Boardman to Hemingway Transmission Line: Draft Proposed Order

To:	Oregon Energy Facility Siting Council
From:	Kellen Tardaewether, Senior Energy Facility Siting Analyst
Date:	May 22, 2019
Re:	ODOE Draft Proposed Order on Application for Site Certificate for the proposed Boardman to Hemingway Transmission Line

Applicant:	Idaho Power Company
Proposed Facility:	High-Voltage Electric Transmission line (primarily 500 kilovolt), along with related and supporting facilities
Proposed Location:	Morrow, Umatilla, Union, Baker, Malheur counties

Staff Recommendation: Approval of site certificate, subject to recommended conditions

To issue a site certificate, the Energy Facility Siting Council (EFSC or the "Council") must find that an application for site certificate demonstrates that the proposed facility satisfies, or with conditions can satisfy, each of the applicable EFSC Siting Standards set forth in OAR 345, Divisions 22 through 24 as well as all other Oregon statutes and administrative rules identified in the project order as applicable to the proposed facility.

As staff to EFSC, the Oregon Department of Energy has reviewed the Boardman to Hemingway Transmission Line application for site certificate, in consultation with state agencies and tribal and local governments. Based upon its review of the application, the Department recommends the Council grant the site certificate for the proposed facility, subject to the conditions set forth in the following draft proposed order. The draft proposed order contains the Department's analysis of the application and includes recommended site certificate conditions. The analysis and recommendations contained in this draft proposed order are not a final determination.

A public comment period is now open on the draft proposed order and application. In addition, the Council will hold public hearings on this draft proposed order and the application for site certificate in each of the Oregon counties the proposed facility crosses, as shown in the table below. Please note, interested parties must testify on the record of the public hearings, either orally at a public hearing or in writing during the comment period, in order to preserve their right to participate further in the process. The public comment period closes on July 23, 2019 at 5 p.m.; written or oral comments must be received by the Department by that time. Section II, Procedural History, of the draft proposed order contains additional information regarding the site certificate review process. The public notice associated with the release of this draft proposed order contains additional information regarding the comment period and public hearings.

Draft Proposed Order Public Hearings			
County	**Date**	**Time**	**Address**
Malheur	Tuesday, June 18, 2019	4:30 – 8 p.m.	Four Rivers Cultural Center, 676 SW 5th Ave, Ontario, OR 97914
Baker	Wednesday, June 19, 2019	4:30 – 8 p.m.	Baker City Veterans of Foreign Wars (Hall 2005), Valley Ave, Baker City, OR 97814
Union	Thursday, June 20, 2019	4:30 – 8 p.m.	Blue Mountain Conference Center, 404 12th St, La Grande, OR 97850
Umatilla	Wednesday, June 26, 2019	4:30 – 8 p.m.	Pendleton Convention Center, 1601 Westgate, Pendleton, OR 97801
Morrow	Thursday, June 27, 2019	4:30 – 8 p.m.	Port of Morrow, Riverfront Room 2, Marine Dr NE, Boardman, OR 97818

BEFORE THE
ENERGY FACILITY SITING COUNCIL
OF THE STATE OF OREGON

In the Matter of the Application for Site Certificate for the Boardman to Hemingway Transmission Line	))))	DRAFT PROPOSED ORDER ON APPLICATION FOR SITE CERTIFICATE

May 22, 2019

Table of Contents

I. INTRODUCTION 1
II. PROCEDURAL HISTORY 2
II.A. Notice of Intent 2
II.B. Project Order 3
II.C. Preliminary Application for Site Certificate 3
II.D. First Amended Project Order 3
II.E. Amended Preliminary Application for Site Certificate 4
II.F. Second Amended Project Order 4
II.G. Application for Site Certificate 5
II.H. Council Review Process 6
III. DESCRIPTION OF THE PROPOSED FACILITY 8
III.A. Transmission Corridor Selection 9
III.B. Site Boundary, Right-of-Way, and Proposed Facility Location 13
III.B.1. Site Boundary and Right of Way Dimensions 13
III.B.2. Proposed Facility Location by County 18
III.C. Proposed Facility 28
III.D. Survey Data Based on Final Design and Site Access 40
IV. EVALUATION OF COUNCIL STANDARDS 46
IV.A. General Standard of Review: OAR 345-022-0000 47
IV.B. Organizational Expertise: OAR 345-022-0010 55
IV.C. Structural Standard: OAR 345-022-0020 67
IV.D. Soil Protection: OAR 345-022-0022 85
IV.E. Land Use: OAR 345-022-0030 95
IV.E.1. Local Applicable Substantive Criteria 100
IV.E.2. Directly Applicable State Statutes and Administrative Rules 195
IV.E.3. Statewide Planning Goals 216
IV.E.4. Goal 4 Exception 222
IV.E.5. Federal Land Management Plans 229
IV.F. Protected Areas: OAR 345-022-0040 229
IV.F.1. Protected Areas Crossed by Transmission Line – Exceptions (OAR 345-022-0040(2) and (3)) 238
IV.F.2. Potential Noise Impacts 241
IV.F.3. Potential Traffic Impacts 244
IV.F.4. Potential Impacts from Water Use and Wastewater Disposal 245
IV.F.5. Potential Visual Impacts from Facility Structures 246
IV.G. Retirement and Financial Assurance: OAR 345-022-0050 263
IV.H. Fish and Wildlife Habitat: OAR 345-022-0060 275
IV.H.1. General Fish and Wildlife Habitat Mitigation Goals and Standards 275
IV.H.2. Sage-Grouse Specific Habitat Mitigation Requirements 309
IV.I. Threatened and Endangered Species: OAR 345-022-0070 327
IV.J. Scenic Resources: OAR 345-022-0080 341
IV.K. Historic, Cultural, and Archaeological Resources: OAR 345-022-0090 378

IV.K.1. Potential Impacts to Historic, Cultural, and Archaeological Resources Under OAR 345-022-0090(1)(a) 386
IV.K.2. Potential Impacts to Historic, Cultural, and Archaeological Resources Under OAR 345-022-0090(1)(b) 435
IV.K.3. Potential Impacts to and Mitigation for Historic, Cultural, and Archaeological Resources Under OAR 345-022-0090(1)(c) 442
IV.K.4. Mitigation for Historic, Cultural, and Archaeological Resources: Historic Properties Management Plan (HPMP) 443
IV.L. Recreation: OAR 345-022-0100 449
IV.L.1. Potential Direct and Indirect Loss 454
IV.L.2. Potential Noise Impacts 455
IV.L.3. Potential Traffic Impacts 457
IV.L.4. Potential Visual Impacts 457
IV.M. Public Services: OAR 345-022-0110 474
IV.M.1. Sewers and Sewage Treatment 477
IV.M.2. Water Supply 478
IV.M.3. Stormwater Drainage 479
IV.M.4. Solid Waste Management 480
IV.M.5. Housing 482
IV.M.6. Traffic Safety 484
IV.M.7. Police Protection 501
IV.M.8. Fire Protection 504
IV.M.9. Health Care 511
IV.M.10. Schools 513
IV.N. Waste Minimization: OAR 345-022-0120 514
IV.O. Division 23: Need Standard for Nongenerating Facilities 521
IV.O.1. Need for a Facility: OAR 345-023-0005 521
IV.P. Division 24 Standards 529
IV.P.1. Siting Standards for Transmission Lines: OAR 345-024-0090 529
IV.Q. Other Applicable Regulatory Requirements Under Council Jurisdiction 538
IV.Q.1. Noise Control Regulations: OAR 340-035-0035, OAR 340-035-0010 and OAR 340-035-0100 538
IV.Q.2. Removal Fill Law: OAR 141-085-0500 through -0785 565
IV.Q.3. Water Rights: OAR 690-310-0000; OAR 690-380-0000 589
IV.Q.4. Fish Passage: OAR 635-412-0035 591
V. PROPOSED CONCLUSIONS AND ORDER 594

LIST OF TABLES

Table 1: Schedule of Boardman to Hemingway Transmission Line DPO Hearings.....7

Table PF-1: Site Boundary and Temporary/Permanent Disturbance Areas by Facility Component 15
Table PF-2: Route Mileage Summary by Land Manager/Owner 19
Table PF-3: Proposed Route Features – Morrow County.....22
Table PF-4: Proposed Route Features – Umatilla County 24
Table PF-5: Proposed Route Features – Union County 25
Table PF-6: Proposed Route Features – Baker County.....26
Table PF-7: Proposed Route Features – Malheur County 27
Table PF-8: Summary of Access Road Classifications.....36

Table OE-1: Idaho Power's Recent 230 kV Transmission Line Projects.....57

Table LU-1: Applicable Substantive Criteria for Proposed Facility Components in Morrow County....103
Table LU-2: Applicable Substantive Criteria for Proposed Facility Components in Umatilla County ...125
Table LU-3: Applicable Substantive Criteria for Proposed Facility Components in Union County 148
Table LU-4: Union County Agriculture-Grazing Zone Predominant Uses 150
Table LU-5: Union County Timber-Grazing Zone Predominant Uses 153
Table LU-6: Applicable Substantive Criteria for Proposed Facility Components in Baker County 172
Table LU-7: Applicable Substantive Criteria for Proposed Facility Components in Malheur County ...183
Table LU-8: Applicable Substantive Criteria for Proposed Facility Components in City of North Powder 190

Table FW-1: Estimated Temporary and Permanent Habitat Impacts and Proposed Mitigation.....280
Table FW-2: Direct Impacts to Sage-grouse Habitat in Oregon 320

Table PA-1: Protected Areas within Analysis Area and Distance from Proposed and Alternative Transmission Line Routes 233
Table PA-2: Predicted Noise Levels from General Construction Activities.....242
Table PA-3: Summary of Protected Areas with Potential Visual Impacts 248

Table RFA-1: Applicant's Decommissioning and Site Restoration Cost Estimate 266

Table SR-1: Scenic Resources within Analysis Area 343

Table HCA-1: Historic, Cultural, and Archaeological Resource Studies 384
Table HCA-2: Oregon Trail/NHT Inventory in Analysis Area with Avoided/No Impacts.....390
Table HCA-3: Oregon Trail/NHT Inventory in Analysis Area with Potential Indirect Impacts.....400
Table HCA-4: Exhibit S Historic Properties of Religious and Cultural Significance to Indian Tribes 410
Table HCA-5: Potentially Impacted Resources under OAR 345-022-0090(1)(a).....414
Table HCA-6: Inventoried Resources under OAR 345-022-0090(1)(b) 437

Table HCA-7: Potential Minimization and Mitigation of Direct Impacts to Resource Site Types Identified within the Direct Analysis Area* 444
Table HCA-8 Potential Minimization and Mitigation Methods for Indirect Impacts* 445
Table HCA-9 Potential Minimization and Mitigation Methods for Indirect and Direct Impacts to Aboveground Resources* 446

Table R-1: Important Recreation Opportunities 451
Table R-2: Predicted Noise Levels from General Construction Activities 455

Table PS-1: Construction Spread and Affected Oregon Counties 475
Table PS-2: Estimated Workers and Population Change during Peak Construction 476
Table PS-3: Solid Waste Disposal Sites within the Analysis Area 480
Table PS-4: Available Housing Options based on Construction Spread 483
Table PS-5: Total Temporary Workers Needing Housing Compared to Available Housing Options 484
Table PS-6: Personal Vehicle Trips per Day per Construction Spread 486
Table PS-7: Evaluation of Facility Impacts on Volume-to-Capacity Ratios for Roads Potentially Used during Facility Construction 489
Table PS-8: Airport Distances from Facility Components 498
Table PS-9: Fire Departments, Rural Fire Protection Districts, and Rangeland Fire Protection Associations within the Analysis Area 505
Table PS-10: School District Information 513

Table WM-1: Materials from Construction Activities, Recycled Totals and Disposal Locations 516

Table SSTL-1: Electric Field Strength for Each Considered Structural Configuration 532
Table SSTL-2: Induced Current Factors 535

Table NC-1: Predicted Noise Levels from General Construction Activities 544
Table NC-2: Statistical Noise Limits for Industrial and Commercial Noise Sources 547
Table NC-3: Summary of Acoustic Modeling Results—Comparison of Predicted Facility Sound Levels to Late Night Baseline L50 (NSR Exceedances) 550

Table RF-1: Summary of Estimated Wetland Impacts 568
Table RF-2: Summary of Estimated Waterway Impacts 568
Table RF-3: Department of State Lands Best Uses for Water Resources and EFSC Standards 579

LIST OF FIGURES

Figure 1: Selected Key Constraints 12
Figure 2: Proposed and Alternative Transmission Line Routes 20
Figure 3: Proposed Alternative Route Location Maps 21
Figure 4: Land Use Analysis Area 99
Figure 5: Morrow County Zoning and Proposed Facility Components 101
Figure 6: Umatilla County Zoning and Proposed Facility Components 123
Figure 7: Union County Zoning and Proposed Facility Components 146
Figure 8: Baker County and Proposed Facility Components 171
Figure 9: Malheur County and Proposed Facility Component Locations 182
Figure 10: City of North Powder Zoning and Proposed Facility Component Locations 189

Figure 11: City of Huntington Zoning and Proposed Multi-Use Area 194
Figure 12: Common Noise Sources and Expected Noise Levels 543

Attachments

Attachment 1: Recommended Site Certificate Conditions (To be replaced with Site Certificate)
Attachment 2: (Reserved for DPO Comment Index)
Attachment 3: Reviewing Agency Comment Letters and Documents Referenced in DPO
Attachment B-5 Road Classification Guide and Access Control Plan (No Maps)
Attachment B-5 Road Classification Guide and Access Control Plan (Maps Only)
Attachment BB-1 Plan for an Alternative Practice
Attachment BB-2 Fish Passage Plans and Designs
Attachment G-4 Draft Spill Prevention Control and Countermeasure Plan
Attachment G-5 Draft Framework Blasting Plan
Attachment H-1 Proposed Site Specific Geotechnical Work
Attachment H-2 Summary of Proposed Boring Locations
Attachment H-3 Seismic Tables and Maps
Attachment H-4 Landslide Inventory
Attachment I-3 1200-C Permit Application and Erosion and Sediment Control Plan
Attachment J-1 Draft Removal-Fill Compensatory Wetland Non-Wetland Mitigation Plan
Attachment J-2 Draft Removal-Fill Temp Impacts Draft Site Rehabilitation Plan
Attachment J-3 Removal Fill Permit Conditions
Attachment K-1 Agricultural Lands Assessment
Attachment K-2 Right of Way Clearing Assessment with Errata
Attachment P1-3 Draft Reclamation and Revegetation Plan with Errata
Attachment P1-4 Draft Vegetation Management Plan
Attachment P1-5 Draft Noxious Weed Plan with Errata
Attachment P1-6 Draft Fish and Wildlife Habitat Mitigation Plan
Attachment P1-9 Avian Protection Plan
Attachment P2-3 Greater Sage-Grouse Habitat Mitigation Plan
Attachment S-9 Draft Historic Properties Management Plan (Inadvertent Discovery Plan) with Errata
Attachment U-2 Draft Transportation and Traffic Plan
Attachment U-3 Draft Fire Prevention and Suppression Plan with Errata
Attachment W-1 Facilities Removal and Site Restoration Cost Estimate with Errata
Attachment X-4 Noise Analysis Results by NSR Location
Attachment X-5 Maps - All NSRs and NSR Exceedances

I. INTRODUCTION

The Oregon Department of Energy (Department) issues this draft proposed order (DPO) in accordance with Oregon Revised Statute (ORS) 469.370(1), based on its review of the Application for Site Certificate (ASC) for the proposed Boardman to Hemingway Transmission Line (proposed facility) and comments and recommendations received by state agencies, local governments, and tribal governments. The applicant is Idaho Power Company (applicant), a wholly owned subsidiary of IDACORP, Inc. This DPO includes recommended conditions of approval for inclusion in the site certificate to ensure or maintain compliance with applicable rules and standards during the construction, operation and retirement of the proposed facility.

The proposed facility would be an approximately 300 mile-long 500 kilovolt (kV) electric transmission line, plus related or supporting facilities including access roads and other facility components. The transmission line would extend from a switching station proposed to be constructed near Boardman, Oregon to the existing Hemingway Substation located in Owyhee County, Idaho. The transmission line would cross five Oregon counties, Malheur, Baker, Union, Umatilla, and Morrow counties and Owyhee County in Idaho. The applicant must receive permitting approvals from the federal land management agencies as well as the Energy Facility Siting Council to satisfy Oregon's requirements for permitting energy facilities. The Council's authority extends to all land in Oregon, regardless of land ownership, except tribal reservation land.

The proposed facility qualifies as an "energy facility" under the definition in ORS 469.300(11)(C) as it is a proposed high voltage transmission line of more than 10 miles in length with a capacity of 230,000 volts or more to be constructed in more than one city or county in the State of Oregon.[1] Approval of a site certificate by the Energy Facility Siting Council (Council or EFSC) is required for the construction, operation, and retirement of energy facilities.[2]

In addition to the conditions recommended in this DPO, the site certificate holder is subject to the conditions and requirements contained in the rules and standards of the Council and in local ordinances and state laws in effect on the date the site certificate is executed. Under ORS 469.401(2), upon a clear demonstration of a significant threat to public health, safety, or the environment that requires application of later-adopted laws or rules, the Council may require compliance with such later-adopted laws or rules. The Council recognizes that many specific tasks related to the design, construction, operation, and retirement of the proposed facility would be undertaken by the applicant's agents or contractors. Nonetheless, the certificate holder remains responsible for ensuring compliance with all provisions of the site certificate. The Council does not have jurisdiction over matters that are not included in and governed by

[1] The definitions contained in ORS 469.300 and Oregon Administrative Rule (OAR) 345-001-0010 apply to terms used in this DPO.
[2] ORS 469.320.

the site certificate or amended site certificate, including design-specific construction or operating standards and practices that do not relate to siting, as well as matters relating to employee health and safety, building code compliance, wage and hour or other labor regulations, or local government fees and charges.[3] Also outside the Council's jurisdiction are matters of land-acquisition, land purchases, land leases and right-of-way easements.

A site certificate is a binding agreement between the State of Oregon and the applicant, authorizing the applicant to design, construct, operate, and retire a facility on an approved site, incorporating all conditions imposed by the Council on the applicant.[4] A site certificate issued by the Energy Facility Siting Council binds the state and all counties, cities and political subdivisions of Oregon. Once the Council issues the site certificate, any affected state agency, county, city or political subdivision must, upon submission by the applicant of the proper applications and payment of the proper fees, but without hearing or other proceeding, promptly issue the permits, licenses and certificates addressed in the site certificate.[5] The Council has continued authority over the site for which the site certificate is issued and may inspect, or direct Department to inspect, or request another state agency or local government to inspect, the site at any time in order to ensure that the facility is being operated consistently with the terms and conditions of the site certificate.[6]

Based upon its review, including conclusions and recommended conditions of compliance presented in this DPO, the Department recommends that the Council approve the application for site certificate and issue a site certificate for the proposed facility.

II. PROCEDURAL HISTORY

II.A. Notice of Intent

On July 6, 2010, the Department received a Notice of Intent (NOI) from Idaho Power Company (applicant) to file an application for site certificate (ASC) for a new 500-kilovolt (kV) transmission line.[7] The proposed facility would be approximately 300 miles long and extend from a switching station proposed to be constructed near Boardman, Oregon to the existing Hemingway Substation located in Owyhee County, Idaho. The transmission line would cross five Oregon counties, Malheur, Baker, Union, Umatilla, and Morrow counties and Owyhee County in

[3] ORS 469.401(4).
[4] ORS 469.300(26).
[5] ORS 469.401(3).
[6] ORS 469.430.
[7] In August 2008, the applicant submitted an NOI to the Department. Due to input received during the joint scoping meetings and the Community Advisory Process (CAP) with the BLM, USFS, the Department and other stakeholders, the applicant revised its route. The applicant withdrew the 2008 NOI and submitted the NOI in 2010 with revised proposed routes. See B2H-0054 07-06-10 Notice of Intent for Boardman to Hemingway Transmission Line. Section B3.

Idaho. Approximately 66 percent of the transmission line corridor would be privately-owned, 32 percent would be managed by federal agencies, and one percent would be owned by state government. The applicant must receive permitting approvals from the federal land management agencies as well as the Energy Facility Siting Council to satisfy Oregon's requirements for permitting energy facilities. The Council's authority extends to all land in Oregon, regardless of land ownership, except tribal reservation land.

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 at OAR 345-020-0011(1)(f). This public notice was distributed jointly with the U.S. Bureau of Land Management (BLM)—the lead agency overseeing the National Environmental Policy Act (NEPA) federal review process—to satisfy both EFSC and NEPA requirements. The Department also published the notice in multiple local area newspapers within the vicinity of the proposed facility. The notice announced a series of public scoping meetings that were held in several cities along the proposed transmission line route, and requested public comments on the NOI. The public notice date also initiated a reviewing agency comment period on the NOI. In accordance with OAR 345-020-0040, a review request was issued by the Department and the applicant distributed the NOI to Special Advisory Groups (SAG's), state agencies, local governments, and tribal governments.

II.B. Project Order

On March 2, 2012, the Department issued a project order in accordance with OAR 345-015-0160, which requires the Department to specify the state statutes, administrative rules, and local, state, and tribal permitting requirements applicable to the construction and operation of the proposed facility. The project order also outlines the application for site certificate requirements from OAR 345-021-0010 that are relevant to the proposed facility. The project order was amended in May 2012, and amended a second time in July 2018. The amendments were required to update applicable standards and rules, as discussed further below.

II.C. Preliminary Application for Site Certificate

On February 27, 2013, the applicant submitted a preliminary application for a site certificate (pASC) to the Department. Thereafter, and in compliance with OAR 345-021-0050(1), the Department prepared a review request memorandum to reviewing agencies and compiled a distribution list, including all reviewing agencies listed in OAR 345-001-0010. In accordance with ORS 469.350(2) and OAR 345-021-0050, the applicant distributed the memorandum and a copy of the pASC to each of the reviewing agencies.

II.D. First Amended Project Order

In May 2013, BLM issued a press release identifying the routes it intended to analyze in the Draft Environmental Impact Statement (DEIS) for the proposed facility. BLM's preliminary environmentally preferred alternative included two route segments not included in the pASC submitted to the Department for the Council's review process. As a result, the applicant

indicated its intent to amend the pASC to include the alternative route segments identified in the DEIS.

Under OAR 345-015-0160(3), the Department or Council may amend the project order at any time. In light of changes and clarifications to the proposed facility since the Department issued the project order in March 2012, and in anticipation of the applicant's amendment to the pASC, the Department issued the first amended project order on December 22, 2014, establishing and updating the requirements for the site certificate application.

II.E. Amended Preliminary Application for Site Certificate

The Bureau of Land Management issued its Final Environmental Impact Statement in November, 2016, and then published its Record of Decision (ROD) on November 17, 2017, identifying the agency's selected route. For additional discussion of the comparison between the deferral NEPA review and permitting process and the Oregon Energy Facility Siting Council's review and permitting process see section III.A, *Transmission Corridor Selection*, of this order.

The applicant submitted to the Department an amended preliminary application for site certificate (ApASC) on July 19, 2017. The ApASC reflected BLM's selected route issued in the ROD and other project modifications. In accordance with OAR 345-021-0090(2), a preliminary application may be amended at any time. As required by OAR 345-021-0050, the Department provided a reviewing agency memorandum that was distributed with copies of the ApASC to SAGs, state and local governments and tribal government reviewing agencies. The reviewing agency memorandum requested agencies and governments to comment on the sufficiency of the information in the ApASC and if additional information needed to be provided for the application to be deemed complete, per OAR 345-015-0190(5). The 45-day comment deadline was September 1, 2017, with an extended comment deadline of October 2, 2017. However, several reviewing agencies provided ongoing comments as the Department and the applicant consulted with them on the sufficiency of the information provided. On September 15, 2017 the Department issued to the applicant a determination of an incomplete amended preliminary application for site certificate detailing required information and noted that reviewing agency comments were outstanding.

II.F. Second Amended Project Order

On July 26, 2018, the Department issued a second amended project order, which reflected changes that resulted from rulemaking, specifically to OAR 345-021-0010(1)(p) and (q), OAR 345-022-0010(1)(h), and OAR 345-022-0060. The second amended project order also removed references to ORS 469.310 because it is a statutory policy rather than a Council standard for siting energy facilities. It also updated the reviewing agency list based on the proposed and alternative routes as proposed by the applicant in the amended preliminary application for site certificate.

II.G. Application for Site Certificate

The Department began reviewing the ApASC upon submission on July 19, 2017 and issued formal requests for additional information (RAI's) from September 15, 2017 to September 21, 2018. The Department issued RAI's per exhibit of the ASC, however the Department also issued RAI's relating to reviewing agency, local and tribal government comment letters and RAI's. The applicant provided responses to all Department RAI's and to all reviewing agency, local and tribal government comments and RAI's. The Department reviewed the applicant responses in consultation with applicable agencies, where necessary, to verify the sufficiency of the information as it relates to OAR 345-021-0010. After reviewing the applicant responses and portions of revised exhibits, the Department determined the ApASC to be complete on September 21, 2018 and the applicant filed a complete ASC on September 28, 2018. Under OAR 345-015-0190(5), an ASC is considered 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.

Public notice of the complete ASC was issued on October 3, 2018 and public notice of the complete ASC was also published in the Baker City Herald, La Grande Observer, East Oregonian, Hermiston Herald, Hells Canyon Journal, Heppner Gazette Times, East Oregonian, Idaho Press, Idaho Statesman, Vale Malheur Enterprise, and the Ontario Argus Observer. On October 3, 2018 the notice was issued via the GovDelivery system to 1,562 email addresses and printed copies were mailed to approximately 8,300 physical addresses on the Council's special mailing list for the proposed facility.

The Department held a series of public informational meetings on the complete ASC from on October 15, 2018 through October 18, 2018 in Ontario, Baker City, La Grande, Pendleton and Boardman, Oregon. Pursuant to OAR 345-015-0200, the Department provided to the applicant a notice to reviewing agencies that the application is complete, along with a request for agency reports on the complete ASC. On or before October 10, 2018, the applicant mailed all reviewing agencies copies of the complete ASC with the notice and request for an agency report with a comment submission date of November 26, 2018.[8] The Department received comments from the following reviewing agencies, including special advisory groups and tribal governments:

- Baker County Planning Department/Board of Commissioners (Special Advisory Group)
- City of La Grande Planning Department

[8] Under ORS 469.360(2), pursuant to a written agreement, the Council may compensate reviewing agencies including state agencies and local governments for expenses directly related to the review of a notice of intent, application for site certificate, and participation in a council proceeding, excluding legal expenses of the agency or local government incurred as a result of participation by the state agency or local government as a party in a contested case. The Department interprets a "council proceeding" to include the public hearing(s) on a draft proposed order, the review of the draft proposed order, and contested case. Under ORS 469.360(4), pursuant to a written agreement, the Council may only compensate Tribal Governments identified as reviewing agencies for expenses directly related to the review of a notice of intent and application for site certificate.

- 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
- 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 (Special Advisory Group)
- United States Bureau of Land Management
- United States Bureau of Reclamation
- United States Department of the Navy
- United States Forest Service

Under OAR 345-015-0190(9), from March 6 to March 29, 2019, the applicant submitted additional information errata in response to the reviewing agency comments and additional information requests made by the Department.[9] The additional information was submitted as errata sheets appending the applicable exhibit. On March 28, 2019, the Department issued a GovDelivery announcement and posted the errata information on the website. References to application exhibits and to the additional information errata are provided in this order.

On May 16, 2019, the Council appointed Ms. Alison Greene Webster as the hearing officer to conduct the public hearing on the draft proposed order and to conduct the contested case proceeding, if requested. Ms. Alison Greene Webster is a Senior Administrative Law Judge with the Oregon Office of Administrative Hearings**.**

II.H. Council Review Process

The issuance of this draft proposed order (DPO) initiates a comment period on the record for the proposed facility. The Council's designated hearing officer will conduct a series of public hearings on the DPO, one in each county crossed by the proposed facility. The details for each public hearing are provided below. Oral and written testimony may be provided at the public hearings.[10] A 62 –day written comment period is also now open. Written comments must be received by the Department by 5 p.m. (PDT) on July 23, 2019.

[9] OAR 345-015-0190(9) states, "After a determination that an application is complete, the applicant shall submit additional information to the Department if the Department identifies a need for that information during its review of the application. Submission of such information does not constitute an amendment of the application."
[10] ORS 469.370(2).

Table 1: Schedule of Boardman to Hemingway Transmission Line DPO Hearings

June 2019					
	Tue 18	**Wed 19**	**Thu 20**	**Wed 26**	**Thu 27**
	4:30 – 8:00 p.m.	**4:30 – 8:00 p.m.**	**4:30 – 8:00 p.m.**	**4:30 – 8:00 p.m.**	**4:30 – 8:00 p.m.**
County	Malheur	Baker	Union	Umatilla	Morrow
Location	Four Rivers Cultural Center, 676 SW 5th Ave, Ontario, OR 97914	Baker City Veterans of Foreign Wars Hall 2005 Valley Ave, Baker City, OR 97814	Blue Mountain Conference Center, 404 12th St, La Grande, OR 97850	Pendleton Convention Center, 1601 Westgate, Pendleton, OR 97801	Port of Morrow, Riverfront Room 2 Marine Dr NE, Boardman, OR 97818

Additional detail regarding the public hearings and how to comment can be found in the Public Notice that was released concurrently with this DPO, as well as on the Department's website for the proposed facility.

Following the close of the record of the public hearing and Council's review of the draft proposed order, the Department will issue a proposed order, taking into consideration Council comments, any comments received "on the record of the public hearing" (i.e., oral testimony provided at the public hearings and written comments received by the Department after the date of the notice of the public hearing and before the close of the public hearing written comment period), and agency consultation. Concurrent with the issuance of the proposed order, the Department will issue a notice of contested case and a public notice of the proposed order.[11] Only those persons who comment in person or in writing on the record of the public hearing may request to participate as a party or limited party in the contested case proceeding. Additionally, to raise an issue in a contested case proceeding, the issue must be within Council jurisdiction, and the person must have raised the issue on the record of the public hearing with "sufficient specificity to afford the Council, the department, and the applicant an adequate opportunity to respond."[12]

At the conclusion of a contested case proceeding, the hearing officer will issue a proposed contested case order stating the hearing officer's findings of fact, conclusions of law and recommended site certificate conditions on the issues raised in the contested case. The Council may adopt, modify or reject the hearing officer's proposed contested case order.[13] Based upon

[11] See ORS 469.370(4) and OAR 345-015-0014.
[12] ORS 469.370(3).
[13] OAR 345-015-0085.

Council's direction to adopt, modify or reject the hearing officer's proposed contested case order, the findings of the hearing officer's proposed contested case order, and any modifications requested by Council, are then incorporated into the Council's final order on the ASC.

Following the contested case proceeding, the Council will issue a final order either approving or denying the ASC based upon the standards adopted under ORS 469.501, and any additional state statutes, rules, or local government regulations or ordinances determined to be applicable to the facility in the project order.[14] The Council's final order is subject to judicial review by the Oregon Supreme Court. Only a party to the contested case proceeding may request judicial review and the issues on appeal are limited to those raised by the parties to the contested case proceeding. A petition for judicial review must be filed with the Supreme Court within 60 days after the date of service of the Council's final order or within 30 days after the date of a petition for rehearing is denied or deemed denied.[15]

III. DESCRIPTION OF THE PROPOSED FACILITY

The information presented in this section is based upon details provided in the application for site certificate (ASC). Section III.A., *Transmission Corridor Selection* describes the siting studies and process the applicant employed to establish the transmission corridors (proposed and alternative routes) and Section III.B., *Location and Site Boundary* provides a description of the site boundary by county. Section III.D., *Survey Data Based on Final Design and Site Access* discusses how the Council will evaluate the survey information necessary for the Council's review taking into account final facility design and site access restrictions experienced by the applicant when preparing the ASC. Finally, Section III.C., *Proposed Facility* of this order describes the proposed "energy" facility and related or supporting facilities.

As discussed in more detail in the below section, III.A., *Transmission Corridor Selection*, the applicant underwent an extensive siting process over several years, evaluating several routing and re-routing options. The result of the applicant's siting studies, and outcome of the federal review process, resulted in the routes proposed in the ASC. The applicant proposes a primary route, and has named this route the proposed route. In some areas the applicant has requested the Council also evaluate alternative routes so the applicant may select from these as options in its final route selection (See Figures 2 and 3 in Section II.B.2). Therefore, in the ASC and this order the Department refers to the primary route as the proposed route and the proposed alternative routes as alternative routes generally, and by the specific route name as appropriate in the analysis.

[14] ORS 469.370(7).
[15] ORS 469.403.

III.A. Transmission Corridor Selection

As discussed in section II.A. *Notice of Intent* above, approximately 32 percent of the proposed facility crosses land owned by federal government agencies, therefore the applicant was obligated to engage in the National Environmental Policy Act (NEPA) federal review process led by the U.S. Bureau of Land Management (BLM). Code of Federal Regulations (CFR) §1502.14 tasks the lead federal agency to conduct an environmental impact assessment of the proposal and the alternatives in a comparative form. The lead agency (BLM) then explores and evaluates all reasonable alternatives based on the agency review and public feedback. The result of the assessment is the identification of the agency's preferred alternative or alternatives, that is issued in the draft and final environmental statement (DEIS and FEIS), and formalized in the agency's record of decision (ROD). A location description of the proposed facility in each Oregon county is provided below in Section III.B. The description in Morrow County outlines the applicant's proposed route as well as two alternative routes in a segment along Bombing Range Road, with portions on the Naval Weapons Systems Training Facility (NWSTF) Boardman, property owned by the United States Department of the Navy (Navy). Rather than including this portion in the NEPA review led by the BLM, the Navy led a separate NEPA review. If approved, the separate NEPA review led by the Navy will result in a separate ROD, Section 106 consultation, and other applicant and federal obligations.

In comparison to the NEPA process, the EFSC standards for siting energy facilities do not require that the applicant compare alternative corridors. Nor do they allow the Council to evaluate and consider alternative routes not proposed in the application for site certificate. ORS 469.360 provides that the Council shall evaluate the application for site certificate. ORS 469.370(7) directs the Council that, at the conclusion of a contested case, the Council shall issue a final order either approving or rejecting the application for site certificate based on the EFSC standards, applicable statutes, rules and local ordinances. This is also reiterated via the EFSC General Standard of Review (OAR 345-022-000(1)(a)).[16] Therefore, in the application, an applicant may propose any route, and alternative routes for Council's review, regardless of a federal agency's selected route issued in the ROD for the NEPA review process. Further, the Council may not recommend an alternative route that is not proposed in the application. The Council shall approve or reject any route, as proposed in the application, based on the applicable Council standards, statutes, rules and local ordinances.

Unless alternative routes are discussed, conditioned, and recommended separately in the sections of this order, the Department's recommendations for each applicable Council standard and other applicable regulatory requirements relates to impacts associated with both the

[16] (1) To issue a site certificate for a proposed facility or to amend a site certificate, the Council shall determine that the preponderance of evidence on the record supports the following conclusions:
(a) The facility complies with the requirements of the Oregon Energy Facility Siting statutes, ORS 469.300 to 469.570 and 469.590 to 469.619, and the standards adopted by the Council pursuant to 469.501 or 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 as described in section (2)***

proposed and alternative routes. Section IV.E., *Land Use*, of this order provides a description of the land use evaluation for each affected county for the proposed route and alternative routes, if there is an alternative route proposed in the county. Sections IV.F., *Fish and Wildlife Habitat*, IV.F., *Protected Areas*, IV.I., *Threatened and Endangered Species*, IV.J., *Scenic Resources*, and IV.K., *Historic, Cultural, and Archaeological Resources*, contain site certificate conditions of approval specific to the applicable proposed or alternative route segments. The final Department recommendations of approved routes is explained in of General Standard of Review Condition 11 (Site-Specific Condition OAR 345-025-0010(5)), discussed in Section IV.A., *General Standard of Review*, of this order.

The Council's application requirements of OAR 345-021-0010(b)(D), state that the applicant is required to provide a "corridor selection assessment" when the proposed facility is a transmission line subject to EFSC jurisdiction. OAR 345-021-0010(b)(D) outlines the information necessary to include in the corridor assessment that the applicant must include in the application.[17] While the assessment evaluation factors in OAR 344-021-0010(1(b)(D) are not related to any Council standard, they inform the applicant's reasoning and basis for the routes proposed in the ASC, and are discussed further in this section. The applicant describes in great detail in ASC Exhibit B and its attachments, the routing and siting process it conducted including the evaluation of OAR 344-021-0010(1(b)(D) as the siting constraints and results of the federal permitting process which contributed to the proposed and alternative routes the applicant includes in the ASC. This is summarized below.

Initially, the applicant identified the northern endpoint of the proposed transmission line in the Boardman, Oregon, area because it is the easternmost point at which the applicant could feasibly interconnect to the Pacific Northwest market.[18] The applicant identified the southern endpoint as applicant's existing Hemingway Substation because it is the westernmost point in

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[17] OAR 344-021-0010(1(b)(D) requires the applicant to evaluate the following factors in discussing its reasons for its corridor selection:
(i) Least disturbance to streams, rivers and wetlands during construction.
(ii) Least percentage of the total length of the pipeline or transmission line that would be located within areas of Habitat Category 1, as described by the Oregon Department of Fish and Wildlife;
(iii) Greatest percentage of the total length of the pipeline or transmission line that would be located within or adjacent to public roads and existing pipeline or transmission line rights-of-way.
(iv) Least percentage of the total length of the pipeline or transmission line that would be located within lands that require zone changes, variances or exceptions.
(v) Least percentage of the total length of the pipeline or transmission line that would be located in a protected area as described in OAR 345-022-0040.
(vi) Least disturbance to areas where historical, cultural or archaeological resources are likely to exist.
(vii) Greatest percentage of the total length of the pipeline or transmission line that would be located to avoid seismic, geological and soils hazards.
(viii) Least percentage of the total length of the pipeline or transmission line that would be located within lands zoned for exclusive farm use.

[18] B2HAPPDoc3-3 ASC 02a_Exhibit_B_Project Description_ASC 2018-09-28. Section 3.1.

the applicant's existing transmission system that could accommodate termination of a 500-kV transmission line. Within the parameters of the two end points, the applicant conducted an extensive corridor selection process in order to determine the proposed route, and alternative routes.

As discussed in detail in ASC Exhibit B, the applicant's corridor selection process progressed from a two-state, 11-county study area comprising over 31,000 square miles to 3,000 miles of preliminary corridors in 2010, to selection of a proposed corridor in 2012, to modification of that proposed corridor based on input from BLM and other developments in 2015 and 2016. The applicant explains that during joint scoping meetings and during several process steps, there have been opportunities for the public and agencies to comment and provide feedback on the corridors.[19] The applicant explains that from the beginning of the process, prior to submitting the NOI for the EFSC process, the applicant employed the eight factors identified in OAR 345-021-0010(1)(b)(D) to filter through alternatives at an increasing level of detail. In the initial phase, the applicant identified more than 225 constraints to and opportunities for siting, including 124 that were directly related to the eight factors.[20] Using these constraints and opportunities and working with the local citizens, the applicant identified over 3,000 miles of alternative corridor for further analysis.

The applicant also used aerial photography to identify and avoid, where practical, irrigation pivots, houses, barns, private runways, other structures (e.g., wind turbines), and land use features. The corridors were adjusted using topographic maps to avoid or minimize distance across very steep slopes and other physical features less desirable for transmission line construction and operation. The corridors were again checked against the constraint and opportunity geographic information system (GIS) database to avoid, where possible, exclusion areas and areas of high permitting difficulty such as potential Oregon Department of Wildlife (ODFW) Category 1 habitats. The applicant then grouped the alternative corridors into 14 regions and evaluated on the basis of permitting difficulty, construction difficulty and mitigation costs. Using the constraint database, which incorporated the eight siting factors, the applicant reviewed the alternatives to determine the most reasonable corridor within each region.

Figure 1, *Selected Key Constraints* below illustrates some of the siting constraints that the applicant evaluated. Examples of siting constraints are ODFW Category 1 habitat, such as Greater Sage Grouse habitat, agricultural and farming lands, protected areas, mountainous areas with steep slopes, and or highly populated residential areas. Examples of siting opportunities the applicant evaluated are siting the proposed facility within existing utility corridors, co-locating the proposed facility adjacent to existing transmission lines, and co-locating the proposed transmission line with highways and other features existing on the landscape.

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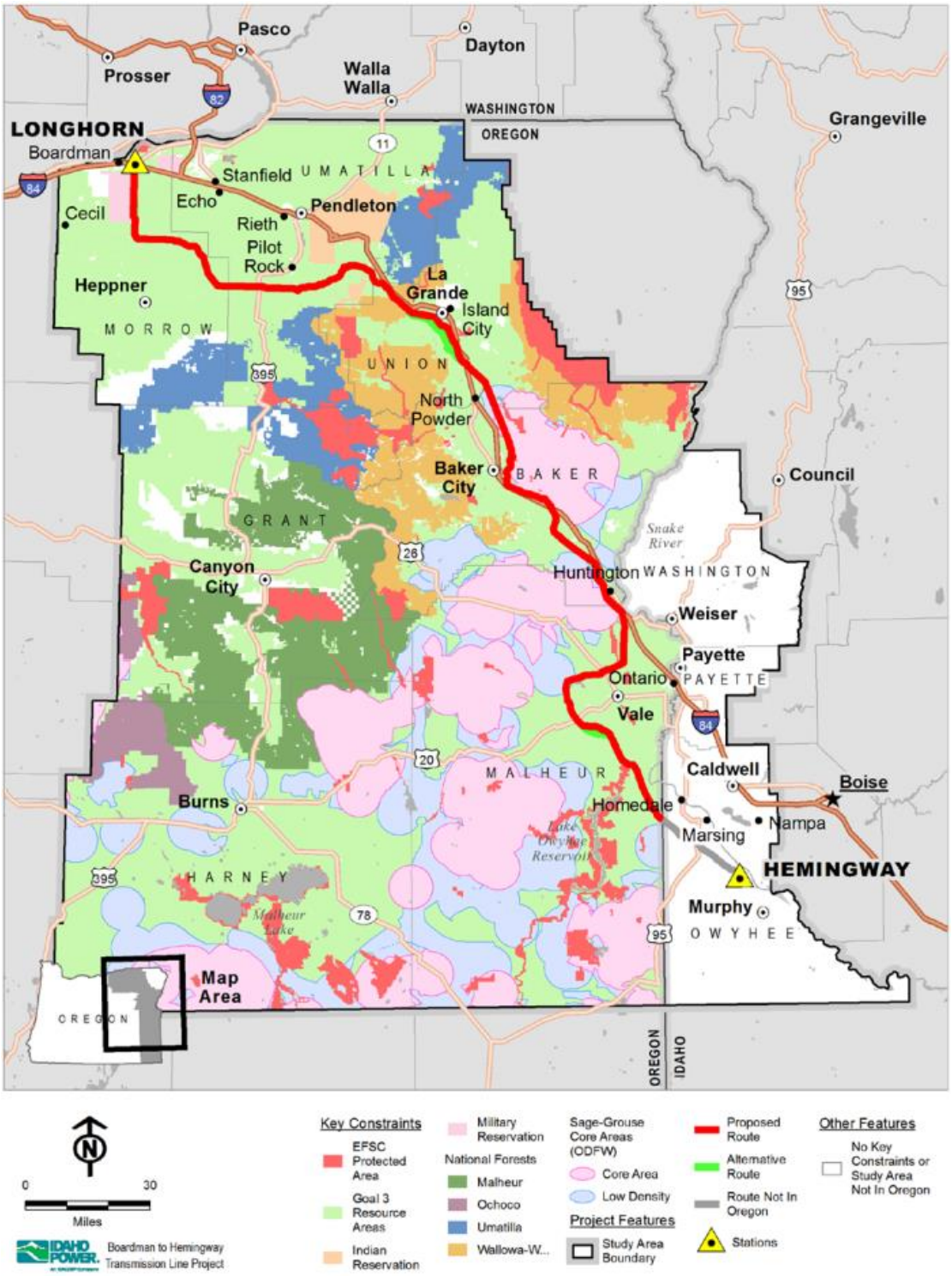
[19] Information gathered from specific sting studies: B2HAPPDoc3-4 ASC 02b_Exhibit B_Attachment B-1 to B-4 2018-09-28 and B2HAPPDoc3-3 ASC 02a_Exhibit_B_Project Description_ASC 2018-09-28. Section 3.1.
[20] B2HAPPDoc3-3 ASC 02a_Exhibit_B_Project Description_ASC 2018-09-28, Section 3.1.6.

Figure 1: Selected Key Constraints



After the applicant submitted its NOI to the Department in 2010, it continued its evaluation process to further reduce potential impacts, eliminate alternative corridor segments, and add several more substantial alternative corridor segments through the second phase of its siting assessment. These changes occurred as a result of extensive field studies, environmental analysis to better define areas of impact, and more detailed engineering studies to better define construction and operation requirements. The changes are documented in ASC Exhibit B, Attachment B-1, 2010 Siting Study, and Attachment B-2, 2012 Supplemental Siting Study. The changes reflect shifts in alignments and relocation of access roads and structure sites to avoid or reduce impacts to the resources, including but not limited to those relevant to the eight factors.

Following the applicant's submittal of the pASC in 2013, the applicant completed a third phase of its siting assessment. The applicant undertook an additional significant evaluation of resources and made many changes to the proposed facility location, both macro and micro, to avoid and minimize impacts to resources identified by one or more of the eight factors in OAR 345-021-0010(1)(b)(D). This third phase of siting is documented in ASC Exhibit B, Attachment B-4, 2015 Supplemental Siting Study.

In 2016, the applicant completed its fourth assessment phase following the BLM's development of a revised agency preferred alternative route.[21] The BLM refined the agency preferred alternative based on input from public comments received on the BLM's draft environmental impact statement (DEIS). This fourth phase of siting is documented in ASC Exhibit B Attachment B-6, 2017 Supplemental Siting Study. After completing the corridor selection process, the applicant performed more detailed engineering analyses of the proposed corridor that resulted in additional adjustments and changes to avoid sensitive resources as well as improve constructability. With the completion of these adjustments to the proposed corridor, the applicant developed the proposed route, and alternative routes submitted in the Amended pASC in July 2017.

The proposed route, and the four proposed alternative routes, are reflected in the final ASC, which the applicant filed with the Department on September 28, 2018.

III.B. Site Boundary, Right-of-Way, and Proposed Facility Location

III.B.1. Site Boundary and Right of Way Dimensions

The proposed facility and proposed alternative transmission line segments would be located within a site boundary as approved by Council. Site boundary is defined as "the perimeter of

[21] B2HAPPDoc3-3 ASC 02a_Exhibit_B_Project Description_ASC 2018-09-28. Section 3.1.

the site of a proposed energy facility, its related or supporting facilities, all temporary laydown and staging areas and all corridors and micrositing corridors proposed by the applicant."[22, 23]

For this proposed EFSC facility, the site boundary is equivalent to a micrositing corridor. A micrositing corridor means a continuous area of land within which construction of facility components may occur, subject to site certificate conditions.[24] Historically, the Council has recognized the need for certificate holders to have flexibility to "microsite" the final location of facility components after issuance of a site certificate. Micro siting may be based on results of final surveys, engineering considerations, avoidance of high-value wildlife habitat, and the desire to reduce conflict with farming practices, or other considerations. The Council permits final siting flexibility within a micrositing corridor (equivalent to the site boundary for this facility) when the certificate holder demonstrates that requirements of all applicable standards have been satisfied by adequately evaluating the entire corridor and location of facility components anywhere within the corridor/site boundary, which has been demonstrated in the ASC, as evaluated in this order.

For the 500-kV transmission line, the site boundary is a 500-foot-wide area within which the transmission line, all transmission structures, and communication stations would be located.[25] The site boundary for the remaining facility features would vary, based on the type of feature and use. For instance, the site boundary for the proposed Longhorn Station would be approximately 190 acres. The site boundary for access roads would be either 100 or 200-feet in width, depending on the nature of the road. The site boundary represents the area that the applicant must evaluate for impacts to resources protected by the EFSC standards. However, for certain resources, the applicant is also obligated to evaluate potential impacts that extend beyond the site boundary, this area is described as the analysis area.[26] The analysis area associated with specific resources may vary and is defined in the second amended project order and described in each Council standard section of this order. If approved by Council, the applicant may construct facility components anywhere within the approved site boundary. Table PF-1 below, details the dimensions of the site boundary and estimates for impacts associated with each type of proposed facility component.

The applicant proposed a right-of-way (ROW) width that is narrower than the evaluated site boundary so the applicant may microsite the proposed ROW anywhere within the approved site boundary. The ROW for the majority of the single-circuit 500-kV transmission line would be up to 250 feet. In forested areas, the ROW width may extend up to 300 feet which includes vegetative maintenance and the removal of hazardous trees. The ROW width requested by the

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[22] OAR 345-001-0010(55)
[23] OAR 345-001-0010(54)
[24] OAR 345-001-0010(32)
[25] B2HAPPDoc3-3 ASC 02a_Exhibit_B_Project Description_ASC 2018-09-28. Section 3.2.2.3 and 3.5.2.
[26] OAR 345-001-0010(2)

Navy along the east edge of Naval Weapons Systems Training Facility (NWSTF) Boardman would be up to 90 feet. The ROW width for the 1.1-mile rebuilding of existing 138-kV transmission line would be up to 100 feet. The existing 138-kV transmission line ROW would be widened to 250 feet to facilitate placement of the 500-kV transmission line within it. The ROW width for the 0.9-mile single-circuit 230-kV rebuilding portion would be up to 125 feet. Finally, the existing 230-kV transmission line ROW would be widened to 250 feet to facilitate placement of the 500-kV line within it.[27] The applicant determined the proposed widths based on three criteria:

1. National Electrical Safety Code (NESC) requires sufficient clearance be maintained to the edge of the ROW, so that during a wind event when the conductors are blown towards the ROW edge they do not encounter other materials.
2. Sufficient room must be provided within the ROW to perform transmission line maintenance.
3. Sufficient clearances must be maintained from the transmission line to the edge of the ROW where structures or trees may be located and deemed a hazard or danger to the transmission line. In some circumstances the ROW width may extend up to 300 feet in forested areas, however, the ROW in many forested areas may be 250 feet. To maintain reliability of the proposed transmission line, the applicant reiterates that vegetative clearance including the ability to remove hazardous trees is essential and a wider ROW is a way of achieving this in forested areas. This is discussed further in Sections IV.E, IV.M, and IV.Q.4 of this order.

The applicant notes that specific localized conditions could result in slightly different ROW widths that will be finalized prior to construction.

Table PF-1: Site Boundary and Temporary/Permanent Disturbance Areas by Facility Component

Component	Length or Count	Site Boundary[1]	Construction Disturbance	Operations Disturbance
Transmission Lines				
Single-Circuit 500-kV	270.8 miles (Proposed)/	500 feet (width)	–[2]	–[2]
Single-Circuit 230-kV	0.9 mile (Proposed)	500 feet (width)	–[2]	–[2]
Single-Circuit 138-kV	1.1 miles (Proposed)	500 feet (width)	–[2]	–[2]
Transmission Structures				
500-kV Lattice	1,085 (Proposed)/ 118 (Alternative)	–[3]	250 x 250 feet (1.4 acres)	50 x 50 feet (0.06 acre)

[27] B2HAPPDoc3-3 ASC 02a_Exhibit_B_Project Description ASC, 2018-09-28, Section 3.2.2.1.

Table PF-1: Site Boundary and Temporary/Permanent Disturbance Areas by Facility Component

Component	Length or Count	Site Boundary[1]	Construction Disturbance	Operations Disturbance
500-kV H-Frame (NWSTF area)	73 (Proposed)/ 34 (Alternative)	–[3]	250 x 90 feet (0.5 acres) on NWSTF / 250 x 150 feet (0.9 acres) off NWSTF	10 x 40 feet (0.001 acre)
500-kV H-Frame (Birch Creek area)	6 (Proposed)	–[3]	250 x 250 feet (1.4 acre)	10 x 40 feet (0.001 acre)
500-kV Y-Frame	8 (Alternative)	–[3]	Varies (0.4 acres)	8 x 8 feet (0.001 acre)
500-kV 3-Pole Dead- end (NWSTF area)	1 (Proposed)/ 2 (Alternative)	–[3]	250 x 90 feet (0.5 acre)	10 x 90 feet (0.02 acre)
500-kV 3-Pole Dead- end (Birch Creek area)	3 (Proposed)	–[3]	250 x 250 feet (1.4 acre)	10 x 90 feet (0.02 acre)
500-kV H-Frame Dead-end (NWSTF area)	3 (Alternative)	–[3]	250 x 90 feet (0.5 acre)	10 x 50 feet (0.01 acre)
230-kV H-Frame	5 (Proposed)	–[3]	250 x 100 feet (0.6 acre)	25 x 5 feet (0.01 acre)
230-kV H-Frame (Removal)	9 (Proposed)	–[3]	150 x 100 feet (0.3 acre)	–[4]
230-kV 3-Pole Dead- end	4 (Proposed)	–[3]	250 x 150 feet (0.6 acre)	40 x 130 feet (0.1 acre)
138-kV H-Frame	8 (Proposed)	–[3]	150 x 250 feet (0.9 acre)	16.5 x 5 feet (0.001 acre)
138-kV H-Frame (Removal)	10 (Proposed)	–[3]	100 x 100 feet (0.2 acre)	–[4]
138-kV 3-Pole Dead- end	3 (Proposed)	–[3]	250 x 150 feet (0.9 acre)	30 x 130 feet (0.09 acre)
69-kV H-Frame (Removal)	94 (Proposed)	–[3]	90 x 90 feet (0.2 acre)	–[4]
Stations				
Longhorn	1	188.9 acres	24.4 acres	19.6 acres
Access Roads[5]				
Existing Road, Moderate Improvements (21-70%)	148.8 miles (Proposed)/ 13.2 miles (Alternatives)	100 feet (width)	16 feet (width)	14 feet (width)
Existing Road, Extensive Improvements (71-100%)	73.4 miles (Proposed)/ 6.3 miles (Alternatives)	100 feet (width)	30 feet (width)	14 feet (width)

Table PF-1: Site Boundary and Temporary/Permanent Disturbance Areas by Facility Component

Component	Length or Count	Site Boundary[1]	Construction Disturbance	Operations Disturbance
New, Bladed	88.8 miles (Proposed)/ 12.8 miles	200 feet (width)	35 feet (width)	14 feet (width)
New, Primitive	117.5 miles (Proposed)/ 12.8 miles	200 feet (width)	16 feet (width)	10 feet (width)
Permanent Facilities				
Communication Station	10 (Proposed)/ 2 (Alternative)	–[2]	100 x 100 feet (0.2 acre)	75 x 75 feet (0.1 acre)
Distribution Power Lines to Communication Station[7]	7 (Proposed)/ 2 (Alternative)	50 feet (width)	25 feet (width)	14 feet (width)
Temporary Facilities				
Multi-use Areas	30 (Proposed)/ 4 (Alternative)	Discrete site boundary; discontiguous from transmission line	23 acres	–
Light Duty Fly Yards	4 (Proposed)	Discrete site boundary; adjacent to transmission line site boundary	5 acres	–
Pulling and Tensioning Sites	299 (Proposed)/ 32 (Alternative)	Discrete site boundary; adjacent to transmission line site boundary	4 acres	–

[1] Site Boundary size may be less than indicated in specific areas to avoid impacts to protected areas or for other reasons.
[2] No temporary or permanent disturbance expected along centerline, other than for specific facility features indicated below.
[3] Component will be sited entirely within the site boundary.
[4] No permanent disturbance expected once existing towers are removed.
[5] See the Road Classification Guide and Access Control Plan (Exhibit B, Attachment B-5) for more information about road types.
[6] Existing roads with no substantial improvements are defined as existing roads that require improvements along 20 percent or less of the entire road segment. These roads have minimal to no temporary or permanent disturbance impacts beyond their existing road surface/profile, are not included in site boundary.
[7] Applicant will construct distribution lines to communication stations within their service territory.

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III.B.2. Proposed Facility Location by County

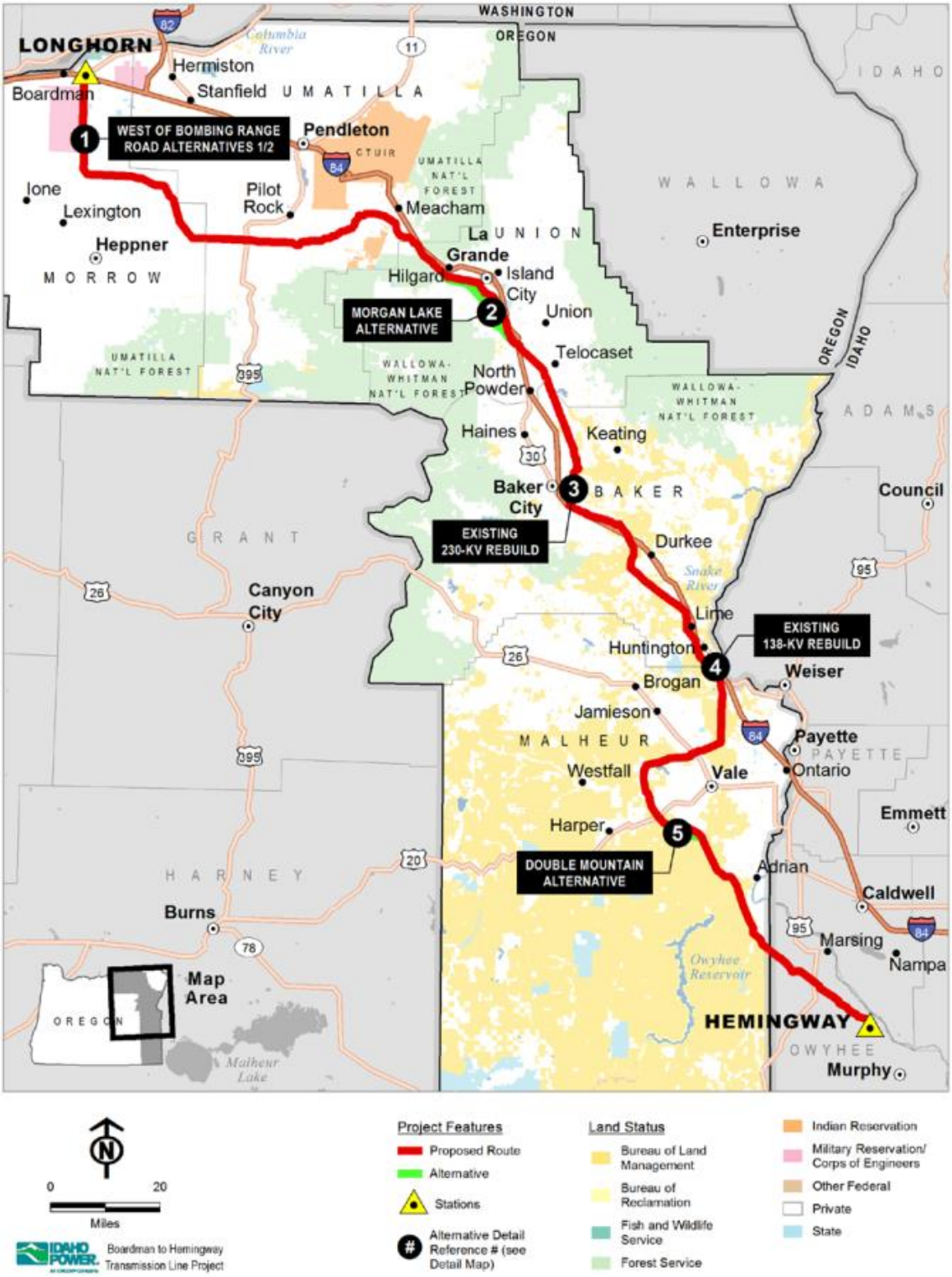
The proposed site boundary would traverse five counties in Oregon including Morrow, Umatilla, Union, Baker and Malheur, as described in detail in ASC Exhibit C, which includes maps of the proposed facility location. As depicted in Table PF-2, *Route Mileage Summary by Land Manager/Owner* below, the majority of the proposed site boundary would be located on private land; however, portions of the proposed and alternative routes would also be located on federal and state land throughout the five affected Oregon counties. Figure 2, *Proposed and Alternative Transmission Line Routes* below presents the proposed facility site boundary, including the overall proposed route and references to the locations of proposed alternative routes. Figure 3, *Proposed Alternative Route Location Maps*, illustrates the proposed alternative routes that are referenced in Figure 2.

Table PF-2: Route Mileage Summary by Land Manager/Owner

Route Name	County	Total Miles	BLM		BOR		DoD/ USACE		State		Private		USFS	
			Miles	%	Miles	%	Miles	%	Miles	%	Miles	%	Miles	%
Proposed Route														
Proposed Route	Morrow	47.5	–	–	–	–	10.5	22%	–	–	36.9	78%	–	–
	Umatilla	40.9	–	–	–	–	–	–	–	–	40.9	100%	–	–
	Union	39.9	0.2	<1%	–	–	–	–	1.1	3%	31.5	81%	7.1	18%
	Baker	68.4	11.9	17%	–	–	–	–	–	–	56.5	83%	–	–
	Malheur	74.1	53.3	72%	0.5	1%	–	–	–	–	20.2	27%	–	–
230-kV Rebuild	Baker	0.9	–	–	–	–	–	–	–	–	0.9	100%	–	–
138-kV Rebuild	Malheur	1.1	–	–	–	–	–	–	–	–	1.1	100%	–	–
69-kV Removal[2]	Morrow	12.0	–	–	–	–	10.5	88%	–	–	1.5	13%	–	–
Alternative Routes														
West of Bombing Range Road 1	Morrow	3.7	–	–	–	–	0.1	3%	–	–	3.6	97%	–	–
West of Bombing Range Road 2	Morrow	3.7	1.8	49%	–	–	–	–	–	–	1.9	51%	–	–
Morgan Lake	Union	18.5	0.8	4%	–	–	–	–	–	–	17.7	96%	–	–
Double Mountain	Malheur	7.4	7.4	100%	–	–	–	–	–	–	–	–	–	–

All totals are rounded and may not sum exactly. Dash indicates zero.
Miles of 69-kV removal are not included in total route summary.
BLM – U.S. Department of the Interior, Bureau of Land Management; BOR – Bureau of Reclamation; DoD – Department of Defense; USACE – United States Army Corps of Engineers; USFS – United States Forest Service.

1 **Figure 2: Proposed and Alternative Transmission Line Routes**



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1 **Figure 3: Proposed Alternative Route Location Maps**

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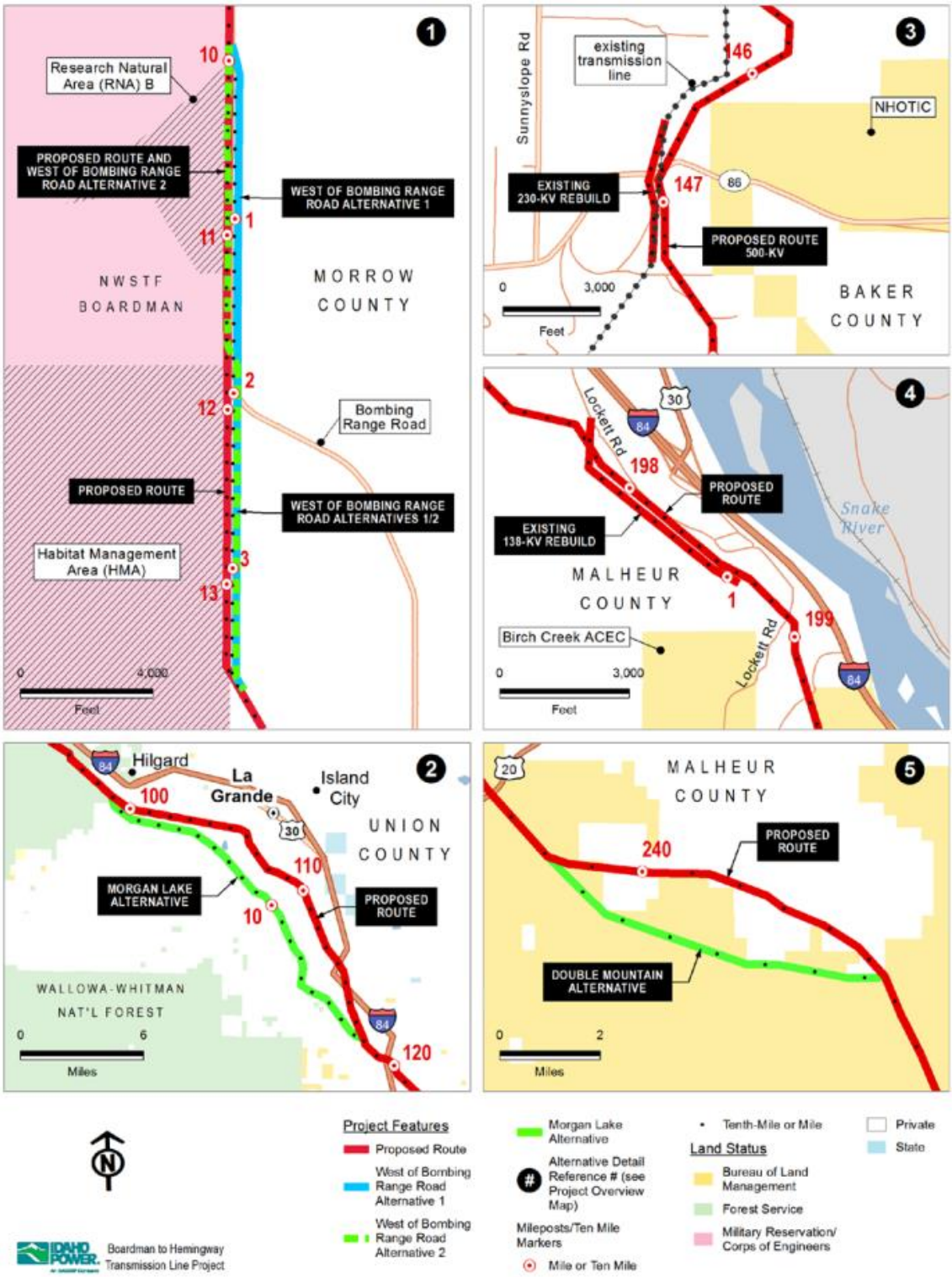

Morrow County: Proposed Facility Components

The proposed transmission line route would cross approximately 47.5 miles in Morrow County beginning at the proposed Longhorn Station. The predominant land uses along the Morrow County segment of the proposed route are irrigated agriculture, dryland farming, and rangeland. The Navy (United States Department of Defense) owns and operates a training range called the Naval Weapons Systems Training Facility Boardman (NWSTF Boardman) in this area. The applicant proposes one communication station in Morrow County, which would be located on Agriculture-Exclusive Farm Use (EFU) zoned land, currently used as a dryland wheat field. As provided in Table PF-3, *Proposed Route Features – Morrow County* below, the proposed route would include five multi-use areas in Morrow County, and none of the proposed multi-use areas would include a light-duty fly yard.[28]

Table PF-3: Proposed Route Features – Morrow County

Project Features	Number of Sites
Towers – Single Circuit 500-kV Lattice	147
Towers – Single Circuit 500-kV H-Frame	73
Towers – Single Circuit 500-kV 3-Pole Dead-end	1
Communication Station(s)	1
Light Duty Fly Yards	0
Multi-Use Areas	5
Pulling and Tensioning Sites	39
Station	1
Access Roads	**Total Miles**
Existing, 21-70% Improved	19.4
Existing, 71-100% Improved	10.8
New, Bladed	1.4
New, Primitive	10.6
Crossings by Proposed Route	**Number of Crossings**
High-Voltage Transmission Line Crossings[1]	1
Existing Road Crossings[2]	3
Existing Railroad Crossings[3]	1

[1] Source: ABB Ventyx (2016) and Idaho Power Company; includes only transmission lines over 69 kV.
[2] Source: Esri (2013); includes Interstate, federal, and state highways.
[3] Source: Oregon Department of Transportation (2013).
Source: B2HAPPDoc3-9 ASC 03_Exhibit C_Project_Location_ASC 2018-09-28, Table C-2.

The proposed facility would include the Longhorn Station, which the applicant proposes to construct and operate at the northern terminus of the transmission line in Morrow County. As the applicant explains, Bonneville Power Administration (BPA) has planned the Longhorn

[28] Facility components, the longhorn Station, related or supporting facilities, and temporary facilities such as multi-use areas and light duty fly yards are discussed in more detail in section III.B of this order.

Station on approximately 20-acres of land it purchased from the Port of Morrow. The application includes a request to construct and operate that station if BPA does not develop it on a schedule consistent with the applicant proposed development schedule.

The proposed route exits the Longhorn Station to the west, generally paralleling an existing 500-kV transmission line for about 0.3 miles. The proposed route then turns south and crosses I-84, coming in parallel with Bombing Range Road on the east side until milepost (MP) 1.2. At that point, the proposed route crosses but stays in parallel with the west side of Bombing Range Road until MP 3.0, then the proposed route enters the NWSTF Boardman property utilizing the existing 90-foot-wide BPA 69-kV right-of-way (ROW). Structures for the portion of the proposed facility within the existing BPA ROW, in the area of Bombing Range Road and NWSTF Boardman will be 100 feet or less in height. From MP 7 to MP 9, the proposed route passes through the NWSTF Boardman approach zone easement. From MP 10 to MP 11.2, the proposed route crosses a portion of the Boardman Research Natural Area (RNA) located on NWSTF Boardman. The Boardman RNA was established in 1978 as part of a federal government system established for research and educational purposes. It is co-managed by the Navy and The Nature Conservancy.

From MP 11.7 to MP 13.5 the proposed route crosses a portion of the NWSTF Boardman's Habitat Management Area (HMA). The Boardman HMA was established in 2016 as mitigation for training impacts to the Washington ground squirrel. At MP 13.5, the proposed route leaves the existing BPA 69-kV ROW and the NWSTF Boardman and proceeds in a southeasterly direction. At MP 15.4, the irrigated agriculture along the proposed route comes to an end and dryland farming becomes the dominant land use. At MP 18, the proposed route turns southeast and then at MP 19.3 turns due east crossing Bombing Range Road. The proposed route continues due east crossing lands under dryland farming practices. At MP 21.2 the proposed route crosses State Highway 207, at MP 27.5 it crosses Pine City Road and Little Butter Creek, at MP 28.3 it crosses Butter Creek and Big Butter Creek Lane, and at MP 34 it again crosses Big Butter Creek Lane and Butter Creek.

The applicant proposes two alternative routes in Morrow County. As described in ASC Exhibit C, the West of Bombing Range Road alternative 1 would be a 3.7-mile departure from the proposed route. It differs from the proposed route by shifting the proposed transmission line from Navy-owned land on the west side of Bombing Range Road to private land on the east side of the road before rejoining the proposed route south of the Navy-owned land. This alternative would avoid the Navy-owned land on the west side of the road that includes the Boardman Research Natural Area, but would result in impacts to agricultural operations on the east side that other would be avoided with the proposed route. See Figure 3 for an illustration of this alternative. As proposed by the applicant structures for the portion of the proposed facility within the area of Bombing Range Road will be 100 feet or less in height.

The West of Bombing Range Road alternative 2 would also depart from the proposed route for 3.7 miles. This alternative would be partially located on Navy-owned land on the west side of

Bombing Range Road before crossing to the east side of that road. This alternative differs from the proposed route along the west side of Bombing Range Road by using an alternative Y-frame structure-type. After the alternative crosses to the private lands on the east side of Bombing Range Road, it would follow the same path as West of Bombing Range Road alternative 1. The applicant developed this alternative to avoid the agricultural impacts associated with West of Bombing Range Road alternative 1 on the east side of the Bombing Range, while also avoiding the Boardman Research Natural Area. See Figure 3 for an illustration of this alternative.

Umatilla County: Proposed Facility Components

The transmission line proposed route would cross approximately 40.8 miles of land in Umatilla County. All of the impacted land in Umatilla County is privately owned. As described in Table PF-4 below, the proposed route would include seven multi-use areas in Umatilla County.[29] One of the proposed multi-use areas in Umatilla County would include a light-duty fly yard, which would be located on land zoned by Umatilla County for Grazing Farm use. The applicant also proposes two communication stations in Umatilla County, both of which would be located on Agriculture-EFU-zoned land, currently used as a dryland wheat field. One of the proposed stations also is subject to a Critical Winter Range Overlay, as discussed further in Section IV.F., *Fish and Wildlife Habitat* of this order. There are no alternative routes proposed in Umatilla County.

Table PF-4: Proposed Route Features – Umatilla County

Project Features	Number of Sites
Towers – Single Circuit 500-kV Lattice	161
Communication Station(s)	2
Light Duty Fly Yards	1
Multi-Use Areas	7
Pulling and Tensioning Sites	41
Station	0
Access Roads	**Total Miles**
Existing, 21-70% Improved	15.6
Existing, 71-100% Improved	21.2
New, Bladed	5.1
New, Primitive	7.4
Crossings by Proposed Route	**Number of Crossings**
High-Voltage Transmission Line Crossings[1]	0
Existing Road Crossings[2]	1
Existing Railroad Crossings[3]	0

[29] Facility components, the longhorn Station, related or supporting facilities, and temporary facilities such as multi-use areas and light duty fly yards are discussed in more detail in section III.B of this order.

Table PF-4: Proposed Route Features – Umatilla County

Project Features	Number of Sites
[1] Source: ABB Ventyx (2016) and Idaho Power Company; includes only transmission lines over 69 kV. [2] Source: Esri (2013); includes Interstate, federal, and state highways. [3] Source: Oregon Department of Transportation (2013). Source: B2HAPPDoc3-9 ASC 03_Exhibit C_Project_Location_ASC 2018-09-28, Table C-3.	

Union County: Proposed Facility Components

The transmission line proposed route would cross approximately 39.9 miles of land in Union County. As provided in Table PF-5 below, the proposed route would include three multi-use areas in Union County, however none of the proposed multi-use areas would include a light-duty fly yard. The applicant proposes two communication stations in Union County along the proposed route, one of which would be located on Timber-Grazing zoned land and the other of which would be located on Agriculture-Grazing zoned land.

Table PF-5: Proposed Route Features – Union County

Project Features	Number of Sites
Towers – Single Circuit 500-kV Lattice	169
Communication Station(s)	2
Light Duty Fly Yards	0
Multi-Use Areas	3
Pulling and Tensioning Sites	43
Station	0
Access Roads	**Total Miles**
Existing, 21-70% Improved	31.1
Existing, 71-100% Improved	6.4
New, Bladed	7.2
New, Primitive	0.4
Crossings by Proposed Route	**Number of Crossings**
High-Voltage Transmission Line Crossings[1]	3
Existing Road Crossings[2]	4
Existing Railroad Crossings[3]	3
[1] Source: ABB Ventyx (2016) and Idaho Power Company; includes only transmission lines over 69 kV. [2] Source: Esri (2013); includes Interstate, federal, and state highways. [3] Source: Oregon Department of Transportation (2013). Source: B2HAPPDoc3-9 ASC 03_Exhibit C_Project_Location_ASC 2018-09-28, Table C-4.	

The Morgan Lake alternative is the only alternative route proposed in Union County and was developed based on input from landowners. The Morgan Lake alternative would be an 18.5-mile departure from the proposed route, located west of the proposed route, leaving that route approximately one mile west of the Hilgard Junction State Park and rejoining the proposed route southeast of Ladd Canyon. Compared to the proposed route, the Morgan Lake alternative would cross fewer parcels with residences, would not cross the Ladd Marsh Wildlife Area/State

Natural Heritage Area (the "Ladd Marsh Wildlife Area"), would not cross Interstate-84 (I-84) and would be 0.5 mile shorter than the proposed route, however, the alternative is proposed to pass near Morgan Lake Park, a park managed by the City of La Grande. For additional description of Morgan Lake Park, see section IV.L., *Recreation*, of this order. The Morgan Lake alternative would include one alternative communication station in Union County, which would be located approximately 0.3 mile south of Morgan Lake. That station would be located on grass land, zoned Timber Grazing by Union County.

Baker County: Proposed Facility Components

The transmission line proposed route would cross approximately 68.4 miles of land in Baker County. In addition to the transmission line, the proposed route would include six multi-use areas in Baker County. One of the proposed multi-use areas in Baker County would include a light-duty fly yard, which would be located on land zoned by Umatilla County for Agriculture-EFU. The applicant proposes two communication stations in Baker County, both of which would be located on Agriculture-EFU-zoned land. There are no alternative routes proposed in Baker County.

Table PF-6: Proposed Route Features – Baker County

Project Features	Number of Sites
Towers – Single Circuit 500-kV Lattice	281
Towers – Single Circuit 230-kV H-Frame	5
Towers – Single Circuit 230-kV 3-Pole Dead-end	4
Communication Station(s)	2
Light Duty Fly Yards	1
Multi-Use Areas	6
Pulling and Tensioning Sites	61
Station	0
Access Roads	**Total Miles**
Existing, 21-70% Improved	41.0
Existing, 71-100% Improved	22.2
New, Bladed	22.2
New, Primitive	6.0
Crossings by Proposed Route	**Number of Crossings**
High-Voltage Transmission Line Crossings[1]	9
Existing Road Crossings[2]	3
Existing Railroad Crossings[3]	1

[1] Source: ABB Ventyx (2016) and Idaho Power Company; includes only transmission lines over 69 kV.
[2] Source: Esri (2013); includes Interstate, federal, and state highways.
[3] Source: Oregon Department of Transportation (2013).
Source: B2HAPPDoc3-9 ASC 03_Exhibit C_Project_Location_ASC 2018-09-28, Table C-5.

Malheur County: Proposed Facility Components

The transmission line proposed route would cross approximately 74.1 miles of land in Malheur County. In addition to the proposed transmission line, the proposed route would include nine multi-use areas in Malheur County. The applicant summarizes the exact location, size and land status of each of these proposed multi-use areas in ASC Exhibit C, Table C-14. Two of the proposed multi-use areas in Malheur County would include light-duty fly yards, both of which would be located on land zoned by Malheur County for Agriculture-Exclusive Range Use. The applicant proposes three communication stations in Malheur County, one of which would be located on Agriculture-EFU-zoned land and two of which would be located on Agriculture-Exclusive Range Use-zoned land.

Table PF-7: Proposed Route Features – Malheur County

Project Features	Number of Sites
Towers – Single Circuit 500-kV Lattice	327
Towers – Single Circuit 500-kV H-Frame	6
Towers – Single Circuit 500-kV 3-Pole Dead-end	3
Towers – Single Circuit 138-kV H-Frame	8
Towers – Single Circuit 138-kV 3-Pole Dead-end	3
Communication Station(s)	3
Light Duty Fly Yards	2
Multi-Use Areas	9
Pulling and Tensioning Sites	83
Station	0
Access Roads	**Total Miles**
Existing, 21-70% Improved	41.7
Existing, 71-100% Improved	12.8
New, Bladed	53.1
New, Primitive	13.8
Crossings by Proposed Route	**Number of Crossings**
High Voltage Transmission Line Crossings[1]	4
Existing Road Crossings[2]	2
Existing Railroad Crossings[3]	1

[1] Source: ABB Ventyx (2016) and Idaho Power Company; includes only transmission lines over 69 kV.
[2] Source: Esri (2013); includes Interstate, federal, and state highways.
[3] Source: Oregon Department of Transportation (2013).
Source: B2HAPPDoc3-9 ASC 03_Exhibit C_Project_Location_ASC 2018-09-28, Table C-6.

The applicant proposes one alternative route in Malheur County, the Double Mountain alternative. The Double Mountain alternative would be a 7.4-mile departure from the proposed route. That alternative would be located southwest of the proposed route, north of the Double Mountains. The proposed alternative would be located entirely on BLM-managed land, mostly on rangeland and in sagebrush. Almost the entire length of this alternative would

be located within the BLM-designated Double Mountain Wilderness Characteristic Unit. The Double Mountain alternative would include one alternative communication station in Malheur County. That station would be located on shrub and grass land, zoned Agriculture-Exclusive Range Use by Malheur County.

III.C. Proposed Facility

The proposed facility would include approximately 300 miles of electric transmission line, with approximately 272.8 miles proposed to be located in Oregon and 23.8 miles in Idaho. It would include 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 existing 138-kV transmission line into a new right-of-way (ROW).[30] Section III.B.2., *Proposed Facility Location by County*, above, provides a description of the alternatives proposed as well as in ASC Exhibit C, Section 3.2

As described in ASC Exhibit B, the applicant requests Council approval of the following major facility components proposed to be located within Oregon:

- Transmission Lines: The proposed route would consist of an approximately 270.8-mile-long single-circuit 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 into a new ROW. Four proposed alternative routes would include approximately 33.3 miles of transmission line.

- Longhorn Station: A proposed 20-acre switching station, the Longhorn Station, would be located near the Port of Morrow, Oregon. The proposed switching station would provide a combination of switching, protection, and control equipment arranged to provide circuit protection and system switching flexibility for the transfer of electric power; it would not incorporate step-down or step-up voltage equipment. The proposed station would connect the proposed transmission line to other 500-kV transmission lines and the Pacific Northwest power market.

- Communication Stations: Ten proposed communication station sites (and two alternative communication stations sites) would each consist of a communication shelter and related facilities. Each proposed communication station site would be less than 1/4-acre in size.

- Access Roads: The proposed facility would include permanent access roads for the proposed route, including 206.3 miles of new roads and 223.2 miles of existing roads requiring substantial modification. The proposed alternative routes would include 30.2 miles of new roads and 22.7 miles of existing roads requiring substantial modification.

[30] B2HAPPDoc3-3 ASC 02a_Exhibit_B_Project Description_ASC 2018-09-28, Section 1.1.

- Temporary Features used during Construction: The proposed transmission line would include 30 temporary multi-use areas and 299 temporary pulling and tensioning sites, four of which would have light-duty fly yards within the pulling and tensioning sites.

All of these are discussed further below.

Transmission Lines

The proposed transmission line system would include the proposed transmission line as described above and towers within an established right-of-way (ROW), transmission and foundation structures, conductors, grounding system, and associated hardware. In addition, the applicant proposes to remove existing 69-kV structures along the eastern boundary of the Naval Weapons System Training Facility Boardman (NWSTF Boardman).

Transmission Towers

ASC Exhibit B, Figures B-15 through B-20 illustrate the various types of tower structures the applicant proposes to use along the proposed and alternative routes. The majority of the proposed transmission line circuits would be supported by 500-kV single-circuit steel lattice towers (Figure B-15). The applicant proposes alternative 500-kV structure types in specific locations where using different tower structures may be necessary to reduce visual or other impacts. ASC Exhibit B, Figures B-16 through B-20 illustrate structure alternatives to reduce visual impacts, these structures are also the typical structures used for 230-kV and 138-kVtransmission line support. Different types of support structures are also used for special purposes, including tangent, angle, and dead-end structures, tubular steel frames, transmission line crossing structures and transposition structures.

Structure and Conductor Clearances

The applicant explains that its proposed conductor phase-to-phase and phase-to-ground clearance parameters are determined in accordance with the applicant's company standards, which are based on National Electrical Safety Code (NESC) requirements produced by the American National Standards Institute (ANSI). These standards and requirements provide minimum distances between the conductors and ground, crossing points of other lines and the transmission support structure and other conductors, and minimum working clearances for personnel during energized operation and maintenance activities. At normal operating conditions, the minimum clearance of conductors above ground is 34.5 feet for 500-kV transmission lines, 27 feet for 230-kV transmission lines, and 30 feet for 138-kV transmission lines.

Structure Foundations

The applicant explains that the 500-kV single-circuit lattice steel structures would each require four foundations, one on each of the four corners of the lattice towers. The applicant's preliminary design indicates that the foundations for the single-circuit tangent lattice towers would be composed of steel-reinforced concrete drilled piers with a typical diameter of four feet and a depth of approximately 15 feet. The 500-kV H-frame structures would require two foundations for each tangent structure, one for each pole that comprises the H-frame structure. Angle and dead-end structures would use a three-pole structure, each with its own foundation. These would be steel-reinforced drilled piers with a typical diameter of six to eight feet and a depth of approximately 25 to 40 feet. The 138-kV H-frame structures would be wood poles directly-embedded in the ground.

Typical direct-embedded foundations sizes would be 5 feet in diameter and 12 feet deep. Tangent structures would be directly-embedded in the ground using a single drilled boring, typically five feet in diameter and 15 feet deep. Angle and dead-end structures would be on steel-reinforced drilled pier foundations with a typical diameter of five to six feet and a depth of approximately 20 to 25 feet. For the 230-kV frame structures, each of the two poles for tangent structures would be directly-embedded in the ground; each of the three poles that make up the angle and dead-end structures would be also be direct-embedded and guyed. The exact foundation style, diameter, and depth would be finalized during final design and dependent on structure loading conditions and the type of soil or rock present at each specific site. The applicant depicts the typical foundation diameters and depths for the proposed structure types at ASC Exhibit B, Table B-10.

Conductors

The applicant proposes to use reinforced conductor steel for the proposed 500-kV lattice structure lines. The applicant explains that each phase of a 500-kV three-phase circuit would be composed of three sub-conductors in a triple bundle configuration. The triple-bundled configuration would provide adequate current carrying capacity and provide for a reduction in audible noise (corona effect) and radio interference as compared to a single large-diameter conductor. In instances where multiple conductors would be used in a bundle for each phase, the bundle spacing would be maintained through conductor spacers placed at intermediate points along the conductor bundle between each structure. In addition to maintaining the correct bundle configuration and spacing, the spacers are also designed to lessen wind-induced vibration in the conductors.

The number of spacers required in each span between towers would be determined during the final design of the transmission line. For the proposed rebuilt 230-kV line, each phase of the 230-kV three-phase circuit would be composed of one conductor. The applicant proposes to use one conductor per phase for the proposed 138-kV rebuilt line.

Other Hardware

Insulators

The applicant explains in ASC Exhibit B and as noted above, insulators would be used to suspend each conductor bundle ("phase") from the structure, maintaining an appropriate electrical clearance between the conductors, the ground, and the structure. Dead-end insulator assemblies for the transmission lines would use an "I-shaped" configuration, which consists of insulators hung from either a tower dead-end arm or a dead-end pole in the form of an "I." Insulators would be composed of green-tinted toughened glass. The typical insulator assemblies for the 500-kV steel lattice tangent structures would consist of an insulator string hung in the form of an "I". However, for 500-kV H-frame structures insulator assemblies would consist of two insulator strings hung in the form of a "V". In ASC Exhibit B, Figure B-18, the applicant illustrates that insulator assemblies for the alternative 500-kV H-frame would consist of one insulator string hung in the form of an "I" on the outside and two insulator strings hung in the form of "V" on the inside. Insulator assemblies for 230-kV H-frame structures would consist of a single insulator suspended from the structure cross arm in the form of an "I." Finally, insulator assemblies for 138-kV tangent structures would consist of one insulator string hung in the form of an "I" that extend vertically down from the crossbar.

Grounding Systems

As the applicant explains in ASC Exhibit B, the proposed transmission line would consist of alternating current transmission lines, which have the potential to induce currents on adjacent metallic structures such as other transmission lines, railroads, pipelines, fences, or structures that are parallel to, cross, or are adjacent to the transmission line. Induced currents on those facilities would occur to some degree during steady-state operating conditions and during a fault condition on the transmission line. As the applicant explains that the magnitude of the effects of the alternating current induced currents on adjacent facilities would be dependent on the magnitude of the current flows in the transmission line, the proximity of the adjacent facility to the line, and the distance (length) along which the two facilities parallel one another. This is discussed further in section IV.P.1., *Siting Standards for Transmission Line*, of this order.

As described in ASC Exhibit DD, the methods and equipment needed to mitigate these conditions would be determined through electrical studies of specific situations. As standard practice and as part of the design of the proposed transmission line, the applicant explains that electrical equipment and all fences, metal gates, pipelines, metal buildings, and other metal structures adjacent to the ROW or that cross or are within the transmission line ROW, would be grounded as determined necessary. Metallic objects outside of the ROW may also be grounded, depending on the distance from the transmission line as determined through the electrical studies. The applicant explains that these actions would address the majority of induced current effects on metallic facilities adjacent to the line by shunting the induced currents to ground through ground rods, ground mats, and other grounding systems, thereby reducing the

effect that a person may experience when touching a metallic object near the line. Potential public health effects from transmission lines are discussed section IV.P.1., *Siting Standards for Transmission Line*, of this order.

Additional Hardware

In addition to the conductors, insulators, and overhead shield wires, the applicant explains that it would install other associated hardware on the tower as part of the insulator assembly to support the conductors and shield wires. This hardware would include clamps, shackles, links, plates, and other pieces composed of galvanized steel and aluminum.

A grounding system would be installed at the base of each transmission structure that would consist of copper or copper-clad ground rods embedded into the ground in immediate proximity to the structure foundation and connected to the structure by a buried copper lead. When the resistance-to-ground for a grounded transmission structure is greater than a specified impedance value, ground rods or counterpoise would be installed to lower the resistance to below a specified impedance value. Counterpoise consists of a bare copper-clad or galvanized-steel cable buried a minimum of 12 inches deep, extending from structures (from one or more legs of structure) for approximately 200 feet within the ROW.

The applicant explains that it may install other hardware not associated with the transmission of electricity, including aerial marker spheres or aircraft warning lighting as required for the conductors or structures pursuant to Federal Aviation Administration (FAA) regulations. Structure proximity to airports and structure height determine whether FAA regulations would apply based on an assessment of wire/tower strike risk. The applicant does not anticipate that structure lighting would be required because proposed structures would be less than 200 feet tall and would not be near airports that require structure lighting.

Removal of Existing 69-kV Structures

The applicant proposes to remove the existing 69-kV transmission line structures along the eastern boundary of the NWSTF Boardman in Morrow County. The majority of the structures would be removed by taking down the overhead conductor and removing each of the wooden poles at three inches below ground surface. The poles would be lifted by cranes onto trucks and removed from the site.

Three H-frame structures located in Washington Ground Squirrel (WAGS) habitat would be removed by cutting the poles into sections, transporting the pole sections by foot to the nearest existing road, and driving the pole sections off-site. The construction contractor would climb the poles and remove the sections starting at the top. The poles would be removed down to slightly above ground level in order to eliminate their potential use as raptor perching structures while avoiding ground disturbance. The below grade portions of the poles would be left in place. For additional information on mitigating impacts to fish and wildlife habitat see

section IV.F., *Fish and Wildlife Habitat*, of this order. Alternatively, the wooden pole structures could be removed by using a helicopter in conjunction with hand crews working on the ground. A final decision on the methods used to remove the poles would be made by the applicant prior to facility construction.

Longhorn Switching Station

The western terminus of the proposed transmission line would be the proposed Longhorn Switching Station, or the Longhorn Station. As noted above, BPA has planned the Longhorn Station on land it purchased from the Port of Morrow. The applicant is requesting authorization to construct and operate the Longhorn Station if the BPA does not develop it within the applicant's timeline.[31]

Where the 500-kV transmission line terminates at the Longhorn Station, the applicant proposes to install 500-kV circuit breakers, high-voltage switches, bus supports, and transmission line termination structures, a 500-kV series capacitor bank, and 500-kV shunt reactor banks. The 500-kV transmission line termination structures would be approximately 125 to 135 feet tall. The applicant proposes to construct a control house to accommodate the necessary system communications, control equipment, and a restroom facility. A new all-weather access road would be used to reach the station site. The station site would be supplied by distribution power brought in from the nearby existing system as necessary and fiber optic signal communication equipment and a backup propane-powered generator would be installed.

The applicant proposes to install fire protection systems at the Longhorn Station, which could include:

- Automatic suppression systems such as fire sprinklers, foam, gaseous, explosion suppression, or other specialized extinguishing systems and appropriate alarms.
- Adequate water supply, storage, and distribution systems for water-based extinguishing systems.
- Automatic fire detection, occupant warning, manual fire alarm, and fire alarm reporting systems combined with properly equipped and adequately trained fire departments.
- Fire barrier systems or combinations of physical separation and barriers for outdoor locations.

[31] The Energy Facility Siting Council does not have jurisdiction over BPA projects and infrastructure. In the event that the Longhorn Station is built by BPA independent of an approved site certificate, Council approval would not be required. EFSC would not maintain compliance authority over the Longhorn Station aside from specific components at the station associated only with the approved facility site certificate.

Communication Systems and Stations

Optical Ground Wire

The applicant proposes to provide primary communications for relaying and control via the optical ground wire that would be installed on the transmission lines. No new microwave sites are proposed. Each 500-kV structure would have two lightning protection shield wires installed on the structure peaks.

Communication Station Sites

As noted above, the applicant proposes ten communication stations (and two alternative communication stations.) Each station would include a communication shelter and related facilities and would be less than a quarter acre in size. All communication station sites are proposed to be located on private lands, within the transmission line ROW.

The typical communication station site would be 100 feet by 100 feet, with a fenced area of 75 feet by 75 feet. The applicant would place a prefabricated concrete communications structure with dimensions of approximately 11.5 feet by 32 feet by 12 feet tall on each site, and construct access roads to the site.[32] Facility service power would be required at each of the ten communication station sites ultimately selected for development, with power from the local electric distribution circuits. A standby generator with a liquefied propane gas tank would be installed at the site inside the fenced area. Two separate conduit (underground) or aerial cable routes would be used for each fiber optic cable bundle between the transmission line and communication station. Conduits would be two-inch-diameter polyvinyl chloride and would be buried three feet below the surface extending from the communication shelter to two different legs of the transmission structure maintaining a 10-foot separation between the cables. All work would occur within the disturbance footprint for either the communication station or the structure to which the cables would attach. The applicant illustrates the plan arrangement of a typical communications station site layout at ASC Exhibit B, Figure B-26.

The applicant proposes to install smoke detectors at communication stations that would alarm through the Supervisory Control and Data Acquisition (SCADA) system, which would communicate to the certificate holder's System Dispatch Center along the fiber optic lines.

Communication Station Distribution Lines

Local electric distribution service providers would install distribution lines to serve the proposed transmission line's communication stations. Where the local service provider is a third party and not the certificate holder, the distribution lines would not be considered related or supporting facilities under ORS 469.300(24). However, the application anticipates that the

[32] B2HAPPDoc3-3 ASC 02a_Exhibit_B_Project Description_ASC 2018-09-28, Section 3.2.2.3.

certificate holder would be the local service provider in Malheur County and parts of Baker counties, and would serve communication stations BA-02, and MA-01, MA-02, MA-03, as well as alternative a communication station in Malheur County.[33] Therefore, those distribution lines would be considered related or supporting facilities, and are included within the site boundary.

Equipment and Systems for Fire Prevention and Suppression

Construction activities could result in risk of fire danger from smoking, refueling activities, operating vehicles and other equipment off improved roadways, welding activities, and the use of explosive materials and flammable liquids. During operation, the risk of fire would be primarily from vehicles and maintenance activities that require welding. As discussed further in section IV.M, *Public Services*, the applicant has established protocols to ensure that all federal, state, and county laws, ordinances, rules, and regulations pertaining to fire prevention and suppression would be strictly adhered to; and that all personnel would be advised of their responsibilities under the applicable fire laws and regulations. Specific fire protection systems would be determined during final design of these facilities; however, a key component of fire protection would be establishing and maintaining a right of way cleared of hazard trees and other tall vegetation that could come into contact with the transmission line during a wind storm or other event. Vegetative clearance of the right of way is further described in Sections IV.E., *Land Use*, and IV.M., *Public Services*, of this order and applicable attachments.

The prevention and suppression of wildfires in eastern Oregon is carried out by BLM, U.S. Forest Service (USFS), and local fire districts and agencies. The applicant has established protocols to ensure that, if the certificate holder became aware of an emergency situation caused by a fire on or threatening BLM-managed or National Forest lands, the certificate holder would notify the appropriate agency contact. Specific construction-related activities and safety measures would be implemented during construction of the transmission line to prevent fires and to ensure quick response and suppression if a fire occurs. Typical practices to prevent fires during construction and maintenance/repair activities could include brush clearing prior to work, posting a fire watch and 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 construction personnel, keeping vehicles on or within designated roads or work areas, and providing fire suppression equipment and emergency notification numbers at each construction site. Additional information specific to vegetative maintenance, clearing, and fire suppression are discussed in section IV.M., *Public Services*.

Under the proposed protocols, the certificate holder would require its contractor to maintain a list, to be provided to local fire-protection agencies and the Department, of all equipment that is either specifically designed for, or capable of, being adapted to fighting fires. It would require its contractor to provide basic fire-fighting equipment on-site during construction, including fire extinguishers, shovels, axes, and other tools in sufficient numbers so each employee on-site can

[33] B2HAPPDoc3-3 ASC 02a_Exhibit_B_Project Description_ASC 2018-09-28, Section 3.3.4.

assist in the event of a fire-fighting operation. The applicant explains that during transmission line operation, risk of fire danger would be minimal. The primary causes of fire within the ROW would result from unauthorized entry by individuals for recreational purposes and from fires started outside the ROW. In the latter case, authorities could use the ROW as a potential point of attack for fighting a fire. During transmission line operation, access to the ROW would be restricted in accordance with jurisdictional agency or landowner requirements to minimize recreational use of the ROW. During maintenance operations, the certificate holder or its contractor would equip personnel with basic fire-fighting equipment. Maintenance crews would also carry emergency response/fire control phone numbers. Fire prevention and suppression measures are discussed more in Attachment U-3, to this order, Fire Prevention and Suppression Plan and section IV.M., *Public Services*.

Related or Supporting Facilities (Permanent and Temporary)

Access Roads

The proposed transmission line would require vehicular access during construction and operation of the station, each communication station site, and each transmission structure, and to temporary facilities including multi-use areas and pulling and tensioning sites. The applicant describes the proposed access road classification and modification proposals in Attachment B-5, Road Classification Guide and Access Control Plan, attached to this order. Proposed access roads, which include both new roads and existing roads requiring substantial modification, are considered related or supporting facilities and are included within the site boundary. Existing roads that would be used for construction and operation of the facility but which would not require substantial modification are not "related or supporting facilities" and, therefore, are not included in the site boundary.[34] Table PF-8, *Summary of Access Road Classifications* below provides a summary of the road descriptions as proposed by the applicant.

Table PF-8: Summary of Access Road Classifications

Access Road Classification		Site Boundary	Construction Disturbance	Operations Disturbance	Road Prism or Profile Changes	Extent of Work
New Roads	Primitive	200 feet	16 feet	10 feet	Yes	Clearing of vegetation or obstructions. Create roads by direct vehicle travel.

[34] OAR 345-001-0010(51) states that "related or supporting facilities does not include any structure existing prior to construction of the energy facility, unless such structure must be significantly modified solely to serve the energy facility."

Table PF-8: Summary of Access Road Classifications

Access Road Classification		Site Boundary	Construction Disturbance	Operations Disturbance	Road Prism or Profile Changes	Extent of Work
	Bladed	200 feet	16–35 feet	14 feet	Yes	Clearing of vegetation or obstructions. Create roads by cutting/filling existing terrain.
Existing Roads - Substantial Modification	Substantial Modification, 21-70% Improved	100 feet	16 feet	14 feet	Yes	Reconstruct portions of existing road to improve road function. Possible road prism widening, profile adjustments, horizontal curve adjustments, or material placement.
	Substantial Modification, 71-100% Improved	100 feet	16–30 feet	14 feet	Yes	Reconstruct portions of existing road to improve road function. Possible road prism widening, profile adjustments, horizontal curve adjustments, or material placement.
Existing Roads – No Substantial Modification	No Substantial Modification, 0-20% Improved	NA[1]	NA[1]	NA[1]	No	Repair of existing road to maintain original road function. No betterment of existing road function or design.

[1] Existing roads with no substantial modifications are not included in the Site Boundary and do not have an operation or construction disturbance width assigned to them.
Source: B2HAPPDoc3-3 ASC 02a_Exhibit_B_Project Description_ASC 2018-09-28, Table B-12.

New Roads

For purposes of describing the disturbance width, the applicant has classified new roads as either "primitive" or "bladed." The site boundary for all new roads would be 200 feet wide (100 feet on either side of the centerline). The typical construction disturbance for primitive roads would be 16 feet and the operational width would be maintained at 10 feet. For bladed roads, the typical construction disturbance would be 16 feet wide, but could be as wide as 35 feet as

dictated by terrain and soil conditions, and the operational width for bladed roads would be 14 feet.

Existing Roads Requiring Substantial Modification

As discussed in ASC Exhibit B, to determine whether existing roads would require substantial modification, the applicant conducted field reconnaissance and surveyed aerial photos of existing road segments. If the applicant determined improvements to an existing road would involve one or more of the following activities, the road segment was classified as requiring substantial improvements:

1. increasing the width of the existing road prism;
2. changing the existing road alignment;
3. using materials inconsistent with the existing road surface;
4. changing the existing road profile; or
5. involving repairs to more than 20 percent of the road surface area defined by road prism width and longitudinal distance over a defined road segment.

Typical construction disturbance for existing roads requiring substantial modification would be 16 feet wide, but could be up to 30 feet wide when road modification exceeds 70 percent. The operational width would be 14 feet. The site boundary for a substantially modified existing road would be 100 feet wide (50 feet on either side of the centerline.)

Following construction, any new roads developed for access to multi-use areas would be removed and restored to preconstruction conditions, unless the landowner requests otherwise. Roads developed for pulling and tensioning sites would be permanent because they would also provide access to structures for operations and maintenance.

Temporary Multi-Use Areas

The applicant proposes to begin construction of the proposed facility by establishing temporary multi-use areas approximately every 15 miles along the ROW. The multi-use areas (MUAs) would be temporary construction areas that would serve as field offices; reporting locations for workers; parking space for vehicles and equipment; and sites for material delivery and storage, fabrication assembly of towers, cross arms and other hardware, concrete batch plants, and stations for equipment maintenance. Each proposed MUA would be approximately 30 acres in size. MUAs would be temporary, and after construction is complete, would be restored to pre-construction conditions in accordance with General Standard of Review Condition 9, as discussed in applicable sections of this order.

The applicant proposes to stage helicopter operations out of some multi-use areas. The final locations of helicopter operations at MUA's is discussed in section IV.M., *Public Services* and Public Services Condition 2. Construction activities facilitated by helicopters could include delivery of construction laborers, equipment, and materials to structure sites; transmission

structure placement; hardware installation; and wire stringing operations. Helicopters could also be used to support the construction and administration and management (either the certificate holder or the construction contractor or both). Where construction access by truck would not be practical due to steep terrain, all-terrain vehicle trails could be used to support maintenance activities. The use of helicopter construction methods would not change the length of the access road system required for operations because vehicle access would be required to each tower site regardless of the construction method.

As explained in ASC Exhibit B and Exhibit G, during construction, gasoline, diesel fuel, crankcase oil, lubricants, and cleaning solvents would be used along the transmission line corridor, typically at multi-use areas, and at the Longhorn Station construction site. These products would be used to fuel, lubricate, and clean vehicles and equipment and would be transported to the multi-use sites in containerized trucks or in other federal and state approved containers. Routine visual inspections for presence of petroleum leaks would be required for vehicles. Diesel fuel tanks would be located at the MUAs for vehicle and equipment fueling. Each fuel tank would be located within secondary containment and each station would be equipped with a spill kit. Refueling within the ROW would be conducted away from waterways. Accidental releases of hazardous materials would be prevented or minimized through proper containment of these substances during use and transportation to the site. Enclosed containment would be provided for petroleum products and chemicals to prevent spills and drainage. Waste products and petroleum-related construction waste would be removed to a disposal facility authorized to accept such materials. Materials, liquids, containment methods and the applicant's Spill Prevention, Control and Countermeasures Plan (SPCC Plan) are discussed more in section IV.N., *Waste Minimization* and section IV.D., *Soil Protection* of this order.

Temporary Pulling and Tensioning Sites and Light-Duty Fly Yards

The applicant explains that the construction of the proposed transmission line would require 299 pulling and tensioning sites. Specifically, pulling and tensioning sites would be required approximately every 1.5 to two miles along the ROW and at angle points greater than 30 degrees and would require approximately five acres at each end of the wire section to accommodate required equipment.[35] Equipment at pulling and tensioning sites would include tractors and trailers with spooled reels that hold the conductors and trucks with the tensioning equipment.

The applicant proposes four pulling and tensioning sites to include light-duty fly yards. The counties in which the light-duty fly years are proposed to be located are Umatilla, Baker and Malheur counties. The applicant explains that light-duty fly yards at these sites would be similar to the fly yards proposed for the multi-use areas but smaller in size. All of the equipment and activities that would occur at a multi-use area could also occur at a light-duty fly yard, except that oil, gas and explosive storage would not occur and no batch plants would be located at the

[35] B2HAPPDoc3-3 ASC 02a_Exhibit_B_Project Description_ASC 2018-09-28, Section 3.3.3.

light-duty fly yards within the pulling and tensioning sites. The light-duty fly yards would be approximately five-acre sites spaced approximately 15 miles apart.

Light duty fly yards and pulling and tension sites would be temporary, and after construction is complete, would be restored to pre-construction conditions in accordance with General Standard of Review Condition as discussed in applicable sections of this order.

Operations and Maintenance Activities

Routine operations and maintenance activities would include vegetative maintenance, weed control, and aerial and ground-based line inspection.

III.D. Survey Data Based on Final Design and Site Access

As noted in Section I., *Introduction*, of this order, Council does not have jurisdiction over matters that are not included in and governed by the site certificate and practices that do not relate to siting of an energy facility. Other matters outside the Council's jurisdiction are issues of land-use agreements, land-acquisition, land purchases, land leases, right-of-way easements, and any other legal proceeding that allows the applicant legal access to lands within the site boundary.

The following Council standards and applicable regulations require field-based surveys, literature review, and agency consultation to support Council review of compliance:

- Structural Standard (OAR 345-022-0020)
- Fish and Wildlife Habitat (OAR 345-022-0060)
- Threatened and Endangered Species (OAR 345-022-0070)
- Historic, Cultural and Archaeological Resources (OAR 345-022-0090)
- Oregon Removal-Fill Law (OAR 141-085-0500 through 141-085-0785; ORS 196.795 - 196.990)

Exhibits included in the ASC that correspond to these standards are: Exhibit H – Geologic Hazards and Soil Stability (Structural Standard), Exhibit J – Waters of the State; Exhibit P - Fish and Wildlife Habitat (Fish and Wildlife Habitat standard), Exhibit Q - Threatened and Endangered Plant and Animal Species (Threatened and Endangered Plant and Animal Species standard), and Exhibit S – Historic, Cultural and Archaeological Resources (Historic, Cultural and Archaeological Resources standard).

Information on the resources protected by the EFSC standards listed above are typically presented in an ASC based on the compilation of information based on a literature review and field surveys as appropriate. An applicant may rely upon existing literature, databases, agency consultation, agency data, aerial imagery, and geographic information system (GIS) data to

identify and describe resources that may be impacted by a proposed facility.[36] Some resources also require field surveys either during the preparation of as ASC, or prior to construction of a proposed facility which incorporates the final design and placement of facility components.

In ASC Exhibit B, the applicant explains that between the spring of 2011 and the summer of 2016, field surveys necessary to meet the submission requirements detailed in OAR 345-021-0010(1) were conducted, where the results were used to inform the federal NEPA review process.[37] The applicant conducted field surveys on publicly-owned state and federal lands and only on private property where the landowners granted access. Field surveys were not conducted where sites could not be accessed due to safety concerns or timing restrictions with landowners or the resource being surveyed. The applicant explains that access granted by landowners differed for each type of resource survey. For instance, some landowners allowed surveys on their lands for wetlands and waters of the state, but not for cultural and archaeological resources; others allowed the opposite.[38] In some instances, access was revoked by the landowner after one of the surveys had been completed, but not the other. For these reasons, some portions of the site boundary have been surveyed for some resources, but not for other resources.

The Department recommends that the additional survey information be submitted as pre-construction 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 completed to inform Exhibit H – Geologic Hazards and Soil Stability (Structural Standard), Exhibit J – Waters of the State; Exhibit P - Fish and Wildlife Habitat (Fish and Wildlife Habitat standard), Exhibit Q - Threatened and Endangered Plant and Animal Species (Threatened and Endangered Plant and Animal Species standard), and Exhibit S – Historic, Cultural and Archaeological Resources (Historic, Cultural and Archaeological Resources standard). Under ORS 469.503, to issue a site certificate, the Council shall determine that the preponderance of evidence on the record supports that the facility complies with the applicable standards adopted by the Council. The ASC, reviewing agency comments, comments from the public, and determinations/orders issued by EFSC/Department compile the evidentiary record for the proposed facility. The record includes information on resources compiled from literature review, agency consultation, GIS data, and other sources in conjunction with the field based survey results conducted with established survey areas for proposed and alternative facility component locations. 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

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[36] For example, Exhibit Q (OAR 345-021-0010(1)(q)(A) requires and applicant submit information related to threated or endangered plant and wildlife species that may be affected by a proposed facility "based on appropriate literature and field study."

[37] ORS 469.370(13) requires that "for a facility that is subject to and has been or will be reviewed by a federal agency under the National Environmental Policy Act 42 USC Section 4321, et seq., 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…"

[38] B2HAPPDoc3-3 ASC 02a_Exhibit_B_Project Description ASC 2018-09-28, Section 3.8.

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.

Pursuant to ORS 469.402, the Council may delegate future review and approval of compliance with site certificate conditions to the Department. All recent Council-approved energy facilities include conditions of approval in the site certificate that stipulate that pre-construction surveys be completed based on final design. These conditions also include the finalization of draft plans, including mitigation plans, which are submitted to the Department for approval in consultation with the appropriate reviewing agencies (e.g., ODFW, SHPO, county planning departments, or other agencies). For pre-construction conditions requiring review and approval by the Department, the Council retains the authority to approve, reject, or modify any revision or update of the plans or permits. For these reasons and the reasons discussed below associated with specific resources, and contingent upon site certificate conditions, the Department recommends that the additional survey information for all resources be submitted as pre-construction conditions of approval. As such, the conditions of approval recommended to be included in the site certified specific to field survey information will be described in each applicable section of this order.[39]

Fish and Wildlife Habitat, Threatened and Endangered Species, and Structural Surveys

The natural characteristics of resources evaluated by the Council's Fish and Wildlife Habitat standard, Threatened and Endangered Species standard, and Structural Standard allows the characterization of certain parcels similar to adjacent and nearby parcels using existing data, or by extrapolating from areas where field surveys can be conducted. For instance, fish and wildlife habitat tends to remain similar across ecoregions; similarly, the underlying geotechnical conditions trend the same based on similar topography and other known issues. For linear facilities, such as the proposed facility, the applicant gained access to conduct field surveys on several parcels within the site boundary but did not have access on some adjacent parcels. The Council may rely on this information to represent and categorize larger areas within the site boundary sufficient to make findings and impose conditions on the applicable standards. Therefore, if the Council determines that there is sufficient information to evaluate resources and potential impacts to such resources, it may be able to find compliance with its standards and impose conditions in areas where site access and field surveys have been conducted, and in the areas where surveys have not been conducted. The Council can impose conditions requiring the applicant to conduct the necessary surveys prior to construction (pre-construction surveys)

[39] The approach described in this section provides an alternative to the recommendations outlined in the Departments' Energy Facility Siting Council Decisions for Linear Facilities with Restricted Access within a Site Boundary: Boardman to Hemingway Transmission Line memo (April 2018).

and submit survey results to applicable reviewing agencies and the Department for review and approval. For instance, under the Council's Fish and Wildlife Habitat standard, it is possible for Council to utilize a combination of field surveys plus a desktop evaluation of existing data, aerial photography, and "over the fence" surveys may meet the information requirements of ASC Exhibits P and Q for its evaluation. If the field survey coverage is sufficient for the Department and the Oregon Department of Fish and Wildlife (ODFW) to consider that the information provided is representative of the fish and wildlife habitat, sensitive species use, and threatened and endangered plant and animal species occurrence or habitat, it is possible that this information can be sufficient to be evaluated for compliance with the applicable Council standards. The categorization of fish and wild life habitat and Threatened and Endangered species and descriptions of the methodologies and surveys completed are discussed further in Sections IV.F., *Fish and Wildlife Habitat* and Section IV. I., *Threatened and Endangered Species* of this order. Recommended conditions in Fish and Wildlife and Threatened and Endangered Species require additional field surveys over the entire site boundary once site access has been secured, as well as finalization of mitigation plans and other management plans, all subject to review and approval by the Department in consultation with ODFW prior to construction of a phase or segment of the facility.

Similarly, the applicant includes information on geotechnical and seismic hazards in ASC Exhibit H by using existing data, consultation with the Oregon Department of Geology and Mineral Industries (DOGAMI), in conjunction with representative field work conducted in preparation of a geotechnical report. The information present in the ASC is sufficient for the Council to make findings and impose conditions in the site certificate to meet the Council's Structural Standard. Recommended Structural Standard Condition 1 requires the applicant to submit a pre-construction site-specific geological and geotechnical investigation report to the Department and DOGAMI for review and approval prior to construction of a phase or segment of the proposed facility.

Delineation Surveys for Wetlands and Waters of the State

Under ORS 469.503(3) and under the Council's General Standard of Review (OAR 345-022-0000), the Council must determine whether the proposed facility complies with "all other Oregon statutes and administrative rules…, as such, Oregon Removal-Fill Law (ORS 196.795 through 196.990) and Department of State Lands (DSL) regulations (OAR 141-085-0500 through 141-085-0785) fall under the Council's jurisdiction. Therefore, as part of the Council's consolidated review, the Council must determine whether a removal-fill permit is needed and if so, whether a removal-fill permit should be issued.

As discussed in Section IV.Q.2., *Removal Fill Law*, of this order, the applicant conducted desktop studies and field investigations to delineate locations of wetlands and waters of the state (WOS) located within the site boundary. The desktop study of potentially jurisdictional wetlands and WOS included an evaluation of multiple existing data sources including the U.S. Fish and Wildlife Service National Wetlands Inventory (NWI), the USGS National Hydrography

Dataset (NHD), the Oregon Department of Transportation Salmon Resources and Sensitive Area Mapping, Oregon Spatial Data Library, and areas of hydric soil mapped by the Natural Resources Conservation Service. The applicant and its consultant, Tetra Tech, conducted field investigations in 2011, 2012, 2013, and 2016. On September 13, 2018, the Oregon Department of State Lands (DSL) issued its letter of concurrence agreeing with the delineated boundaries in the applicant's wetland delineation reports. Construction and operation of the proposed facility is expected to impact and generate more than 50 cubic yards of removal or fill activities in wetlands or WOS, therefore a removal-fill permit is necessary and is governed by the site certificate. The total of permanent and temporary impacts to wetlands and waters of the state is less than one acre (0.793 acres).

The applicant proposes to mitigate the permanent impacts to wetlands and WOS through the creation of functioning wetlands and enhancement of existing wetlands at a mitigation site discussed in more detail in the Compensatory Wetland and Non-Wetland Mitigation Plan (CWNWMP), Attachment J-1 to this order. The combined acreages at the mitigation parcel of 6.21 acres of created or enhanced wetlands equates to 3.66 acres of wetland mitigation credit, this amount of wetland mitigation credit is significantly greater than the amount of impact to field surveyed/delineated wetland features and non-wetland WOS. Recommended Removal-Fill Condition 5 requires the applicant to comply with and update the impact tables in the removal fill permit authorized by Council and issued by DSL (Attachment J-3 to this order). The expected impacts associated with the construction and operation of the entire proposed facility is expected to be substantially less that the mitigation parcel the applicant is proposing to maintain as described in this order, site certificate conditions and in conditions of the removal fill permit (also included as site certificate conditions).

Therefore, once the applicant gains access to the remaining sites, surveys will be conducted, and submitted to DSL for concurrence, the only expected revisions to the removal-fill permit are administrative, primarily to update the impact acreage tables (as stipulated in Attachment J-3: Removal Fill Permit Conditions, Special Condition 3). Because the edits to the removal fill permit would be administrative updates to the impact tables and not substantive revisions to the permit conditions, and that the mitigation parcel exceeds the estimated impacts from the proposed facility, the additional survey information for wetlands and WOS may be submitted for Department review and approval in consultation with DSL prior to construction of a phase or segment of the facility.

Field Surveys for Cultural, Archaeological and Historic Resources

Section IV.K., *Historic, Cultural, and Archaeological Resources*, of this order, presents a discussion of the Council's statutory obligation under ORS 469.370(13), to conduct its site certificate review in a manner that does not duplicate efforts for energy facilities that also are subject to review by a federal agency under the National Environmental Policy Act (NEPA). The Department, in consultation with the Oregon State Historic Preservation Office (SHPO) and in coordination with the applicant, presents the information on cultural, archaeological and

historic resources in this order in a manner that aligns with the Section 106 compliance obligations under the NEPA review. As such, Section IV.K., describes the methodologies and results of surveys conducted to evaluate potential direct impacts (within the site boundary/direct analysis area) and to evaluate indirect impacts (within 5 miles of the site boundary/Visual Assessment analysis area). As part of the EFSC review and necessary under the Section 106 compliance, and based on the applicant and its consultants' research and field surveys, the applicant makes recommendations of eligibility to the National Register of Historic Places (NRHP).

For energy facilities that are subject to the NEPA review process, lead federal agencies are tasked with designating the final eligibility determinations in consultation with parties to the Programmatic Agreement (PA) including Tribal governments and SHPO. In ASC Exhibit S and associated attachments, the applicant proposes eligibility recommendations for the EFSC review, including recommendations of eligible, not eligible and unevaluated (presumed likely eligible for listing on the NRHP). Resources that are determined to be not eligible do not have to be avoided or mitigated for impacts from this facility or future projects. Despite the applicant's analysis, for the EFSC review of its standard as proposed in this order, the Department and SHPO assume that resources are either eligible or "unevaluated" (meaning, the resources are treated as likely eligible or likely to be listed on the NRHP), and then evaluate impacts to the resources and appropriate mitigation, if necessary. This is because under the terms of the PA and Section 106 requirements, it is the federal lead agency (in this case, the BLM) that makes a final determination on eligibility, and not SHPO. If the BLM and SHPO disagree on a resource's eligibility, the determination is made by another federal agency, the Keeper of the National Register, a division of the National Park Service. And, again under the terms of the PA, the determination of eligibility will not occur until site access has been gained to all areas proposed for the facility, as a pre-construction condition.

An outcome of this proposal is that the impacts from the construction and operation of the proposed facility will appear to be more than actually anticipated – it is very likely that many, or all, of the resources that the applicant assessed as "not eligible" will ultimately be agreed by the federal government as not eligible. Thus the evaluation in this order overestimates impacts and mitigation for impacts to resources protected under OAR 345-022-0090. However, to reduce duplicative efforts of eligibility determinations that will be made by the lead federal agencies, the treatment of resources as "unevaluated" and therefore "likely to be listed" for the EFSC review is consistent with the Council's standard and streamlines eligibility determinations for the Section 106 process. The applicant proposes appropriate mitigation for impacts to cultural, archaeological and historic resources in its Historic Properties Management Plan (HPMP). The HPMP serves as a framework to inform Council on how the applicant will avoid, minimize and mitigate impacts to each resource type that may be protected under the EFSC standard. Recommended Cultural, Archaeological and Historic Resources Condition 2 requires the applicant to submit the HPMP for Department review and approval, in consultation with SHPO and Tribal governments, prior to construction of a phase or segment of the facility. The HPMP will be reconciled to include the final determinations from the lead federal agencies and will be

submitted to the Department to reflect the outcomes of the Section 106 compliance review. It is anticipated that the impacts reflected in the HPMP will be substantially less than evaluated by Council in this order because the lead federal agencies may concur with the applicant recommendations of many resources as not eligible, therefore, the applicant is not obligated to avoid or mitigate for impacts to these resources. As described in Section IV.K.4., and the site certificate condition, the HPMP will include the following information:

- Final eligibility determinations for resources from the lead federal agencies;
- Final avoidance and impact information based on the final design of a phase or segment of the facility, or specific facility component;
- Final mitigation for impacts to resources based on final design of a phase or segment of the facility, or specific facility component.

IV. EVALUATION OF COUNCIL STANDARDS

As discussed above, ORS 469.320 requires a site certificate from the Council before construction of a "facility." ORS 469.300(14) defines "facility" as an "energy facility together with any related or supporting facilities." The proposed Boardman to Hemingway Transmission Line qualifies as an "energy facility" under the definition in ORS 469.300(11)(C).

To issue a site certificate for a proposed facility, the Council must determine that "the facility complies with the applicable standards adopted by the council pursuant to ORS 469.501 or the overall public benefits of the facility outweigh any adverse effects on a resource or interest protected by the applicable standards that the facility does not meet."[40] The Council must also determine that the proposed facility complies with all other applicable Oregon statutes and administrative rules, as identified in the second amended project order, excluding requirements governing design or operational issues that do not relate to siting[41] and excluding compliance with requirements of federally-delegated programs.[42] Nevertheless, the Council may consider these programs in the context of its own standards to ensure public health and safety and protection of the environment.[43]

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[40] ORS 469.503(1).

[41] As stated above, such matters include design-specific construction or operation standards and practices that do not relate to siting, as well as matters relating to employee health and safety, building code compliance, wage and hour or other labor regulations, or local government fees and charges.

[42] ORS 469.401(4); ORS 469.503(3).

[43] 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.

Under ORS 469.310, the Council is charged with ensuring that the "siting, construction and operation of energy facilities shall be accomplished in a manner consistent with protection of the public health and safety." ORS 469.401(2) further provides that the Council must include in the site certificate "conditions for the protection of the public health and safety, for the time for completion of construction, and to ensure compliance with the standards, statutes and rules described in ORS 469.501 and ORS 469.503."[44] The Council implements this statutory framework and ensures the protection of public health and safety by adopting findings of fact, conclusions of law, and conditions of approval concerning the proposed facility's compliance with the EFSC Standards for Siting Facilities at OAR 345, Divisions 22, 24, 26, and 27.

This DPO includes the Department's initial analysis of whether the proposed facility meets each applicable Council Standard (with mitigation and subject to compliance with recommended conditions, as applicable), based on the information on the record for the proposed facility including information in the ASC and reviewing agency comment letters on the ASC. Following the written and oral comment period, the proposed order will include the Department's consideration of the comments and additional evidence received on the record of the DPO.

IV.A. General Standard of Review: OAR 345-022-0000

(1) To issue a site certificate for a proposed facility or to amend a site certificate, the Council shall determine that the preponderance of evidence on the record supports the following conclusions:

(a) The facility complies with the requirements of the Oregon Energy Facility Siting statutes, ORS 469.300 to ORS 469.570 and 469.590 to 469.619, and the standards adopted by the Council pursuant to ORS 469.501 or the overall public benefits of the facility outweigh the damage to the resources protected by the standards the facility does not meet as described in section (2);

(b) Except as provided in OAR 345-022-0030 for land use compliance and except for those statutes and rules for which the decision on compliance has been delegated by the federal government to a state agency other than the Council, the facility complies with all other Oregon statutes and administrative rules identified in the second amended project order, as amended, as applicable to the issuance of a site certificate for the proposed facility. If the Council finds that applicable Oregon statutes and rules, other than those involving federally delegated programs, would impose conflicting requirements, the Council shall resolve the conflict consistent with the public interest. In resolving the conflict, the Council cannot waive any applicable state statute.

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[44] ORS 469.401(2).

(4) In making determinations regarding compliance with statutes, rules and ordinances normally administered by other agencies or compliance with requirement of the Council statutes if other agencies have special expertise, the Department of Energy shall consult such other agencies during the notice of intent, site certificate application and site certificate amendment processes. Nothing in these rules is intended to interfere with the state's implementation of programs delegated to it by the federal government.

Findings of Fact

OAR 345-022-0000 provides the Council's General Standard of Review and requires the Council to find that a preponderance of evidence on the record supports the conclusion that the proposed facility complies with the requirements of the Oregon Energy Facility Siting statutes and the siting standards adopted by the Council and that the proposed facility complies with all other Oregon statutes and administrative rules applicable to the issuance of a site certificate for the proposed facility, as identified in the second amended project order.[45]

In this draft proposed order, the Department recommends draft proposed findings of fact and conclusions of law based on a staff evaluation of the proposed facility's compliance with all statutes, administrative rules and ordinances applicable to the issuance of this site certificate. As discussed above, the Department consulted with other agencies during review of the ASC to aid in the evaluation of the proposed facility's compliance with statutes, rules and ordinances otherwise administered by other agencies. Additionally, the Department relied upon the reviewing agencies' special expertise in evaluating the proposed facility's compliance with the requirements of the EFSC standards.

Certificate Expiration [OAR 345-025-0006(4)]

Under OAR 345-015-0006(4), a site certificate is effective upon execution by the Council and by the applicant. ORS 469.370(12) requires the Council to "specify in the site certificate a date by which construction of the facility must begin." ORS 469.401(2) requires that the site certificate contain a condition "for the time for completion of construction." Under OAR 345-027-0000, in order to avoid expiration of the site certificate, the certificate holder must begin construction on the facility no later than the construction beginning date specified by Council in the site certificate. "Construction" is defined in ORS 469.300(6) to mean "work performed on a site,

[45] If an applicant shows that the proposed facility cannot meet Council standards or has shown that there is no reasonable way to meet the Council standards through mitigation or avoidance of any adverse effects on a protected resource or interest, OAR 345-022-0000(2) and (3) establish criteria the Council may use to make a balancing determination. Here, the applicant does not assert that the proposed facility cannot meet an applicable Council standard. Therefore, OAR 345-022-0000(2) and (3) do not apply to this review.

excluding surveying, exploration or other activities to define or characterize the site, the cost of which exceeds $250,000." OAR 345-010-0010(12) adopts the statutory definition.

The applicant anticipates proposed facility construction would begin within three years of the effective date of the site certificate, and construction would be completed within seven years of that date.[46] The applicant anticipates that switching and communication station construction activities would begin on a schedule that would allow for completion at approximately the same timeframe as the proposed transmission line.

Based on the Department's experience with large energy facilities, a number of unforeseen factors can cause delays to a facility's construction commencement and completion timelines, such as financial, economic, or technological changes. The Department acknowledges that the size, scope and complexity of the proposed Boardman to Hemingway Transmission Line exceeds that of other facilities that Council has review and approved. The Department also points to the pre-construction obligations in conditions of approval that are recommended to Council in this order, as well as the pre-construction obligations imposed upon the facility by the Bureau of Land Management and other federal government agencies. An applicant would typically be obligated to comply with all pre-construction conditions prior to beginning any construction activities.

Recommended pre-construction conditions include additional surveys related to wildlife habitat, geotechnical, cultural, and wetland surveys, as well as the finalization of impact and mitigation plans currently in draft form, as discussed in this order. The applicant would have to gain access to currently restricted properties to conduct these remaining surveys, and the Department notes that, depending on the pathway utilized to gain access, this may extend timelines. Further, many pre-construction conditions for fish and wildlife habitat and Threatened and Endangered Species are contingent upon seasonal activities of the specific species (for example, Washington ground squirrel surveys must be conducted during a specific time of year, in late spring). As discussed in Section IV.K., *Historic, Cultural and Archaeological Resources*, the final Historic Properties Management Plan (HPMP) which will include the final impact analysis and mitigation proposals for Historic, Cultural and Archaeological Resources must be finalized based on field surveys and coordination with the lead federal agencies. The final impact analysis and mitigation obligations for the applicant will be rectified based on the final eligibility determinations made by the lead federal agencies, consistent with the Programmatic Agreement (PA), for Section 106 compliance as part of the NEPA review. As outlined in the PA, the process for these eligibility determinations depend on consultations with participating parties and may be appealed to the National Park Service for their final input and determination. The Section 106 compliance efforts, in themselves, could be a lengthy process and extend beyond the proposed timeline by the applicant. Therefore, to allow the applicant sufficient time to complete all pre-construction commitments specified in the site certificate and the obligations imposed by the federal government, and being able to complete

[46] B2HAPPDoc3-3 ASC 02a_Exhibit_B_Project Description_ASC 2018-09-28. Section 3.6.

construction while also minimizing the potential for changes that could affect a Council finding, the Department recommends that the Council approve a four-year deadline for the applicant to begin construction, and an additional four years for the applicant to complete construction once construction has begun. In compliance with OAR 345-025-0006(4), the Department recommends that the Council adopt the following conditions:

Recommended General of Review Standard Condition 1:

a. **Construction Commencement Deadline:** The certificate holder shall begin construction of the facility within four years after the effective date of the site certificate. Under OAR 345-015-0085(8), the site certificate is effective upon execution by the Council chair and the certificate holder. Prior to beginning construction as defined in OAR 345-010-0010(12), the certificate holder shall provide the Department written verification of the date that it will begin construction, acknowledge the commencement of the construction completion timeline, and confirm the construction completion deadline as stated in General Standard of Review Condition 1(b).

b. **Construction Completion Deadline:** The certificate holder shall complete construction of the facility within four years after the construction commencement date outlined in General Standard of Review Condition 1(a). Within 90 days of construction completion, the certificate holder shall provide the Department written notification of the anticipated date of construction completion.

c. Proposed and alternative facility routes approved in the final order and site certificate (per General Standard of Review Condition 11), but not selected for construction are deemed expired and no longer approved for construction once the construction completion deadline has passed.
[Mandatory Condition OAR 345-025-0006(4)]

Based on the complexities of gaining site access to all phases or segments of the transmission line and completing all preconstruction conditions associated with each phase or segment, for the purposes of meeting the beginning construction deadline as required by Recommended General Standard of Review Condition 1, the applicant may meet all pre-construction conditions specific to a phase or segment of the transmission line as referred to in Recommended General Standard of Review Condition 2.

Construction and Operation Rules for Facilities [OAR Chapter 345, Division 26]

The Council has also adopted rules at OAR Chapter 345, Division 26 to ensure that construction, operation, and retirement of facilities are accomplished in a manner consistent with the protection of the public health, safety, and welfare and protection of the environment. These rules include requirements for compliance plans, inspections, reporting and notification of

incidents. The certificate holder must construct, operate, and retire the facility in accordance with all applicable rules adopted by the Council in OAR Chapter 345, Division 26.[47]

The Department understands that the construction of the proposed facility including transmission lines and station as well as the related or supporting facilities including access roads, multi-use areas, etc., is expected to be complex and will require advance coordination between the applicant, Department, reviewing agencies and construction contractors. The Department recommends the Council adopt the following condition to support the Department's execution of pre-construction planning and compliance by requiring information be provided about construction phasing and planning as well as ongoing site certificate compliance, in accordance with OAR Chapter 345, Division 26:

Recommended General of Review Standard Condition 2:

a. At least 180 days prior to beginning construction (unless otherwise agreed to by the Department), the certificate holder shall submit to the Department a construction plan outlining construction phasing or segments, activities and schedules for completing construction of the facility consistent with the site certificate. Submission of pre-construction surveys or plans shall be conducted in accordance to site certificate conditions and may occur consistent with the phase or segment of the facility that is being constructed.
b. Upon Department verification of compliance with applicable pre-construction requirements in the site certificate for any phase or segment of the facility, the Department shall notify the certificate holder in writing that pre-construction requirements have been met and they may commence construction for that phase or segment.

The Council's rules under OAR 345-026-0080 outline the general reporting requirements for construction and operation of energy facilities. OAR 345-026-0080(1)(a) includes reporting requirements be submitted to the Department every six months during construction including updates on any major milestones, a site certificate compliance report, and construction progress. OAR 345-026-0080(1)(b) outlines the reporting requirements the applicant submits to the Department on an annual basis. This annual report includes updates on the status of the facility, compliance with site certificate conditions, and a monitoring report for monitoring and mitigation activities. The rules also stipulate that the applicant may include the construction progress report within the annual report. The Department recommends Council include the following conditions in the site certificate to clearly require the applicant to comply with the semi-annual construction report and annual reporting requirements:

Recommended General Standard of Review Condition 3: Within six months after the Construction Commencement Deadline in General Standard of Review Condition 1, and

[47] Applicable rule requirements established in OAR Chapter 345, Division 26 include OAR 345-026-0005 to OAR 345-026-0170.

every six months thereafter during construction of the facility and related or supporting facilities, the certificate holder shall submit a semiannual construction progress report to the Department consistent with OAR 345-026-0080(1)(a). To the extent that information required by this rule is contained in reports the certificate holder submits to other state, federal or local agencies, the certificate holder may submit excerpts from such other reports to satisfy this rule, unless otherwise required by a site certificate condition.

Recommended General Standard of Review Condition 4: After January 1 but no later than April 30 of each year after beginning operation of the facility, unless otherwise agreed upon by the certificate holder and the Council Secretary, the certificate holder shall submit an annual report to the Department addressing the subjects listed in OAR 345-026-0080(1)(b). To the extent that information required by this rule is contained in reports the certificate holder submits to other state, federal or local agencies, the certificate holder may submit excerpts from such other reports to satisfy this rule, unless otherwise required by a site certificate condition.

Other Site Certificate Mandatory Conditions [OAR 345-025-0006]

OAR 345-025-0006 lists certain conditions that the Council must adopt in every site certificate. Some mandatory conditions directly implement a Council standard and are therefore applied in this draft proposed order within the discussion of the relevant standard. Mandatory conditions OAR 345-025-0006(7) through (9) and (16) are discussed and applied in Section IV.G., *Retirement and Financial Assurance*, of this order as they relate to the restoration of the site, Council approval of a retirement plan, and bonding requirements of the applicant. Mandatory conditions OAR 345-025-0006(12) through (14) are discussed and applied in Section IV.C, *Structural Standard*, because they are associated with the design, construction and the operation of the proposed facility to avoid dangers of seismic hazards, coordination with and notifications to the Department of Geology and Mineral Industries.

In addition, OAR 345-025-0006(10) requires that the Council include as conditions in the site certificate all representations in the ASC and supporting record the Council deems to be binding commitments made by the applicant.[48] Mandatory conditions that are not otherwise addressed in the evaluation of compliance with specific standards are listed below, in the context of the Council's General Standard of Review. As stated in OAR 345-025-0006(1), "the Council shall not change the conditions of the site certificate except as provided for in OAR Chapter 345, Division 27."

The following are mandatory conditions required under OAR 345-025-0006:

[48] Applicant representations deemed necessary to satisfy an applicable standard are included in the appropriate corresponding section of this order.

The Department recommends the Council modify General Standard of Review Condition 5 below to require the applicant to submit final design information to the Department as well as to the Planning Departments from each of the five affected counties, as per their requests.

> **Recommended General of Review Standard Condition 5:** The certificate holder shall submit a legal description of the site to the Department, Malheur County Planning Department, Baker County Planning Department, Union County Planning Department, Umatilla County Planning Department, and Morrow County Planning Department within 90 days after beginning operation of the facility. The legal description required by this rule means a description of metes and bounds or a description of the site by reference to a map and geographic data that clearly and specifically identify the outer boundaries that contain all parts of the facility.
> [Mandatory Condition OAR 345-025-0006(2)]
>
> **Recommended General Standard of Review Condition 6:** The certificate holder shall design, construct, operate, and retire the facility:
> a. Substantially as described in the site certificate;
> b. In compliance with the requirements of ORS Chapter 469, applicable Council rules, and applicable state and local laws, rules and ordinances in effect at the time the site certificate is issued; and
> c. In compliance with all applicable permit requirements of other state agencies.
> [Mandatory Condition OAR 345-025-0006(3)]

The Department recommends the Council modify General Standard of Review Condition 7 below to remove the language of the condition that does not apply to transmission lines and maintain the portion of the condition that would apply to the proposed facility.

> **Recommended General Standard of Review Condition 7:** 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)]
>
> **Recommended General Standard of Review Condition 8:** If the certificate holder becomes aware of a significant environmental change or impact attributable to the facility, the certificate holder shall, as soon as possible, submit a written report to the Department describing the impact on the facility and any affected site certificate conditions.
> [Mandatory Condition OAR 345-025-0006(6)]
>
> **Recommended General Standard of Review Condition 9:** Upon completion of construction, the certificate holder shall restore vegetation to the extent practicable and shall landscape

all areas disturbed by construction in a manner compatible with the surroundings and proposed use. Upon completion of construction, the certificate holder shall remove all temporary structures not required for facility operation and dispose of all timber, brush, refuse and flammable or combustible material resulting from clearing of land and construction of the facility. In the annual report, the certificate holder shall report to the Department restoration activities, and applicable sections of the Reclamation and Revegetation Plan provided as Attachment P1-3 of the Final Order on the ASC, by county and area of temporary disturbance (i.e. multi-use areas, light duty fly yards, pulling and tensioning sites).
[Mandatory Condition OAR 345-025-0006(11)]

Recommended General Standard of Review Condition 10: Before any transfer of ownership of the facility or ownership of the site certificate holder, the certificate holder shall inform the Department of the proposed new owners. The requirements of OAR 345-027-0100 apply to any transfer of ownership that requires a transfer of the site certificate.
[Mandatory Condition OAR 345-025-0006(15)]

Site Specific Conditions [OAR 345-025-0010]

In addition to mandatory conditions imposed on all facilities, Council rules also include "site specific" conditions at OAR 345-025-0010 that the Council may include, as appropriate, in the site certificate to address issues specific to certain facility types or proposed features of facilities.[49]

Site-Specific Condition OAR 345-025-0010(4) addressing National Electrical Safety Code is discussed in Section IV.P.1., *Siting Standards for Transmission Lines*, of this order. Site-Specific Condition OAR 345-025-0010(5) is specific to pipelines and transmission lines and specifies that the Council shall specify an approved corridor in the site certificate. The Department therefore recommends the Council adopt General Standard of Review Condition 11 with revisions describing the final Department recommended routes for Council approval. General Standard of Review Condition 11 below incorporates OAR 345-025-0010(5) as applied to the proposed facility.

Recommended General Standard of Review Condition 11: Subject to conditions of the site certificate the, certificate holder may construct the facility anywhere within the site boundary (approved corridor(s)), and as described in ASC Exhibit B and represented in ASC Exhibit C Attachment C-2 and C-3 mapsets. The approved corridors include:

a. The proposed route in Morrow, Umatilla, Union, Bakker, and Malheur counties;
b. West of Bombing Range Road alternative 1 and the west of Bombing Range Road alternative 2 in Morrow County;

[49] Site-Specific Conditions at OAR 345-025-0010(1)-(3), and (6)-(7) do not apply to the facility based on facility energy source/type.

c. Morgan Lake alternative in Union County; and
d. Double Mountain alternative in Malheur County.

[Site-Specific Condition OAR 345-025-0010(5)]

Conclusions of Law

Based on the foregoing findings of fact and conclusions of law, and subject to compliance with recommended General Standard of Review conditions presented in the above section, the Department recommends that the Council find that the proposed facility, including the proposed and alternative routes, satisfies the requirements of OAR 345-022-0000.

IV.B. Organizational Expertise: OAR 345-022-0010

(1) To issue a site certificate, the Council must find that the applicant has the organizational expertise to construct, operate and retire the proposed facility in compliance with Council standards and conditions of the site certificate. To conclude that the applicant has this expertise, the Council must find that the applicant has demonstrated the ability to design, construct and operate the proposed facility in compliance with site certificate conditions and in a manner that protects public health and safety and has demonstrated the ability to restore the site to a useful, non-hazardous condition. The Council may consider the applicant's experience, the applicant's access to technical expertise and the applicant's past performance in constructing, operating and retiring other facilities, including, but not limited to, the number and severity of regulatory citations issued to the applicant.

(2) The Council may base its findings under section (1) on a rebuttable presumption that an applicant has organizational, managerial and technical expertise, if the applicant has an ISO 9000 or ISO 14000 certified program and proposes to design, construct and operate the facility according to that program.

(3) If the applicant does not itself obtain a state or local government permit or approval for which the Council would ordinarily determine compliance but instead relies on a permit or approval issued to a third party, the Council, to issue a site certificate, must find that the third party has, or has a reasonable likelihood of obtaining, the necessary permit or approval, and that the applicant has, or has a reasonable likelihood of entering into, a contractual or other arrangement with the third party for access to the resource or service secured by that permit or approval.

(4) If the applicant relies on a permit or approval issued to a third party and the third party does not have the necessary permit or approval at the time the Council issues the site certificate, the Council may issue the site certificate subject to the condition that the certificate holder shall not commence construction or operation as appropriate until the third party has obtained the necessary permit or approval and the applicant has a

contract or other arrangement for access to the resource or service secured by that permit or approval.

Findings of Fact

Subsections (1) and (2) of the Council's Organizational Expertise standard require that the applicant demonstrate its ability to design, construct, and operate the proposed facility in compliance with Council standards and all site certificate conditions, as well as its ability to restore the site to a useful, non-hazardous condition. The Council may consider the applicant's experience and past performance in constructing, operating and retiring other facilities in determining compliance with the Council's Organizational Expertise standard. Subsections (3) and (4) address the applicant's reliance upon third party permits.

To demonstrate compliance with the Council's Organizational Expertise standard, the applicant provides evidence regarding its experience and organizational expertise to construct, operate and retire the proposed facility in Exhibit A (applicant Information); Exhibit D (applicant's Organizational, Managerial, and Technical Expertise); Exhibit E (Permits Required for Construction and Operation); Exhibit M (Financial Assurance); and Exhibit W (Retirement and Restoration).

Demonstrated ability to design, construct and operate the proposed facility in compliance with site certificate conditions and in a manner that protects public health and safety

The applicant is a wholly owned subsidiary of IDACORP, Inc. Idaho Power Company (applicant) was originally incorporated in 1915. As described in ASC Exhibit D, the applicant's core business is the generation, transmission, distribution, sale, and purchase of electric energy. The applicant explains that it serves over 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. It 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.[50]

As stated above, in order to demonstrate compliance with the Organizational Expertise standard, "the Council may consider the applicant's experience, the applicant's access to technical expertise and the applicant's past performance in constructing, operating and retiring other facilities, including, but not limited to, the number and severity of regulatory citations issued to the applicant."

[50] B2HAPPDoc3-10 ASC 04_Exhibit D_Organization_ASC 2018-09-28, Section 3.1.

Experience and Expertise in Permitting Transmission Lines

In ASC Exhibit D, the applicant describes its permitting experience with both state and federal authorities. The applicant has federally permitted multiple facilities; ASC Exhibit D, Table D-4 includes a representative list of the applicant's federally permitted project. Tables D-5 and D-6 include representative lists of administrative and local government permits for facilities in Idaho. ASC Exhibit D, Table D-7 represents Oregon permits that the applicant has obtained and complied with to construct or maintain energy facilities in Oregon.

Experience and Expertise Constructing, Operating, and Maintaining Transmission Lines

The applicant discusses in ASC Exhibit D that it constructed or oversaw the construction of nearly the entirety of its 4,858-mile transmission system, including portions of the transmission system in Oregon. Table OE-1, *Idaho Power's Recent 230 kV Transmission Line Projects* below provides examples of recent (since 2000) 230 kV transmission line projects that the applicant constructed.

Table OE-1: Idaho Power's Recent 230 kV Transmission Line Projects

Line No.	Line Name	Circuit	Mileage	Constructing Entity	Year
707	Brownlee-to-Ontario	Single	72.7	Mustang Construction	2000
710	Locust-to-Caldwell	Single	18.6	Wilson Construction	2003
711	Nampa Tap	Double	3.2	Wasatch Electric	2006
714	Brownlee-to-Oxbow	Single	11.0	Great Southwestern	2004
715	Langley Gulch	Double	2.8	IPC (lines); TBH & Assoc. (foundations)	2011
716	Bennett Mountain-to-Rattlesnake	Single	4.4	Wasatch Electric	2008
Source: B2HAPPDoc3-10 ASC 04_Exhibit D_Organization_ASC 2018-09-28, Table D-1.					

The applicant also provides an example of an older 345/500-kV transmission line that it constructed in 1981, the Borah to Midpoint line, which is 84.4 miles in length. The transmission line was constructed to 500 kV standards, but was initially energized and currently operates at 345 kV; however, the transmission line has the capability to be energized at 500 kV.

In addition to its operations in Idaho, the applicant owns and maintains approximately 692 miles of transmission lines in Oregon. Since 2009, the applicant has built approximately 27 miles of 69 kV transmission lines in Oregon. In addition, as part of the Sage Station project near Ontario, Oregon, in 2011, the applicant built a 16-mile 138 kV transmission line that is currently energized at 69 kV to a junction point known as Ontario Junction. The applicant explains that the process for constructing 230 kV transmission lines is essentially the same as that for

constructing 500 kV transmission lines. Both 230 kV and 500 kV transmission lines involve the same design process and similar considerations for selecting components, structures, and structure locations. Both types of transmission lines require similar construction techniques and materials. The primary differences in the construction of 230 kV and 500 kV transmission lines are the requirements for clearances and conductor spacing.[51] The National Electrical Safety Code (NESC) requirements for ground clearances and conductor spacing increase as the voltage of the lines increase, so structures required for 500 kV transmission lines are typically taller than those required for 230 kV transmission lines. Additionally, 500 kV insulator strings are generally longer than those for 230 kV transmission lines. However, while there are some requirement differences between 230 kV and 500 kV transmission lines, the processes for design, construction, and operation are broadly similar for high-voltage transmission lines.

The applicant explains that it has assembled an experienced team of professional, technical, and administrative personnel to manage all phases of the proposed facility. ASC Exhibit D includes a brief description of the qualifications and experience of key individuals who represent the applicant's expertise.

The applicant proposes to retain an outside contractor to complete the engineering, design, procurement, and construction activities related to the proposed transmission line. The applicant has not yet selected the contractor; however, its request for proposal package criteria would ensure the selected contractor has the requisite skills and experience to engineer, design, procure, and construct the proposed facility. The criteria and evaluation process for the applicant's review of proposals is outlined in ASC Exhibit D. The applicant's administration team would select the respondent that demonstrates the best ability to accomplish the requested work scope on schedule, while meeting all safety, environmental, and permit requirements.

The applicant explains that its company is responsible for maintaining its transmission and distribution system and for ensuring that all maintenance is performed in a manner that protects public health and safety through compliance with applicable regulatory requirements. The applicant lists that it implements a comprehensive maintenance program for each of its transmission line facilities to ensure compliance with applicable safety and reliability standards, including NESC, Federal Energy Regulatory Commission (FERC), North American Electric Reliability Corporation (NERC), and Western Electricity Coordinating Council (WECC) standards. The company's maintenance program is also designed to achieve compliance with all applicable Oregon Public Utility Commission (OPUC) rules.

The applicant's maintenance program includes compliance with its Transmission Maintenance and Inspection Plan (TMIP), which applicant developed and reviews annually. In addition, every three years, WECC audits applicant's compliance with applicable NERC reliability standards. The most recent WECC audit in 2015, which addressed the company's Transmission Maintenance

[51] B2HAPPDoc3-10 ASC 04_Exhibit D_Organization_ASC 2018-09-28, Section 3.1.2.

and Inspection Plan, did not result in any notices of alleged Transmission Maintenance and Inspection Plan violations or penalties.

The applicant explains that, in accordance with its own TMIP, applicant conducts three types of line maintenance patrols: routine line patrols/inspections, unscheduled emergency line patrols, and aerial vegetation patrols.[52] The routine line patrols include a detailed visual inspection of the entire line and are conducted at least once per year on all lines included in a WECC transfer path in the bulk electric system. These inspections are conducted from either the ground or air and are designed to ensure the integrity of the system by identifying obvious line threatening defects. Emergency line patrols are performed in response to any unexplained system outage or interruption, or whenever requested by a dispatcher, to identify a major structural failures or issues. These typically would not involve inspection of the entire line, but only the portion of a line where there is an indication or report of a possible problem. Finally, a transmission utility arborist conducts aerial vegetation patrols to identify and manage vegetation encroachments that threaten the transmission lines. The arborist normally completes the aerial vegetation patrol alongside the line patrolman during routine line patrols/inspections.

In addition to the cyclical inspection cycles described above, Transmission Patrolmen patrol and inspect transmission lines at a minimum once a year to identify any transmission defects and any vegetation hazards that may develop between vegetation clearing cycles. The applicant explains in ASC Exhibit P1, Attachment P1-4 and attached to this order that during these inspections the Patrolman will identify hazardous vegetation needing maintenance, within or adjacent to the ROW, that could fall in or onto the transmission lines or associated facilities. See Section IV.H., *Fish and Wildlife Habitat,* of this order and proposed Fish and Wildlife Condition 2 that addresses the Vegetation Management Plan. The applicant proposed to complete a comprehensive 10-year maintenance inspection on all of its transmission lines consistent with its TMIP and includes detailed visual inspections of all transmission line components. The data collected from these inspections would be compiled and evaluated, and identified issues are addressed through general maintenance. The applicant explains that the inspection and maintenance procedures required for applicant's transmission system, including its 230 kV and 345/500 kV transmission lines, are substantially the same as those proposed for the proposed facility. Compliance with the applicant's TMIP would enable the certificate holder to operate the proposed facility in a manner that protects public health and safety. The Department recommends Council impose Organizational Expertise Condition 1 to provide the Department the opportunity to review the results of inspections and corrective actions conducted in accordance with the TMIP.

Recommended Organizational Expertise Condition 1: During operations, the certificate holder shall provide documentation of inspection, including date inspection(s) occurred, issues identified, and any corrective actions taken, within the annual report submitted to the Department pursuant to OAR 345-026-0080 (1)(b), for the following:

[52] B2HAPPDoc3-10 ASC 04_Exhibit D_Organization_ASC 2018-09-28, Section 3.1.3.

a. Transmission line(s): Routine line patrols/inspections, unscheduled emergency line patrols, aerial vegetation patrols, and comprehensive 10-year maintenance inspection conducted in accordance with its Transmission Maintenance and Inspection Plan and Transmission Vegetation Management Program.
b. Longhorn Station: Monthly inspections including visual inspections of buildings, fencing, and electrical equipment; monitoring of all protective relays, gauges, counters, meters, and communication devices; and, annual infrared assessment of bus and operating equipment carrying capacity in accordance with the Station Maintenance Program.

Based on the above described analysis and compliance with the proposed conditions, the Department recommends that the Council find that the applicant's experience designing, construction, operating its existing transmission system demonstrates it has the experience and expertise required for construction, operations and maintenance of the proposed facility in a manner that protects public health and safety.

The Department recommends the Council find that the applicant has the requisite experience and expertise to manage construction, operation and maintenance of the proposed facility. However, because the applicant has not yet selected the contractors, engineers, and manufacturers for the construction of the proposed facility, the applicant proposes, and the Department recommends, that the Council adopt the following site certificate conditions in order to ensure the major contractors are qualified to design, engineer, and construct the proposed facility and all contractors and subcontractors operate in compliance with the site certificate:

Recommended Organizational Expertise Condition 2: The certificate holder shall:
a. Prior to construction, notify the Department and affected counties of the identity and qualifications of the major design, engineering, and construction contractor(s) for the facility. The certificate holder shall select contractors that have substantial experience in the design, engineering, and construction of similar facilities.
b. During construction, report to the Department in its semi-annual construction progress report required pursuant to OAR 345-026-0080(1)(a) the identity and qualifications of any new or changes to its design, engineering and construction contractors.

Recommended Organizational Expertise Condition 3: Prior to construction, the certificate holder shall notify the Department of the identity and qualifications of any construction managers, including the on-site construction manager(s), to demonstrate that the construction manager is qualified in managing facility construction and has the capability to ensure compliance with all site certificate conditions.

Recommended Organizational Expertise Condition 4: Prior to construction, the certificate holder shall contractually require all construction contractors and subcontractors involved in the construction of the facility to comply with all applicable laws and regulations and with the terms and conditions of the site certificate. The certificate holder shall provide a copy of

executed contracts to the Department. Copies of contracts may redact business confidential information. Such contractual provisions shall not relieve the site certificate holder of responsibility under the site certificate.

Experience and Expertise in Station Construction, Operation and Maintenance

The applicant describes that it has constructed, or overseen the construction of, nearly all of its 305 transmission and other electrical stations. ASC Exhibit D, Table D-2 describes the seven transmission stations the company has constructed since 2000. The Hemingway Station, which applicant constructed in 2010, is a 500/230 kV station similar in capacity and design to the proposed Longhorn Station. The remaining stations in ASC Exhibit D Table D-2, while not 500 kV stations, are similar in design and contain similar components to the proposed Longhorn Station. Additional descriptions of the proposed Longhorn station can be found in ASC Exhibit B and Section III., *Description of the Proposed Facility,* of this order.

As the applicant explains, its stations are subject to a standardized inspection and maintenance program, in order to ensure the continued safe and reliable operation of applicant's transmission system. The applicant's station maintenance program provides for monthly inspections, including visual inspection of buildings, fencing, and electrical equipment, and detailed monitoring of all protective relays, gauges, counters, meters, and communications devices.[53] Applicant uses reliability-based maintenance schedules for each type of station equipment. For instance, the applicant utilizes a process known as Reliability Centered Maintenance, which analyzes the usage rates for the different types of station equipment and determines when maintenance should be completed to avoid emergency repairs. The applicant also performs annual infrared assessments of all current carrying busses and operating equipment to identify issue areas that would indicate a potential problem.

The Department recommends that the Council find that the applicants' experience constructing stations demonstrates that applicant possesses the experience and expertise required for the design and construction of the proposed Longhorn Station. Additionally, based on the applicant's illustrated operation and maintenance programs for existing stations, the Department recommends the Council find that the applicant possesses the experience and expertise to operate and maintain the proposed Longhorn Station.

Experience and Expertise with Distribution Line Construction, Operation and Maintenance

As discussed in ASC Exhibit D, the applicant operates 27,072 miles of distribution lines, 2,212 miles of which are in Oregon. The applicant anticipates it would be the local service provider constructing, operating, and maintaining the distribution lines associated with the proposed facility serving the communication stations in Malheur County and parts of Baker County. However, for the communication stations in Morrow County, Umatilla County, Union County,

[53] B2HAPPDoc3-10 ASC 04_Exhibit D_Organization_ASC. 2018-09-28, Section 3.1.5.

and other parts of Baker County, the applicant proposes to rely on third-parties Umatilla Electric Co-Op, Pacific Power and Oregon Trail Electric Cooperative to construct, obtain permits to, operate and maintain the distribution lines serving those communications stations. The third-party permits are addressed below.

Experience and Expertise in Compliance

Compliance with Federal Reliability Standards

As the applicant explains in Exhibit D, applicant's transmission system is subject to three levels of federal reliability enforcement: FERC, NERC and WECC.

The applicant explains that under the current reliability enforcement system, the first reliability standards became mandatory and enforceable in 2007. Since then, applicant has participated in one NERC audit and three WECC audits regarding its compliance with the reliability standards. None of the possible issues identified in the audits presented a material risk to the bulk electric system, were not associated with a transmission service interruption, and did they adversely impact distribution customers. In addition to audits, applicant conducts internal monitoring of its compliance with federal reliability standards and self-reports any potential issues. The applicant provides that any potential issues discovered in the applicant's internal monitoring processes have not presented more than minimal risk.

Compliance with Oregon Reliability Standards

The Oregon Public Utility Commission (OPUC) regulates the construction, operation, and maintenance of electrical supply systems in Oregon, to ensure that the systems operate "in such a manner as to protect and safeguard the health and safety of all employees, customers, and the public."[54] OPUC safety and reporting standards require compliance with NESC standards for the construction and operation of all energy facilities in the state and require records of all service interruptions and major events. As part of compliance with OPUC regulations, the applicant must maintain records of all service interruptions, calculate system-wide interruption indices, develop threshold levels for applicable interruption indices based on past reliability data, demographic, geographic, and electrical characteristics, and the relative performance of the circuits to each other.[55] Finally, OAR 860-023-0151 and OAR 860-023-0161 require the applicant to file an annual report on the previous year's reliability information which includes a comparison of the year's data to the determined thresholds and provides a summary of the causes of interruptions on applicant's system and all major events. In addition to annual reporting, the applicant must report each major outage event to the OPUC within 20 days of the occurrence.

[54] Oregon Revised Statute 757.035(1)
[55] OAR 860-023-0100, 0110, and 0120

Other Regulatory Compliance

The applicant must operate its generation, transmission, and distribution facilities in compliance with the requirements of many regulatory agencies including the National Oceanic and Atmospheric Administration, the Oregon Department of Fish and Wildlife (ODFW), Oregon Department of State Lands, Occupational Safety and Health Administration (OSHA), ODEQ, OPUC, as well as the requirements of each of the Oregon cities and counties in which its facilities are located. In the past five years, applicant has been cited for only one compliance violation related to its generation, transmission, and distribution facilities: On December 1, 2015, OSHA issued two citations related to a forklift accident at applicant's Boise Operations Center.[56] The applicant sites that it settled the citations with OSHA.

The applicant's regulatory and operational compliance record establishes that it has the organizational expertise to design, construct, operate and maintain the proposed facility. However, in order to ensure continued compliance with all regulatory requirements, including site certificate conditions, the applicant proposes, and the Department recommends that the Council adopt the following site certificate conditions:

Recommended Organizational Expertise Condition 5: The certificate holder shall be responsible for any matter of non-compliance under the site certificate. Any notice of violation (NOV) issued under the site certificate will be issued to the certificate holder. Any civil penalties under the site certificate will be levied on the certificate holder.

Recommended Organizational Expertise Condition 6: Within 72 hours after discovery of incidents or circumstances that violate the terms or conditions of the site certificate, the certificate holder must report the conditions or circumstances to the Department, in addition to the requirements of OAR 345-026-0170.

Mitigation Experience

The applicant relies on mitigation to meet the Council standards. ASC Exhibit D presents the applicant's experience implementing mitigation projects similar to the mitigation projects proposed for the proposed transmission line. As the applicant explains, most of its mitigation experience is related to hydroelectric facilities. The applicant currently owns 17 hydroelectric facilities on the Snake River and its tributaries in southern Idaho and eastern Oregon, operating the facilities under 12 Federal Energy Regulatory Commission (FERC) licenses. Most of the FERC licenses include management and mitigation requirements to address water quality, recreation, aquatic species, terrestrial species, and land management impacts. Examples in ASC Exhibit D of resource management plans that the applicant implements for compliance with FERC requirements are a Riparian Habitat Acquisition Plan which outlines a riparian and wetland plan for a 360-acre property, a Visual Resource Management Plan which provides visual resources

[56] B2HAPPDoc3-10 ASC 04_Exhibit D_Organization_ASC 2018-09-28, Section 3.3.3.

protection, mitigation, and enhancement measures, and a Historic Properties Management Plan which implements an agreement among applicant, the State of Idaho, federal agencies, and Tribal governments to identify and protect cultural resources.

The applicant employs almost 100 full-time staff biologists in its Environmental Affairs Department as well as two full-time staff who track, manage, and document compliance with FERC license requirements. The applicant states that in the past three years, FERC inspected at least three of the applicant's mitigation sites, and, with minimal follow-up items, the applicant passed each inspection. The applicant continues by explaining that it has not received a letter of non-compliance for any FERC land management, fisheries, or recreational program mitigation requirements.[57]

Based on the size, scope and compliance with the applicant's past mitigation projects, the Department recommends that the Council find that the applicant's mitigation experience demonstrates that it has the organizational expertise to successfully complete mitigation necessary for the proposed transmission facility.

Demonstrated ability to restore the site to a useful, non-hazardous condition

The Council's Organizational Expertise standard requires the Council find that the applicant has demonstrated the ability to restore the site to a useful, non-hazardous condition. The applicant's ability to retire the proposed facility and to restore the site, taking into account mitigation, to a useful, nonhazardous condition is discussed in ASC Exhibit W and evaluated in Section IV.G., *Retirement and Financial Assurance,* of this order.

The applicant explains in ASC Exhibit W that based on its experience as a utility company and throughout the industry, transmission lines as a whole are expected to be operated for an indefinitely long duration. Transmission line retirement is extremely rare primarily due to the high demand for transmission services, the high cost of building new transmission lines, and the fundamental value of transmission rights-of-way.[58] Transmission line components and related facilities are replaced, as necessary, however the applicant states that transmission lines, including the proposed facility, would likely remain in service in perpetuity. To comply with the EFSC standards, the applicant estimates that the useful life of the proposed facility would be in excess of 100 years.

Recommended Retirement and Financial Assurance Condition 2 (Mandatory Council condition OAR 345-025-0006(9)) requires that the certificate holder shall retire the facility if the certificate holder permanently ceases construction or operation of the facility. The certificate holder shall retire the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110. The certificate holder shall pay the actual cost to restore the

[57] B2HAPPDoc3-10 ASC 04_Exhibit D_Organization_ASC 2018-09-28, Section 3.4.
[58] B2HAPPDoc3-40 ASC 23_Exhibit W_Retirement_ASC 2018-09-28, Section 3.1.

site to a useful, non-hazardous condition at the time of retirement, notwithstanding the Council's approval in the site certificate of an estimated amount required to restore the site.

In the future event the applicant (certificate holder) is required to retire the proposed transmission line, ASC Exhibit W demonstrates that the applicant has the expertise required to do so in compliance with OAR 345-025-0006(9) (Retirement and Financial Assurance Condition 2), which requires the certificate holder to restore the site to a useful non-hazardous condition in accordance with a retirement plan approved by Council. As explained further in Section IV.G., *Retirement and Financial Assurance,* of this order, the applicant's retirement plan would provide for:

i. Removal of all facilities. For the transmission line, these facilities would include all support structures, conductors, overhead shield wires, and communication sites. For the station, these facilities would include an interconnecting bus system, switches, breakers, and instrumentation for the control and protection of the equipment.
ii. Removal of the foundations for each support structure to a depth of three (3) feet below grade in lands zoned Exclusive Farm Use (EFU). Any foundations in lands in other zones would be removed to a depth of 1 foot below grade, depending on ground slope.
iii. Restoration of all structure locations and access roads to a useful, non-hazardous condition consistent with site zoning, including EFU zoning (Attachment P1-3: Reclamation and Revegetation Plan and Attachment K-1: Agricultural Lands Assessment). Restoration would include restoring the site to a condition suitable for uses comparable with the surrounding land uses, intended land use, and then-current technologies.

Retirement and Financial Assurance Conditions 1-3 (include Mandatory Conditions) along with Recommended Retirement and Financial Assurance Conditions 4 and 5, would ensure the proposed facility site, taking into account mitigation, can be restored adequately to a useful, non-hazardous condition following permanent cessation of construction or operation of the proposed facility.

Based on the information provided by the applicant and subject to compliance with the recommended site certificate conditions, the Department recommends that the Council find that the applicant has the organizational expertise to restore the site to a useful, non-hazardous condition at the end of the proposed facility's useful life.

ISO 900 or ISO 14000 Certified Program

Subsection (b) is not applicable because the applicant does not have an ISO 9000 or ISO 14000 certified program.

Third-Party Permits

Under the Council's Organizational expertise standard, the Council must find that each third party has a reasonable likelihood of obtaining the necessary permits, and that the applicant has a reasonable likelihood of entering into a contractual or other arrangement with the third party for access to the resource or service secured by that permit.

The applicant proposes to rely on third party permits obtained by Umatilla Electric Co-Op, Pacific Power, and Oregon Trail Electric Cooperative to install, operate, and maintain the distribution lines serving the communications stations. As summarized in ASC Exhibit D, distribution lines may require local permits or approvals if they cross a public right-of-way, depending on the final design and alignment of those distribution lines. The third-party local service provider will obtain any necessary utility crossing permits directly from the applicable county department.

The applicant explains that local electrical service providers generally must provide service to requesting customers within the utility's service territory. The applicant indicates that Umatilla Electric Co-Op, Pacific Power and Oregon Trail Electric Cooperative are required to provide electrical service to applicant's communication stations located within their service territory. Therefore, the Department recommends Council find that the applicant has a reasonable likelihood of entering into a contract or agreement with Umatilla Electric Co-Op, Pacific Power and Oregon Trail Electric Cooperative for access to the distribution lines, once permitted, constructed and operational.

As described in ASC Exhibit D, the distribution lines that could require local permits or approvals are located in Morrow, Umatilla, Union and Baker counties. Accordingly, if they are needed, the local permits or approvals would be subject to approval by the planning departments of each of those counties. To ensure the necessary third-party permits or approvals are in place at the time of construction, the applicant proposes, and the Department recommends, that the Council adopt the following site certificate condition:

Recommended Organizational Expertise Condition 7: Prior to construction, the certificate holder shall:

a. Submit to the Department and affected counties a list of third-party permits to be obtained or that have been obtained by Umatilla Electric Co-Op, Pacific Power and Oregon Trail Electric Cooperation for the communication station distribution lines.
b. Submit to the Department copies of all obtained third party permits, as identified in (a) of this condition.

Based on this analysis and the information provided by the applicant, and subject to compliance with the recommended site certificate conditions, the Department recommends that the Council find that the applicant has the organizational expertise to design, construct, and operate the facility in compliance with site certificate conditions and in a manner that protects

public health and safety and has demonstrated the ability to restore the site to a non-hazardous condition. The Department further recommends that the Council find that each of the third parties upon which it proposes to rely has a reasonable likelihood of obtaining the necessary permits, and that the applicant has a reasonable likelihood of entering into, a contractual or other arrangement with those third parties for access to the resource or service secured by those permits.

Conclusions of Law

Based on the evidence in the record, and subject to compliance with the recommended conditions of approval, the Department recommends that the Council find that the applicant satisfies the Council's Organizational Expertise standard.

IV.C. Structural Standard: OAR 345-022-0020

(1) Except for facilities described in sections (2) and (3), to 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;

(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).

***[59]**Findings of Fact**

As provided in section (1) above, the Structural Standard generally requires the Council to evaluate whether the applicant has adequately characterized the potential seismic, geological and soil hazards of a proposed site, and whether the applicant demonstrates that it can design,

[59] Section (2) and Section (3) of OAR 345-022-0020 apply to energy generation facilities and special criteria facilities, respectively. The proposed facility is neither an energy generation facility nor a special criteria facility. Therefore, Section (2) and Section (3) of OAR 345-022-0020 do not apply.

engineer and construct the proposed facility to avoid dangers to human safety and the environment from these hazards.

As established in the second amended project order, the analysis area for the Structural Standard is the area within the site boundary. "Site boundary," as defined in OAR 345-001-0010(55), is the area within the perimeter of the proposed facility, its related or supporting facilities, all temporary laydown and staging areas, and all micrositing corridors proposed by the applicant."

As noted in ASC Exhibit H, the applicant applies a larger analysis area for evaluation of seismic hazards, including a 100-mile analysis area for magnitude 7.0 earthquakes, 50-mile analysis area for magnitude 6.0 to 7.0 earthquakes, and 25-mile analysis area for magnitude 6.0 and below earthquakes. The applicant also evaluates seismic and non-seismic hazards extending half-mile of the proposed transmission line centerline. Therefore, while the analysis area is defined as the site boundary, based on the analysis presented in ASC Exhibit H, the applicant voluntarily extends the analysis area to half-mile from the proposed transmission line centerline (or up to 2,390 feet on either side of the proposed site boundary).

DOGAMI Consultation

Council rules at OAR Chapter 345 Division 21 require the applicant to consult with the Oregon Department of Geology and Mineral Industries (DOGAMI) on the appropriate methodology and scope of the seismic hazards and geology and soil-related hazards assessments, and the appropriate site-specific geotechnical work that must be completed to inform the ASC and demonstrate compliance with the Council's Structural Standard. The applicant consulted with DOGAMI and the Department during in-person and teleconference meetings on April 4, 2011 and October 5, 2017 and across various phone conversations over the duration of the ASC process. In addition to the consultation, DOGAMI reviewed and provided comments on the ApASC, for which the applicant responded. Based on review of the applicant's responses, DOGAMI provided confirmation on March 9, 2018 and February 16, 2018 that the evaluation provided in Exhibit H was sufficient to inform the evaluation under the Council's Structural Standard.[60]

In summary, through consultation, DOGAMI provided various recommendations on methods for evaluating landslide, fault, and soil-related hazards. To evaluate landslide hazards within the surrounding area, DOGAMI recommended use of the updated SLIDO 2 database and LIDAR. To evaluate potentially active faults, DOGAMI recommended review of the most recent information on regional seismic studies at the U.S. Department of Energy's Hanford Site and Columbia and Snake River dams; identification of Quaternary faults and fault zones; and, consideration of additional subsurface exploration at fault and fault zones and locations where

[60] B2HAPPDoc ApASC Reviewing Agency Comment DOGAMI to IPC Responses_Wang 2018-02-16 and B2HAPPDoc ApASC Reviewing Agency Comment DOGAMI to IPC Responses for Structural Rule Change_Wang 2018-03-09.

ground shaking can influence site response, such as river crossings and near drainages with softer soil conditions. DOGAMI recommended that proposed boring locations be based on potential for geo-seismic hazards such as liquefaction, lateral spreading, and seismic slope instability. DOGAMI suggested that geologic and soil hazard analysis at each tower location was not necessary, and should be based on type of hazards present at each location. Additionally, DOGAMI recommended use and reference to most recent International Building Code (IBC) and Oregon Structural Specialty Code (OSSC) requirements; and suggested that a transmission line designed for wind and ice forces would be sufficient to account for typical seismic forces.

As evaluated below, the applicant presents an analysis and proposes methods, to be used in a pre-construction site specific geotechnical investigation, consistent with DOGAMI recommendations.

Potential Seismic, Geologic, and Soil Hazards within Analysis Area

OAR 345-022-0020(1)(a) requires the Council to find that the applicant has adequately characterized the seismic, geologic, and soil hazards of a proposed site.

Earthquake and Seismic Hazards

To evaluate potential earthquake sources within the surrounding area, the applicant evaluated published data, and field data and literature compiled by its consultants – Shannon & Wilson. Shannon & Wilson reviewed data on historic earthquakes from the U.S. Geological Survey (USGS) Earthquake Search Database, the National Geophysical Data Center, and the Pacific Northwest Seismic Network. Based on this review, potentially three types of earthquake sources exist within the vicinity of the site boundary: crustal, intraslab, and interplate events. Of these, the Cascadia Subduction Zone (CSZ) interplate events have the potential to produce the largest magnitude earthquake, up to 9.0 magnitude. However, this earthquake source is located at a distance of 280 miles or more from the proposed site boundary.

Seismic hazards from earthquake events include seismic shaking or ground motion, ground failure, landslides, liquefaction, subsidence and lateral spreading, which are described below.

Seismic Shaking/Ground Motion

Seismic shaking from a CSZ interplate event would attenuate over this distance and would therefore not represent the most significant earthquake hazard for the proposed facility. Crustal faults, which typically produce earthquakes of a maximum magnitude of 7.0, are located in much closer proximity to the proposed alignment and therefore represent the most

significant seismic hazard to the proposed facility.[61] Given the maximum magnitude of historic earthquakes in the vicinity of the proposed transmission line route, Shannon & Wilson recommended the facility seismic design be based on earthquake magnitudes of 6.0 to 6.2.[62] Earthquake risk is greatest in the northern portion of the proposed transmission line route (in Morrow County).[63]

The applicant's consultant, Shannon & Wilson, performed a preliminary evaluation of short- and long-period spectral response accelerations anticipated to affect the proposed facility during the 2,500-year return period; these data are considered when designing facilities to withstand ground shaking. In addition, Shannon & Wilson performed a preliminary evaluation of the estimated probabilistic peak ground acceleration (PGA) for a 500- and 5,000-year return period; these data are used to assess geo-seismic hazards such as seismic slope stability and liquefaction. These preliminary evaluations are based on the USGS 2002 and 2014 National Seismic Hazard Maps. The USGS developed these maps using a probabilistic seismic hazard analysis (PSHA) that considered multiple specific sources and regional seismicity to predict the probability of an earthquake of a given ground motion occurring anywhere in a given area within a given return period.[64]

The Department describes the results of Shannon & Wilson's evaluations that are based on the more up-to-date data used in the USGS 2014 PSHA. The 500-year return period PGA values range from 0.074g at the beginning of the proposed transmission line route near Boardman, Oregon, to 0.045g at the end of the proposed transmission line route near Hemingway, Idaho. The PGA values for the 5,000-year return period range from 0.261g the beginning of the alignment to 0.169g at the end of the alignment.[65]

The 2,500-year return period PGA values range from 0.185g at the beginning of the proposed transmission line route to 0.117g at the end of the proposed transmission line route. For the same return period, the short period (0.2-second) spectral response acceleration values range from 0.416g at the beginning of the proposed transmission line route to 0.262g at the end of the proposed transmission line route, and the long period (1.0-second) spectral response acceleration values range from 0.137g at the beginning of the proposed transmission line route to 0.082g at the end of the proposed transmission line route.[66]

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[61] B2HAPPDoc3-14 ASC 08a_Exhibit H_Geology_ASC_Part 1 2018-09-28, Section 3.7.3 and B2HAPPDoc3-14 ASC 08a_Exhibit H_Geology_ASC_Part 1 2018-09-28, Attachment H-1, Section 4.2.
[62] B2HAPPDoc3-14 ASC 08a_Exhibit H_Geology_ASC_Part 1 2018-09-28, Section 3.7.4.
[63] The applicant performed a preliminary seismic risk assessment from a review of earthquake hazard zones included in Federal Emergency Management Agency data, prepared for the U.S. Department of Transportation, Office of Pipeline Safety. B2HAPPDoc3-14 ASC 08a_Exhibit H_Geology_ASC_Part 1 2018-09-28, Section 3.7.6.
[64] B2HAPPDoc3-14 ASC 08a_Exhibit H_Geology_ASC_Part 1 2018-09-28, Attachment H-1, Section 4.1.
[65] B2HAPPDoc3-14 ASC 08a_Exhibit H_Geology_ASC_Part 1 2018-09-28, Attachment H-1, Section 4.1.
[66] B2HAPPDoc3-14 ASC 08a_Exhibit H_Geology_ASC_Part 1 2018-09-28, Attachment H-1, Section 4.1.

Shannon & Wilson's evaluations assumed that the site class along the proposed transmission line route is at the boundary between site class B and site class C (site class B/C), which is a soft rock profile, and used ground motion parameters that correspond to this profile.

Ground Failure

Seismic hazards from earthquake events could include ground failure and fault displacement when an active fault ruptures. To evaluate the potential for ground failure and fault displacement, the applicant evaluates presence of Quaternary faults (that is, faults likely to have been active within the last 2.6 million years) within a 50-mile radius of the proposed site boundary using USGS's 2006 Quaternary Fault and Fold Database. The analysis presented in ASC Exhibit H focuses on mapped Quaternary faults within a five-mile radius of the proposed site boundary, which includes the following 8 faults: the Hite Fault System, Thorne Hollow Section; Hite Fault System, Agency Section; West Grande Ronde Valley Fault Zone; Unnamed East Baker Valley Faults; West Baker Valley Faults; South Grande Ronde Valley Fault Zone; Cottonwood Mountain Fault; and, Faults Near Owyhee Dam. A map of Quaternary faults within 50 miles of the proposed alignment is presented in ASC Exhibit H (Attachment H-1, Appendix D, Figure D11).

Landslides

Seismic hazards from earthquake events include landslides. To characterize the site based on historic landslides, the applicant conducted a desktop review and field reconnaissance, as summarized below:

- Review of GIS files compiled by Oregon Department of Geology and Mineral Industries (DOGAMI) in the Statewide Landslide Information Database for Oregon (SLIDO), version 3.4 (Burns and Watzig, 2017); the review included landslides within a one-mile wide route corridor; initial work by Shaw utilized SLIDO, version 2 (Burns and others, 2011);
- Review of existing geologic maps, including Engineering Geology of the La Grande Area, Union County, Oregon, by Schlicker and Deacon (1971); the maps were compiled and geo-referenced in GIS along the alignment to confirm the location of each SLIDO landslide along the route and to check that each mapped landslide was included in the SLIDO database*;*
- Site reconnaissance (by Shaw) along portions of the original alignment, conducted on October 26-28 and November 15-18, 2011;
- Site reconnaissance (by Shannon & Wilson) along portions of new alignment alternatives and select alignment changes, conducted July 30 through August 2, 2012, and October 16-18, 2013;
- Review of aerial photography (Shaw reviewed 1:24,000 scale aerial photographs provided by 3Di, LLC, of Eugene, Oregon (3Di), and the ESRI Microsoft Virtual Earth

Exhibit H - Attachment H-1 24-1-03820-006 E-2 layer in GIS; Shannon & Wilson reviewed aerial photographs from both ESRI and Google Earth);

- Review of Digital Terrain Models (DTMs) along one-mile-wide route corridors; and
- DOGAMI LiDAR Data Viewer (relevant LiDAR data was only available for portions of the Meacham Lake, Huron, Kamela SE, Hilgard, LaGrande SE, Glass Hill, Craig Mountain, North Powder, Telocaset, Baker, Virtue Flat, and Owyhee Dam quadrangles); No LiDAR data was available in Idaho[67]

Based on a review of the above-described information, Shannon & Wilson mapped landslides within one mile of the proposed transmission line route, alternative transmission segments, and of multi-use areas located outside one mile of the proposed transmission line route (see ASC Exhibit H, Attachment H-1, Appendix E). Based on mapping conducted to inform ASC Exhibit H, more than 40 potential landslides were identified with a potential to affect proposed facility components (see ASC Exhibit H, Attachment H-1, Appendix E).

Liquefaction and Lateral Spreading

Seismic hazards from earthquake events include liquefaction and lateral spreading. Liquefaction refers to the saturation and cohesion of soils causing these soils to temporarily lose their strength, resulting from intense and prolonged ground shaking and seismic activity. Areas with a shallow water table (within 50 feet of the surface) and thick, unconsolidated sediments are the most susceptible to liquefaction in the event of ground shaking. The majority of the site boundary has a low susceptibility to liquefaction because it mostly consists of relatively stable terrain with shallow bedrock and deep groundwater. Seismic activity also has the potential to cause lateral spreading, which is the permanent horizontal movement of liquefiable soil. Lateral spreading during seismic events is most likely to occur on gradual slopes or on flat sites with liquefiable soils.

Subsidence

Subsidence is the sinking or the gradual downward settlement of the land surface, and is often related to groundwater drawdown, compaction, tectonic movements, mining, or explosive activity. Seismic activity in the area could lead to the settling of sediment and could also exacerbate potential subsidence associated with groundwater withdrawal in more populous regions. No historical cases of subsidence in the site boundary have been identified, and the majority of the site has a low susceptibility to subsidence.

Soil-Related and Geologic Hazards

Non-seismic hazards include mass-wasting and landslides, flooding, and erosion.

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[67] B2HAPPDoc3-14 ASC 08a_Exhibit H_Geology_ASC_Part 1 2018-09-28, Section 3.7.6 and Attachment H-1 (Section 5.1.1).

Landslides are a subset of mass wasting events, which describes processes that include the downslope movement of masses of soil and rock. As previously discussed, seismic events have the potential to result in landslides, but non-seismic factors may also trigger landslides (e.g., from heavy precipitation events at unstable areas). Shannon & Wilson mapped landslides within one mile of the proposed alignment (seen ASC Exhibit H, Attachment H-1, Appendix E).[68]

Mass-wasting and Landslides

Mass wasting is a generic term for landslides, rockslides, rockfall, debris flows, soil creep, and other processes that include the downslope movement of masses of soil and rock. Mass wasting can be initiated by precipitation events, sometimes in conjunction with land use. Slope stability is a function of moisture content, slope gradient, rock and soil type, slope aspect, vegetation, seismic conditions and ground-disturbing activities. Appendix E Attachment H-1 contains a detailed reconnaissance of the site boundary showing the locations of known landslides and soil instabilities.

Flooding

Using data from the 2017 Federal Emergency Management Agency (FEMA) National Flood Hazard Layer and the 2015 DOGAMI Statewide Flood Hazard Database for Oregon – FEMA Flood Insurance Study inundation zones, the applicant overlaid the 100-year flood zone with the facility temporary and permanent disturbance areas. As shown in Table H-4 of ASC Exhibit H, some temporary work areas (multi-use areas, pulling and tensioning sites, and structure work areas) within Morrow, Baker, and Malheur counties, and a little more than a mile of permanent access roads, would be located within the 100-year flood zone.[69] In addition, as described in ASC Exhibit K, it appears that the proposed route would cross a number of floodplains and a SFHA in Malheur County (see ASC Exhibit K Figure K-56).

Erosion

Soils most susceptible to erosion by wind and water are typically non-cohesive soils with low infiltration rates, residing on moderate to steep slopes, and soils that are sparsely vegetated.[70] The applicant evaluated erosion potential within the analysis area based on three factors: soil-erodibility (K) factor, wind erodibility, and slope. The standard measurement condition is the unit plot. The unit plot is 72.6 feet (22.1 meters) long on a 9 percent slope, maintained in continuous fallow, tilled up and down hill periodically to control weeds and break crusts that form on the surface of the soil. The plots are plowed, disked, and cultivated the same for a row crop of corn or soybeans except that no crop is grown on the plot.

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[68] B2HAPPDoc3-14 ASC 08a_Exhibit H_Geology_ASC_Part 1 2018-09-28, Section 3.7.6 and Attachment H-1 (Section 5.1.1).
[69] B2HAPPDoc3-14 ASC 08a_Exhibit H_Geology_ASC_Part 1 2018-09-28, Section 3.8.2.
[70] B2HAPPDoc3-14 ASC 08a_Exhibit H_Geology_ASC_Part 1 2018-09-28, Section 3.8.3.

The applicant reviewed the State Soil Geographic (STATSGO) database to characterize soil erosion factors. The U.S. Department of Energy, Pacific Northwest National Laboratory website (DOE 2003) guideline was used to segregate the mapped soils into low, moderate, or high K Factor soils. Low K values ranged from 0.05 to 0.15, moderate K values were from 0.25 to 0.4, and high K values were greater than 0.4. However, the closest category in the Natural Resources Conservation Service (NRCS) geographic information system data file to 0.4 was 0.37. As such, a K factor of 0.37 was used to define soils mostly likely to erode. ASC Exhibit H Attachment H-1 Appendix B presents further information concerning soil erosion potential. Areas of soils with high K factor that could be affected during construction and operations are contained in ASC Exhibit I, Table I-5 and Table I-9.

The potential for soil erosion by wind was evaluated using NRCS wind erodibility group data, which are based on the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion. Project construction activities that could expose soils particularly erodible to wind erosion include any surface disturbance (e.g., road construction and improvements, vegetation clearing).

In general, steep slopes possess a greater potential for erosion by water or mass movements than flat areas. Areas containing greater than 25 percent slope were considered to have greater erosion potential.

Expansive Soils

Expansive soils, which swell when exposed to moisture and shrink when dried, may impact structure foundations. The applicant represents that the pre-construction geological and geotechnical report will evaluate expansive soils hazards and identify measures to mitigate these hazards. It is possible to mitigate the hazards associated with expansive soils by removing the layer of expansive soils, treating the soils to reduce their expansive properties, extending structure foundations deep enough to bypass the layer of expansive soils, or isolating the soil from changes in moisture using enhanced draining and/or coverings.[71]

Groundwater Hazards

Groundwater may exacerbate slope instability, and may require hydrogeological mitigation (such as surface drainage, shallow drainage, and deep drainage) to reduce the soil's water content. Groundwater can also impact construction, particularly where excavations extend below the water table. If shaft foundations for transmission line towers extend below the water

[71] B2HAPPDoc3-14 ASC 08a_Exhibit H_Geology_ASC_Part 1 2018-09-28, Section 3.9.2.3.

table in granular soils, casing and/or slurry may be necessary to prevent soil heave and maintain shaft integrity.

Corrosive Subsurface Conditions

Corrosive soils can damage the metallic and concrete components of subsurface utilities and structures. Shannon & Wilson overlaid data from the Natural Resources Conservation Service Soil Survey Geographic Database with the proposed alignment. These data show that susceptibility of concrete to corrosion when in contact with the on-site surficial soils is expected to be low in most areas, and susceptibility of uncoated steel to corrosion when in contact with the onsite surficial soils is expected to be moderate to high. Metal materials may be protected through the addition of protective coatings or by increasing the metal thickness. Concrete can also be protected, by coating the concrete with an asphalt emulsion, for example.

Based upon consultation with DOGAMI on the investigation methods utilized to evaluate potential seismic and non-seismic risks of the site, and based on the summary of measures and outcomes provided above and as further described in ASC Exhibit H, the Department recommends Council find that the applicant has adequately characterized the seismic and non-seismic risks of the site.

Design, Engineer and Construct Proposed Facility to Avoid Potential Seismic Hazards within Surrounding Area

The Structural Standard requires the Council to find that, based on an adequate characterization of the seismic risks of the site – as presented above, that the applicant demonstrates an ability to design, engineer and construct the proposed facility to avoid potential seismic hazards (i.e. ground motion, ground failure, fault displacement, landslides, liquefaction, lateral spreading, and subsidence) within the surrounding area.

Measures to Design Proposed Facility to Avoid Seismic and Non-Seismic Hazards

The applicant describes that a final seismic hazard assessment including a geotechnical field exploration program, laboratory testing, and detailed site reconnaissance would be completed prior to construction to identify all the areas that would require mitigation due to seismic hazards. All designs and subsequent construction requirements would be modified based on the site-specific characterization of seismic, geologic, and soil hazards. Some specific mitigation techniques for earthquake-induced landslide and liquefaction hazards are presented below.

The principal mitigation strategy for surface rupture hazards is modification of structure locations. Additional mitigation strategies would be developed and refined following completion of future geotechnical investigations. To ensure the applicant conducts the additional geological and geotechnical investigations and develops any necessary mitigation and that the applicant provides notification to the Department and DOGAMI if site specific

investigations identify conditions significantly different from what's described in this ASC, the applicant proposes and the Department recommends that the Council include the following condition in the site certificate:

Recommended Structural Standard Condition 1: Prior to construction of a phase or segment of the facility:

a. At least 90-days prior to construction of a phase or segment of the facility, unless otherwise agreed to by the Department, the certificate holder shall submit an investigation plan for the pre-construction site-specific geologic and geotechnical investigation to the Department for review in consultation with DOGAMI. The investigation plan shall specify the investigation methods to be used to evaluate site-specific seismic and non-seismic hazards identified in (b) of this condition and should, at a minimum, be consistent with the Oregon State Board of Geologist Examiners Guideline for Preparing Engineering Geologic Reports and include methods for literature review, geotechnical field exploration program, laboratory testing, mapping and detailed site reconnaissance.
b. At least 90-days prior to construction of a phase or segment of the facility, unless otherwise agreed to be the Department, the certificate holder shall submit to the Department and DOGAMI a pre-construction site-specific geological and geotechnical investigation report (report) for review, demonstrating that the facility site has been adequately characterized and the facility and temporary construction activities, such as blasting, have been designed and located to avoid seismic, soil and geologic hazards. The report shall at a minimum include information derived from the geological and geotechnical investigations regarding:
    1. Subsurface soil and geologic conditions within the site boundary;
    2. Site-specific geotechnical design criteria and data for the facility components;
    3. Potentially active faults that may affect the facility and their potential risk to the facility;
    4. 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; and, locations necessary to verify lithologic changes and/or geologic hazards such as landslides, steep slopes, or soft soil area.
    5. Potential liquefaction hazards;
    6. Potential soil expansion hazards;
    7. Groundwater detections and any related potential risk to the facility;
    8. Corrosive soils detections and any related potential risk to the facility; and
    9. Facility components within the 100-year flood zone and any related potential risk to the facility
    10. Define and delineate geological and geotechnical hazards to the facility, and identify means to mitigate the identified hazards.

11. The report shall identify the applicable codes, including name and reference number, that the facility components will be designed to satisfy.

In addition, the applicant would utilize the Oregon Structural Specialty Code and the International Building Code for seismic design of the substation, auxiliary buildings, and facilities other than the transmission line towers.[72] The Department recommends that the Council impose the following condition to require the applicant to design the facility in accordance with the versions of the Oregon Structural Specialty Code, International Building Code, and local building codes in effect at the time of construction:

Recommended Structural Standard Condition 2: The certificate holder shall design, engineer, and construct the transmission lines, Longhorn Station, and communication stations in accordance with the International Building Code, Oregon Structural Specialty Code, and local building codes that are most current at the time that final engineering of each of these components is completed and in a manner that does not conflict with National Electrical Safety Code identified Siting Standards for Transmission Lines Condition 3.

The transmission line would be designed and constructed in accordance with the National Electric Safety Code (NESC) and applicable American Society of Civil Engineers (ASCE) standards (including ASCE Standard 10-97; ASCE Standard 7, Chapters 13 and 16; and ASCE Manual of Practice 74). The applicant explains that by designing the transmission towers in accordance with the NESC, which requires that transmission lines be designed to withstand wind and ice loading, the transmission line would also be able to resist earthquake loads. As support for its assertion, the applicant refers to NESC Section 250.A.4, which states, "The structural capacity provided by meeting the loading and strength requirements of Sections 25 (Loadings for Grades B and C) and 26 (Strength Requirements) [of the NESC] provides sufficient capability to resist earthquake ground motions."

In addition, the applicant quotes from the ASCE *Guidelines for Electrical Transmission Line Structural Loading*, which states, in part, "Transmission structures need not be designed for ground-induced vibrations caused by earthquake motion because, historically, transmission structures have performed well under earthquake events, and transmission structure loadings caused by wind/ice combinations and broken wire forces exceed earthquake loads."[73] Recommended Siting Standards for Transmission Lines Condition 3 would require the certificate holder to design, construct, and operate the transmission line in accordance with the requirements of the version of the NESC that is most current at the time that final engineering of the facility is completed.

[72] B2HAPPDoc3-14 ASC 08a_Exhibit H_Geology_ASC_Part 1 2018-09-28, Section 3.7.1 and 3.9.1.1.
[73] B2HAPPDoc3-14 ASC 08a_Exhibit H_Geology_ASC_Part 1 2018-09-28, Sections 3.7.1 and 3.9.1.1.

Ground Failure and Fault Displacement

The Quaternary faults within the surrounding area should be considered during final facility design with regards to their potential to result in ground failure and fault displacement at or near the proposed alignment. The applicant explains that it would evaluate ground failure including landslide, lateral spreading, liquefaction, and surface rupture or settlement once ground accelerations and subsurface conditions are known (following the pre-construction, site-specific geologic and geotechnical investigations). Recommended Structural Standard Condition 1 would require the pre-construction site-specific geological and geotechnical investigation report to, in part, describe potentially active faults that may affect the facility, their potential risk to the facility, and measures to mitigate the identified hazards.

Landslides

Landslides could potentially affect the stability of the proposed tower foundations or associated work areas. The applicant explains that, if feasible, facility structures would be located with sufficient setback from slopes to mitigate the potential for slope instability, and where structures cannot be moved or realigned, mitigation techniques may include modification of slope geometry (grading or removing soils), hydrogeological modification (drainage to reduce the soil's water content), and slope reinforcement methods.[74] Recommended Structural Standard Condition 1 would require the pre-construction site-specific geological and geotechnical investigation report to, in part, use agency approved investigation methods such as LiDAR or field survey investigation of the site boundary to assess the potential for slope instability and landslide hazards, and to identify measures to mitigate the identified hazards.

Liquefaction and Lateral Spreading

The applicant proposes that the pre-construction, site-specific geological and geotechnical investigations include a site-specific evaluation of liquefaction hazards and identify any necessary mitigation measures.[75]

Prior to the development of final engineering design, liquefaction studies will be conducted for susceptible areas, including areas that cross or approach rivers and areas where thick unconsolidated sediments are encountered in the field. Additional evaluation of liquefaction also may be needed as the final alignment and tower locations are chosen. The geotechnical engineer will recommend additional exploration and/or analysis as applicable to assess liquefaction hazards in the geotechnical design report for the transmission line.

[74] B2HAPPDoc3-14 ASC 08a_Exhibit H_Geology_ASC_Part 1 2018-09-28, Section 3.9.2.1.
[75] B2HAPPDoc3-14 ASC 08a_Exhibit H_Geology_ASC_Part 1 2018-09-28, Sections 3.7.6 and 3.9.1.3.

In particular, the evaluation of liquefaction hazards will include susceptible areas, such as areas with thick unconsolidated sediments and areas that cross or approach rivers.[76] Recommended Structural Standard Condition 1 would require the pre-construction site-specific geological and geotechnical investigation report to, in part, assess potential liquefaction hazards and to identify measures to mitigate the identified hazards.

The applicant states that its pre-construction, site-specific evaluation of liquefaction hazards will evaluate if lateral spreading is an additional hazard for areas susceptible to liquefaction.[77] Recommended Structural Standard Condition 1 would require the pre-construction site-specific geological and geotechnical investigation report to, in part, assess potential lateral spreading hazards and to identify measures to mitigate the identified hazards.

Subsidence

Seismic activity has the potential to cause subsidence, which is the sinking or gradual downward settlement of the land surface. The applicant explains that it does not currently propose to perform subsidence studies because the majority of the site boundary has a low susceptibility to subsidence and because the applicant has not identified any historical cases of subsidence in the site boundary. If the geotechnical investigation identifies any subsidence-prone areas, the applicant represents that it would design and site the transmission line to avoid subsidence hazards.[78]

Mass Wasting and Landslides

Landslides could potentially affect the stability of the proposed tower foundations or associated work areas. The applicant explains that, if feasible, facility structures would be located with sufficient setback from slopes to mitigate the potential for slope instability, and where structures cannot be moved or realigned, mitigation techniques may include modification of slope geometry (grading or removing soils), hydrogeological modification (drainage to reduce the soil's water content), and slope reinforcement methods.[79]

Recommended Structural Standard Condition 1 would require the pre-construction site-specific geological and geotechnical investigation report to assess the potential for slope instability and landslide hazards, and to identify measures to mitigate the identified hazards.

[76] B2HAPPDoc3-14 ASC 08a_Exhibit H_Geology_ASC_Part 1 2018-09-28, Section 3.7.6.
[77] B2HAPPDoc3-14 ASC 08a_Exhibit H_Geology_ASC_Part 1 2018-09-28, Section 3.7.6.
[78] B2HAPPDoc3-14 ASC 08a_Exhibit H_Geology_ASC_Part 1 2018-09-28, Section 3.7.6.
[79] B2HAPPDoc3-14 ASC 08a_Exhibit H_Geology_ASC_Part 1 2018-09-28, Section 3.9.2.1.

Flooding

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.

Erosion

The applicant proposes to mitigate for potential soil impacts including wind and water related erosion and expansive soils. Erosion control measures would be designed based on mapped soil erosion hazards, with particular attention to areas with medium and high hazard ratings. Soil erosion would be minimized by constraining traffic, heavy equipment and construction to existing roads where possible. Where new road construction is required, road widths would be limited to the width necessary to accommodate construction equipment. New roads would be located to avoid steep areas as much as possible. Areas affected by construction will be reseeded with vegetation to minimize future erosion and to restore the systems to their natural state. Erosion and sediment control measures will be designed to remain intact until natural vegetation is sufficient to protect against erosion. The station operational footprint areas will be graveled to prevent erosion. The area outside the station fence may also be graveled where practical to prevent soil erosion during operations.

The applicant proposes to implement the following best management practices, in accordance with the DEQ-issued 1200-C General Stormwater permit:

- Avoid Highly Erodible Areas: Initial mitigation measures should include avoiding highly erodible areas, such as steep slopes, where possible, and rerouting impacted drainages to natural drainages to minimize erosion and sedimentation from runoff. Areas impacted by construction should be reseeded and sediment fences, check dams, and other BMPs will remain in place until impacted areas are well vegetated and the risk of erosion has subsided.
- Stabilize Road Entrance/Exit: A stabilized construction entrance/exit should be installed at locations where dirt (exposed, disturbed land) or newly constructed roads intersect existing paved roads. Stabilized entrances should also be installed at the construction laydown areas. The stabilized construction entrance/exits should be inspected and maintained for the duration of the Project life.
- Preserve/Restore Vegetation: To the extent practicable, existing vegetation should be preserved. In the event that vegetation is destroyed in temporary road locations or laydown areas, stockpiled topsoils should be replaced and recontoured. Vegetation

should be reseeded to prevent erosion using an approved seed mixture specified by the NRCS or the USFS as being capable of surviving in local conditions (see the Vegetation Management Plan provided in Attachment P1-4 of this order).

- Control Dust: Dust should be controlled during construction through water application to the disturbed grounds and access roads where necessary. Application of excess water that could lead to erosion or sedimentation should be avoided. Other methods of dust control may include the use of poly sheeting, vegetation, or mulching. Speed limits should be kept to a minimum to prevent pulverization of road substrate.
- Install Silt Fencing: Silt fencing or an equivalent control measure should be installed at various locations along the transmission line. The fencing should be installed on contours downgradient of excavations, fill areas, or graded areas where necessary. Silt fencing or an equivalent control measure should be installed around the perimeters of material stockpiles and construction laydown areas.
- Install Straw Wattles: Straw wattles should be installed to decrease the velocity of sheet flow from stormwater. The wattles should be used along the downgradient edge of access roads adjacent to slopes or sensitive areas.
- Apply Gravel and Mulching: Gravel should be used where soil becomes wet or muddy to prevent erosion and working of the soil. Mulch should be provided to immediately stabilize soil exposed as a result of land disturbing activities. The mulch reduces the potential for wind and raindrop erosion.
- Install Stabilization Matting: Jute mesh, straw matting, or turf reinforcement matting should be used to stabilize slopes that could become exposed during installation of access roads, during rainfall events, or to stabilize intermittent streams disturbed during construction of road crossings. Erosion control matting should be combined with revegetation techniques.
- Control Concrete Washout Area: Concrete washout should be appropriately managed to prevent concrete washout water from impacting soils, water bodies, or wetlands.
- Manage Stockpiles: Soils excavated may be temporarily stockpiled. While the material is stockpiled, perimeter controls should be established and the stockpiled material should be covered as necessary with mulch, plastic sheeting, and/or other appropriate means to prevent erosion and sedimentation.
- Install Check Dams, Sediment Traps, and Sediment Basins: Check dams and sediment traps should be used during construction near tributaries and existing drainages. The check dams and sediment traps will minimize downstream disturbances and sedimentation of creeks. A sediment basin is a constructed temporary pond, built to capture eroded soils that wash off from larger construction sites during rain storms. The sediment-laden soil settles in the pond before the runoff is discharged

To mitigate the risk of accelerating soil erosion by wind in areas rated with wind erodibility, the applicant proposes to implement reseeding efforts, apply mulch, and use water for dust control. Areas that are susceptible to aeolian processes that will be disturbed by construction activities and not permanently covered by aboveground facilities will be vegetated using a seed mixture specified by the applicable agencies as being capable of surviving in local conditions,

and withstanding burial and deflation from aeolian processes. Disturbed areas susceptible to wind erosion may be hydroseeded when temperatures and moisture levels are conducive to seed germination. Vegetation protection actions and activities wouldbe presented as part of the applicant's final Vegetation Management Plan (see Attachment P1-4 of this order). To ensure the protective measures set forth in the draft Vegetation Management Plan are incorporated into the final Vegetation Management Plan and to ensure compliance with the final Vegetation Management Plan, the Department recommends Council impose Fish and Wildlife Condition 2.

The applicant describes that appropriate mitigation techniques would be selected for expansive soil swell. In general, mitigation techniques for expansive soils include removal, bypass, isolation, and treatment. If only a thin layer of expansive soil is present at a site, it may be feasible to strip and remove it. For thicker layers of expansive soil, it is common practice to extend foundations deep enough to effectively bypass the zone where moisture content is likely to change. Another mitigation alternative is to isolate the soil from changes in moisture content, through the use of enhanced drainage and/or coverings. Where only shallow foundations are practical, another mitigation alternative is to treat the expansive soils with lime or some other material that reduces their expansive properties. Recommended Structural Standard Condition 1 includes a requirement that, as part of the pre-construction geotechnical investigation, the certificate holder would address the potential of expansive soil impacts and any necessary mitigation measures regarding the same.

Based upon the evidence provided, and subject to compliance with the recommended conditions referenced above, the Department recommends the Council find that the applicant can design, engineer, and construct the facility to avoid dangers to human safety and the environment presented by the identified non-seismic hazards of the site.

Mandatory Structural Conditions

OAR 345-025-0006 lists certain conditions that the Council must adopt in every site certificate, and includes conditions relevant to the consideration of seismic, geological, and soil hazards in facility siting and design at OAR 345-025-0006(12) through (14). The Department recommends that the Council adopt these mandatory conditions as Recommended Structural Standard Conditions 2 through 4:[80]

> **Recommended Structural Standard Condition 3:** The certificate holder shall design, engineer and construct the facility to avoid dangers to human safety and the environment presented by seismic hazards affecting the site that are expected to result from all maximum probable seismic events. As used in this rule "seismic hazard" includes ground shaking, ground failure, landslide, liquefaction triggering and consequences (including flow

[80] The language of Recommended Structural Standard Condition 2 is based upon OAR 345-025-0006(12), but was modified to exclude reference to coastal sites because the site boundary is located far from coastal areas.

failure, settlement buoyancy, and lateral spreading), cyclic softening of clays and silts, fault rupture, directivity effects and soil-structure interaction.
[Mandatory Condition OAR 345-025-0006(12)]

Recommended Structural Standard Condition 4: The certificate holder shall notify the Department, the State Building Codes Division and the Department of Geology and Mineral Industries promptly if site investigations or trenching reveal that conditions in the foundation rocks differ significantly from those described in the application for a site certificate. After the Department receives the notice, the Council may require the certificate holder to consult with the Department of Geology and Mineral Industries and the Building Codes Division to propose and implement corrective or mitigation actions.
[Mandatory Condition OAR 345-025-0006(13)]

Recommended Structural Standard Condition 5: The certificate holder shall notify the Department, the State Building Codes Division and the Department of Geology and Mineral Industries promptly if shear zones, artesian aquifers, deformations or clastic dikes are found at or in the vicinity of the site. After the Department receives notice, the Council may require the certificate holder to consult with the Department of Geology and Mineral Industries and the Building Codes Division to propose and implement corrective or mitigation actions.
[Mandatory Condition OAR 345-025-0006(14)]

<u>Disaster Resilience and Climate Change Adaptation</u>

OAR 345-021-0010(1)(h)(E) and OAR 345-021-0010(1)(h)(F)(i) require the applicant to discuss the proposed facility's disaster resilience (with respect to seismic hazards and non-seismic geologic hazards, respectively) and OAR 345-021-0010(1)(h)(F)(ii) requires the applicant to discuss the impacts of future climate conditions on the facility.

Disaster Resilience[81]

In ASC Exhibit H Section 3.8.4, the applicant explains that, by designing the transmission line to NESC-mandated engineering and construction standards, the transmission line would be designed to withstand earthquake hazards as well as severe wind and ice loading. As previously discussed, the applicant would utilize the OSSC and the IBC for seismic design of the substation, auxiliary buildings, and facilities other than the transmission line towers. Access roads would be sited away from areas of high geology- or soil-related hazards.

In the event of a disaster, the applicant would follow its Transmission Emergency Response Plan, which guides the applicant's response to natural disasters and outage events that disrupt the transmission system. Through its membership in the Edison Electric Institute, the applicant

[81] B2HAPPDoc3-14 ASC 08a_Exhibit H_Geology_ASC_Part 1 2018-09-28, Section 3.8.4.

has access to assistance from other investor-owned electric companies that would provide personnel and materials to restore electric service following a service disruption. The applicant also maintains spare materials and repair kits that allow it to restore power in the event of a transmission outage, including spools of spare conductors, lattice tower repair kits, and emergency towers that can be erected to temporarily replace damaged transmission towers.

In the event that an access road is damaged, the applicant would be able to access transmission line structures using alternative access roads or traveling to the structure by foot, overland travel, or using a helicopter. If the access road is located on private land, the applicant would repair the road as soon as possible and necessary. In the event that one of the facility's communication stations is damaged, the applicant explains that it would still maintain full communications because the communications system for the transmission line is designed to be redundant and geographically diverse.

Climate Change[82]

Based on a review of the Third Oregon Climate Assessment Report and literature on how climate change may impact soil erosion rates, the applicant determined that climate change is anticipated to change conditions in eastern Oregon by increasing drought, increasing wildfires, reducing summertime water supply, and increasing forest disturbance from disease, drought, and wildfire. Increased wildfire and forest disturbances may result in decreased vegetative cover on sleep slopes, thereby increasing runoff and erosion rates. Extreme precipitation events are also expected to increase, resulting in an increased risk of flooding, runoff, soil erosion, landslides, and mass wasting events.

The applicant asserts that the mitigation measures listed in ASC Exhibit H Section 3.9 are sufficient to address any climate-change-induced increases in soil erosion or geology hazards. The Department notes that these mitigation measures includes measures to reduce the risks posed by flooding, soil erosion, landslides, and mass wasting events. Additionally, as discussed in Section IV.E., *Land Use* of this order, maintaining vegetative clearance in the right of way, and particularly maintaining a right of way free of hazard or danger trees, will further reduce the risk of fire from, or to, the proposed facility.

<u>Conclusions of Law</u>

Based on the foregoing findings of fact and conclusions of law, and subject to compliance with the recommended conditions referenced above, the Department recommends that the Council find that the proposed facility, including the proposed and alternative routes, would comply with the Council's Structural Standard.

[82] B2HAPPDoc3-14 ASC 08a_Exhibit H_Geology_ASC_Part 1 2018-09-28, Section 3.8.5.

IV.D. Soil Protection: OAR 345-022-0022

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.

Findings of Fact

The Soil Protection standard requires the Council to find that, taking into account mitigation, the design, construction and operation of a facility are not likely to result in a significant adverse impact to soils. The applicant's assessment of potential soil impacts and compliance with the Soil Protection standard are included in ASC Exhibit I. Additional information related to the proposed facility's potential effects to soils and proposed mitigation measures, as described by the applicant, can be found in ASC Exhibit G (Materials Analysis) and Exhibit K (Land Use).

The analysis area for the Soil Protection standard includes the area within the site boundary.[83] Construction activities would disturb approximately 4,348 acres (temporary impacts) and the footprint of the proposed facility would disturb approximately 757 acres (permanent impacts), as shown in ASC Exhibit I, Table I-4.[84]

Existing Soil Conditions and Land Use

Existing soil conditions within the analysis area are described and shown in ASC Exhibit I, specifically in Section I.3.3. The majority of soil within the site boundary is classified either as Aridisol or Mollisol. The applicant states that Aridisols are generally found in dry climates and contain subsurface horizons in which clay, calcium carbonate, silica, salts, and/or gypsum have accumulated due to limited leaching. These soils are not generally suitable for agricultural purposes unless irrigated, and revegetation in these areas is also considered to be difficult due to the amount of water that would be necessary to aid in revegetation measures. Mollisols include a variety of soils formed mainly under grasslands; these soils have a strong organic component formed by the decomposition of grass and other vegetation. These soils maintain high agricultural potential and are favorable for revegetation. Table I-1 indicates that most (approximately 78 percent) of the soils within the proposed site boundary consists of Mollisols, with Aridisols representing the second largest group of soils within the site boundary (at approximately 14 percent). The remaining soils (approximately eight percent) are classified as Andisols and Entisols, which represent a variety of soils with a predominantly volcanic origin and recently developed soils, respectively.

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[83] B2HAPPDoc3-16 ASC 09a_Exhibit I_Soil_ASC_ Part 1 2018-09-28, p. I-2
[84] B2HAPPDoc3-16 ASC 09a_Exhibit I_Soil_ASC_ Part 1 2018-09-28, Table I-4.

Soils most susceptible to erosion by wind and water are typically non-cohesive soils with low infiltration rates, residing on moderate to steep slopes, and soils that are sparsely vegetated. Using the Natural Resources Conservation Service (NRSC) State Soil Geographic Database (STATSGO) and the U.S. Geological Survey (USGS) National Elevation Dataset (NED), the applicant evaluated soil erosion hazards throughout the site boundary.[85] Exhibit I, Tables I-5 and I-9 show the erosion potential for the soils within the temporary and permanent disturbance areas, respectively.

In addition, the applicant evaluated factors that have the potential to affect the level of effort required to reclaim disturbed soils, including soil compaction, the amount of stony-rocky soil, droughty soil, depth to bedrock, and the presence of hydric soils.[86] No highly compaction-prone soils were identified within the site boundary.[87] Exhibit I, Table I-6 identifies the amounts of stony-rocky soils, droughty soils, shallow bedrock, and hydric soils within the temporary disturbance areas.

While most (approximately 79 percent) of the land cover crossed by the proposed alignment consists of shrubland and grassland, the proposed alignment would also cross land cover types that may be representative of current land uses that require or depend on productive soils to support the current use. These land cover types include cultivated cropland (which includes dryland and irrigated agriculture; approximately 9 percent), forested/woodland areas (approximately nine percent), and substantially smaller amounts of pasture, other agricultural areas, and wetlands.[88] As shown in ASC Exhibit I, Table I-2, approximately 1,856 acres of high-value farmland soils were identified within the site boundary for the proposed alignment.

Prior to construction, the applicant would collect and assess additional soil data as part of the site-specific geotechnical investigation (see Section IV.C., *Structural Standard* of this order) to refine its understanding of existing soil conditions in the site boundary.

Potential Adverse Impacts to Soil

ASC Exhibit I, Section 3.5 includes the applicant's assessment of how the proposed facility may impact soils, and Section 3.6 contains the applicant's proposed measures to avoid, minimize, and mitigate those impacts.

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[85] B2HAPPDoc3-16 ASC 09a_Exhibit I_Soil_ASC_ Part 1 2018-09-28, Section 3.2.3.
[86] Data sources include STATSGO, the NRCS Soil Survey Geographic Database (SSURGO), and the Oregon Wetlands Database hydric soil data.
[87] B2HAPPDoc3-16 ASC 09a_Exhibit I_Soil_ASC_ Part 1 2018-09-28, Section 3.2.4.
[88] B2HAPPDoc3-16 ASC 09a_Exhibit I_Soil_ASC_ Part 1 2018-09-28, Table I-3. The applicant reviewed Regional Gap Analysis Project data and performed a desktop interpretation of 2012 National Agriculture Imagery Program imagery to determine the land cover types.

Construction

Construction of the proposed facility would result in temporary disturbance to approximately 4,348 acres, which may result in increased erosion, soil compaction, loss of soil productivity, and potentially the need for soil reclamation.[89] Clearing, grubbing, grading, backfilling, and excavation activities along the ROW and at additional temporary workspaces would increase the potential for erosion, topsoil loss, and sedimentation into surface water streams or lakes.[90] Construction equipment and vehicles driving on native soil may result in soil compaction, especially in areas under roadways, structures, and high-use areas. Compacted soil would need to be ripped, loosened, or otherwise treated using BMPs to restore its productivity, and extensive construction blasting (if necessary) could prolong the time to achieve successful reclamation due to the creation of additional stony-rocky soils.[91]

Some of the soils that could be impacted include productive soils used for agriculture and forested areas (see ASC Exhibit I, Table I-7). In addition to preventing agricultural use of the soils during construction, construction activities may impact productive soils by increasing the potential for soil erosion, damage to the agricultural land drainage and irrigation systems, mixing of topsoil and subsoil, loss of topsoil, and soil compaction. While productive soils could support seasonal crops and replanted tree species within a growing season of construction completion, the transmission line ROW would not be suitable for tree growth while the facility remains in service, and aerial spraying routes may need to be modified or restricted in agricultural areas adjacent to the transmission line. Productive soils located within the footprint of permanent facility components would be unavailable for use throughout the life of the proposed facility.[92]

In addition to temporary impacts, the placement of project components would permanently disturb approximately 757 acres to account for the footprint of the transmission towers and related and supporting facilities.[93] Temporarily disturbed areas would be restored following completion of construction, and permanently disturbed areas would be restored following permanent cessation of construction or operation of the facility (retirement of the proposed facility).[94]

During facility construction, there would be a risk to soils from spills or leakage of chemicals, petroleum products such as diesel fuel, or other materials.[95] As provided in Table G-3, the applicant expects that construction of the facility would require 72,000 gallons of gasoline;

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[89] B2HAPPDoc3-16 ASC 09a_Exhibit I_Soil_ASC_Part 1 2018-09-28, Table I-4 and Section 3.5.4.
[90] B2HAPPDoc3-16 ASC 09a_Exhibit I_Soil_ASC_Part 1 2018-09-28, Section 3.5.1.1.
[91] B2HAPPDoc3-16 ASC 09a_Exhibit I_Soil_ASC_Part 1 2018-09-28, Sections 3.5.1.2 and 3.5.1.3.
[92] B2HAPPDoc3-16 ASC 09a_Exhibit I_Soil_ASC_Part 1 2018-09-28, Section 3.5.1.4.
[93] B2HAPPDoc3-16 ASC 09a_Exhibit I_Soil_ASC_Part 1 2018-09-28, Table I-4.
[94] B2HAPPDoc3-16 ASC 09a_Exhibit I_Soil_ASC_ Part 1 2018-09-28, Section 3.6.10 and B2HAPPDoc3-40 ASC 23_Exhibit W_Retirement_ASC 2018-09-28, Section 3.2.
[95] B2HAPPDoc3-16 ASC 09a_Exhibit I_Soil_ASC_ Part 1 2018-09-28, Sections 3.5.1.6 and 3.6.3.

216,000 gallons of diesel; 4,000 gallons of motor and gear oil; 400 gallons of antifreeze; 400 gallons of transmission fluid; 400 gallons of hydraulic fluid; and detergents. In addition, construction of the facility would require the use of paint/solvents, herbicides, jet fuel for helicopter use, and blasting materials (where needed to blast rock). Prevention and management of spills and leaks is further discussed in the mitigation section below.
The proposed facility would be subject to the requirements of the National Pollutant Discharge Elimination System (NPDES) 1200-C general stormwater permit, which requires the applicant to develop and implement an Erosion and Sediment Control Plan (ESCP) to minimize impacts to soils and the environment.[96] Mitigation measures and recommended site certificate conditions are discussed below.

Operation

The applicant states that proposed facility operation would have minimal soil erosion potential; soil erosion could consist of soil disturbance at tower sites, Longhorn station, communication stations, and/or access roads during repair and maintenance of facility components.[97]

Restoration of temporarily impacted areas would further reduce the potential for erosion during facility operation. As discussed in Section IV.A., *General Standard of Review* of this order, General Standard of Review Condition 9 requires the applicant to restore vegetation to the extent practicable and landscape all areas disturbed by construction. As an example, the applicant notes that the area surrounding the Longhorn Station site would be covered with free draining rock, which would isolate native soil from erosive conditions. Access roads used during operations would be seeded with a grass mix and revegetated.[98]

The applicant expects that it would require approximately 3,400 gallons of liquid propane as backup fuel for generators at communications stations; herbicide; gasoline; motor oil; antifreeze; and transmission fluid. In addition, the applicant would use 14,800 gallons of PCB-free insulating oil at the Longhorn Station to insulate shunt reactors and the neutral grounding reactor.[99] Hazardous materials management is further discussed in the mitigation section below.

[96] B2HAPPDoc3-16 ASC 09a_Exhibit I_Soil_ASC_ Part 1 2018-09-28, Section 3.6.2.
[97] B2HAPPDoc3-16 ASC 09a_Exhibit I_Soil_ASC_ Part 1 2018-09-28, Section 3.5.2.1.
[98] B2HAPPDoc3-16 ASC 09a_Exhibit I_Soil_ASC_Part 1 2018-09-28, Section 3.5.2.
[99] B2HAPPDoc3-13 ASC 07_Exhibit G_Materials_ASC 2018-09-28, Table G-3a and Section 3.2.

Measures to Mitigate Potential Adverse Impacts to Soils

Erosion

As noted above, the applicant represents that soil erosion could occur during construction but that soil erosion would be minimal during operations.[100]

There are a number of measures the applicant proposes to implement to reduce erosion during construction. Proposed facility construction must be conducted in accordance with an NPDES 1200-C Construction Stormwater Permit, including an associated Erosion and Sedimentation Control Plan (ESCP). NPDES 1200-C permits are federally-delegated from the U.S. Environmental Protection Agency to DEQ, and are therefore not included in or governed by the site certificate. The NPDES 1200-C permit is intended to regulate and manage stormwater during construction. The NPDES 1200-C Construction Stormwater Permit Application and draft ESCP the applicant submitted to the Oregon Department of Environmental Quality (DEQ) are included in ASC Exhibit I, Attachment I-3. Based on its evaluation of the NPDES permit application and associated ESCP, DEQ notified the applicant and the Department in December 2012 that DEQ expects to be able to issue the NPDES 1200-C construction stormwater permit for the proposed facility within two to three weeks of receiving the site certificate and the final version of the ESCP.[101]

The applicant states that erosion would be minimized through the following general best management practices (BMPs) in the ESCP. Traffic, heavy equipment, and construction would be constrained to existing roads, when practicable.[102] New roads would be constructed to avoid steep areas; roads would be constructed so that proper drainage is not impaired.[103] Furthermore, the applicant represents that it would (a) avoid earth-disturbing activities during wet weather; (b) implement sediment controls in work areas; (c) implement storm drain inlet protection; and (e) implement non-stormwater pollution controls.[104] The ESCP would also include specific BMPs to be implemented in areas with higher potential for soil erosion impacts. Those BMPs would include:[105]

- Seeding and Stabilization: Seeding would be conducted to stabilize disturbed areas. If topsoil is removed, it would be separated from subsoils and stored separately. Topsoils would be returned to the removal site and would not be spread in other areas. Seeding

[100] B2HAPPDoc3-16 ASC 09a_Exhibit I_Soil_ASC_ Part 1 2018-09-28, Section 3.5.2.1.
[101] B2HAPPDoc3-17 ASC 09b_Exhibit I_Soil_ASC_Part 2 2018-09-28, Attachment I-4.
[102] B2HAPPDoc3-16 ASC 09a_Exhibit I_Soil_ASC_ Part 1 2018-09-28, Section 3.6.4.
[103] B2HAPPDoc3-16 ASC 09a_Exhibit I_Soil_ASC_ Part 1 2018-09-28, Section 3.6.4.
[104] B2HAPPDoc3-16 ASC 09a_Exhibit I_Soil_ASC_ Part 1 2018-09-28, Sections 3.6.
[105] B2HAPPDoc3-16 ASC 09a_Exhibit I_Soil_ASC_ Part 1 2018-09-28, Section 3.6.4.

measures would be evaluated after two growing seasons, and areas of inadequate cover would be re-seeded.

- Silt Fencing**:** Silt fences would be used during construction to trap sediment, which would be removed before it reaches one-third of the aboveground silt fence height. Once the drainage area has become permanently stabilized, the fence materials and sediment deposits would be removed. The disturbed area would be graded and re-seeded.
- Vegetation Buffers: Vegetation buffers would be used to treat sheet flow from adjacent surfaces by slowing runoff velocities, and allowing sediment and other pollutants to partially infiltrate into underlying soils. Vegetation buffers would be inspected, as necessary, to ensure uniform sheet flow and minimize any development of channels.
- Temporary Construction Entrances: Temporary construction entrance gravel pads would prevent mud and sediment from leaving the construction site. After rainfall, structures used to trap sediment will be inspected and cleaned out as necessary.
- Concrete Washouts: Concrete washouts would be located away from waterbodies. They would be installed prior to concrete construction. Washouts would be repaired, enlarged, or cleaned as necessary to maintain capacity for wasted concrete.

The applicant proposes, and the Department recommends, the following conditions relating the DEQ-issued NPDES 1200, and as required by the NPDES 1200, the ESCP:

Recommended Soil Protection Condition 1: The certificate holder shall:

a. Prior to construction of the facility, submit to the Department a final copy of an ODEQ-issued NPDES 1200-C General Construction Permit, including the final Erosion Sediment Control Plan (ESCP). The protective measures described in the 1200-C Permit Application and ESCP as provided in Attachment I-3 of the Final Order on the ASC, shall be included in the final ESCP.
b. During construction of the facility, the certificate holder shall conduct all work in compliance with the NPDES 1200-C General Construction Permit and ESCP.

Compliance with the NPDES 1200-C permit and ESCP, as issued and approved by DEQ, would reduce soil erosion by water. To minimize the potential for wind erosion during construction, the applicant would apply seed, apply mulch, and use water to control dust in areas susceptible to wind erosion.[106]

As soon as construction is completed in any given area, the applicant would reclaim the area in accordance with the Reclamation and Revegetation Plan (ASC Exhibit P1, Attachment P1-3) unless that area is covered by an aboveground facility. In addition, following construction, the

[106] B2HAPPDoc3-16 ASC 09a_Exhibit I_Soil_ASC_Part 1 2018-09-28, Section 3.6.5 and B2HAPPDoc3-14 ASC 08a_Exhibit H_Geology_ASC_Part 1 2018-09-28, Section 3.9.2.2.

applicant would limit surface erosion on the roads that would be retained for operation by seeding and revegetating the roads in accordance with the Reclamation and Revegetation Plan.[107] Recommended Fish and Wildlife Habitat Condition 1 would require the certificate holder to submit a finalized Reclamation and Revegetation Plan to the Department for its approval, and to conduct all work in compliance with that plan.

Spills or Leaks

Each multi-use area would contain up to one aboveground storage tank (AST) for gasoline or diesel fuel. To contain potential spills, each AST would be located within secondary containment with a capacity of at least ten percent greater than the volume of the AST. In addition to ASTs, areas that may be used for storage of materials that could result in a spill (such as vehicle maintenance areas) would be limited to multi-use areas, which would be fenced with a locked gate.[108] Herbicides would not be stored on-site during facility operations but would be brought in on an as-needed basis for vegetation management, and would be applied, handled, and managed in accordance with the Noxious Weed Plan (ASC Exhibit P, Attachment P1-5).[109] Recommended Fish and Wildlife Habitat Conditions 3 would require the certificate holder to submit a finalized Noxious Weed Plan to the Department for its approval, and to conduct all work in compliance with that plan.

The applicant would require its construction contractors to abide by a Spill Prevention, Control, and Countermeasures Plan (SPCC). An SPCC Plan contains site-specific spill prevention, response, and cleanup procedures to minimize the risk and impacts of spills or leaks of fuels, lubricants, coolants, or solvents. The applicant provided its draft SPCC as Attachment G-4 to ASC Exhibit G. The draft SPCC provides, in pertinent part, that:[110]

- Liquids transfer and refueling would occur only at approved locations that are at least 100 feet away from any wetlands or surface waters, 200 feet from any private water well and 400 feet from any municipal or community water well.
- Crews would maintain adequate spill response equipment available at the dispensing or transfer location.
- Fuels in storage tanks would be located at least 100 feet from wetlands, 200 feet from private water wells, and 400 feet from municipal water supply wells. Furthermore, the

[107] B2HAPPDoc3-16 ASC 09a_Exhibit I_Soil_ASC_Part 1 2018-09-28, Sections 3.5.1.1 and 3.6.4.
[108] B2HAPPDoc3-13 ASC 07_Exhibit G_Materials_ASC 2018-09-28, Section 3.3.
[109] B2HAPPDoc3-16 ASC 09a_Exhibit I_Soil_ASC_Part 1 2018-09-28, Section 3.5.1.5.
[110] B2HAPPDoc3-16 ASC 09a_Exhibit I_Soil_ASC_Part 1 2018-09-28, Section 3.6.3.

applicant would install a temporary berm around the tank, which would be lined with plastic, to provide for containment. The container would be inspected daily.

- A fuel truck with a maximum of 300 gallons of fuel may enter restricted areas to refuel construction equipment; two trained personnel will be present during refueling to reduce the potential for spill or accidents.
- Each contractor would be required to develop a detailed, site-specific Hazardous Materials Management Plan prior to construction.

The applicant proposes, and the Department recommends, the following Conditions relating to an 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.

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.[111] However, the applicant proposes, and the Department recommends that the Council adopt the following condition relating to the implementation of 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.

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.

Soil Compaction

As previously discussed, no highly compaction-prone soils were identified within the site boundary; however, all soil has some potential for compaction. As described in the applicant's Agricultural Lands Assessment (ASC Exhibit K, Attachment K-1), it would avoid performing

[111] B2HAPPDoc3-16 ASC 09a_Exhibit I_Soil_ASC_Part 1 2018-09-28, Section 3.6.3.

activities that could result in soil compaction when soils are wet and therefore most susceptible to compaction. Where construction activities result in soil compaction, the applicant would rip, loosen, or otherwise relieve soil compaction to restore the productive potential of those soils after construction completion. Once the facility is placed in service, vehicles would mostly travel on already established travelways, thereby minimizing the potential for additional soil compaction; however, local soil loosening may be necessary to facilitate reclamation of an area disturbed during facility maintenance activities.[112] As described in the Reclamation and Revegetation Plan, measures to reduce compaction while preventing gully formation (i.e., a landform created by running water) include road ripping, developing frequent water bars, and using cross-ditching (e.g., rolling dips).

Impacts to Farmland and Forested Areas

The draft ESCP (ASC Exhibit I, Attachment I-3) would require, in part, salvaging and segregating topsoil, which would reduce impacts to farmland and forested areas. Appendix B to the Section IV.E., *Land Use* of this order and the applicant's Agricultural Lands Assessment (ASC Exhibit K, Attachment K-1) details how the applicant would mitigate impacts to productive soils and the agricultural and forest operations that require or depend on those soils. Recommended Land Use Conditions 14 would requires the certificate holder to submit a finalized Agricultural Lands Assessment to the Department for its approval, and to conduct all work in compliance with that plan.

Other Risks to Soils

The proposed transmission line would require the use of explosives for blasting rock; the applicant represents that use of explosives would conform to its Framework Blasting Plan, which is provided as Attachment G-5 to ASC Exhibit G. As described in Attachment G-5, the Blasting Plan would delineate procedures relating to the safe use and storage of explosives. Blasting could be utilized in areas with rocky terrain to excavate tower footings, prepare station pads, and to construction access roads.[113] The applicant states that blasting would only be utilized in areas where traditional earth moving equipment and practices are unable to accomplish excavation. If hard rock is encountered within the planned drilling depth, blasting may be required to loosen or fracture rock to reach the required depth to install foundation structures. Locations where blasting is expected would be identified within a site-specific

[112] B2HAPPDoc3-16 ASC 09a_Exhibit I_Soil_ASC_Part 1 2018-09-28, Section 3.6.6.
[113] B2HAPPDoc3-13 ASC 07_Exhibit G_Materials_ASC 2018-09-28, Attachment G-5, p. 1.

geotechnical investigation. Additionally, construction contractors may to use implosive sleeves during line stringing to fuse conductor wires.[114]

The Blasting Plan would be updated after site-specific geotechnical surveys are completed.[115] The applicant proposes, and the Department recommends the Council adopt, the following conditions related to blasting:

Recommended Soil Protection Condition 4:

a. Prior to construction, the certificate holder shall finalize, and submit to the Department for approval, a final Blasting Plan. The protective measures described in the draft Blasting Plan in Attachment G-5 attached to the Final Order on the ASC, shall be included as part of the final Blasting Plan, unless otherwise approved by the Department. The final Blasting Plan shall meet the requirements of the Oregon State Police and the Oregon Office of State Fire Marshal relating to the transportation, storage, and use of explosives.
b. The certificate holder shall conduct all work in compliance with the final Blasting Plan approved by the Department.

Soil Revegetation and Reclamation

As previously discussed, factors that have the potential to affect the level of effort required to reclaim disturbed soils include soil compaction, the amount of stony-rocky soil, droughty soil, depth to bedrock, and the presence of hydric soils. The applicant's proposed Vegetation Management Plan (ASC Exhibit P, Attachment P1-4) describes the revegetation actions and activities that would occur in areas where one or more of these factors apply. For example, adaptive seed mixtures and fertilization, mulching, and monitoring may be necessary to successfully reclaim areas with shallow bedrock.[116] Recommended Fish and Wildlife Habitat Conditions 2 would require the certificate holder to submit a finalized Vegetation Management Plan to the Department for its approval, and to conduct all work in compliance with that plan.

Monitoring Program

Each year for up to five years following construction completion, the applicant would perform post-construction reclamation monitoring to evaluate the reclamation success of reclaimed temporary disturbance areas and to determine if site soils are adequately protected or if further monitoring and reclamation actions are warranted.[117] Recommended Fish and Wildlife Habitat Condition 1 would require the certificate holder to submit a finalized Reclamation and

[114] B2HAPPDoc3-13 ASC 07_Exhibit G_Materials_ASC 2018-09-28, Attachment G-5, Section 1.2.
[115] B2HAPPDoc3-16 ASC 09a_Exhibit I_Soil_ASC_Part 1 2018-09-28, Section 3.6.3.
[116] B2HAPPDoc3-16 ASC 09a_Exhibit I_Soil_ASC_Part 1 2018-09-28, Section 3.6.7.
[117] B2HAPPDoc3-25 ASC 16A_Exhibit P1_Wildlife_ASC_Part 1_Main thru Attach P1-6 rev 2018-09-28, Attachment P1-3, Section 6.0.

Revegetation Plan to the Department for its approval, and to conduct all work in compliance with that plan.

The final DEQ-approved ESCP would include regular inspection requirements. The draft ESCP (ASC Exhibit I, Attachment I-3) specifies the required frequency of inspections of ESCP controls and practices to ensure that BMPs are in working order. For example, the draft ESCP would require daily inspections when stormwater runoff is occurring, or every two weeks in dry conditions.

Once the facility is placed in service, the applicant proposes to perform regular (generally bi-annual) inspection of the facility to determine if facility structures are resulting in erosion and whether or not any corrective or mitigation measures are necessary.[118] The applicant proposes, and the Department recommends that the Council adopt, the following condition to ensure soil impacts are monitored during facility operations:

> **Recommended Soil Protection Condition 5:** During operation, the certificate holder shall inspect the facility components for soil impacts as part of the certificate holder's regular transmission line inspection process and shall implement corrective action and mitigation measures, if necessary.

Subject to compliance with the recommended conditions above, the Department recommends that the Council find the design, construction, and operation of the proposed facility would not be likely to result in a significant adverse impact to soils.

Conclusions of Law

Based on the foregoing recommended findings of fact and conclusions of law, and subject to compliance with the recommended site certificate conditions, the Department recommends that the Council find that the proposed facility, including the proposed and alternative routes, would comply with the Council's Soil Protection standard.

IV.E. Land Use: OAR 345-022-0030

(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

[118] B2HAPPDoc3-16 ASC 09a_Exhibit I_Soil_ASC_Part 1 2018-09-28, Section 3.7.

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);

(B) For a proposed facility that does not comply with one or more of the applicable substantive criteria as described in section (3), the facility otherwise complies with the statewide planning goals or an exception to any applicable statewide planning goal is justified under section (4); or

(C) For a proposed facility that the Council decides, under sections (3) or (6), to evaluate against the statewide planning goals, the proposed facility complies with the applicable statewide planning goals or that an exception to any applicable statewide planning goal is justified under section (4).

(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. If the special advisory group recommends applicable substantive criteria, as described under OAR 345-021-0050, the Council shall apply them. If the special advisory group does not recommend applicable substantive criteria, the Council shall decide either to make its own determination of the applicable substantive criteria and apply them or to evaluate the proposed facility against the statewide planning goals.

(4) The Council may find goal compliance for a proposed facility that does not otherwise comply with one or more statewide planning goals by taking an exception to the applicable goal. Notwithstanding the requirements of ORS 197.732, the statewide planning goal pertaining to the exception process or any rules of the Land Conservation and Development Commission pertaining to the exception process, the Council may take an exception to a goal if the Council finds:

(a) The land subject to the exception is physically developed to the extent that the land is no longer available for uses allowed by the applicable goal;

(b) The land subject to the exception is irrevocably committed as described by the rules of the Land Conservation and Development Commission to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable; or

(c) The following standards are met:

(A) Reasons justify why the state policy embodied in the applicable goal should not apply;

(B) The significant environmental, economic, social and energy consequences anticipated as a result of the proposed facility have been identified and adverse

impacts will be mitigated in accordance with rules of the Council applicable to the siting of the proposed facility; and

(C) The proposed facility is compatible with other adjacent uses or will be made compatible through measures designed to reduce adverse impacts.

(5) If the Council finds that applicable substantive local criteria and applicable statutes and state administrative rules would impose conflicting requirements, the Council shall resolve the conflict consistent with the public interest. In resolving the conflict, the Council cannot waive any applicable state statute.

(6) If the special advisory group recommends applicable substantive criteria for an energy facility described in ORS 469.300(10)(a)(C) to (E) or for a related or supporting facility that does not pass through more than one local government jurisdiction or more than three zones in any one jurisdiction, the Council shall apply the criteria recommended by the special advisory group. If the special advisory group recommends applicable substantive criteria for an energy facility described in ORS 469.300(10)(a)(C) to (E) or a related or supporting facility that passes through more than one jurisdiction or more than three zones in any one jurisdiction, the Council shall review the recommended criteria and decide whether to evaluate the proposed facility against the applicable substantive criteria recommended by the special advisory group, against the statewide planning goals or against a combination of the applicable substantive criteria and statewide planning goals. In making the decision, the Council shall consult with the special advisory group, and shall consider:

(a) The number of jurisdictions and zones in question;

(b) The degree to which the applicable substantive criteria reflect local government consideration of energy facilities in the planning process; and

(c) The level of consistence of the applicable substantive criteria from the various zones and jurisdictions.

Findings of Fact

The Land Use standard requires the Council to find that a proposed facility complies with local applicable substantive criteria and statewide planning goals adopted by the Land Conservation and Development Commission (LCDC).[119] Applicable substantive criteria are criteria from the affected local government's acknowledged comprehensive plan and land use ordinance that are required by the statewide planning goals identified as applicable to the proposed facility based on facility type or facility component and land use zone, and that are in effect on the date the applicant submits the application for site certificate (ASC), which in this instance occurred on February 27, 2013. The affected local governments include the governing bodies of the jurisdictions for which proposed facility components would be located, which in this instance includes the governing bodies of five Oregon counties: Morrow, Umatilla, Union, Baker, and Malheur; and two Oregon cities: North Powder and Huntington.

[119] The Council must apply the Land Use standard in conformance with the requirements of ORS 469.504.

The analysis area for potential land use impacts, as defined in the second amended project order, is the area within and extending half-mile from the site boundary, as presented in ASC Exhibit K Figure K-1 and Figure 4, *Land Use Analysis Area* below.

Figure 4: Land Use Analysis Area

IV.E.1. Local Applicable Substantive Criteria

The governing bodies of the affected local governments within whose jurisdiction the facility or facility components are proposed to be located are considered "special advisory groups" (SAG) and must be appointed by Council. The Council appointed the following SAGs for the proposed facility:

- Morrow County Board of Commissioners (October 7, 2011)
- Umatilla County Board of Commissioners (October 7, 2011)
- Union County Board of Commissioners (October 7, 2011)
- Baker County Board of Commissioners (October 7, 2011)
- Malheur County Court (October 7, 2011)
- North Powder City Council (March 15, 2013)
- Huntington City Council (August 2, 2013)

Applicable substantive criteria identified by the SAGs for the proposed facility are presented and evaluated in Section IV.E.1.1., *Morrow County* through IV.E.1.7., *City of Huntington* of this order.

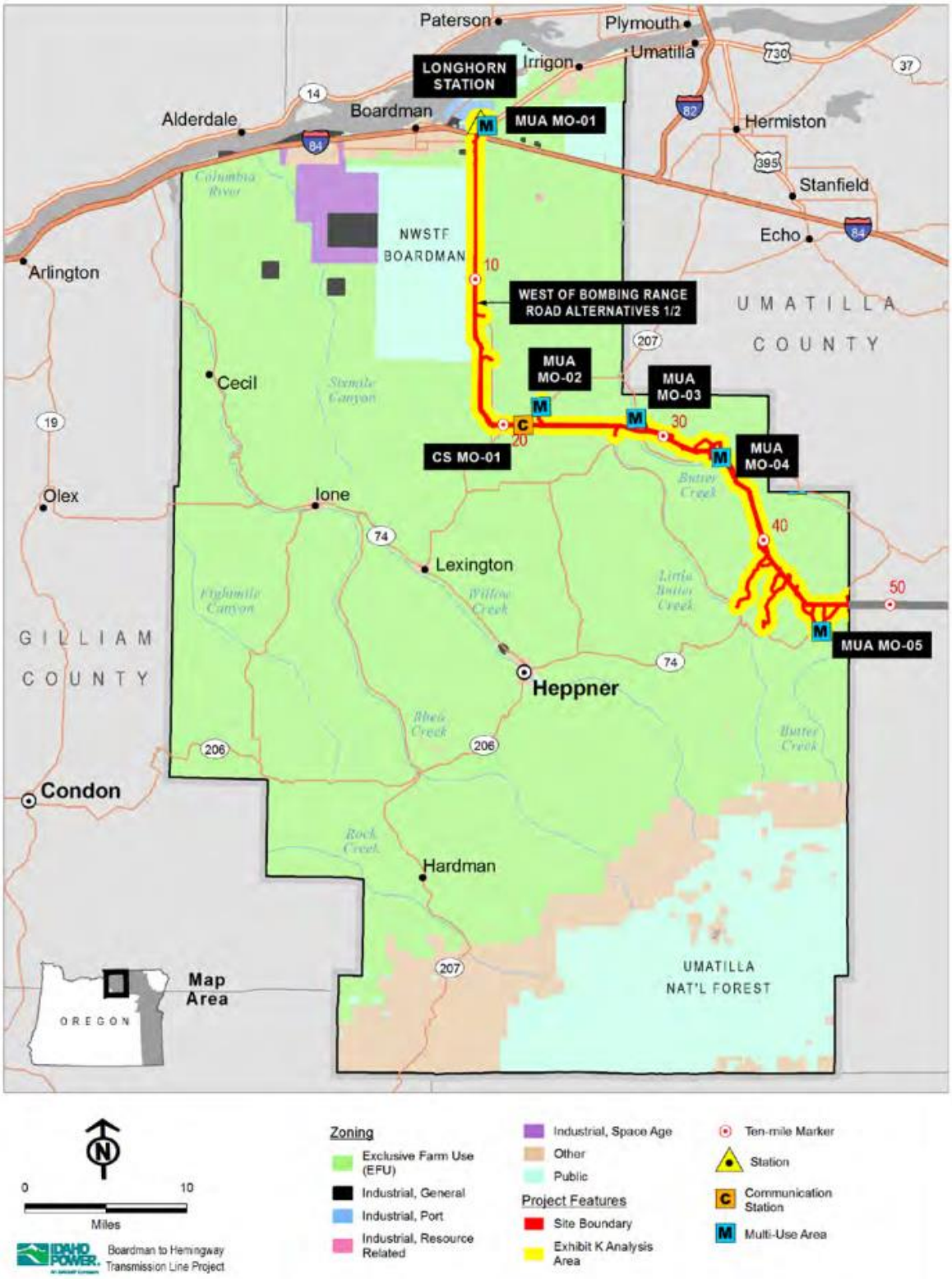
IV.E.1.1. Morrow County

Facility components proposed within Morrow County include approximately 47.5 miles of 500 kV transmission line; the Longhorn Station, if not developed by BPA; five temporary multi-use areas; 37.5 miles of new access roads; 30.2 miles of substantially modified existing roads; 39 temporary pulling and tensioning sites; and, one communication station.[120] In addition, there are two 3.7 mile transmission line segments proposed as alternatives to the proposed transmission line route along Bombing Range Road – West of Bombing Range Road alternative 1 and 2. The locations of proposed and alternative facility components are represented in ASC Exhibit K Figure K-8 and Figure 5, *Morrow County Zoning and Proposed Facility Components* below.

[120] As described in ASC Exhibit B, if developed by the applicant, the Longhorn Station would permanently disturb approximately 20 acres and would include 500-kV circuit breakers, high-voltage switches, bus supports, transmission line termination structures, a 500-kV series capacitor bank, and 500-kV shunt reactor banks. The 500-kV transmission line termination structures would be approximately 125 to 135 feet tall. A control house to accommodate the necessary system communications, control equipment, and a restroom facility would also be constructed.

Multi-use areas would be approximately 30 acres in size and would include construction field offices, parking areas, construction vehicle maintenance area, helicopter operations (helipads), explosives storage, hazardous materials storage, water storage tank, portable concrete batch plant, concrete washout station, gravel tire scrub area, noxious weed wash-off station, and bulk materials storage area.

Figure 5: Morrow County Zoning and Proposed Facility Components



The above-described facility components proposed in Morrow County would be located on land zoned Exclusive Farm Use (EFU), some of which would also be located within the Significant Resource Overlay (SRO) zone and Special Flood Hazard Area (SFHA); General Industrial (MG); and, Port Industrial (PI). Facility components would also be located in existing rights-of-way and public land (restricted public access - federally-owned land by U.S. Navy). Proposed facility components within each zone (with proposed land use category denoted in parenthesis) are as follows:

Exclusive Farm Use Zone (Utility Facility Necessary for Public Service)
35.4 miles of 500 kV transmission line (Significant Resource Overlay [SRO])[121]
26 miles of substantially modified roads; 32.7 miles of new roads (SRO)
4 temporary multi-use areas (Special Flood Hazard Area [SFHA])[122]
36 temporary pulling and tensioning sites

General Industrial Zone (Utility, transmission and communication towers less than 200 feet in height)
0.3 miles of 500 kV transmission line
0.1 mile of new road

Port Industrial Zone (Power generating and utility facilities)
0.9 miles of 500 kV transmission line
1 switching station (Longhorn Station)
1 temporary multi-use area
2 temporary pulling and tensioning sites

Existing Rights of Way[123]
0.3 miles of 500 kV transmission line
0.1 mile of new road

Public Zone (Federally-Owned and no applicable substantive criteria)
10.5 miles of 500 kV transmission line
5 miles of substantially modified roads; 4.5 miles of new road
1 temporary pulling and tensioning site

The two alternative 3.7 mile 500 kV transmission line segments, referred to as West of Bombing Range Road alternative 1 and 2, would be located in EFU zoned land and public land.

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[121] The applicant proposes 5 temporary stream crossings (for transmission line installation) and substantial modification of an existing road and road/bridge within Goal 5 designated streams/riparian areas.
[122] One of four multi-use area, MUA MO-02, would be located within the Sand Hollow Special Hazard Overlay Area.
[123] There are no MCZO provisions related specifically to the Major Road or Railroad Right-of-Way Zone—i.e., there are no approval criteria for uses in this zone. No analysis is required, and no standard must be met, to comply with the MCZO with respect to proposed facility components within the Major Road or Railroad Right-of-Way Zone.

Applicable substantive criteria for proposed facility components in Morrow County, in effect on the date the applicant submitted the pASC (February 27, 2013), are presented in Table LU-1 below.

Table LU-1: Applicable Substantive Criteria for Proposed Facility Components in Morrow County

Morrow County Zoning Ordinance (MCZO)[1]	
Article 3 – Use Zones	
Section 3.010	**Exclusive Farm Use, EFU Zone**
Section D	Conditional Uses Permitted
Section 3.070	**General Industrial Zone**
Section A	Uses Permitted Outright
Section C	Use Limitations
Section D	Dimensional Standards
Section E	Traffic Impact Analysis
Section 3.073	**Port Industrial Zone**
Section A	Uses Permitted Outright
Section C	Use Limitations
Section D	Dimensional Standards
Section G	Traffic Impact Analysis
Section 3.100	**Flood Plain Overlay Zone**
Section 4.1-1	Development Permit
Section 5.1-1	Anchoring
Section 5.1-2	Construction Materials and Methods
Section 3.200	**Significant Resource (Goal 5) Sites**
Section D	Review Criteria
Section E	List of Conflicting Uses and Activities
Morrow County Comprehensive Plan[2]	
Agricultural Lands Element Policy 1 Natural Hazards Element Utility Finding C; Policy C Goal 5 Resources	
Notes: 1. ASC Exhibit K Table K-9 includes "potentially applicable substantive criteria" identified by the SAG and the applicant. The evaluation of applicable substantive criteria is based on the table above, and omits some potentially applicable substantive criteria identified by the applicant. Specifically, MCZO Sections 3.010(C) (utility and transmission towers), (G) (dimensional standards) and (H) (yard setbacks) were omitted because under ORS 215.283(1)(g), a utility facility necessary for public service is permitted subject only to the requirements of ORS 215.275 and the county cannot impose additional approval criteria; ORS 215.283 and 215.275 requirements are addressed later in this order. MCZO Article 4 provisions have not been included in this table, as Article 4 contains ministerial reviews for site plans and access (road, utility) permits to be conducted and issued directly by the county. 2. MCCP elements, findings and policies omitted from this table include those that are not related to the proposed facility, including the Energy Conservation element (applies to projects serving the county), Finding 19 of the Agricultural Lands Element (applies to hydro-electric power and irrigated agriculture), General Policy	

Table LU-1: Applicable Substantive Criteria for Proposed Facility Components in Morrow County

F (applies to local electric distribution projects), Utility Finding and Policy D (applies to substations that would serve Morrow County.

The following analysis addresses the applicant's ASC Exhibit K evaluation of compliance with applicable substantive criteria.

Morrow County Zoning Ordinance

Morrow County Zoning Ordinance Article 3 Section 3.010 Exclusive Farm Use Zone

Proposed facility components within EFU-zoned land in Morrow County would include up to 35.4 miles of a single-circuit 500 kV transmission line; 32.7 mile of new access roads; 26 miles of substantially modified existing roads; four temporary multi-use areas (with helipads); 36 temporary pulling and tensioning sites; and, one communication station.[124] Alternative facility components within EFU-zoned land in Morrow County would include up to 2 miles of a single-circuit 500 kV transmission line; 0.8 of a mile of substantially modified roads; and, 1.4 miles of new roads. An evaluation of the applicable substantive criteria for these uses within EFU-zoned land is presented below.

<u>MCZO Section 3.010(D): Conditional Uses Permitted</u>

In an EFU Zone, the following uses and their accessory uses are permitted subject to the demonstration of compliance with the requirements of Article 6 of this ordinance and Section (G) below:

Section 3.010(D)(17) Utility facilities "necessary" for public service, excluding commercial utility facilities for the purpose of generating power for public use by sale, and transmission towers over 200 feet in height. A utility facility is necessary for public service if the facility must be sited in an exclusive farm use zone in order to provide the service. To demonstrate that a utility facility is necessary, an applicant must show that

[124] In ASC Exhibit K, the applicant describes that Morrow County Planning Department confirmed that there were no separate applicable substantive criteria or permit requirements for the temporary multi-use areas/helipads, but requested confirmation through site certificate condition that the helipads would be removed and impacted area restored, unless otherwise requested by the landowner, following construction. If temporary helipads are not removed and used for operational purposes, the county may consider the use a "personal use airport" requiring a conditional use permit. Recommended General Standard of Review Condition 9 and Fish and Wildlife Habitat Condition 1,2 & 5 require restoration of temporarily impacted vegetation, and include requirements for monitoring and tracking to ensure successful vegetation within an appropriate duration.

reasonable alternatives have been considered and that the facility must be sited in an exclusive farm use zone due to one or more of the factors list in OAR 660-033-0130(16).

MCZO Section 3.010(D)(17) identifies utility facilities "necessary" for public service as a conditional use permitted on EFU zoned land, subject to the requirements of MCZO Article 6 Conditional Uses and Section 3.010(G) Dimensional Standards. Transmission lines are considered utility facilities; utility facilities are considered "necessary" for public service if the facility, after consideration of reasonable alternative locations, must be sited in EFU zoned land due to one or more factors listed in OAR 660-033-0130(16) to provide a service.

As described in ASC Exhibit K, proposed facility components within EFU zoned land in Morrow County would include up to 35.4 miles of a single-circuit 500 kV transmission line. In additional to the 500 kV transmission line, proposed facility components within EFU zoned land would include 32.7 mile of new access roads; 26 miles of substantially modified existing roads; four temporary multi-use areas (with helipads); 36 temporary pulling and tensioning sites; and, one communication station, which the applicant requests be evaluated as ancillary facilities to the transmission line as a utility facility. The applicant asserts that ancillary facilities, based on a 2001 and 2005 court decision, should be considered under the "utility facility necessary for public service" land use category.[125] Based on review of the referenced court decision and historic Council land use evaluations, the Department agrees and recommends Council find that proposed and alternative facility components should be evaluated as a utility facility necessary for public service and therefore would be a conditionally permitted use in EFU zoned land under MCZO Section 3.010(D)(17).

Notwithstanding the language in the County's code, the conditional use requirements beyond those that are consistent with ORS 215.275 are not applicable to proposed and alternative facility components because, as a utility facility necessary for public service under ORS 215.283(1)(g), the use is permitted subject only to the requirements of ORS 215.275 and the county cannot impose additional approval criteria. Therefore, the conditional use requirements of MCZO Article 6 Conditional Uses and Section 3.010(G) Dimensional Standards are not evaluated as applicable substantive criteria; however, it is noted that the applicant evaluates these criteria and based on review, the Department considers the analysis to represent consistency with these provisions.

Proposed facility components would be located in EFU zoned land across five Oregon counties including Morrow, Umatilla, Union, Baker, and Malheur. For facility components located in EFU zoned land, the land use compliance evaluation is limited to ORS 215.275, as presented in

[125] See Save Our Rural Or. v. Energy Facility Siting Council, 339 Or. 353, 384 (2005) (upholding Council's determination that ancillary facilities are considered "utility facilities necessary for public service"); Cox v. Polk County, 174 Or. Ct. App. 332, 343-44 (2001) ("utility facilities necessary for public service" may include ancillary or off-site equipment).

Section IV.E.2.1., *ORS 215.283, ORS 215.275 and ORS 215.296 (Exclusive Farm Use Requirements)* of this order.

Morrow County Zoning Ordinance Article 3 Section 3.070 General Industrial (M-G) Zone

MCZO 3.070(A): Uses Permitted Outright

In an M-G Zone, the following uses and their accessory uses are permitted outright; except as limited by subsection C of this section. A Zoning Permit is required and projects larger than 100 acres are subject to Site Development Review (Article 4 Supplementary Provisions Section 4.170 Site Development Review).

15. Utility, transmission and communications towers less than 200 feet in height.

MCZO Section 3.070(A)(15) establishes utility and transmission towers less than or equal to 200 feet in height, and accessory uses, as a use permitted outright within a General Industrial (M-G) zone, subject to the requirements established in MCZO Section 3.070(C).[126] MCZO Section 3.070(A)(15) also establishes that a zoning permit is required and, for projects larger than 100 acres, requires Site Development Review under MCZO Section 4.170.

As described in ASC Exhibit K, proposed facility components within Morrow County M-G zoned land would include up to 0.3 miles of a single-circuit 500 kV transmission line with structures that could extend up to 200 feet in height. Accessory uses to the transmission line would include 0.1 of a mile of new access road. Therefore, the Department recommends Council find that the proposed transmission towers and proposed 0.1 of a mile of new access road, evaluated as an accessory use, would be a use permitted outright in M-G zoned land under MCZO Section 3.070(A)(15).

The applicant would be required to obtain an M-G zoning permit and proposes Land Use Condition 1, administratively amended by the Department for clarification, to demonstrate that all ministerial county-level permits would be obtained prior to any phase or segment of the facility where the permit is required (recommended conditions are presented under the heading *Recommended Land Use Conditions – Morrow County* of this section*)*. The proposed facility would be subject to use limitations under MCZO Section 3.070(C), evaluated below. The applicant confirms that proposed facility components within Morrow County M-G zoned land would occupy less than 100 acres (estimated at approximately 7.9 acres); therefore while MCZO Section 4.170 Site Development Review include applicable substantive criteria that would apply to uses within M-G zoned land, it would not apply to the proposed facility based on the area impacted by proposed facility components.

[126] Accessory use, as defined in MCZO Article 1 Section 1.030 defines "accessory use" as a use or structure incidental and subordinate to the main use of the property and located on the same lot as the main use.

MCZO 3.070(C): Use Limitations

In an M-G Zone, the following limitations and standards shall apply to all permitted uses:

1. *No use permitted under the provisions of this section that requires a lot area exceeding two (2) acres shall be permitted to locate adjacent to an existing residential lot in a duly platted subdivision, or a lot in a residential zone, except as approved by the Commission.*
2. *No use permitted under the provisions of this section that is expected to generate more than 20 auto-truck trips during the busiest hour of the day to and from the subject property shall be permitted to locate on a lot adjacent to or across the street from a residential lot in a duly platted subdivision, or a lot in a residential zone.*

MCZO Section 3.070(C) restricts the location of uses permitted outright on M-G zoned land from siting adjacent to an existing residential lot on a duly platted subdivision or a lot in a residential zone, when the lot area exceeds two acres or would generate more than 20 auto-truck trips during the busiest hour of the day. The applicant explains that proposed facility components and site boundary within Morrow County M-G zoned land would not be located adjacent to an existing residential lot on a duly platted subdivision or a lot in a residential zone and therefore, while the criteria apply to uses within M-G zoned land, they are not applicable to the proposed facility based on adjacent uses.

MCZO 3.070(D): Dimension Requirements

The following Dimensional requirements apply to all buildings and structures constructed, placed or otherwise established in the MG zone.

1. *Lot size and frontage: A minimum lot size has not been determined for this zone although the lot must be of a size necessary to accommodate the proposed use, however, it is anticipated that most, if not all uses will be sited on lots of at least two acres. The determination of lot size will be driven by the carrying capacity of the land given the proposed use. Minimum lot frontage shall be 300 feet on an arterial or collector; 200 feet on a local street.*
2. *Setbacks: No specific side or rear yard setbacks are identified within this zone, but may be dictated by provisions of the Building Code or other siting requirements. The minimum setback between a structure and the right-of-way of an arterial shall be 50 feet. The minimum setback of a structure from the right-of-way of a collector shall be 30 feet, and from all lower class streets the minimum setback shall be 20 feet. There shall be no setback requirement where a property abuts a railroad siding or spur if the siding or spur will be utilized by the permitted use.*
3. *Stream Setback: All sewage disposal installations such as outhouses, septic tank and drainfield systems shall be set back from the high-water line or mark along all streams and lakes a minimum of 100 feet, measured at right angles to the high-water line or mark. All structures, buildings, or similar permanent fixtures shall be set back from the*

high-water line or mark along all streams or lakes a minimum of 10 feet measured at right angles to the high-water line or mark.

4. *Uses adjacent to residential uses. A sight-obscuring fence shall be installed to buffer uses permitted in the General Commercial Zone from residential uses. Additional landscaping or buffering such as diking, screening, landscaping or an evergreen hedge may be required as deemed necessary to preserve the values of nearby properties or to protect the aesthetic character of the neighborhood or vicinity.*

MCZO Section 3.070(D)(1) establishes minimum parcel lot sizes and frontage setback requirements from the parcel to arterial and local roads within M-G zoned land. The applicant proposes to secure easements for access to proposed facility component locations within M-G zoned land; however, if it is not possible to obtain an easement, the applicant describes that it would obtain approval directly from Morrow County to partition a parcel, which at that time would be required to satisfy the minimum lot size and frontage setback requirements.

MCZO Section 3.070(D)(2) establishes minimum setback requirements of 50, 30, and 20 feet between a structure and road (arterial, collector, and lower class street, respectively) right-of-way. Proposed facility components within M-G zoned land include a short segment of 500 kV transmission line and new access road. The applicant affirms that the setback requirements apply to proposed transmission line structures, but not proposed new access road, as the road would not be considered a structure. The applicant also identifies that the nearest collector road would be Bombing Range Road, and therefore would require a minimum 30 foot setback from transmission line structures. To demonstrate compliance with the setback requirement, the applicant proposes Land Use Condition 2 (recommended conditions are presented under the heading *Recommended Land Use Conditions – Morrow County* of this section*)*.

MCZO 3.070(D)(3) establishes a minimum setback requirement of 10 feet between a structure and the high water mark or line of a lake or stream. The applicant describes that there are no streams or lakes within 10 feet of the portion of the proposed route that goes through the M-G Zone.

MCZO 3.070(D)(4) establishes that fencing, landscaping, or buffering be implemented for uses located adjacent to a residence. The applicant confirms that, for proposed facility components located in M-G zoned land, there are no adjacent residences.

Based on the analysis presented above, the Department recommends Council find that proposed facility components with M-G zoned land would satisfy MCZO Section 3.070(D) dimensional requirements.

<u>MCZO 3.070(E): Transportation Impacts</u>

1. *Traffic Impact Analysis (TIA). In addition to the other standards and conditions set forth in this section, a TIA will be required for all projects generating more than 400 passenger*

car equivalent trips per day. Heavy vehicles - trucks, recreational vehicles and buses - will be defined as 2.2 passenger car equivalents. A TIA will include: trips generated by the project, trip distribution for the project, identification of intersections for which the project adds 30 or more peak hour passenger car equivalent trips, and level of service assessment, impacts of the project, and, mitigation of the impacts. If the corridor is a State Highway, use ODOT standards. (MC-C-8-98).

MCZO 3.070(E) establishes that for conditionally permitted uses within M-G zoned land, a Traffic Impact Analysis (TIA) would be required for projects that would generate more than 400 passenger equivalent trips per day. Based on the applicant's assessment provided in ASC Exhibit U, construction-related traffic would generate less than 400 passenger car equivalents per day. However, the applicant represents that it would work with the Morrow County Road Department to identify specific construction traffic-related concerns, and would develop a traffic management plan prior to construction which would specify necessary traffic control measures to mitigate for the effects of the temporary increase in traffic volumes. The applicant proposes, and the Department recommends, Council impose Recommended Public Services Condition 1 to minimize potential construction-related traffic impacts, ensure coordination with the County Planning Department and Road Master, ensure necessary road permits are obtained, and that a road use agreement or similar legally binding document is obtained prior to construction for use of and repair of potentially impacted local roads. The Department recommends Council find that, because construction-related traffic would result in less than 400 passenger car equivalents per day, a TIA is not required.

Morrow County Zoning Ordinance Article 3 Section 3.073 Port Industrial (PI) Zone

Proposed facility components within Port Industrial zoned land in Morrow County would include up to 0.9 miles of a single-circuit 500 kV transmission line, the Longhorn Station, and

one temporary multi-use area (with helipad). An evaluation of the applicable substantive criteria for these uses within Port Industrial zoned land is presented below.[127]

MCZO 3.073(A): Uses Permitted Outright with a Zoning Permit

> *Outside activities are permitted within the scope of allowed uses outlined below. Projects larger than 100 acres are subject to Site Development Review (Article 4 Supplementary Provisions Section 4.170 Site Development Review)*
> *****
> *9. Power generating and utility facilities.*

MCZO Section 3.073(A) establishes uses permitted outright within Port Industrial zoned land, and includes "power generating and utility facilities." MCZO Section 3.073(A) also requires Site Development Review per MCZO Section 4.170 for projects larger than 100 acres, and adherence to the provisions outlined in MCZO Section 3.073(C) Limitation on Uses, (D) Dimensional Standards and (G) Traffic Impact Analysis. Per the definition of a utility facility under MCZO Section 1.030, the Department recommends Council find that the proposed facility would be a utility facility and therefore a use permitted outright in Port Industrial zoned land under MCZO Section 3.073(A).[128]

The Site Development Review under MCZO Section 4.170 is a ministerial review conducted by the county prior to issuance of a zoning permit, defined under MCZO 1.050 as "an authorization issued prior to a building permit, or commencement of a use subject to administrative review, stating that the proposed use is in accordance with the requirements of the corresponding land use zone." The applicant would be required to secure zoning permits from Morrow County prior to construction of the facility.[129] While the applicant must comply with the county's applicable Site Development Review requirements and process, the county's administration of its Site Development Review process itself is not under Council jurisdiction or review, and therefore, the Council cannot restrict or condition the county's authority in administering that process. The applicant proposes, and the Department recommends, Council impose Recommended Land Use Condition 1 to ensure all applicable county permits are obtained prior to construction of any phase or segment of the proposed facility.

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[127] As described in ASC Exhibit B, the Longhorn Station would include 500-kV circuit breakers, high-voltage switches, bus supports, and transmission line termination structures, a 500-kV series capacitor bank, and 500-kV shunt reactor banks; control equipment, and a restroom facility.

[128] MCZO Section 1.030 defines a utility facility as "[a]ny major structure owned or operated by a public, private, or cooperative electric, fuel, communication, sewage, or water company for the generation, transmission, distribution, or processing of its products or for the disposal of cooling water, waste, or byproducts, and including power transmission lines, major trunk pipelines, power substations, dams, water towers, sewage lagoons, sanitary landfills, and similar facilities, but excluding local sewer, water, gas, telephone and power distribution lines, and similar minor facilities allowed in any zone."

[129] Pursuant to ORS 469.401(3), the county must issue a zoning permit upon submittal of the proper applications and fees, but without hearings or other proceedings and subject only to conditions set forth in the site certificate.

An evaluation of the applicant's compliance with MCZO Section 3.073(C) Limitation on Uses, (D) Dimensional Standards and (G) Traffic Impact Analysis is presented below.

MCZO 3.073(C): Limitations on Uses

1. *Material shall be stored and grounds shall be maintained in a manner which will not create a health hazard.*
2. *All related provisions of the Oregon Revised Statutes shall be complied with, particularly those dealing with hazardous substances and radioactive materials.*

MCZO Section 3.073(C) establishes limitations on uses within Port Industrial zoned land and specifies that permitted uses must safely store materials, safely maintain grounds, and comply with all applicable ORS requirements for handling and storing hazardous materials.

As described above, proposed facility components within Port Industrial zoned land would include the Longhorn Station and a temporary multi-use area, both of which would include use and storage of hazardous and non-hazardous materials. As described in ASC Exhibit G, hazardous explosive materials would be stored at the temporary multi-use area for potential blasting activities during construction. All blasting materials would be stored in approved containers per National Fire Protection Act (NFPA) 495 and OAR 837-012-1340. The Longhorn Station would be equipped with a shunt reactor bank, which would include a total of approximately 14,800 gallons of insulating oil. The applicant describes that safe storage of the oil-containing equipment associated with the shunt reactor bank would include placement within secondary containment consisting of a lined pit with sufficient capacity, filled with rock to grade level.

The applicant describes compliance with Spill Prevention Countermeasure and Control (SPCC) Plans during both construction and operation, which would ensure that hazardous and non-hazardous materials, and the grounds within the proposed Longhorn Station and temporary multi-use area, would be maintained in a manner which would not create a health hazard. Draft SPCC Plans are provided in Attachment G-4 of this order and imposed in recommended Soil Protection Conditions 2 and 3. Based on compliance with these conditions, the Department

recommends Council find that proposed facility components within Port Industrial zoned land would satisfy the use limitations under MCZO Section 3.073(C).

MCZO 3.073(D): Dimension Requirements

The following dimensional requirements apply to all buildings and structures constructed, placed or otherwise established in the PI zone, subject to subsection F of this Section.

1. *Minimum front yard setback: Thirty (30) feet. No structure shall be erected closer than ninety (90) feet from the center line of any public, county or state road. Structures on corner or through lots shall observe the minimum front yard setback on both streets.*
2. *Minimum side and rear yard setback: ten (10) feet.*
3. *Minimum lot coverage: No limitation.*
4. *Maximum building height: No limitation.*
5. *Exceptions to the setback regulations are as follows:*
    a. *There shall be no setback requirement where a property abuts a railroad spur if the spur will be utilized by the permitted use.*
    b. *Side and rear lot requirements may be waived on common lot lines when adjoining lot owners enter into a joint development agreement for coordinating vehicular access and parking development. Party wall or adjoining building walls must meet fire separation requirements of the State of Oregon Structural Specialty Code and Fire and Life Safety Code. The joint development agreement must be approved by the Port of Morrow as to form and content, recorded in the Morrow County Clerk's office and a copy must be provided to the Planning Department.*

MCZO Section 3.073(D) establishes parcel size and setback requirements for buildings and structures within Port Industrial zoned land. In ASC Exhibit K, the applicant describes that buildings and structures proposed at the Longhorn Station and temporary multi-use area and, transmission structures associated with the 0.9-mile of 500 kV transmission line would be subject to MCZO Section 3.073(D) dimensional standards. The applicant affirms that proposed facility component locations within Port Industrial zoned land contain sufficient area to meet the parcel and setback requirements. However, to ensure compliance with the dimensional standards, the applicant proposes, and the Department recommends, Council impose recommended Land Use Condition 2, as presented under the *Recommended Land Use Conditions – Morrow County* header of this section. Based on compliance with recommended Land Use Condition 3, the Department recommends Council find that the proposed facility would satisfy MCZO Section 3.073(D).

MCZO 3.073(G): Transportation Impacts Analysis

In addition to the other standards and conditions set forth in this section, a TIA will be required for all projects generating more than 400 passenger car equivalent trips per day. Heavy vehicles B trucks, recreational vehicles and buses B will be defined as 2.2 passenger

car equivalents. A TIA will include: trips generated by the project, trip distribution for the project, identification of intersections for which the project adds 30 or more peak hour passenger car equivalent trips, and level of service assessment, impacts of the project, and, mitigation of the impacts. If the corridor is a 18 State Highway, use ODOT standards. (MC-C-8-98).

MCZO Section 3.073(E) requires a Traffic Impact Analysis (TIA) for permitted uses within Port Industrial zoned land that would generate more than 400 passenger equivalent trips per day. Based on the applicant's assessment provided in ASC Exhibit U, construction-related traffic would generate less than 400 passenger car equivalents per day. However, the applicant represents that it would work with the Morrow County Road Department to identify specific construction traffic-related concerns, and would develop a traffic management plan prior to construction which would specify necessary traffic control measures to mitigate for the effects of the temporary increase in traffic volumes. The applicant proposes, and the Department recommends, Council impose Recommended Public Services Condition 1 to minimize potential construction-related traffic impacts, ensure coordination with the County Planning Department and Road Master, ensure necessary road permits are obtained, and that a road use agreement or similar legally binding document is obtained prior to construction for use of and repair of potentially impacted local roads. The Department recommends Council find that, because construction-related traffic would result in less than 400 passenger car equivalents per day, a TIA is not required.

Morrow County Zoning Ordinance Section 3.100 - Flood Plain Overlay Zone

<u>MCZO 3.100(4.1-1): Development Permit Required</u>

A development permit shall be obtained before construction or development begins within any area of special flood hazard established in Section 3.2. The permit shall be for all structures including manufactured homes, as set forth in the "DEFINITIONS", and for all development including fill and other activities, also as set forth in the "DEFINITIONS".

MCZO Section 3.100(4.1-1) establishes that a flood plain development permit is required for construction activities within a Special Flood Hazard Area (SFHA). In ASC Exhibit K, the applicant describes that a small portion of the temporary multi-use area and five substantially modified access roads would be located within a SFHA (see ASC Exhibit K, Figure K-20 and K-21); therefore, a flood plain development permit would be required.

The flood plain development permit would be reviewed and approved by Morrow County's floodplain manager and would include an evaluation of facility component location, potential flood related impacts, and flood-proofing protection requirements to ensure protection of public health and safety and minimize public and private losses due to flood conditions. The applicant proposes, and the Department recommends, Council adopt Land Use Condition 1,

which ensures the development permit is secured and that a copy of the permit is maintained onsite, and provided to the Department prior to construction.

The applicant describes that while the temporary multi-use area and 5 roads would be located within the SFHA zone, no structures would be located within the SFHA zone. To ensure that structures that would be located within the temporary multi-use area are not located within the SFHA, the Department recommends Council impose Land Use Condition 2 restricting structure placement within the SFHA or, in the alternative, if structures are placed within the SFHA they must adhere to MCZO requirements for anchoring (MCZO Section 3.100(5.1-1) and construction materials (MCZO Section 3.100(5.1-2) with the SFHA. Therefore, based on compliance with recommended Land Use Condition 2, the Department recommends Council find that the proposed facility would satisfy MCZO Section 3.100 requirements for development within a SFHA.

Morrow County Zoning Ordinance Section 3.200 - Goal 5 Resources

Morrow County established a Significant Resource Overlay Map identifying the location of designated Goal 5 resources, which the applicant evaluates and presents in relation to proposed facility components in ASC Exhibit K Figure 22. Goal 5 resources include designated natural resources, scenic and historic areas, and open spaces. Based on this evaluation, four Goal 5 stream/riparian resources would be located on private/state land within the proposed site boundary including: Butter Creek, Matlock Canyon Creek, Little Butter Creek, and Sand Hollow Creek; and two Goal 5 habitat and wildlife related resources would be located on federally-owned (public) land within the site boundary including: Naval Weapons System Training Facility (NWSTF) Boardman and certain Washington ground squirrel (WAGS) habitat, which are two resources but are basically one in the same (i.e. the Goal 5 resource identified as "certain WAGS habitat" is located within the NWSTF Boardman site and the NWSTF Boardman site is a Goal 5 resource for WAGS habitat). There are no other Goal 5 resources located within the analysis area.[130]

In ASC Exhibit K, the applicant describes that Goal 5 resources located on private/state lands are 3C resources and must be evaluated under MCZO Section 3.200(D)(3) and (E)(2), and Section 3.020. Goal 5 resources located on federal land are 2A resources, where the county relies on the federal management of these areas for protection of the resource and no local provisions would apply. Therefore, potential impacts to the two Goal 5 resources on public

[130] B2HAPPDoc3-19 ASC 11_Exhibit K. Land Use_ASC 2019-09-28. In ASC Exhibit K Section 6.4.4.15 Historic Resources, the applicant identifies other historic Goal 5 resources of interest including Cecil General Store, Willow Creek Campground, and the Oregon Trail, all of which would be located at distances outside of the analysis area and therefore, while described in the ASC Exhibit K, are not evaluated in this order as the Council is not obligated to make findings on potential impacts outside of the Land Use analysis area (area within and extending half-mile from the site boundary).

land, NWSTF Boardman and certain WAGS habitat, are not further evaluated under MCZO Section 3.200.[131] The evaluation of applicable substantive criteria for potential impacts from the proposed facility to Goal 5 stream resources under MCZO Section 3.200 is presented below.

<u>MCZO 3.200(D)(1): Review Criteria For All Significant Resources Sites</u>

(a) The resource site shall not be altered or impacted to the point where it no longer has significant resource value. Such a point would be reached when the altered or impacted site would no longer meet the significant resource requirements used to designate the site in the comprehensive plan.
(b) The amount of alteration of or impact to the significant resource shall be the minimum necessary to accomplish the purpose of the proposed use or activity.
(c) There shall be no significant loss of habitat for threatened or endangered species of animals or plants as listed by the U.S. Fish and Wildlife Service or the Oregon Department of Fish and Wildlife.
(d) An alternative site for the proposed use or activity, which would have less impact to the resource value of the site, does not exist on the applicant's lot or parcel or on contiguous lots or parcels. For purposes of this section, continuous means lots or parcels with a common boundary, not separated by a public road, and in which greater than possessory interests are held by the same person, spouse or single partnership or business entity, separately or in tenancy in common.

MCZO Section 3.200(D)(1) establishes review criteria for potential impacts of proposed projects that could impact Goal 5 resources, including 3C-designated resources, which applies to the Goal 5 streams described above. Review criteria requires a finding that the proposed facility: would not significantly alter or impact the resource site, and would minimize potential impacts to the resource; would not result in a significant loss of habitat for threatened and endangered species; and, that an alternative site with a lesser impact to the resource site does not exist. These criteria are evaluated below.

Goal 5 Stream Resources (Butter Creek, Matlock Canyon Creek, Little Butter Creek, Sand Hollow Creek)

Proposed facility components that could impact Goal 5 designated streams in Morrow County would include: temporary stream crossings for installation of the 500 kV transmission line at Sand Hollow Creek (one temporary stream crossing), Little Butter Creek (two temporary stream crossings), Butter Creek (two temporary stream crossings), and Matlock Canyon Creek (one temporary stream crossing); substantial modification of an existing road adjacent to Little

[131] In ASC Exhibit K, the applicant describes that MCZO Section 3.200 review criteria does not apply to Goal 5 resources on public land, but then presents an evaluation of consistency with the review criteria. This analysis is omitted from the order because the Department agrees that the provisions do not apply and the Council is not tasked with making findings of compliance. However, potential impacts and mitigation related to WAGS is further evaluated in Section IV.I., *Threatened and Endangered Species* of this order.

Butter Creek; and, temporary substantial modification of an existing bridge, that would be temporarily modified through placement of an approximately 48-foot railcar bridge outside of the high water mark, that crosses Butter Creek (see ASC Exhibit K, Figures K-23 through K-25).[132]

Based on the proposed construction activity, and the presumed basis of Goal 5 protection as an important water/riparian area, potential impacts from stream crossings and road modifications would result from permanent and temporary removal and fill; and, erosion and vegetation disturbance impacts associated with the temporary steam crossings. Permanent placement of transmission structures within the Goal 5 stream high water mark could also result in erosion and vegetation impacts. As described in Section IV.Q.2. *Removal Fill Law* of this order, the applicant proposes to implement best management practices during stream crossings and work near streams, such as minimizing excavation, stabilizing stream approaches with aggregate, and stabilizing exposed soils. In addition, the applicant requests, through the site certificate process, approval of a removal-fill permit authorizing impacts and imposing impact minimization measures for removal-fill activities within delineated wetlands and other waters of the state, which includes permanent and temporary impacts to Butter Creek. Further, to minimize potential impacts to the Goal 5 streams from erosion and vegetation disturbance, the applicant proposes to setback transmission line structures a minimum of 100 feet from the high water level in accordance with MCZO Section 3.020(D)(3)(b) (see recommended Land Use Condition 2(a)).

As evaluated in ASC Exhibit P, suitable habitat used by state-listed Threatened and Endangered (T&E) species is designated pursuant to ODFW's Habitat Mitigation Policy and the Council's Fish and Wildlife Habitat standard as Category 1 habitat, where impacts are prohibited. Therefore, the proposed facility is precluded from resulting in a loss of habitat for T&E species. Moreover, the area within and around Butter Creek and Little Butter Creek is not considered Category 1 habitat, and the applicant asserts that these streams are not used by T&E species.

The applicant evaluated the availability of other existing roads on the same or contiguous lots, for the purpose of determining whether impacts to the Goal 5-designated streams could be avoided, and asserts that there are none that would provide similar access.

Based on the above analysis, the Department recommends Council find that the proposed facility would satisfy MCZO Section 3.200(D)(1) review criteria.

<u>MCZO 3.200(D)(3): Riparian Vegetation/Wetlands Review Criteria</u>

(a) Road construction within riparian zones shall be reviewed in cooperation with the responsible agency listed in Section 3.200.F. Road construction shall seek alternative methods whenever possible, to avoid disturbing wildlife; reducing the size of the riparian zone; and impacting water quality in the aquatic zone. New roads built along streams

[132] B2HAPP Attachment BB-2 Fish Passage Plans and Design. Table 1. 2018-09-28.

shall be avoided whenever possible unless no other alternative route is available. The safety and welfare of all road users shall be considered in determining the appropriate management strategy.

(b) All dwellings and other non-water dependent structures shall be set back a minimum of 100 feet from the high water level of the stream or the water body reaches during normal seasonal run-off.

(c) Permanent vegetation removal within the area defined as the riparian zone shall retain 75% of all layers or stratas of vegetation (e.g., deciduous trees, shrubs, sedges, rushes and emergents).

MCZO 3.200(D)(3)(a) requires that road construction activities avoid and minimize impacts to Goal 5 stream riparian zones and consult with appropriate agencies regarding the same. The Department interprets road construction as inclusive of the activities associated with temporary stream crossings for installation of the 500 kV transmission line at Sand Hollow Creek (1 temporary stream crossing), Little Butter Creek (1 temporary stream crossing), Butter Creek (2 temporary stream crossings), and Matlock Canyon Creek (1 temporary stream crossing); substantial modification of an existing road adjacent to Little Butter Creek; and, temporary substantial modification of an existing bridge that crosses Butter Creek. The appropriate agencies to consult with for potential impacts to riparian areas, as listed in MCZO Section 3.200(F), include ODFW, DEQ and Soil Conservation Services.

In response to this criteria, the applicant describes that consultation with the appropriate agencies would occur by obtaining the ministerial permits required for permanent road construction for the road adjacent to Little Butter Creek, including an access approach permit and permit to build on right-of-way. The Department considers the activities associated with temporary stream crossings to be road construction that could impact riparian areas of the Goal 5 inventoried streams. Therefore, the Department recommends Council impose Land Use Condition 1 requiring consultation with ODFW to minimize potential riparian impacts and determine process for measuring and monitoring maintenance of 75 percent of vegetation layers (MCZO Section 3.200(D)(3)(c), and DEQ and Soil Conservation Services of Morrow County if determined necessary, prior to construction of temporary stream crossings and substantial road modifications adjacent to Goal 5 streams.

MCZO 3.200(D)(3)(b) establishes a 100-foot setback requirement from structures to the high water level of Goal 5 streams. The applicant asserts that proposed transmission structure

locations would comply with the minimum 100-foot setback requirement, and proposes Land Use Condition 1 to demonstrate compliance.

Based on the above analysis, the Department recommends Council find that the proposed facility would satisfy MCZO Section 3.200(D)(3) review criteria.

MCZO 3.200(E)(2): List of Conflicting Uses and Activities

a. Road construction.
b. Campgrounds.
c. Any long term use adversely impacting water quality and quantity (including temperature).
d. Any use impeding the movement of wildlife from one habitat to another.
e. Any long term use adversely resulting in the loss of vegetation diversity within the riparian zone.
f. Mining

MCZO Section 3.200(E)(2) establishes conflicting uses within the Significant Resource Overlay zone, and includes road construction and permanent vegetation loss within riparian zones, which are the activities during proposed facility construction that could impact the identified Goal 5 streams/riparian areas. MCZO Section 3.200(B) establishes that conflicting uses shall become conditional uses subject to the provisions of MCZO Section 3.200 and Article 6.[133] However, as noted by the applicant in ASC Exhibit K, the proposed construction activities that could impact Goal 5 streams would be located in EFU-zoned land. Because the proposed construction activities are evaluated under the "utility facility necessary for public service" land use category, the use is permitted subject only to the requirements of ORS 215.275 and the county cannot impose additional approval criteria.[134] Therefore, while road construction and potential permanent impacts to riparian areas within the Significant Resource Overlay zone would be conflicting uses under MCZO Section 3.200(E)(2), the Department recommends Council find that the criteria established under MCZO Section 3.200(B) would not apply.

[133] MCZO Section 3.200(B) establishes that uses permitted outright, or uses requiring a zoning permit, within an underlying zone but also located within the Significant Resource Overlay zone shall become a conditional use subject to MCZO Section 3.200 provisions and Article 6 if identified in MCZO Section 3.200(E) as a conflicting use.
[134] Brentmar v. Jackson County, 321 Or 481, 496 (1995).

Morrow County Comprehensive Plan

Agricultural Lands Element, Policy 1:

> *It shall be the policy of Morrow County, Oregon, to preserve agricultural lands, to protect agriculture as its main economic enterprise, to balance economic and environmental considerations, to limit noncompatible nonagricultural development, and to maintain a high level of livability in the County.*

The MCCP Agricultural Lands Element establishes a policy (Policy 1) to preserve and protect agricultural lands and to maintain a high level of livability in the County, consistent with statewide planning Goal 3.

The proposed facility would result in temporary and permanent impacts to agricultural lands and agricultural practices. However, as described in ASC Exhibit K and evaluated in Section IV.E.2.1., the applicant proposes to implement mitigation measures and conduct monitoring during construction activities within EFU zoned land, in accordance with an Agricultural Land Assessment and Mitigation Plan, to be finalized by the applicant and approved by the Department in consultation with affected counties, prior to construction, as imposed in recommended Land Use Condition 14. The applicant also provides an evaluation of consistency with statewide planning Goal 3, as further evaluated in Section IV.E.3., *Statewide Planning Goals* of this order. Therefore, based on the applicant's proposed mitigation for temporary agricultural impacts and overall minimal permanent impacts to agricultural lands from proposed facility components (i.e. 38 of 3,391.5 acres), the Department recommends Council find that the proposed facility would be consistent with MCCP Agricultural Lands Element Policy 1.

Natural Hazards Element

> *Applies to "areas that are subject to natural events that are known to result in death or endanger the works of man, such as stream flooding, ocean flooding, ground water, erosion and deposition, landslides, earthquakes, weak foundation soils and other hazards unique to local or regional areas"*

The MCCP Natural Hazards element establishes goals that projects not conflict with any identified natural hazards, such as stream or ocean flooding, ground water, erosion and deposition, landslides, earthquakes, weak foundation soils and other unique local or regional areas.

The applicant describes that the siting process for the proposed facility represents consistency with the MCCP Natural Hazards element because, as presented in ASC Exhibit H and evaluated in Section IV.C. *Structural Standard*, natural hazards were evaluated and mapped and facility component location is based on minimizing and avoiding such hazards. In addition, as described above under MCZO Section 3.100, while some portions of the site boundary and facility

components, such as roads, would be located within a SFHA, the applicant confirms that no facility structures would be placed within a SFHA. As described under the evaluation of MCZO Section 3.100, if facility structures are constructed within the SFHA, MCZO Section 3.100(5) construction standards would apply. Therefore, based on the analysis presented in ASC Exhibit H and as evaluated in Section IV.C. *Structural Standard*, and compliance with Morrow County's MCZO Section 3.100(5) construction standards for buildings and structures located in the SHFA zone, the Department recommends Council find that the proposed facility would be consistent with MCCP Natural Hazards element.

<u>Utility Findings and Policies</u>

Finding C. Electrical power substations can create negative impacts on nearby property. Careful site planning and physical design can minimize adverse environmental effects.

Policy C. Power substations should be planned and designed in a manner which will minimize the negative environmental impacts on nearby properties and the public as a whole.

MCCP Utility Finding and Policy C apply to substations and establish goals for careful site planning and physical design to minimize environmental impacts. In ASC Exhibit K, the applicant describes careful planning and consideration of proposed facility objectives in the selection of the Longhorn Station site, which would permanently disturb approximately 20 acres within Port Industrial zoned land. The proposed Longhorn Station site is surrounded by agricultural and industrial uses; existing industrial uses include Union Pacific Railroad, transmission lines and a substation. Given the similar existing impacts and land use zoning designations in the area, the incremental impact of constructing and operation the Longhorn Station on the public and the environment would be minimal. Therefore, the Department recommends Council find that the proposed Longhorn Station would be consistent with MCCP Utility Finding and Policy C.

Recommended Land Use Conditions – Morrow County

Recommended Land Use Condition 1: For facility components in Morrow County, the certificate holder shall:

a. Prior to construction of any phase or segment of the facility, provide to the Department a copy of the following Morrow County approved permits, if such permits are required by Morrow County zoning ordinances:
    i. Flood plain development permit, for work in the Flood Plain Overlay Zone;
    ii. Utility crossing permit;
    iii. Access approach site permit; and
    iv. Construction permit to build on right-of-way.
b. Prior to construction of a stream crossing at, or substantial road modification adjacent to, a Goal 5 stream including Sand Hollow Creek, Little Butter Creek, Butter Creek, and Matlock Creek, consult with ODFW on construction methods, measures to minimize riparian impacts, and measures to evaluate and monitor riparian impacts in order to demonstrate maintenance of 75 percent of vegetation layers or stratas within the

defined riparian zone. Consultation with DEQ and Morrow County Soil Conservation Services shall be completed if determined by the certificate holder, the Department, or ODFW to be necessary based on extent of potential water and erosion impacts. (MCZO Section 3.200(D)).

c. During construction, the certificate holder shall comply with conditions of permits listed in (a) and (b).
d. During construction, if the certificate holder determines additional County-approved permits are required, the certificate holder shall provide to the Department a copy of those additional permits.
e. Prior to construction of any phase or segment of the facility, the certificate holder shall provide to the Morrow County Weed Supervisor a list of the suppliers that will be supplying the aggregate used in construction in Morrow County. The certificate holder shall ensure that said suppliers provide the Morrow County Weed Supervisor reasonable access to the aggregate sites for inspection for weeds.

Recommended Land Use Condition 2: For facility components in Morrow County, the certificate holder shall design the facility to comply with the following setback distances and other requirements:

<u>Significant Resource Overlay Zone (MCZO Section 3.200(D)(3)(b))</u>

a. Buildings and the fixed bases of the transmission line towers shall be setback at least 100 feet from the high-water mark of all Goal 5 streams (i.e. Sand Hollow Creek, Little Butter Creek, Butter Creek and Matlock Canyon Creek).

<u>Sand Hollow Flood Pain Overlay Zone (MCZO Section 3.100(5.1-1)</u>

b. Buildings and structures located within the multi-use area shall not be located within the Sand Hollow Flood Plain Overlay Zone (see ASC Exhibit K Figure K-21) unless anchored to prevent flotation, collapse or lateral movement of the structure.

<u>In the EFU Zone (Based solely on certificate holder representations in the ASC)</u>

c. Buildings and the fixed bases of the transmission line towers shall be setback as follows:
   (i) Front yards shall be set back at least 20 feet from minor collector road rights-of-way, 30 feet from major collector road rights-of-way, 80 feet from arterial road rights-of-way, and 100 feet from intensive agricultural uses;
   (ii) Side yards shall be set back at least 20 feet from the property line, 30 feet for corner lots, and 100 feet from intensive agricultural uses; and
   (iii) Rear yards shall be set back at least 25 feet from the property line, and 100 feet from intensive agricultural uses.
d. Buildings and the fixed bases of the transmission line towers shall be set back at least 100 feet from the high-water mark of all streams and lakes.

<u>In the General Industrial Zone (MCZO Section 3.070(D))</u>

e. Buildings and the fixed bases of the transmission line towers shall be set back at least 50 feet from arterial road rights-of-way, 30 feet from collector road rights of-way, and 20 feet from lower-class road rights-of-way.

<u>In the Port Industrial Zone (MCZO Section 3.073(D))</u>

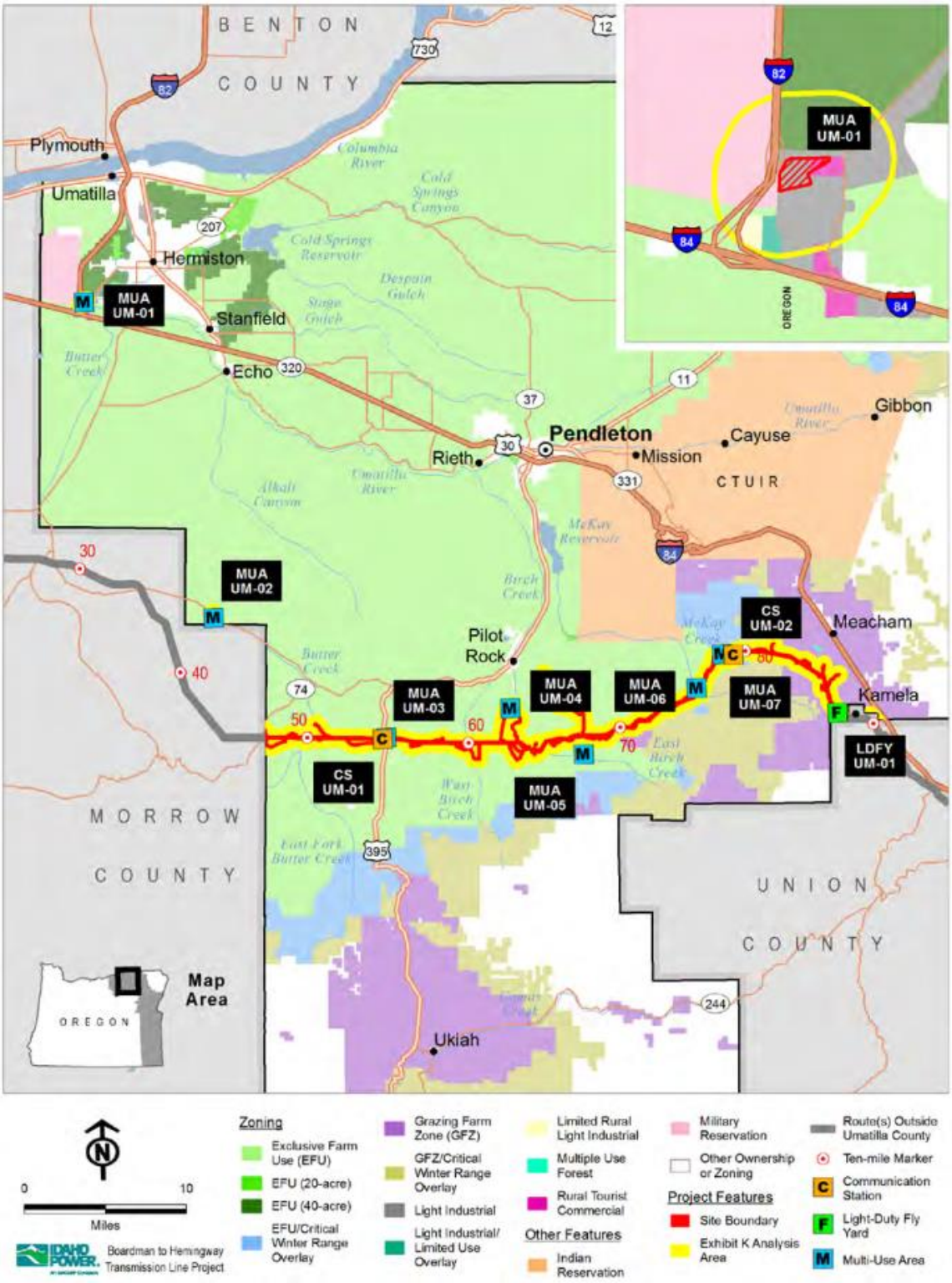
f. Buildings associated with the Longhorn Station and multi-use area, and the fixed bases of the transmission line towers shall be setback as follows:
   i. Front yards shall be set back at least 30 feet from the property line; buildings and structures shall be setback at least 90 feet from the centerline of any public, county, or state road;
   ii. Rear and side yards shall be set back at least 10 feet from the property line.

IV.E.1.2. Umatilla County

Facility components proposed within Umatilla County include approximately 40.8 miles of 500 kV transmission line, seven multi-use areas, 33.8 miles of new access roads, 36.8 miles of substantially modified existing roads, 41 pulling and tensioning sites, one light-duty fly yard, and two communication station.[135] There are no alternate routes or facility components locations requested for approval in Umatilla County. The locations of proposed facility components are represented in ASC Exhibit K Figures K-28, and Figure 6 below.

[135] As described in ASC Exhibit B, multi-use areas would be approximately 30 acres in size and would include construction field offices, parking areas, construction vehicle maintenance area, helicopter operations (helipads), explosives storage, hazardous materials storage, water storage tank, portable concrete batch plant, concrete washout station, gravel tire scrub area, noxious weed wash-off station, and bulk materials storage area.

Figure 6: Umatilla County Zoning and Proposed Facility Components



The above-described facility components proposed in Umatilla County would be located on land zoned Exclusive Farm Use/Critical Winter Range (Overlay), Grazing Farm Zone/Critical Winter Range (Overlay), Light Industrial, and Rural Tourist Commercial. Proposed facility components within each zone (with proposed land use category denoted in parenthesis) are as follows:

<u>Exclusive Farm Use Zone</u>
<u>(Utility Facility Necessary for Public Service)</u>
31 miles of 500 kV transmission line (3.1 miles within Critical Winter Range (CWR) Overlay)
28.9 miles of substantially modified roads; 29.6 miles of new roads (1.2 miles of substantially modified road, and 1.8 miles of new road within CWR Overlay)
6 multi-use areas (1 multi-use area within CWR Overlay)
33 pulling and tensioning sites (3 pulling and tensioning sites within CWR Overlay)
2 communication station (1 communication station within CWR Overlay)

<u>Grazing Farm Zone</u>
<u>(Construction of new utility facilities, including transmission lines and towers, necessary for public service as provided in Section 152.617(I)(C))</u>
9.9 miles of 500 kV transmission line (2.8 miles within Critical Winter Range (CWR) Overlay)
8.0 miles of substantially modified roads; 4.3 miles of new roads (1.9 miles of substantially modified roads, and 1.6 miles of new roads within CWR Overlay)
8 pulling and tensioning site (1 pulling and tensioning site would contain a helipad)
1 light-duty fly yard

<u>Light Industrial Zone (Construction of..temporary storage, and processing sites)</u>
1 (portion of) multi-use area

<u>Rural Tourist Commercial Zone (Construction of..temporary storage, and processing sites)</u>
1 (portion of) multi-use area

There are no alternative routes or facility components proposed in Umatilla County.

Applicable substantive criteria for proposed facility components in Umatilla County, in effect on the date the applicant submitted the pASC (February 27, 2013), are presented in Table LU-2 below.

Table LU-2: Applicable Substantive Criteria for Proposed Facility Components in Umatilla County

Umatilla County Development Code (UCDC)[1]	
Exclusive Farm Use Zone	
Section 152.059	Uses Permitted Outright
Grazing Farm Zone	
Section 152.085	Conditional Uses Permitted
Light Industrial Zone	
Section 152.303	Conditional Uses Permitted
Section 152.304	Limitations on Use
Section 152.306	Dimensional Standards
Rural Tourist Commercial Zone	
Section 152.283	Conditional Uses Permitted
Section 152.284	Limitations on Use
Section 152.286	Dimensional Standards; Setbacks
General Provisions	
Section 152.010	Access to Buildings
Section 152.016	Riparian Vegetation
Section 152.017	Conditions for Development Proposals
Section 152.439	Historical, Archeological or Cultural Site/Structure Overlay; Criteria for Review
Section 152.456	Critical Winter Range Overlay; Applicability
Goal 5	Technical Report D-63
Umatilla County Comprehensive Plan	
Open Space, Scenic and Historic Areas, and Natural Resources Element - Finding 37; Policy 37 Public Facilities and Services Element - Finding 19; Policy 19 Transportation Element - Finding 20; Policy 20	

Notes:

1. ASC Exhibit K Table K-9 includes "potentially applicable substantive criteria" identified by the SAG and the applicant. The evaluation of applicable substantive criteria by county is based on the table above, and omits some potentially applicable substantive criteria identified by the applicant. Specifically, as evaluated in this section, the Department recommends Council find that ancillary facilities to the transmission line be evaluated as part of the utility facility, and therefore separate provisions that would apply to helipads, roads and batch plant, as individual uses, would not apply and therefore were not evaluated including UCDC 152.060, 152.061, 152.086, 152.616, 152.617, 152.062, 152.063, 152.545, 152.546, 152.547, 152.560, 152.061, 152.062. However, the Department reviewed the applicant's assessment and, while not considered appropriate to recommend Council make findings of compliance, considers that the applicant demonstrates consistency with the requirements of these provisions.

The following analysis addresses the applicant's ASC Exhibit K evaluation of compliance with applicable substantive criteria.

Umatilla County Zoning Ordinance

Umatilla County Development Code Chapter 152 Exclusive Farm Use Zone, EFU

Proposed facility components within EFU/critical winter range (CWR) overlay zoned land in Umatilla County would include up to 31 miles of a single-circuit 500 kV transmission line with structures that could extend up to 200-feet in height. The applicant identifies that ancillary facilities to the proposed transmission line located within EFU-zoned land would include 29.6 miles of new access roads, 28.9 miles of substantially modified existing roads, six multi-use areas, and two communication stations.[136] An evaluation of the applicable substantive criteria for these uses within EFU-zoned land is presented below.

<u>UCDC 152.059: Land Use Decision and Zoning Permit</u>

In an EFU zone the following uses may be permitted through a land use decision via administrative review (§152.769) and subject to the applicable criteria found in §152.617. Once approval is obtained a zoning permit (§ 152.025) is necessary to finalize the decision.
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(C) Utility facilities necessary for public service, including wetland waste treatment systems but not including commercial facilities for the purpose of generating electrical power for public use by sale or transmission or communication towers over 200 feet in height. A utility facility necessary for public service may be established as provided in ORS 215.275 and in § 152.617(II)(7).

UCDC 152.059(C) establishes that utility facilities necessary for public service are uses permitted outright in the EFU zone, subject to UCDC 152.769 administrative review; and compliance with applicable criteria in ORS 215.275 and UCDC 152.617(II)(7). UCDC 152.059 also specifies that a zoning permit is necessary for uses permitted outright in EFU zoned land.

As described in ASC Exhibit K, proposed facility components within EFU/CWR overlay-zoned land in Umatilla County would include 31 miles of 500 kV transmission line. In addition, the applicant proposes 29.6 miles of new access roads, 28.9 miles of substantially modified existing

[136] In ASC Exhibit K, the applicant describes that Umatilla County identified UCDC Sub-section 152.060(G) *Personal Use Airports* as potentially applicable to the helipads to be located within each of six multi-use areas in EFU-zoned land. Because the multi-use area is an ancillary facility to the proposed facility, the Department recommends Council evaluate all facility components within EFU zoned land as a utility facility necessary for public service. In the alternative, however, the applicant provides a compliance demonstration if UCDC Sub-section 15.2060(G) is determined applicable, which is incorporated into ASC Exhibit C, K and the draft Helicopter Use Plan (Recommended Public Services Condition 2, to be provided to the Department and applicable counties prior to helipad use).

roads, six multi-use areas, and two communication stations, which based on a 2001 and 2005 court decision, the applicant asserts should be considered under the "utility facility necessary for public service" land use category.[137] The Department agrees and recommends Council find that the proposed facility components located in EFU-zoned land would be a land use decision use under UCDC 152.059(C).

Notwithstanding the language in the County's code, the conditional use requirements beyond those that are consistent with ORS 215.275 are not applicable to the proposed facility because, as a utility facility necessary for public service under ORS 215.283(1)(g), the use is permitted subject only to the requirements of ORS 215.275 and the County cannot impose additional approval criteria. Therefore, the conditional use requirements of UCDC 152.617 do not apply.[138] UCDC 152.769 provides procedural requirements for administrative review of uses permitted outright, which do not apply when Council makes the land use decision.

Based on the analysis presented above, proposed facility components within EFU-zoned land would be a use permitted outright and would require a zoning permit. The Department recommends Council impose Land Use Condition 3 in accordance with UCDC 152.059.

Proposed facility components would be located in EFU-zoned land across five Oregon counties including Morrow, Umatilla, Union, Baker, and Malheur. Therefore, for these locations, the land use compliance evaluation is limited to ORS 215.275, as presented in Section IV.E.2.1.*, ORS 215.283, ORS 215.275 and ORS 215.296 (Exclusive Farm Use Requirements)* of this order.

Umatilla County Development Code Chapter 152 Grazing/Farm Zone, GF

Facility components proposed to be located in Umatilla County Grazing/Farm (GF) zoned land include approximately 9.9 miles of transmission line, 4.3 miles of new access road, 8.0 miles of substantially modified existing access roads, and one light-duty fly yard. An evaluation of applicable substantive criteria for these proposed uses within GF zoned land is presented below.

The GF zone in Umatilla County is a hybrid zone that includes forested land, agricultural land, and rangeland. Proposed facility components would be located on forested lands within the GF zone.

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[137] See Save Our Rural Or. v. Energy Facility Siting Council, 339 Or. 353, 384 (2005) (upholding Council's determination that ancillary facilities are considered "utility facilities necessary for public service"); Cox v. Polk County, 174 Or. Ct. App. 332, 343-44 (2001) ("utility facilities necessary for public service" may include ancillary or off-site equipment).

[138] In ASC Exhibit K, the applicant provides a compliance demonstration with UCDC 152.617, 152.062, and 152.063, which the Department reviewed and concurs that the analysis represents consistency with the standards.

UCDC 152.085: Conditional Uses Permitted

In the GF Zone, the following uses may be permitted conditionally via administrative review (§ 152.769), subject to the requirements of § 152.086, applicable supplementary regulations in §§ 152.010 through 152.016 and §§ 152.545 through 152.562, and applicable §§ 152.610 through 152.615. Specific standards for some of the conditional uses listed below are contained in § 152.616. A zoning permit is required following the approval of a conditional use pursuant to § 152.025. Existing uses classified as conditional use and listed in this section may be expanded subject to administrative review and subject to the requirements listed in this section, except expansions on a parcel or tract meeting the definition of high value farmland will not be permitted.

*****

(R) Construction of new utility facilities, including transmission lines and towers, necessary for public service as provided in § 152.617(I)(C).

UCDC 152.085(R) identifies new utility facilities necessary for public service, defined in UCDC Chapter 152.617(1)(C) as commercial utility facilities for the purpose of generating and distributing power for public use by sale, as a conditional use permitted on GF zoned land, subject to the requirements of UCDC 152.086, 152.010 through 152.016, 152.545 through 152.562, 152.610 through 152.615, 152.616, and 152.025.

The applicant describes that Umatilla County identified UCDC 152.085(R) as potentially applicable, but then argues that because it applies to commercial utility facilities for the purpose of generating and distributing power, it would not apply to the non-energy generating facility, or specific non-generating facility components proposed to be located in GF-zoned land. The Department agrees and recommends Council conclude that UCDC 152.185(R) does not apply to facility components proposed to be located in GF zoned land. However, it is noted that in the absence of UCDC 152.185(R), there are no land use categories within UCDC 152.185 for the proposed facility. However, because LCDC Chapter 660 establishes authorized uses within forest lands as inclusive of transmission lines within a 100 foot right-of-way, state rules would apply directly. The applicant further identifies that the UCDC GF zone provisions do not include a Goal 4 analysis methodology applicable to Goal 4 forest lands; therefore, the applicable requirements for proposed facility components in GF zoned land are the directly applicable administrative LCDC Chapter 660 for uses authorized in forest zones, as evaluated in Section IV.E.2.2. *ORS 772.210 and OAR 660-006-0025* of this order.

Umatilla County Development Code Chapter 152 Light Industrial Zone, LI

The proposed facility would include one temporary multi-use area within Umatilla County's LI zone, as presented in ASC Figure K-33. The temporary multi-use area would primarily be used for equipment and vehicle storage. Ancillary uses to the primary use (i.e. equipment and vehicle storage) would include a helipad for helicopter operations supporting equipment, laborer and material delivery; fuel and lubricant storage (1,000-gallon aboveground storage tank (AST) for

gasoline; 1,000-gallon AST for diesel fuel; 500-gallon AST diesel fuel for the batch plant); and temporary batch plant operation.[139]

UCDC 152.303(A): Conditional Uses Permitted

> *In a LI Zone, the following uses and their accessory uses are permitted, conditionally, subject to the requirements of §§ 152.610 through 152.616, and upon the issuance of a zoning permit:…*
>
> *(19) Construction of . . . temporary storage, and processing sites;*

UCDC 152.303 establishes conditionally permitted uses within Light Industrial (LI) zoned land and requires permitted uses to satisfy the requirements in UCDC 152.610 through 152.616, and obtain a zoning permit.[140,141] UCDC 152.303(A)(19) identifies construction of "…temporary storage, and processing sites" as a conditionally permitted use in LI zoned land.

The applicant proposes a temporary multi-use area, of which a portion would be located in LI zoned land, and requests that the use be evaluated under UCDC 152.303(A)(19), as provided above. As explained in ASC Exhibit K, temporary multi-use areas would be used for equipment and fuel storage, and could include temporary operation of a mobile batch plant during transmission line foundation construction (i.e. activity considered aggregate processing). Therefore, based on these uses, and because it is approximately 30 miles from other facility components proposed in Umatilla County, the Department recommends Council evaluate this multi-use area separately from the utility facility as a temporary storage and processing site under UCDC 152.303(A)(19) and find that it is a conditionally permitted use within LI zoned land. Further, the Department recommends Council impose recommended Land Use Condition 3 requiring that, prior to construction in Umatilla County, the applicant demonstrate that a zoning permit has been obtained for the temporary multi-use area.

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[139] As explained in ASC Exhibit G, fuel ASTs would be located within secondary containment consisting of lined soil berms with capacity of at least 10 percent greater than the volume of the AST. The dimensions of the spill containment area would vary based on the volume of the materials stored with a capacity of at least 10 percent greater than the volume of materials stored.

[140] In ASC Exhibit K, the applicant provides UCDC 152.303(A)(19) as provided above, which references UCDC 152.610 through 152.616. However, instead of UCDC 152.610 through 152.616, the applicant provides zoning provision language for 152.303 through 152.306, which are the current code provisions referenced in UCDC dated August 2018. The Department evaluates the code referenced in ASC Exhibit K.

[141] UCDC 152.610 through 152.614 contain procedural requirements for conditionally permitted uses, which are superseded by the procedural requirements in OAR Chapter 345 Division 15. UCDC 152.615 contains additional restrictions the county could impose on conditionally permitted uses, and UCDC 152.616 contains standards for review of conditionally permitted uses, but does not establish standards of review for the temporary multi-use area evaluated as "construction of rest areas, weigh stations, temporary storage and processing sites."

UCDC 152.303(B): General Criteria

The following general criteria shall be used to review all conditional uses listed in the LI Zone, notwithstanding any other criteria listed in this chapter for a particular use:

(1) The use will be compatible with other uses allowed in a LI Zone;

(2) The use will be in conformance with policies listed in the text of the Comprehensive Plan;;

(3) The use would not have an adverse impact on existing industrial uses in that it would not be incompatible with the noise, dust, vibrations and odors that may emanate from or be caused by the existing adjacent industrial uses.

UCDC 152.303(B) establishes general criteria for conditional uses permitted in LI zoned land including a demonstration that the use would be compatible with other allowed uses; that the use would be consistent with applicable Comprehensive Plan policies; and, that the use would not have adverse impacts, or be incompatible with, existing industrial uses.

The proposed temporary multi-use area would include use and storage of construction equipment, transmission line structures, and worker vehicles, which is similar to the allowable use under UCDC 152.302(B)(8) for a haul and truck yard or terminal. Additionally, as described by the applicant, uses surrounding the multi-use area include County Road 1234, large industrial and shipping distribution facilities to the east and south, and I-82 to the west. The Hermiston Generating Plant is less than one-quarter mile to the east. These industrial uses are similar to and would be consistent with the nature of activity proposed at the multi-use area. Based on the proposed temporary use of the multi-use area, the Department recommends Council find that the use would be compatible with other adjacent uses in the LI zone.

Policies listed in the Comprehensive Plan applicable to the LI zone include providing an attractive zone for industry by providing direct access to the freeway system. The proposed multi-use area was selected based on its location and access to the highway. Therefore, the Department recommends Council find that the proposed use would be in conformance with applicable Comprehensive Plan policies.

The proposed multi-use area would generate dust, noise and vibration consistent with other allowable uses within LI zone, and therefore would be expected to be compatible with adjacent uses. Therefore, for these reasons, the Department recommends Council find that the proposed temporary multi use area would satisfy UCDC 152.303(B) general criteria.

UCDC 152.304: Limitations on Use

(A) All business, commercial and industrial activities, and storage allowed in an LI Light Industrial Zone shall be conducted wholly within a building or shall be screened from view from adjacent public roads or surrounding properties in farm, residential or commercial zones, unless the entire activity is conducted more than 500 feet from said

surrounding property or road. Outdoor storage of farm and forest products or equipment shall not be subject to this limitation;

(B) All off-street loading areas shall be screened from view if adjoining properties are in a residential zone;

(C) All noise, vibration, dust, odor, smoke, appearance or other objectionable factors involved in any activity shall comply with appropriate state and federal regulations.

UCDC 152.304 requires that views of permitted uses on LI zoned land be screened, or setback 500 feet, from surrounding properties or roads; and, that noise, vibration, dust odor, smoke and other objectionable factors adhere to applicable state and federal requirements. UCDC also requires that views of off-street loading be screened if adjoining properties are in a residential zone, which, for the proposed site of the temporary multi-use area, would not apply as there are no adjacent residential zoned areas.

The temporary multi-use area site would be surrounded by County Road 1234 to the north and I-82 to the west. In ASC Exhibit K, the applicant describes that Umatilla County Planning Department interprets the setback requirement to be inapplicable to temporary facilities.[142] Because it is unclear why only some UCDC LI zone provisions would apply to the temporary multi-use area and because providing screening of the multi-use area uses (e.g. helicopter use and batch plant operations, and general activities related to equipment delivery and storage), the Department recommends Council consider visibility screening or a 500-foot setback to provide necessary safety precautions for vehicles travelling on the above described roads, which appear to be within 500 feet of the proposed site. In ASC Exhibit B, the applicant describes that multi-use areas would be fenced, with locked gates. However, it is not clear whether the fence would include visibility-reducing screens. Therefore, the Department recommends Council impose recommended Land Use Condition 5 to ensure that the multi-use area include a visibility obscuring fence or is designed to limit activities within 500 feet of adjacent public roads.

UCDC 152.304 requires that all noise, vibration, dust, odor, smoke, appearance or other objectionable factors involved in any activity must comply with appropriate state and federal regulations. The applicant commits to complying with all required federal and state regulations. More specifically, though, the applicant identifies that an Air Contaminant Discharge Permit (ACDP) would be obtained from the Oregon Department of Environmental Quality for the temporary mobile batch plant that would potentially be operated within the multi-use area. The ACDP would include requirements and limits applicable to dust and smoke. Recommended Condition 3 would ensure that, prior to construction, the applicant provide copies of all permits obtained and, during construction, provide records demonstrating compliance with the non-site certificate governed permit requirements. The applicant would not obtain any other permits that would limit noise and vibration, and based on review of ASC Exhibit CC, there are no other state or federal requirements applicable to the proposed facility that would limit noise and

[142] ASC Exhibit K, page K-172; May 12, 2016 letter from Umatilla County Planning Department.

vibration at the temporary multi-use area. Therefore, based on compliance with recommended Land Use Condition 3, the Department recommends Council find that the temporary multi-use area would satisfy the UCDC 152.304 use limitations.

UCDC 152.306: Dimensional Standards; Lot Size; Minimum Lot Width

In a LI Zone, the following dimensional standards shall apply:
(A) Lot size. The minimum lot size shall be one acre unless written proof from the Department of Environmental Quality is provided which shows that an approvable subsurface disposal system can be located on less than one acre;
(B) Minimum lot width. The minimum average lot width shall be 100 feet with a minimum of 25 feet fronting on a dedicated county or public road or state highway;

UCDC 152.306 establishes dimensional standards, lot size and minimum lot width for permitted uses within LI zoned land. The applicant asserts that these provisions would only apply if a partition was needed, which is not expected, and even if it were, would be obtained directly from the county. Because any future partition would not be subject to and governed by the site certificate, the Department recommends Council conclude that UCDC 152.306 is not applicable.

UCDC 152.306(C): Setback Requirements

The minimum setback requirements shall be as follows:
(1) Front yard: 20 feet, except if the front yard area is used for off-street parking space, then the front yard shall be a minimum of 40 feet;
(2) Side yard: 20 feet;
(3) Rear yard: 20 feet;
(4) The minimum side and rear yard setbacks may be modified upon the request of a property owner, pursuant to § 152.625 through 152.630. Under no circumstance shall the setback requirements be modified when the reduced setback would adjoin residentially zoned property.

UCDC 152.306(C) establishes minimum front, side and rear yard setback distances of 20 feet for permitted uses in LI zoned land. The applicant represents that Umatilla County interprets UCDC 152.306(C) setback requirements to be inapplicable to temporary uses, including the temporary multi-use area. However, because the temporary multi-use area may include helicopter and batch plant operations, and other general construction equipment and material delivery and storage, the Department considers setbacks to provide necessary distance between the proposed use and adjacent properties. Therefore, the Department recommends Council find that UCDC 152.306(C) would apply and impose setback limitations in Land Use Condition 5 consistent with UCDC 152.306(C) to demonstrate compliance with the requirements.

UCDC 152.306(D): Stream Setback

To permit better light, air, vision, stream or pollution control, protect fish and wildlife areas, and to preserve the natural scenic amenities and vistas along the streams, lakes and wetlands, the following setbacks shall apply:

(1) All sewage disposal installations, such as septic tanks and septic drainfields, shall be setback from the mean high-water line or mark along all streams, lakes or wetlands a minimum of 100 feet, measured at right angles to the high-water line or mark. In those cases where practical difficulties preclude the location of the facilities at a distance of 100 feet and the DEQ finds that a closer location will not endanger health, the Planning Director may permit the location of these facilities closer to the stream, lake or wetland, but in no case closer than 50 feet.

(2) All structures, buildings or similar permanent fixtures shall be set back from the high-water line along all streams, lakes or wetlands a minimum of 100 feet measured at right angles to the high-water line or mark.

UCDC 152.306(D) establishes 100 foot setbacks from the high-water like or mark to streams, lakes or wetlands to permitted uses in LI zoned land. The applicant represents that Umatilla County interprets UCDC 152.306(C) setback requirements to be inapplicable to temporary uses, including the temporary multi-use area. However, because the temporary multi-use area would include helicopter and batch plant operations, and other general construction equipment and material delivery and storage, the Department considers setbacks to provide necessary protection from potential runoff resulting from activities at the multi-use area. However, based on review of ASC Exhibit C Attachment C-2 Map 24, there are no streams, lakes or wetlands in the vicinity of the proposed site. Therefore, while the Department considers that the setbacks would apply, a condition specifying the setback to streams is not necessary given the lack of streams, lakes or wetlands in the vicinity of the proposed site.

Umatilla County Development Code Chapter 152 Subsection Rural Tourist Commercial Zone RTC

The proposed facility would include a portion of a temporary multi-use area within Umatilla County's RTC zone, as presented in ASC Figure K-34. The temporary multi-use area would primarily be used for equipment and vehicle storage. Ancillary uses to the primary use of equipment and vehicle storage may include a helipad for helicopter operations supporting equipment, laborer and material delivery; fuel and lubricant storage (1,000-gallon aboveground storage tank (AST) for gasoline; 1,000-gallon AST for diesel fuel; 500-gallon AST diesel fuel for the batch plant); and temporary batch plant operation.[143]

[143] As explained in ASC Exhibit G, fuel ASTs would be located within secondary containment consisting of lined soil berms with capacity of at least 10 percent greater than the volume of the AST. The dimensions of the spill containment area would vary based on the volume of the materials stored with a capacity of at least 10 percent greater than the volume of materials stored.

UCDC 152.283: Conditional Uses Permitted

In an RTC Zone, the following uses and their accessory uses are permitted subject to the requirements of §§152.610 through 152.616 and 152.284 through 152.286 of this chapter, and upon the issuance of a zoning permit:…

(G) Construction of..temporary storage, and processing sites.

UCDC 152.283 establishes conditionally permitted uses within RTC zoned land and requires permitted uses to satisfy the requirements in UCDC 152.610 through 152.616, 152.284 through 152.286, and obtain a zoning permit.[144] UCDC 152.283(G) identifies construction of…temporary storage and processing sites as a conditionally permitted use in RTC zoned land.[145]

The applicant proposes a temporary multi-use area, of which a portion would be located in RTC zoned land – the remaining portion would be located in LI zoned land, and requests that the use be evaluated under UCDC 152.283(CCC) – utility facility as provided in UCDC 152.616. As explained in ASC Exhibit K, multi-use areas would be used for equipment and fuel storage, and could be used by a mobile batch plant during foundation construction. Therefore, based on these uses, and because it is approximately 30 miles from other facility components proposed in Umatilla County, the Department recommends Council evaluate this multi-use area as a temporary storage and processing site under UCDC 152.283(G) and find that it is a conditionally permitted use within RTC zoned land. Further, the Department recommends Council impose Land Use Condition 3 requiring that, prior to construction in Umatilla County, the applicant demonstrate that a zoning permit has been obtained for the temporary multi-use area.

UCDC 152.284: Limitations on Uses

In the RTC Zone, the following limitations on uses shall apply:

(A) Outside storage areas shall be screened with a site-obscuring fence so that the area shall not be exposed to view from the traveling public and surrounding properties;
(B) Storage of scrap or salvage materials shall be prohibited.

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[144] UCDC 152.610 through 152.614 contain procedural requirements for conditionally permitted uses, which are superseded by the procedural requirements in OAR Chapter 345 Division 15. UCDC 152.615 contains additional restrictions the county could impose on conditionally permitted uses, and UCDC 152.616 contains standards for review of conditionally permitted uses, but does not establish standards of review for the temporary multi-use area evaluated as "construction of rest areas, weigh stations, temporary storage and processing sites."
[145] In ASC Exhibit K, the applicant evaluates the temporary multi-use area as a "utility facility as provided in Section 152.616 (CCC)" under 152.283(D). However, as evaluated under 152.303(A) – uses within LI zone, because the temporary multi-use are would be more than 30 miles from the location of transmission structures within Umatilla County, the Department considers the appropriate land use category to be specific to the activities at the multi-use area (e.g. storage and processing) rather than the transmission line as a utility facility.

(C) Except as provided in Paragraphs D and E of this Section, buildings shall not exceed 3,500 square feet of floor space.
(D) Motels and hotels that existed on July 1, 2005 may expand up to 35 units or up to 50% of the number of existing units, whichever is larger, with no limitation on square footage.
(E) Structures that existed on July 1, 2005 may expand to a building size of 4,500 square feet or to a size that is 50% larger than the building size that existed on July 1, 2005, whichever is larger.
(F) Notwithstanding the size limitations for structures contained in this chapter, a lawfully approved or lawfully constructed structure existing as of July 1, 2005 shall not be considered a non-conforming use, and in the event the structure is destroyed or substantially damaged, the structure may be restored to its prior lawfully approved size.

UCDC 152.304 establishes limitations on conditionally permitted uses within RTC zoned land. Applicable limitations include a requirement that outdoor storage areas be screened with a site-obscuring fence; and restriction against the storage of scrap or salvage materials. In ASC Exhibit K, the applicant argues that these provisions may not apply to temporary uses, such as the temporary multi-use area.[146] However, because the temporary multi-use area site would be surrounded by County Road 1234 to the north and I-82 to the west, the Department recommends Council consider visibility screening necessary to provide safety precautions for vehicles travelling on the above described roads, which appear to be within 500 feet of the proposed site. In ASC Exhibit B, the applicant describes that multi-use areas would be fenced, with locked gates. However, it is not clear whether the fence would include site-obscuring screens. Therefore, the Department recommends Council impose Land Use Condition 5 to ensure that the multi-use area in the RTC zone is properly screened from views by travelling vehicles and from surrounding properties.

The primary use at the temporary multi-use area would be for temporary storage of equipment and materials, including construction related waste. The Department recommends Council find that construction related waste, such as packing materials, scrap conductors, and empty wire spools, not be considered scrap or salvage materials. Moreover, if construction related waste is stored at the temporary multi-use area, it would be stored for a short-term duration and then hauled offsite for recycling or disposal at a landfill.

Based on the above analysis and reasoning, the Department recommends Council find that the temporary multi-use area would satisfy the UCDC 152.284 use limitations.

<u>UCDC 152.286: Dimensional Standards; Lot Size; Minimum Lot Width</u>

In an RTC Zone, the following dimensional standards shall apply:

[146] ASC Exhibit K, page K-172; May 12, 2016 letter from Umatilla County Planning Department.

(A) Lot size. The minimum lot size shall be one acre unless written proof from the Department of Environmental Quality is provided that shows that an approvable subsurface disposal system can be located on less than one acre;

(B) Minimum lot width. The minimum average lot width shall be 100 feet with a minimum of 25 feet fronting on a dedicated county or public road or state highway;

(C) No building shall be located closer than 20 feet from a property line, except on the street/road side of a corner lot used for a side yard the setback shall be 55 feet from the center line of the road, highway, or easement, or 25 feet from the property line, whichever is greater. The minimum side and rear yard setbacks may be modified upon the request of a property owner, pursuant to § 152.625 through 152.630. Under no circumstance shall the setback requirements be modified when the reduced setback would adjoin residentially zoned property.

(D) To permit better light, air, vision, stream or pollution control, protect fish and wildlife areas, and to preserve the natural scenic amenities and vistas along the streams, lakes or wetlands, the following setbacks shall apply:

(1) All sewage disposal installations, such as septic tanks and septic drainfields, shall be set back from the mean high-water line or mark along all streams, lakes or wetlands a minimum of 100 feet measured at right angles to the high water line or mark. In those cases where practical difficulties preclude the location of the facilities at a distance of 100 feet and the DEQ finds that a closer location will not endanger health, the Hearings Officer may permit the location of these facilities closer to the stream, lake or wetland, but in no case closer than 50 feet;

(2) All structures, buildings or similar permanent fixtures shall be set back from the high-water line or mark along all streams, lakes or wetlands a minimum of 100 feet measured at right angles to the high-water line or mark.

UCDC 152.286 (A) and (B) describes the dimensional requirements for parcels in the RTC zone. These provisions would apply only if the applicant were to require a partition of the impacted RTC zoned parcel in Umatilla County. The applicant explains that it intends to secure easements where necessary and does not expect to require the partitioning of any parcel in Umatilla County. Because no partitions are proposed, UCDC 152.286(A) and (B) are not applicable to the proposed multi-use area. Moreover, the applicant explains that in the event a partition becomes necessary, the applicant would obtain approval of the partition directly from Umatilla County, outside this siting process. Because any future partition would not be subject to and governed by the site certificate, UCDC 152.283(A) and (B) are not applicable to this ASC.

UCDC 152.306(C) and (D) addresses setback requirements of 20 feet from a property line and 100 feet from structures or buildings to the high-water line or mark. In ASC Exhibit K, the applicant asserts that the proposed multi-use area is not proposed to be located within 100 feet of any stream, lake or wetland. Therefore, while the Department recommends this criteria be considered applicable to the proposed use, it would not apply to the proposed site.

UCDC General Provisions

UCDC 152.010: Access to Buildings; Private Driveways and Easements

(A) Every building hereafter erected or moved shall be on a lot that abuts a public street or a recorded easement. All structures shall be so located on lots as to provide safe and convenient access for servicing, fire protection, and required off-street parking. In commercial and industrial zones, access points shall be minimized. To accomplish this, access shall be limited to one every 200 feet and shall be reviewed during the design review stage or the conditional use hearing. If necessary to accomplish this, driveways may be shared between two lots.

(B) Private driveways and easements that enter onto a public or county road or state or federal highway shall be constructed of at least similar if not the same material as the public or county road or state or federal highway to protect the edge of the road from rapid deterioration. The improvements shall extend at least 25 feet back from the edge of the existing travel lane surface.

UCDC 152.010 establishes general provisions for site and building access applicable within all zones. Proposed facility components in Umatilla County would include 7 temporary multi-use areas and 2 communication stations, which would include buildings or structures. To ensure compliance with UCDC 152.010 requirements, the applicant proposes, and the Department recommends, Council impose Land Use Condition 5.

UCDC 152.016: Riparian Vegetation; Wetland Drainage

(A) The following standards shall apply for the maintenance, removal and replacement of riparian vegetation along streams, lakes and wetlands which are subject to the provisions of this chapter:

(1) No more of a parcel's existing vegetation shall be cleared from the setback and adjacent area than is necessary for uses permitted with a zoning permit, accessory buildings, and/or necessary access.

(2) Construction activities in and adjacent to the setback area shall occur in such a manner so as to avoid unnecessary excavation and/or removal of existing vegetation beyond that required for the facilities indicated in subdivision (A)(1) above. Where vegetation removal beyond that allowed in subdivision (A)(1) above cannot be avoided, the site shall be replanted during the next replanting season to avoid water sedimentation. The vegetation shall be of indigenous species in order to maintain the natural character of the area.

(3) A maximum of 25% of existing natural vegetation may be removed from the setback area.

(4) The following uses and activities are excepted from the above standards:…

(B) Minor drainage improvements necessary to ensure effective drainage on surrounding agricultural lands shall be coordinated with the Oregon Department of Fish and Wildlife and Soil and Water Conservation District. Existing drainage ditches may be cleared to original specifications without review.

UCDC 152.016 establishes standards for permitted uses in all zones that result in maintenance, removal and replacement of riparian vegetation along streams, lakes and wetlands. Standards include minimizing the extent of cleared vegetation within the designated 100-foot setback area, limiting clearance of existing natural vegetation within the setback area to 25 percent, and requiring that drainage improvements be coordinated with ODFW and the local Soil and Water Conservation District.

The proposed facility would result in removal, replacement and maintenance of riparian vegetation during construction where temporary stream crossings are needed to support transmission line installation. The applicant describes that, during temporary stream crossing activities, vegetation in riparian zones may be thinned or temporarily removed. Temporary vegetation impacts would be restored with indigenous species in the next replanting season as outlined in the draft Reclamation and Revegetation Plan, as provided in Attachment P1-3 of this order. Vegetation clearance and management would be conducted in accordance with the draft Vegetation Management Plan, as provided in Attachment P1-4 of this order, which would ensure minimization of natural vegetation removal within the setback area. The applicant, however, requests the ability to remove more than 25 percent of natural vegetation within riparian areas if necessary to maintain safe facility operations.

In addition, the applicant proposes to coordinate minor drainage improvements necessary within proposed stream crossing areas with ODFW and the Soil and Water Conservation District where required. To ensure compliance with the relevant UCDC 152.016 requirements, the applicant proposes, and the Department recommends, the Council impose Land Use Condition 5. Based on compliance with recommended Land Use Condition 5, the Department recommends Council find that the proposed facility would comply with UCDC 152.016 standards.

<u>UCDC 152.017: Conditions for Development Proposals</u>

(A) The proposed use shall not impose an undue burden on the public transportation system. Any increase meeting the definition of significant change in trip generation constitutes an undue burden.

For the purpose of this chapter, the following definitions shall apply unless the context clearly indicates or requires a different meaning:…SIGNIFICANT CHANGE IN TRIP GENERATION. A change in the use of the property, including land, structures or facilities, or an expansion of the size of the structures or facilities causing an increase in the trip generation of the property exceeding:

(1) for gravel surfaced County roads, 30 vehicles of less than 10,000 pounds Gross Vehicle Weight (GVW) and/or 20 vehicles of greater than 10,000 pounds GVW;
(2) for paved County roads, 75 vehicles of less than 10,000 GVW; and
(3) for State paved Highways, 150 vehicles 0f 10,000 pounds GVW or less and/or 100 vehicles of greater than 10,000 pounds GVW.

(B) For developments likely to generate a significant increase in trip generation, applicant shall be required to provide adequate information, such as a traffic impact study or traffic counts, to demonstrate the level of impact to the surrounding system. The scope of the impact study shall be coordinated with the providers of the transportation facility. Proposals that meet the requirements in §152.019(B) are subject to §152.019(C), Traffic Impact Analysis Requirements.
(C) The applicant or developer may be required to mitigate impacts attributable to the project. Types of mitigation may include such improvements as paving, curbing, bridge improvements, drainage, installation or contribution to traffic signals, construction of sidewalks, bikeways, accessways or paths. The determination of impact or effect should be coordinated with the providers of affected transportation facilities;
(D) Dedication of land for roads, transit facilities, sidewalks, bikeways, paths, or accessways may be required where the existing transportation system will be impacted by or is inadequate to handle the additional burden caused by the proposed use.

UCDC 152.017(A) requires that a permitted uses in all zones not impose a significant change in trip generation (i.e. 30 to 75 vehicle trips per day on gravel and paved county roads, and 150 vehicle trips per day on State paved highways) within the local transportation system. UCDC 152.017(B) requires that, for uses likely to generate a significant increase in trip generation, an impact assessment be provided and shall include proposed mitigation. As noted in ASC Exhibit K, construction-related traffic in and around the multi-use areas would be temporary and would not, then, result in a long term impact on the ability of the local transportation system to provide adequate capacity to users. In addition, the applicant describes that in 2016, Umatilla County Planning Director confirmed that the county would not require a traffic impact analysis for temporary construction-related traffic impacts.

In Umatilla County, the applicant proposes 7 temporary multi-use areas. Construction-related traffic would predominately occur from worker and material/equipment delivery vehicles travelling to and from the multi-use areas, which are estimated to generate up to 130 vehicles trips per day. Typical activities at multi-use areas would include material deliveries, show-up sites for construction workers, and the dispatching of material to tower work areas. If a batch plant is co-located at a multi-use area, concrete trucks would also generate daily trips during foundation construction.

The applicant identifies that construction-related traffic in Umatilla County may result in 75 or more vehicle trips per day, which would exceed the UCDC 152.003(2) limit for vehicular traffic on county paved roads. The applicant proposes to address potential impacts to local roadways

through a Road Use Agreement and through implementation of measures outlined in the draft Transportation and Traffic Plan, provided as Attachment U-2 of this order, and as recommended by imposed in Public Services Condition 1. Based on compliance with recommends Public Services Conditions 1, the Department recommends Council find that the proposed facility would satisfy UCDC 152.017.

UCDC Historic, Archeological or Cultural Site/Structure Overlay Zone

UCDC 152.437(A): When a development, alteration or demolition is proposed for a HAC site or structure, the Planning Director or Hearings Officer shall review the proposal to insure that it meets the requirements of this section. A zoning permit is required for any alteration or demolition of a HAC site or structure.

UCDC 152.437(A) establishes requirements for proposed uses within the county's designated Historic, Archeological or Cultural Site/Structure Overlay (HAC) zone, including a review by the Planning Director if the proposed uses would alter or demolition a HAC site or structure. The applicant asserts that the HAC zone is over 25 miles from the proposed site boundary and that the county has not identified specific HAC sites or structures within the analysis area. Therefore, the Department recommends Council find that, while potentially applicable to the proposed facility, based on the distance from the HAC zone to the proposed site boundary, the criterion does not apply to the proposed facility site.

UCDC Critical Winter Range Overlay Zone, Section 152.458

<u>UCDC 152.458: Critical Winter Range Overlay Zone</u>

(A) Dwelling units shall be limited to a maximum density of three dwellings within a radius of one half mile of any proposed dwelling. All requests for dwellings or land divisions that will result in eventual placement of a dwelling, or administrative review of non-resource dwellings, shall be referred to the Oregon Department of Fish and Wildlife (ODFW) for review and recommendation.

(B) Dwellings shall be sited to minimize impact on critical winter range by application of the following:…

UCDC 152.458 establishes requirements for specific uses within the Critical Winter Range (CWR) Overlay zone that would result in eventual placement of a dwelling, and administrative review of non-resource dwellings. The CWR Overlay Zone was established for the protection of elk and deer winter range, and aligns with ODFW's habitat designation.

Approximately 4.2 miles of the proposed 500 kV transmission line would cross CWR Overlay Zone. However, the criteria under UCDC 152.458 for minimizing impacts with the CWR Overlay Zone apply to dwellings, and therefore would not apply to the proposed facility. As noted in ASC Exhibit K, however, under the Council's Fish and Wildlife Habitat standard, the applicant

evaluates potential impacts to elk and deer winter range and proposes mitigation that, as described in Section IV.H. *Fish and Wildlife Habitat* of this order, the Department recommends Council find would meet the standard. Proposed mitigation includes compensatory mitigation for permanent and temporary habitat impacts; restricting construction activities during sensitive deer and elk seasons (Dec 1 to March 31) and imposing speed limits to reduce risk of vehicular collision. Therefore, while UCDC 152.458 would not apply to the proposed facility, the applicant demonstrates that the proposed facility would be consistent with the provisions to minimize potential impacts from development within the CRW Overlay Zone.

Umatilla County Goal 5 Resources

The proposed facility and site boundary would cross the following Goal 5 resources, as identified by Umatilla County, and presented in ASC Exhibit K Figure K-35: five (5) waterfowl/furbearer areas (Butter Creek, Bear Creek, West Birch Creek, East Birch Creek, and McKay Creek); four (4) anadromous fish streams (Bear Creek, West Birch Creek, California Gulch Creek, and East Birch Creek); a high density archaeological area near the Columbia River, and the southwest corner of another high density area in the Blue Mountains; a medium density archaeological area; and, a Big Game Critical Winter Range Habitat (included within CWR Overlay Zone, as described above).

In ASC Exhibit K, the applicant represents that Umatilla County has not adopted any Goal 5 protection program for furbearers and hunted non-game wildlife, or Goal 5 fish streams. Nonetheless, as evaluated under UCDC 152.286 and 152.306 and imposed under recommended Land Use Condition 5 – requiring a 100-foot setback from structures to the high water mark of any stream, lake or wetland; minimization of cleared vegetation; and, restoration and monitoring - impacts to streams and riparian vegetation would be minimized.

As evaluated above, UCDC 152.435 through 152.443 are the only applicable provisions to HAC sites within the Historic, Archeological or Cultural Site/Structure Overlay Zone UCDC. UCDC 152.436 defines a HAC site as "any historic, archeological or cultural site or structure, or geographic area listed on the Umatilla County Register of Historic Landmarks or recognized as significant by the County Comprehensive Plan and Technical Report." Umatilla County has not identified any specific HAC sites or structures included in the Goal 5 inventory within the analysis area. As evaluated under the Council's Historic, Cultural and Archeological Resources standard in Exhibit S and Section IV.K., *Historic, Cultural and Archeological Resources* of this order, the applicant conducted extensive analysis of historic, cultural, and archeological resources in the analysis area (see Exhibit S, Section 3.2 [discussing survey methods]). However, because Umatilla County has not adopted specific provisions for Goal 5 HAC sites, no additional analysis is required to comply with the County's Goal 5 planning goals for historic resources.

Umatilla County Comprehensive Plan (UCCP)

Open Space, Scenic and Historic Areas, and Natural Resources Element

Finding 37: Areas specifically set aside for natural resource exploitation, future development of reservoirs, energy generation and transmission facilities, and industry will lower the cost of eventual use as compared to allowing incompatible development on the same lands before such eventual use.

Policy 37: The County shall ensure compatible interim uses provided through Development Ordinance standards, and where applicable consider agriculturally designated land as open space for appropriate and eventual resource or energy facility use.

The Open Space, Scenic and Historic Areas, and Natural Resources Element – Finding 37, Policy 37 – establishes that, based on the potential for energy generation and transmission facilities to lower the cost of eventual use of areas protected under the element, the County ensure compatible development. The proposed facility, including alternative routes, would predominately be located on EFU zoned land within Umatilla County, which based on the above-referenced text, may be considered open space appropriate for energy facility use. Based on the analysis provided in Section IV.E.2.1.*, ORS 215.283, ORS 215.275 and ORS 215.296* of this order and ASC Exhibit K Section 4.0, Section 6.5.2.1, Section 6.5.2.2, and Section 6.5.5, the Department recommends Council find that construction and operation of the proposed facility would not significantly impact accepted farm practices, including costs.

Therefore, because the proposed facility would not result in significant adverse impacts to accepted farm practices within the analysis area, and because agricultural lands may be considered open space under this element, the Department recommends Council find that the proposed facility would be consistent with UCCP Open Space, Scenic and Historic Areas, and Natural Resources Element – Finding 37, Policy 37.

Public Facilities and Services Element

Finding 19: Utility facilities can remove valuable resource lands and create development problems for new developments and detract from existing development.

Policy 19: Where feasible, all utility lines and facilities shall be located on or adjacent to existing public or private rights-of-way so as to avoid dividing existing farm or forest units; and transmission lines should be located within existing corridors as much as possible.

The Public Facilities and Services Element - Finding 19, Policy 19 – establish that, based on the potential for utility facilities to remove valuable resource land and detract from existing development, the county aim to permit utility lines and facilities adjacent to existing rights-of-way or existing corridors, to the extent feasible. The applicant asserts that siting the proposed

facility within or adjacent to existing public or private ROWs is not feasible due to minimum separation distances for high voltage transmission lines as established by NERC and WECC reliability requirements. However, the applicant describes that the proposed route was designed to avoid dividing existing farm or forest units, to the extent feasible. The Department recommends that, while the proposed facility would not use existing ROWs, the applicant demonstrates that it evaluated feasibility of using existing ROWs and therefore would be consistent with Public Facilities and Services Element - Finding 19, Policy 19.

Transportation Element

Finding 20: Major transmission lines (natural gas and electricity) traverse the county with additional expansion proposed, and additional new lines or pipelines could be proposed through the county.

Policy 20: The county will review right-of-way acquisitions and proposals for transmission lines and pipelines so as to minimize adverse impacts to the community.

The Transportation Element - Finding 20, Policy 20 – establishes that, based on the potential for major transmission lines traversing the county to result in future development, the county review ROW acquisitions for transmission lines to minimize adverse local impacts. As described above, the applicant asserts that utilizing existing ROWs is not feasible due to minimum separation distances for high voltage transmission lines as established by NERC and WECC reliability requirements. However, the applicant underscores its planning history for the proposed facility through the Community Advisory Process (CAP) process, where the applicant worked extensively with local landowners in the siting process. Moreover, Umatilla County is a Special Advisory Group for the proposed facility and has reviewed the ASC to date, and will have the opportunity to review the Department's recommendations. Therefore, through this process the county will review the applicant's proposal and Department's recommendations consistent with the Transportation Element Finding 20 and Policy 20.

Recommended Land Use Conditions – Umatilla County

Recommended Land Use Condition 3: For facility components in Umatilla County, the certificate holder shall:

a. Prior to construction of any phase or segment of the facility, provide to the Department a copy of the following Umatilla-County issued permits:
    i. Zoning Permit for facility components evaluated as a Utility Facility Necessary for Public Service (UCDC 152.059) including transmission line, new roads, substantially modified roads, multi-use areas (including batch plant and helipads), and communication stations in EFU-zoned land.
    ii. Installation of Utilities on County and Public Roads Permit.
    iii. Road Approach and Crossing Permit; and
    iv. Flood Plain Development Permit.

b. If after construction commencement the certificate holder determines additional County-approved permits are required, the certificate holder shall provide to the Department a copy of those additional permits.
c. Prior to construction, provide to the Department and Umatilla County a copy of the ODEQ issued Air Contaminant Discharge or General Permit for the mobile batch plant.
d. During construction, the certificate holder shall comply with all condition requirements of permits identified under (a), (b), and (c) of this condition.

Recommended Land Use Condition 4: Prior to construction of any phase or segment of facility components in Umatilla County, the certificate holder shall work with the Public Works Department on building standards for the road improvements and construction, and will ensure road construction is consistent with the Oregon Forest Practices Act.

Recommended Land Use Condition 5: For facility components located in Umatilla County, the certificate holder shall design the facility to comply with the following setback distances and other requirements:

<u>In All Zones:</u>

i. Buildings, the fixed bases of transmission line towers, and new access roads shall be set back from Class I streams at least 25-feet or one-half the stream width, whichever is greater.
ii. Permanent vegetation removal within the riparian zone of all Class I streams shall retain 75% of all layers or stratas of vegetation.
iii. Within the transmission line right-of-way, a maximum of 25% of existing natural vegetation along streams, lakes, and wetlands may be removed, unless necessary for reliability purposes.
iv. The certificate holder shall coordinate with the Oregon Department of Fish and Wildlife and Soil and Water Conservation District on minor drainage improvements necessary to ensure effective drainage on surrounding agricultural lands. Existing drainage ditches may be cleared to original specifications without review.
v. Access points to multi-use areas and communication stations shall be limited to one every 200 feet.
vi. New roads that enter onto a public or county road or state or federal highway shall be constructed of at least similar if not the same material as the public or county road or state or federal highway, and the material shall extend at least 25 feet back from the edge of the existing travel lane surface.

<u>In the EFU Zone (Based solely on certificate holder representations in the ASC):</u>

vii. Buildings shall be setback as follows: (i) at least 30 feet from the property line or private road easement boundary; or (ii) at least 60 feet from the center line of the road, highway, or private road easement, whichever is greater.
viii. Buildings and the fixed bases of the transmission line towers shall be set back at least 100 feet from the high-water mark of all streams, lakes, and wetlands.
ix. Parking lots shall be designed and operated as follows:

i. areas used for standing and maneuvering of vehicles at the multi-use areas will have paved surfaces maintained adequately for all weather use and will be drained as to avoid flow of water across public sidewalks;
ii. parking spaces along the outer boundaries of any multi-use area parking lot will be contained by a curb at least four inches high and set back a minimum of four and one-half feet from the property line, or by a bumper rail; and
iii. artificial lighting, if provided, will not create or reflect glare in a residential zone or on any adjacent dwelling.

<u>In the LI zone:</u>

j. The temporary multi-use area shall include visibility-obscuring fencing or shall setback the fence or limit areas of activity a minimum of 500 feet from adjacent public roads.
k. The temporary multi-use area shall be designed to comply with front, side, and rear yard setbacks of 20 feet.

<u>In the RTC Zone:</u>

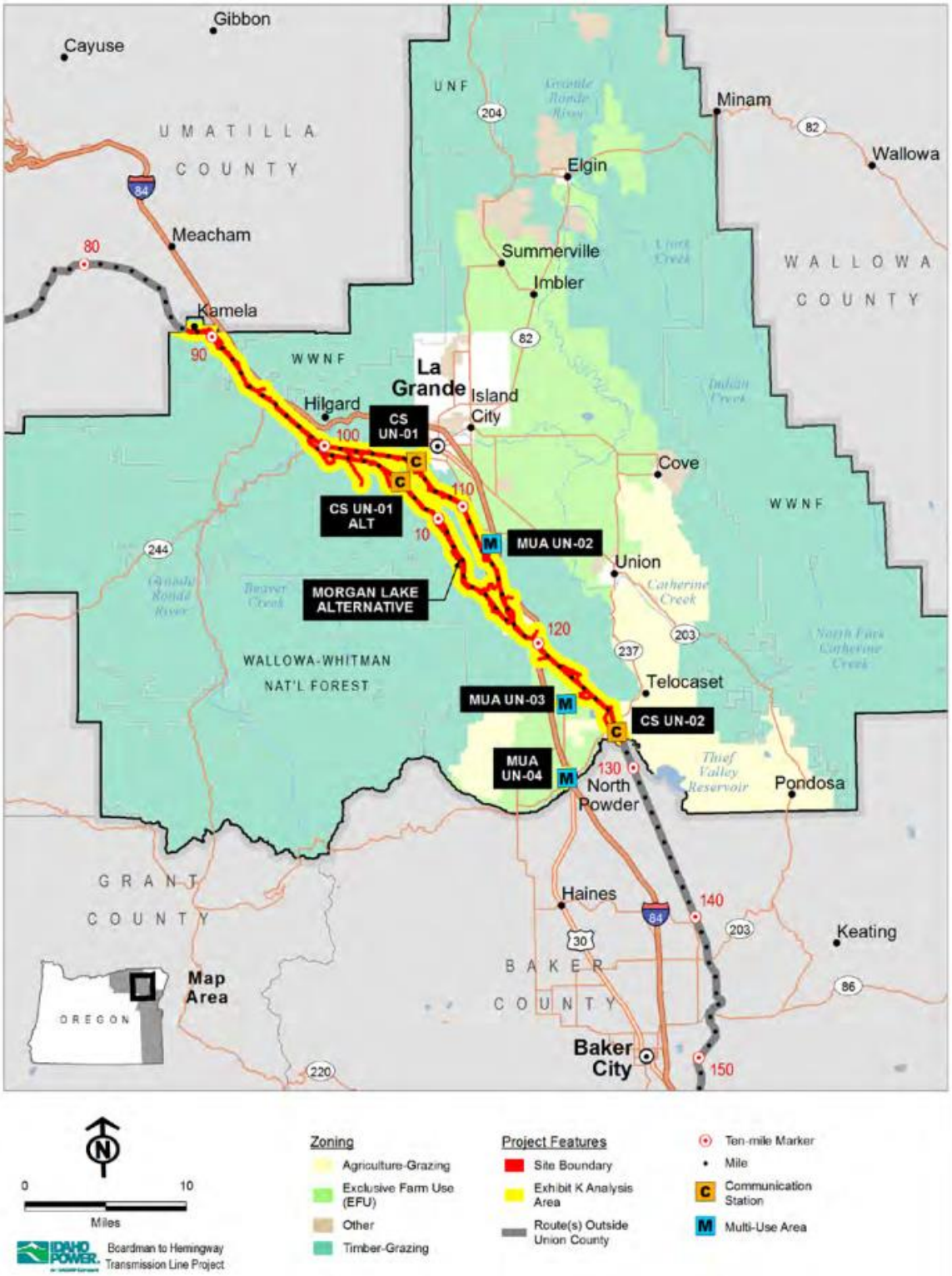
l. The temporary multi-use area shall include a visibility-obscuring fencing as necessary to limit views of the area by travelling public and from surrounding properties.

IV.E.1.3. Union County

Facility components proposed within Union County include approximately 39.9 miles of 500 kV transmission line, three multi-use areas, 16.6 miles of new access roads, 37.5 miles of substantially modified existing roads, and two communication stations.[147] There is an 18.5 miles alternative 500 kV transmission line route segment, Morgan Lake Alternative, and one alternative communication station site requested for approval in Union County. The locations of proposed and alternative facility components are represented in ASC Exhibit K Figures K-36 and Figure 7, *Union County Zoning and Proposed Facility Component Locations* below.

[147] As described in ASC Exhibit B, multi-use areas would be approximately 30 acres in size and would include construction field offices, parking areas, construction vehicle maintenance area, helicopter operations (helipads), explosives storage, hazardous materials storage, water storage tank, portable concrete batch plant, concrete washout station, gravel tire scrub area, noxious weed wash-off station, and bulk materials storage area.

Figure 7: Union County Zoning and Proposed Facility Components



The above-described facility components proposed in Union County would be located on land zoned Exclusive Farm Use (A-1), Agricultural Grazing (A-2) and Timber-Grazing (A-4). Proposed facility components within each zone (with proposed land use category denoted in parenthesis) are as follows:

Exclusive Farm Use Zone (Utility Facility Necessary for Public Service)
1.5 miles of 500 kV transmission line
1.9 miles of substantially modified roads; 0.5 miles of new road
3 multi use areas
1 communication station

Agricultural Grazing Zone (Utility facilities, and similar minor facilities necessary for public service and repair, replacement and maintenance thereof..)
6.1 miles of 500 kV transmission line
6.1 miles of substantially modified roads; 3.1 miles of new road
1 communication station

Timber Grazing Zone (Utility facilities, and similar minor facilities necessary for public service and repair, replacement and maintenance thereof..)
32.1 miles of 500 kV transmission line
29.5 miles of substantially modified roads; 13.1 miles of new road

The Morgan Lake Alternative Route would cross the same zones as identified for the proposed route; the alternative communication station site would be located in the Timber Grazing zone.

Applicable substantive criteria for proposed facility components in Umatilla County, in effect on the date the applicant submitted the pASC (February 27, 2013), are presented in Table LU-3 below.

Table LU-3: Applicable Substantive Criteria for Proposed Facility Components in Union County

Union County Zoning, Partition, and Subdivision Ordinance (UCZPSO)[1,2]	
Exclusive Farm Use Zone	
Section 2.03	Administrative Uses
Agricultural-Grazing Zone	
Section 3.03	Administrative Uses
Section 3.07	Development Standards
Section 3.08	Development and Fire Siting Standards
Timber-Grazing Zone	
Section 5.03	Administrative Uses
Section 5.04	Predominately Forestland Conditional Uses
Section 5.06	Minimum Parcel Sizes
Section 5.07	Siting Standards for Dwellings and Structures
Section 5.08	Development and Fire Siting Standards
Section 21.06	General Standards Governing Conditional Uses
Supplementary Provisions	
Section 20.08	Riparian Zone Setbacks
Section 20.09	Significant Goal 5 Resource Areas

Notes:

1. ASC Exhibit K Table K-19 includes "potentially applicable substantive criteria" identified by the SAG and the applicant. The evaluation of applicable substantive criteria is based on the table above, and omits some potentially applicable substantive criteria identified by the applicant. Specifically, UCZPSO 2.07 (Development Standards), UCZPSO 2.06 (Minimum Parcel Size), UCZPSO 20.07 (Clear Vision Areas). While the applicant argues that the helipad and batch plant, which could be operated at multi-use areas, are ancillary facilities to the primary use of temporary storage and processing, an evaluation of criteria that could apply if these ancillary uses were evaluated under separate land use categories was provided, which the Department considers be used for information purposes rather applicable substantive criteria. These criteria include: UCZPSO 2.04 (Conditional Uses with General Review Criteria), 1.08 (Definitions), 21.06 (General Standards Governing Conditional Uses), 21.05 (Time Limit on a Conditional Use). Because the Council has jurisdiction over the site certificate, any required site plan or plat approvals or variance requests would be subject to Council, rather than County, procedures and requirements. Therefore, county review and procedural requirements under UCZPSO 20.10 (Site Plan Requirements), UCZPSO 20.40 (Nonfarm Use Partitions), UCZPSO 25.05(1) (Tentative Plan Requirements), UCZPSO 25.06(1) (Final Plat Requirements) and UCZPSO 30.01 (Authority to Grant or Deny Variances) would not apply.
2. In ASC Exhibit K, the applicant describes that Union County, as the SAG, has not identified policies, findings, or goals from the Union County Comprehensive Plan that would apply to the proposed facility. Because the applicant and Department rely upon the SAG to identify applicable substantive criteria, and none were identified from the UCCP, the Department recommends Council rely upon the provisions of the UCZPSO for the land use evaluation.

1

Union County Zoning, Partition, and Subdivision Ordinance (UCZPSO)

UCZPSO Chapter 2 Exclusive Farm Use Zone, A-1 Zone

Proposed facility components within Union County's A-1 EFU zone include 1.5 miles of 500 kV transmission line, ½-mile of new access road, 1.9 miles of substantially modified existing access roads, and four multi-use areas (MUA UN-01, UN-02, MUA UN-03, and MUA UN-05), as presented in ASC Exhibit K, Figures K-38a through K-38c.

<u>UCZPSO 2.03: Administrative Uses</u>

The following uses may be established in an A-1 Zone subject to the review process identified in Section 24.02 (Planning Director Land Use Decision). The USDA Natural Resources Conservation Service soil information shall be used to determine the applicable standards to identify rangeland vs. cropland…

7. Utility facilities, and similar minor facilities necessary for public service and repair, replacement and maintenance thereof, except commercial facilities for the purpose of generating power for public use by sale and transmission towers over 200 feet in height. A facility is considered necessary if it must be situated in an agricultural zone in order for the service to be provided.

UCZPSO 2.03(7) establishes that utility facilities necessary for public service is an administrative use permitted in Union County's A-1 EFU zone, subject to county Planning Director review under UCZPSO Section 24.02.

As described in ASC Exhibit K, proposed facility components within Union County's A-1 EFU zone would include up to 1.5 miles of 500 kV transmission line and ancillary facilities, which based on a 2001 and 2005 court decision, the applicant asserts should be considered under the "utility facility necessary for public service" land use category.[148] Based on review of the referenced court decision, the Department agrees and recommends Council find that proposed facility components located in A-1 EFU-zoned land would be an administrative use permitted under UCZPSO 2.03(7).

Notwithstanding the language in the County's code, the conditional use requirements beyond those that are consistent with ORS 215.275 are not applicable to proposed facility components because, as a utility facility necessary for public service under ORS 215.283(1)(g), the use is permitted subject only to the requirements of ORS 215.275 and the county cannot impose additional approval criteria. Therefore, UCZSPO 2.06 (Minimum Parcel Size) and 2.07(1)-(4)

[148] See Save Our Rural Or. v. Energy Facility Siting Council, 339 Or. 353, 384 (2005) (upholding Council's determination that ancillary facilities are considered "utility facilities necessary for public service"); Cox v. Polk County, 174 Or. Ct. App. 332, 343-44 (2001) ("utility facilities necessary for public service" may include ancillary or off-site equipment).

Development Standards are not evaluated as applicable substantive criteria; however, it is noted that the applicant evaluates these criteria and based on review, the Department considers the analysis to represent consistency with these provisions.

Proposed facility components would be located in EFU-zoned land across five Oregon counties including Morrow, Umatilla, Union, Baker, and Malheur. Therefore, for these locations, the land use compliance evaluation is limited to ORS 215.275, as presented in Section IV.E.2.1.*, ORS 215.283, ORS 215.275 and ORS 215.296 (Exclusive Farm Use Requirements)* of this order.

UCZPSO Chapter 3 Agricultural Grazing Zone, A-2 Zone

Proposed facility components within Union County's Agriculture-Grazing (A-2) zone, which includes both rangeland and cropland, includes approximately 6.1 miles of 500 kV transmission line, 3.1 miles of new access road, 6.1 miles of substantially modified existing access roads, and one communication station (CS UN-02), as presented in ASC Exhibit K Figures K-39a and K-39b. Alternative components are also proposed in the A-2 zone including 1.3 miles of 500 kV transmission line, 1.0 miles of new access roads and one communication station (CS UN-01).

The applicant provides an analysis of the predominant use within the parcels crossed by the proposed facility in the A-2 zone, based on taxlot data from the county, soil type data from SSURGO, and 2011 aerial photography. The results of this evaluation are presented in Table LU-4, *Union County Agriculture-Grazing Zone Predominant Uses* below. As represented in the table, predominant use within the A-2 zone is rangeland.

Table LU-4: Union County Agriculture-Grazing Zone Predominant Uses

Predominant Use	No. of Parcels	Centerline (Miles)	Site Boundary (Acres)
Range	8	4.9	321.6
Other[1]	NA	<0.1	3.5
Agricultural-Grazing A-2 Zone Total	8	4.9	325.1

Notes:
1. Includes rail and road parcels and therefore was not included in the analysis.
2. Source: ASC Exhibit K, Table K-24

<u>UCZPSO 3.03: Administrative Uses</u>

The A-2 Agriculture-Grazing Zone allows the following uses to be established in an A-2 Zone subject to the review process identified in Section 24.02 (Planning Director Land Use Decision). The USDA Natural Resources Conservation Service soil information shall be used to determine the applicable standards to identify rangeland vs. cropland…

7. *Utility facilities, and similar minor facilities necessary for public service and repair, replacement and maintenance thereof, except commercial facilities for the purpose of generating power for public use by sale and transmission towers over 200 feet in height. A facility is considered necessary if it must be situated in an agricultural zone in order for the service to be provided.*

UCZPSO 3.03 establishes administrative uses permitted within Union County's A-2 zone and includes utility facilities necessary for public service, subject to county Planning Director review. The evaluation of whether the proposed facility is necessary for public service is provided in Section IV.E.2.1., *ORS 215.283, ORS 215.275 and ORS 215.296 (Exclusive Farm Use Requirements)* of this order. As evaluated in that section, the Department recommends that the Council find that the proposed facility is a utility facility necessary for public service and therefore would be a permitted use in the A-2 zone.

<u>UCZPSO 3.07: Development Standards</u>

(1) Any proposed division of land included within the A-2 Zone resulting in the creation of one or more parcels of land shall be reviewed and approved or disapproved by the County (ORS 215.263).
(2) Setbacks from property lines or road rights-of-way shall be a minimum of 20-feet front and rear yards and 10-feet side yards.
(3) Animal shelters shall not be located closer than 100 feet to an R-1 or R-2 Zone.
(4) Signs shall be limited to the following: a. All off-premise signs within view of any State Highway shall be regulated by State regulation under ORS Chapter 377 and receive building permit approval. b. All on-premise signs shall meet the Oregon Administrative Rule regulations for on-premise signs which have the following standards:
A. Maximum total sign area for one business is 8% of building area plus utilized parking area, or 2,000 square feet, whichever is less.
B. Display area maximum is 825 square feet for each face of any one sign, or half the total allowable sign area, whichever is less.
C. Businesses which have no buildings located on the premises or have buildings and parking area allowing a sign area of less than 250 square feet may erect and maintain on-premises signs with the total allowable area of 250 square feet, 125 square feet maximum for any one face of a sign.
D. Maximum height of freestanding signs adjacent to interstate highways is 65 feet, for all other highways is 35 feet, measured from the highway surface or the premises grade, whichever is higher to the top of the sign.
E. All on-premise signs within view or 660 feet of any State Highway shall obtain permit approval from the Permit Unit, Oregon State Highway Division. No sign shall be moving, revolving or flashing, and all lighting shall be directed away from residential use or zones, and shall not be located so as to detract from a motorists vision except for emergency purposes.

UCZPSO 3.07 establishes development standards for permitted uses within A-2 zoned land, including requirements for review of land division, setbacks, and signage. UCZPSO(1) applies to proposed development that includes land divisions in the A-2 zone and would apply only if the applicant were to require a partition of any of the A-2-zoned property in Union County. The applicant explains that it intends to secure easements where necessary and does not expect to require any lot splits or partitioning of any A-2- zoned parcels in Union County. Because no partitions are proposed, while applicable to the proposed facility, does not apply based on the proposed site. Moreover, the applicant explains that in the event a partition becomes necessary, the applicant would obtain approval of the partition directly from Union County, outside this siting process.

UCZPSO 3.07(2) establishes that buildings in the A-2 zone be setback 20-feet from front and rear yards and 10 feet from side yards. As described above, facility components proposed within A-2 zoned land would include one communication station, which would include an approximately 11.5 foot (L) by 32 foot (W) by 12 foot (H) prefabricated concrete structure. The applicant assumes that the building setbacks under UCZPSO 3.07(2) apply to the buildings associated with the proposed communications station.[149] Accordingly, the applicant proposes to locate all buildings at the communication station in the A-2 zone in Union County to comply with the lot line and yard setback requirements of UCZPSO 3.07(2). To ensure compliance with this standard, the applicant proposes and the Department recommends that the Council adopt Land Use Condition 7.

UCZPSO 3.07(4) regulates the placement of signs for the purpose of fire safety. The requirements provide non-discretionary requirements based on the proposed location, with which the site certificate holder must comply. To ensure compliance with this standard, the applicant proposes and the Department recommends that the Council adopt Land Use Condition 7. Based on the applicant's representation and compliance with the recommended condition, the Department recommends Council find that the proposed facility would satisfy the UCZPSO 3.07 standards.

<u>UCZPSO 3.08(4): Development and Fire Siting Standards</u>

> *(d) All dwelling addresses shall be uniquely designated in accordance with the Union County Road Naming and Addressing Ordinance (Court Order 1988-03) on signs clearly visible and placed at the intersection of the driveway and named road. Rural address markers provided and installed by the Union County Public Works Department shall not be removed, modified or obstructed.*

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[149] Based on the UCZPSO 2.07(1) definition of "building setback line" it appears that the UCZPSO 2.07(2) setback requirements apply only to buildings and not to structures such as the proposed towers. UCZPSO 2.07(1) defines "building setback line" as "A line beyond which a building cannot be constructed. The building setback line is referenced by and measured from the property line or road or street right-of-way line where applicable. UCZPSO 1.08 defines "building" as "[a] structure built for the shelter or enclosure of persons, animals, chattels or property of any kind."

(e) Signs identifying pertinent information such as "dead end road", "bridge out", and so forth, shall be appropriately placed as designated by Union County.
(f) Signs identifying location of a fire-fighting water source and each assess to that source shall be permanently identified and shall indicate whether it is a fire hydrant, a dry hydrant, or another type of water supply

UCZPO 3.08(4)(d)-(f) identifies fire siting standards for structures including requirements for placement of signs, specifying the location and size. The requirements provide non-discretionary requirements based on the proposed location, with which the site certificate holder must comply. To ensure compliance with these requirements, the Department recommends Council impose Land Use Condition 7. Based on the applicant's representation and compliance with the recommended condition, the Department recommends Council find that the proposed facility would satisfy the UCZPSO 3.08(4) requirements.

UCZPSO Chapter 5 Timber Grazing Zone, A-4 Zone

Proposed facility components within Union County's A-4 Timber Grazing zone include approximately 32.1 miles of 500 kV transmission line, 14.3 miles of new access road, 15.8 miles of substantially modified existing access roads, and one communication station (CS UN-01), as presented in ASC Exhibit K Figure K-40a and 40b.

Alternative facility components within Union County's A-4 Timber Grazing zone include 17.2 miles of 500 kV transmission line, 14.3 miles of new access roads, 15.8 miles of substantially modified existing access roads and one alternative communication station (CS UN-01 ALT) – referred to as the Morgan Lake alternative.

The applicant provides an analysis of the predominant uses within the parcels crossed by the proposed facility in the A-4 zone, based on taxlot data from the county, soil type data from SSURGO, and 2011 aerial photography. The results of this evaluation are presented in Table LU-5, *Union County Timber-Grazing Zone Predominant Uses* below. As presented in the table, predominant uses within the site boundary are split between forest and rangeland with a negligible amount of high value cropland

Table LU-5: Union County Timber-Grazing Zone Predominant Uses

Predominant Use	Number of Parcels[1]	Centerline (miles)	Site Boundary (acres)
Proposed Route			
Forest	33	15.2	1,063.7
Range	28	16.5	1,205.2
High Value Cropland	1	--	0.1
Proposed Route – Total	**62**	**31.7**	**2,269.0**
Morgan Lake Alternative			

Table LU-5: Union County Timber-Grazing Zone Predominant Uses

Predominant Use	Number of Parcels[1]	Centerline (miles)	Site Boundary (acres)
Forest	20	7.0	525.2
Range	18	10.1	802.0
High Value Cropland	--	--	--
Morgan Lake Alternative – Total	**38**	**17.1**	**1,327.2**

UCZPSO 5.03: Administrative Uses; Definitions

The A-4 Timber-Grazing Zone allows both farm and forest uses, is acknowledged to be in compliance with Statewide Planning Goals 3 (agriculture) & 4(forestry) and is a qualifying exclusive farm use zone. The County shall apply either forest or farm standards for siting a dwelling in the A-4 Timber-Grazing Zone based on the predominant use of the tract on January 1, 1993. Predominant use shall be determined as defined in Section 1.08…[150]

…The following uses may be established in an A-4 Zone subject to the Planning Director Land Use Decision review procedure identified in Section 24.02…

8. On predominantly farmland parcels utility facilities, and similar minor facilities necessary for public service and repair, replacement and maintenance thereof, except commercial facilities for the purpose of generating power for public use by sale and transmission towers over 200 feet in height. A facility is considered necessary if it must be situated in an agricultural zone in order for the service to be provided. [OAR 660-33-130(16)]

UCZSPO 5.03 establishes administrative uses permitted within A-4 Timber Grazing zone in Union County, and includes utility facilities necessary for public service. As described above, proposed facility components within A-4 zoned land would predominately be located within forested and range lands. With the Morgan Lake alternative, 17.1-line miles of transmission line, 14.2 miles of new access roads, 15.9 miles of substantially modified existing access roads, one communication station (CS UN-02 ALT) and one multi-use area (MUA UN-02) would be located on predominantly forestland parcels. For the proposed and alternative facility components located within forestland portions of the A-4 zone, the county code refers to OAR

[150] UCZPSO 1.08 defines predominant use as, "the most common use of a parcel when differentiating between farmland and forest land. 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…"

Chapter 660 Division 6 – which is evaluated in Section IV.E.2.2. *ORS 552.210 and OAR 660-006-0025* of this order.

For the facility components located on range land, the Department recommends Council find that proposed facility components located in A-4 zoned land would be an administrative use permitted under UCZPSO 5.03(8). For the Morgan Lake alternative components in A-4 zoned land where the underlying land is predominately farmland (range), under UCZPSO 5.03(8), the use is permitted as a utility facility necessary for public service under ORS 215.283(1)(c)(A) and ORS 215.275.[151] Based on the evaluation presented in Section IV.E.2.1.*, ORS 215.283, ORS 215.275 and ORS 215.296 (Exclusive Farm Use Requirements)* of this order, the Department recommends Council find that the proposed and alternative facility satisfies the ORS 215.275(2) factors and is, therefore, allowed on the predominantly farmland portions of the A-4 zone.

<u>UCZPSO 5.04: Predominantly Forestland Conditional Uses - Review Criteria</u>

> *The following uses may be established on predominantly forestland parcels or tracts in an A-4 Zone subject to the review procedures identified in Section 24.03 and subject to approval by the Planning Commission based on applicable standards in Article 21.00 and the following criteria:…*
>
> *3. New electrical 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) with rights-of-way 50 feet or less in width*
>
> *Criteria No. 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; and*
>
> *Criteria No. 2 - The proposed use will not significantly increase fire hazard or significantly increase fire suppression costs or significantly increase risks to fire suppression personnel; and*
>
> *Criteria No. 3- A written statement recorded with the deed or written contract with the county or its equivalent is obtained from the landowner which recognizes the rights of adjacent and nearby landowners to conduct forest operations consistent with the Forest Practices Act and Rules for 12. home occupations, 5. parks and campgrounds, and 4. temporary hardship dwellings.*

UCZPSO 5.04(3) establishes review criteria for permitted uses within A-4 zoned land within Union County, including new electrical transmission lines with right of way widths up to 100

[151] UCZPSO 5.03 references OAR 660-33-0130(16), which implements the factors at ORS 215.275 for determining whether a utility facility is necessary for public service.

feet as specified in ORS 772.210. UCZPSO 5.04(3) Criteria 1 and 2 mirror OAR 660-006-0025(4)(q), which is evaluated in Section IV.E.2.2. *ORS 772.210 and OAR 660-006-0025* of this order. UCZPSO 5.04(3) Criteria 3 applies to home occupations, parks and campgrounds and temporary hardship dwellings, and therefore because these uses do not cover new electrical transmission lines, would not apply to the proposed facility.

<u>UCZPSO 5.06: Minimum Parcel Size</u>

1. *For farmland not designated rangeland the minimum parcel size shall be 160 acres.*
2. *For land designated rangeland the minimum parcel size shall be 320 acres.*
3. *For new parcels which will be predominantly comprised of forest land the minimum parcel size shall be 240 acres.*
4. *On predominantly agricultural parcels (cropland or rangeland) a variance application may be submitted per Article 30.00 to create parcels per ORS 215.780(1) for resource related purposes only.*
5. *New land divisions less than required in Section 5.06 3. above: [OAR 660-06-026(2)]*
    a. *New land divisions on predominantly forest land parcels less than the parcel size in 5.06 3. may be approved only for the uses listed in 5.02 3. & 12.; 5.04 1., 2., 5., 6., 10., & 11.; and 5.05 3. provided that such uses have been approved pursuant to 5.04 Criteria No's 1, 2 & 3.*
    b. *Such divisions shall create a parcel that is the minimum size necessary for the use. 6. Non-farm parcels on predominantly farmland parcels.*
        a. *Predominantly farmland parcels that are not customarily provided in conjunction with farm use may be created only if all of the following criteria can be satisfied:*
            A. *No new lot or parcel may be created for this purpose until the dwelling to be sited on the new parcel is first approved pursuant to Section 5.05 4. (non-farm dwelling).*
            B. *The new parcel is a preexisting substandard lot or parcel created prior to the adoption of this ordinance and when the parcel is the result of a transfer of a parcel of land between adjacent landowners as described in the definition of a minor partition in Section 1.08.*

UCZPSO 5.06 establishes minimum lot sizes for permitted uses within A-4 zoned land and would apply to the proposed facility if land division or portioning is necessary. In ASC Exhibit K, the applicant asserts that the parcels to be used for siting of the proposed and alternative facility components within A-4 zoned land would not likely involve partitioning. However, if partitioning is necessary, the applicant would work directly with the county to obtain approval and ensure the lot size satisfied UCZPSO 5.06 requirements.

UCZPSO 5.07: Siting Standards for Dwelling and Structures

The following siting standards shall apply to all new dwellings and related structures in the A-4 Zone where the predominant use is forestry [OAR 660-06-050(3)] and where dwellings are on rangeland within one quarter mile of forest land areas. These standards are designed to make such uses compatible with forest operations and agriculture, to minimize wildfire hazards and risks, and to conserve values found on forest lands. The standards in Sections 5.07 and 5.08 shall be considered when identifying the building site…

1. *Dwellings and structures shall be sited on the parcel so that:*
   a. *They have the least impact on nearby or adjoining forest or agricultural lands;*
   b. *The siting ensures that adverse impacts on forest operations and accepted farming practices on the parcel will be minimized;*
   c. *The amount of forest lands used to site access roads, service corridors, the dwelling and structures is minimized; and*
   d. *The risks associated with wildfire are minimized.*

2. *Siting criteria satisfying subsection 5.07 1. may include setbacks from adjoining properties, clustering near or among existing structures, siting close to existing roads and siting on that portion of the parcel least suited for growing trees*

UCZPSO 5.07 establishes siting and setback standards for dwellings and related structures of permitted uses within A-4 zoned land. The applicant argues that proposed facility components would not be considered a dwelling or a structure related to a dwelling as defined in UCZPSO 1.08 as "buildings containing one or more rooms designed for occupancy by a family." The Department agrees and recommends Council find that UCZPSO 5.07 requirements would not apply to the proposed or alternative facility components. However, because Union County interprets the code provisions to be applicable to proposed structures at the communication stations and because the applicant provides a compliance demonstration consistent with the requirements, the Department provides the following summary.

UCZPSO 5.07(1) restricts the placement of structures on the property to minimize impact on nearby or adjoining forest or agricultural lands. The proposed communication stations would be located within the transmission line right-of-way, which would minimize potential adverse impacts on forest operations. Siting the communication stations within the transmission line right-of-way would also minimize the amount of forest lands used for access roads because the station would use access roads that would already be used for accessing the transmission line. As explained further In ASC Exhibit U, the risks associated with wildfire from or to the communication station would be minimal.

UCZPSO 5.07(2) authorizes the use of setbacks from adjoining properties, or requiring clustering of dwellings and related structures near or among existing structures, requiring that the dwellings and related structures be sited close to existing roads or requiring them to be sited on a portion of the parcel least suited for growing trees. However, because the communication

stations have been sited in a way to minimize any unnecessary cumulative impacts, the Department recommends Council find that no additional limitations are warranted.

UCZPSO 5.08: Development and Fire Siting Standards

The following standards shall apply to all development in an A-4 Timber Grazing Zone. Fire siting standards (items 5-8) shall apply only to new dwellings and related structures in the A-4 Zone where the predominant use is forestry [OAR 660-06-055(3)] and where dwellings are on rangeland within one quarter mile of forest land areas…

2. *Setbacks from property lines or road rights-of-way shall be a minimum of 20-feet front and rear yards and 10-feet side yards…*

4. *Signs shall be limited to the following:*
   a. *All off-premise signs within view of any State Highway shall be regulated by State regulation under ORS Chapter 377 and receive building permit approval.*
   b. *All on-premise signs shall meet the Oregon Administrative Rule regulations for on premise signs which have the following standards:*
      A. *Maximum total sign area for one business is 8% of building area plus utilized parking area, or 2,000 square feet, whichever is less.*
      B. *Display area maximum is 825 square feet for each face of any one sign, or half the total allowable sign area, whichever is less.*
      C. *Businesses which have no buildings located on the premises or have buildings and parking area allowing a sign area of less than 250 square feet may erect and maintain on-premises signs with the total allowable area of 250 square feet, 125 square feet maximum for any one face of a sign.*
      D. *Maximum height of freestanding signs adjacent to interstate highways is 65 feet, for all other highways is 35 feet, measured from the highway surface or the premises grade, whichever is higher to the top of the sign.*
   c. *All on-premise signs within view or 660 feet of any State Highway shall obtain permit approval from the Permit Unit, Oregon State Highway Division. No sign shall be moving, revolving or flashing, and all lighting shall be directed away from residential use or zones, and shall not be located so as to detract from a motorist's vision except for emergency purposes.*
   d. *All dwelling addresses shall be uniquely designated in accordance with the Union County Road Naming and Addressing Ordinance (Court Order 1988-03) on signs clearly visible and placed at the intersection of the driveway and named road. Rural address markers provided and installed by the Union County Public Works Department shall not be removed, modified or obstructed.*
   e. *Signs identifying pertinent information such as "dead end road", "bridge out", and so forth, shall be appropriately placed as designated by Union County.*
   f. *Signs identifying location of a firefighting water source and each assess to that source shall be permanently identified and shall indicate whether it is a fire hydrant, a dry hydrant, or another type of water supply..*

UCZPSO 5.08(2) establishes lot line and road setback requirements for permitted uses in the A-4 zone. The proposed multi-use areas and communications stations would include buildings, to which the UCZPSO 5.08 development standards apply. To ensure compliance with the setback requirements of UCZPSO 5.08(2), the applicant proposes and the Department recommends the Council adopt Land Use Condition 7.[152]

UCZPSO 5.08(4) includes nondiscretionary siting and other standards for signs on uses in the A-4 zone. The applicant agrees to comply with all signage requirements. To ensure compliance with this standard, the applicant proposes and the Department recommends that the Council adopt Land Use Condition 7.

<u>UCZPSO 21.06: General Standards Governing Conditional Uses</u>

The following standards and criteria shall govern conditional uses, except as provided in subsection 21.07:

1. *A conditional use shall ordinarily comply with the standards of the zone concerned for uses permitted outright except as specifically modified by the Planning Commission in granting the conditional use.*
2. *Other uses similar to those enumerated within specified zones except in the A-1, A-2, A-3 and A-4 Zones which are consistent with the purposes and intent of the applicable zone may be modified by the Planning Commission if the use is found:*
   - *A. To be compatible with outright or conditional uses of the applicable zone.*
   - *B. Not to interfere seriously with established and accepted practices on adjacent lands.*
   - *C. Not to materially alter the stability of the overall land use pattern of the area.*
   - *D. That the proposed use can comply with the standards of the zone, and*
   - *E. To comply with such other conditions as the Planning Commission or its designate considers necessary to carry out the purposes of this ordinance.*

UCZPSO 21.06 applies to all conditional uses in Union County. UCZPSO 21.06(1) requires that conditional uses meet the development standards relevant to uses permitted outright in the zone, including UCZPSO 5.06 (Minimum Parcel Size), UCZPSO 5.07 (Siting Standards for Dwellings and Structures), and UCZPSO 5.08 (Development and Fire Siting Standards), which would be satisfied based on applicant representations and compliance with recommended Land Use Condition 7.

[152] The UCZPSO 1.08 definition of "building setback line" indicates that the lot line and road setback requirements of UCZPSO 5.08(2) apply only to buildings. The applicant explains that because the proposed access roads and transmission line would not be built to support, shelter or enclose anything and are, therefore, not considered buildings, the UCZPSO 5.08(2) setback requirements do not apply to those uses.

UCZPSO Chapter 20 Riparian Zone

UCZPSO Chapter 20 establishes requirements for development within designated riparian zones. The proposed and alternative facility components would impact land within riparian zones during temporary stream crossings. ASC Exhibit K, Figure K-31a depicts the locations within Union County where the proposed transmission line would cross or be located near Class I streams. Applicable criteria for potential impacts from permitted uses to riparian zones is evaluated below.

<u>UCZPSO 20.08: Riparian Zone Setbacks</u>

> *In order to maintain vegetative cover along Class I streams, rivers and lakes known as riparian habitat a setback for any new development such as structures or roads shall be required on a sliding scale proportional to one-half the stream width, at right angles to the annual high-water line or mark. A minimum of 25-feet either side of streams will be recognized. Woody vegetation presently existing in the riparian zone shall be maintained, however, thinning or harvesting of merchantable tree species may occur within the riparian zone where 75 percent of the existing shade over the stream is maintained.*

UCZPSO 20.08 establishes setbacks for 'structures' proposed to be located near Class I streams, rivers and lakes. UCZPSO 1.08 defines "structure" as "That which is built or constructed. An edifice or building of any kind or any piece of work artificially built up or composed of parts joined together in some manner and which requires location on the ground or which is attached to something having a location on the ground. "It defines "building" as "[a] structure built for the shelter or enclosure of persons, animals, chattels or property of any kind."

UCZPSO 20.08 applies to all "new developments" including proposed new access roads, transmission towers, multi-use areas and communications stations. Because substantially modified existing roads are not "new developments," the UCZPSO 20.08 setback requirements do not apply those improvements.

To ensure compliance with the riparian area setback requirements of UCZPSO 20.08, the applicant proposes and the Department recommends that the Council adopt Land Use Condition 7.

UCZPSO Chapter 17 Flood Plain Overlay Zone

UCZPSO Chapter 17 establishes requirements for development proposed within Special Flood Hazard Areas (SFHA). The proposed facility would span the Grande Ronde River (MP 95.7) and Powder River (MP 124) SFHAs, as presented in ASC Exhibit K Figure K-42. Along the Morgan Lake alternative, the transmission line would span the Grande Ronde SFHA (MP 0.8). Applicable criteria for development with SFHAs is evaluated below.

UCZPSO 17.03(1)(A): Permit Requirement

Filing of a development permit or building permit, where applicable, shall be obtained before construction or development begins within any area of special flood hazard. Development permits are required for all structures including manufactured homes and for all other development including fill, except low investment structures; building permits shall be for all structures. Application for a development and building permit shall be made to and maintained by the County Building Inspector and findings submitted to the County Planning Department.

UCZPSO 17.03(1)(A) requires a flood plan development permit for activities within an SFHA. To ensure that a flood plain development permit is obtained prior to construction activities within an SFHA, the Department recommends Council impose Land Use Condition 6.

UCZPSO 17.03(1)(B)(1): Anchoring

(1) All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure.
(2) All mobile homes shall be anchored to resist floatation, collapse, or lateral movement by providing over-the-top and frame ties to ground anchors. Specific requirements shall be that:…
(3) An alternative method of anchoring may involve a system designed to withstand a wind force of 90 miles-per-hour or greater. Certification must be provided to the County Building Inspector that this standard has been met.
(4) All manufactured homes must likewise be anchored to prevent flotation, collapse or lateral movement . . . .

UCZPSO 17.03(1)(B)(1) requires that all new construction and substantial improvements within a SFHA be anchored to prevent flotation, collapse or lateral movement. As proposed, the lattice and tubular steel structures of the proposed towers would be anchored to large drilled pier foundations, which are designed to resist the heavy loads that are transferred from the structure (from various temperature, wind, and icing conditions) to the conductors. The foundations would also be designed to resist uplift pressures (buoyancy forces) that can occur in areas with high water tables. UCZPSO 17.03(1)(B)(3) allows an alternative method of anchoring to withstand wind forces of 90 miles per hour or more. The proposed transmission structure foundation design would prevent flotation, collapse, or lateral movement of the structure, as required under UCZPSO 17.03(1)(B)(1). The applicant does not anticipate requiring the alternative method allowed under UCZPSO(1)(B)(3), but if it is determined necessary, commits to complying with the requirements of that section. Based on the applicant's representations of transmission tower design, the Department recommends Council find that the proposed facility would satisfy UCZPSO 17.03(1)(B)(1) anchor requirements.

UCZPSO 17.03(1)(B)(2) and (4) involve the regulation of mobile and manufactured homes. Because none of the components of the proposed transmission line include the construction of mobile or manufactured homes, these criteria are not applicable.

UCZPSO 17.03(1)(C): Construction, Materials and Methods

(1) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
(2) All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.
(3) Electrical, heating, ventilation, plumbing, and air- conditioning equipment and other service facilities shall be designed and/or otherwise elevated or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

UCZPSO 17.03(1)(C)(1) and 17.03(1)(C)(2) establishes construction, material and method requirements for development within a SFHA. Specifically, construction materials and utility equipment must be resistant to flood damage; construction methods must minimize flood damage. In compliance with these standards, construction methods for the transmission towers would include use of concrete drilled piers that would be highly resistant to the presence of water and are commonly used in the utility industry for structures located in high water tables or standing or flowing water. The foundations would also have a minimum foundation reveal, and the length the foundation would extend above the ground by at least one foot to protect the steel structure from low levels of standing or flowing water. In the event of free standing water extending above the top of the transmission tower foundation, the structures would be made of galvanized or weathering steel for corrosion protection.

UCZPSO 17.03(1)(C)(3) requires electrical and other service facilities to be designed to prevent water from entering its components during flooding conditions. As proposed, the transmission towers would be located above the elevation of the 100-year floodplain, and otherwise would be designed and located to prevent water from entering the equipment components during flooding conditions.

Based on the applicant's facility design representations, the Department recommends Council find that the proposed facility would be designed in accordance with UCZPSO 17.03(1)(C) construction, material and method requirements for development within a SFHA.

UCZPSO 17.03(1)(D): Utilities

(1) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.

(2) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters; and
(3) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

UCZPSO 17.03(1)(D) establishes requirements for utility system development within a SFHA, including systems for water supply, sanitary sewage, and on-site waste disposal. The proposed facility would not include any of those systems and, therefore, this criterion is inapplicable.

<u>UCZPSO 17.03(2)(B): Specific Standards; Non-Residential Construction</u>

New construction and substantial improvement of any commercial, industrial or non-residential structure other than low investment accessory structures shall either have the lowest floor, including the basement, elevated to the level of the base flood elevation, or together with the attendant utility and sanitary facilities, shall:
(1) Be flood proofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water.
(2) Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy, and
(3) Be certified by a registered professional engineer or architect that the standards of this subsection are satisfied. Such certifications shall be provided to the County Building Inspector.

UCZPSO 17.03(2)(B) establishes specific standards for non-residential construction in a SFHA, including requiring structure floor placement above the base flood elevation. As proposed, all transmission line towers would be located above the elevation of the 100-year floodplain. Therefore, while UCZPSO 17.03(2)(B) is applicable substantive criteria, would not apply based on the proposed facility component location and design.

<u>UCZPSO 17.03(2)(E): Floodways</u>

Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles, and have erosion potential, the following provisions apply:

(1) Encroachments are prohibited, including fill, new construction, substantial improvements, and other development unless certification by a registered professional engineer or architect is provided demonstrating that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge. (2) If Section (1) above is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Section 17.03 limitations….

UCZPSO 17.03(2)(E) prohibits encroachments into floodways unless certification by a registered engineer or architect demonstrates that the encroachment(s) would not result in any increase in flood levels. As proposed, it is unlikely that there would be any potential for any components of the proposed transmission line to be located within a floodway. However, to the extent transmission line components would be located in a floodway, the certificate holder agrees to obtain certification by a registered professional engineer or architect providing that the encroachments would not result in an increase in flood levels during the occurrence of the base flood discharge, in compliance with this criterion. Therefore, the Department recommends Council find that the proposed facility would satisfy UCZPSO 17.03(2)(E) floodway requirements.

Public Right-of-Way Access Provisions

ORS 374.305(1) Road Approach Permit: *A person may not place, build or construct on the right of way of any state highway or county road, any approach road, structure, pipeline, ditch, cable or wire, or any other facility, thing or appurtenance, or substantially alter any such facility, thing or appurtenance or change the manner of using any such approach road without first obtaining written permission from the Department of Transportation with respect to state highways or the county court or board of county commissioners with respect to county roads.*

UCZPSO 25.09(8) *Road Widths and Improvements (a) Road standards shall not be less than those set forth in Table 7-2 in the Transportation System Plan, except where it can be shown that probable future traffic development or physical characteristics are such as to unquestionably justify modification of the standards. (b) In areas designed and zoned for commercial use, road widths may be increased by such amount as may be deemed necessary by the Commission to provide for the free flow of through traffic without interference by parked or parking vehicles, and to provide safe parking space for such commercial or business districts. (c) Road and related improvements shall be completed or bonded for completion prior to final plat consideration and shall be constructed under the direction of the County Planning Department, according to the minimum Road Standard Table 7-2***.*

UCZPSO 25.09(8) and ORS 374.305(1) establish provisions for development and access within a publically owned right-of-way. An ODOT road approach permit or a permit from the county to work in the county right of way would be required where the proposed access roads intersect with public roads or if necessary updates to existing roads affect a public road. The applicant would obtain all necessary approach permits in compliance with the statutory requirements. As explained in ASC Exhibit E, any required state or local permit would not be included in or governed by the site certificate. However, in order to provide assurance to the Council that the certificate holder has complied with any requirements to obtain any necessary approach permits or permits required to work in the county right of way, the applicant proposes and the Department recommends that the Council adopt Land Use Condition 6.

UCZPSO 25.09(8) includes nondiscretionary county road width and improvement requirements. Nondiscretionary county road permits are not included in or governed by the site certificate. However, the applicant proposes and the Department recommends Council adopt Land Use Condition 6 and Public Services Condition 1 to ensure necessary nondiscretionary permits are obtained prior to construction and that the applicant consult with and coordinate with the county to minimize potential traffic-related impacts.

Union County Goal 5 Resources

The proposed facility and site boundary would be located within Union County's Big Game Winter Range or Critical Habitat Zone, which is identified in the Union County Comprehensive Plan (UCCP) Goal 5 Resources element. Big game habitat is mapped in the Union County Comprehensive Plan as winter range (WR) and critical habitat (CH) Overlay areas. ASC Exhibit K, Figure K-36 depicts the location of the WR and CH Overlays in the portion of Union County that the proposed transmission line would cross. Union County has indicated that its mapping is intended to be over-inclusive of possible habitat areas.[153]

Within the Big Game Winter Range or Critical Habitat Zone, the proposed route would include 28 miles of 500 kV transmission line, 9.7 miles of new access roads, 25.5 miles of substantially modified existing access roads, two communication stations (CS UN-01 and CS UN-02), and two multi-use areas (MUA UN-02 and MUA UN-03). The Morgan Lake alternative would include 16.4 miles of 500 kV transmission line, 14.5 miles of new access roads, 13.1 miles of substantially modified existing access roads, one communication station (CS UN-02 ALT) and one multi-use area (MUA UN-02) in the Big Game Winter Range or Critical Habitat zone.[154]

The County has indicated that under its Comprehensive Plan all big game habitat is considered a 3C resource, which requires that conflicting uses be minimized. UCZPSO 20.09 implements the County's Comprehensive Plan by providing a conditional use process when a 3A or 3C decision has been made as indicated in the comprehensive plan, as evaluated below.

<u>UCZPSO 20.09: Review Criteria</u>

(2) Review Classification

A. When a 3A or 3C (limit conflicting uses) decision has been made as indicated in the comprehensive plan, the applicant must, in coordination with the responsible agency, develop a management plan which would allow for both resource preservation and the proposed use. If the responsible agency and the applicant cannot agree on such a management plan, the proposed activity will be reviewed

[153] B2HAPPDoc3-19 ASC 11 Exhibit K Land Use. P K-232. 2018-09-28.

[154] B2HAPPDoc3-19 ASC 11 Exhibit K Land Use. Table K-21, (page K-261) depicts the amount of Critical Habitat and Winter Range crossed by the Proposed Route. 2018-09-28.

through the conditional use process. 3A sites will be preserved where potential conflicts may develop. Conflicts will be mitigated in favor of the resource on 3C sites.

(4) Under the conditional use process land use decisions will consider the economic, social, environmental, and energy consequences when attempting to mitigate conflicts between development and resource preservation.

(5): The following criteria shall be considered, as applicable, during the appropriate decision making process:

A. ECONOMIC: The use proposed is a benefit to the community and would meet a substantial public need or provide for a public good which clearly outweighs retention of the resources listed in Section 20.09 (1): . . .

B. SOCIAL: The proposed development would not result in the loss of or cause significant adverse impact to, a rare, one of a kind or irreplaceable resource as listed in Section 20.09(1).

C. ENERGY: The development, as proposed, would support energy efficient land use activities for such things as transportation costs, efficient utilization of urban services, and retention of natural features which create micro climates conducive to energy efficiency.

D. ENVIRONMENTAL: If alternative sites in Union County for proposed development are available which would create less of an environmental impact of any of the resources listed in Section 20.09(1), major consideration should be given to these options.

(6) The reviewing body may impose the following conditions, as applicable upon a finding of fact that warrants such restrictions: . . .

C. BIG GAME WINTER RANGE AND BIG GAME CRITICAL HABITAT: A proposed new structure requiring a conditional use may be required to:

1. Be located as close as possible to an ADJACENT compatible structure (a compatible structure shall be any structure which does not adversely affect the intended use of another structure); . . .

2. Share a common access road or where it is impossible to share a common access road, locate as closely as possible to the nearest existing public road in order to minimize the length of access from the nearest road.

UCZPSO 20.09 establishes review criteria for potential impacts to 3C designated Goal 5 resources. Under UCZPSO 20.09(3)(A), the County's 3C habitat designation requires limiting potential conflicting uses to the designated resource and requires the applicant to develop a management plan that allows both the proposed use and resource preservation. As evaluated under the Council's Fish and Wildlife Habitat standard in Section IV.H. of this order and ASC Exhibit P, the applicant proposes to implement a Fish and Wildlife Habitat Mitigation Plan (provided as Attachment P1-6 of this order) that would mitigate temporary and permanent direct and indirect impacts to the habitat and species protected and uses within the designated big game winter range area.

UCZPSO 20.09(4) requires a consideration of the economic, social, environmental and energy consequences "when attempting to mitigate conflicts between development and resource preservation," and is implemented by the specific criteria in UCZPSO 20.09(5).

UCZPSO 20.09(5)(A) ECONOMIC - requires a finding that the "proposed use is a benefit to the community and would meet a substantial public need or provide for a public good which clearly outweighs retention of the resource."

The applicant has evaluated and demonstrated the public need for the proposed transmission line in ASC Exhibit N. As discussed and explained in detail in that Exhibit and summarized in ASC Exhibit K, the primary objective of the proposed transmission line is to create additional transmission capacity that would allow the applicant to import power from the Pacific Northwest market to serve its retail customers located in the states of Idaho and Oregon. Historically, as described in the Company's 2013 and 2015 Integrated Resource Plans (IRPs), the proposed transmission line would remedy a current transmission constraint in the company's on-peak purchases on the western side of its system by allowing it to import an average of 350 megawatts (MW) (500 MW in the summer, 200 MW in the winter) of market purchases to serve its native load.

The proposed transmission line would also serve as an integral component of regional transmission planning because by serving as a crucial high-capacity connection between two key points in the existing bulk electric system that currently lack sufficient transmission capacity.

In addition, the transmission line would allow the applicant to comply with FERC requirements, which require it to construct adequate transmission infrastructure to provide service to wholesale customers in accordance with company's Open Access Transmission Tariff (OATT). The transmission line would provide sufficient capacity to: 1) transfer an additional 1,050 MW of power from the BPA 500-kV transmission system in the Pacific Northwest west-to-east across the Idaho-Northwest transmission path; 2) transfer an additional 1,000 MW of power east-to-west across the Idaho-Northwest transmission path; and 3) allow for actual power flows on the transmission line of up to approximately 1,500 MW, accounting for variations in actual power flows of the various transmission lines comprising the Idaho-Northwest transmission path.

In addition, as discussed in ASC Exhibit U, construction of the proposed transmission line would create direct economic benefits, including creation of new jobs, increased ad valorem taxes, new dollars supporting the local economy, and a stimulus to the local economy in the form of expenditures on materials and supplies. Construction of the transmission line would result in the creation of up to 250 construction jobs during peak construction in Union County.

As discussed in ASC Exhibit P1, the applicant does not expect that the transmission line would result in long-term adverse impacts to big game. Because expected impacts to big game would

be for a limited duration and would be mitigated, the Department recommends Council find that the public benefit from the development outweighs the limited impacts on the resource.

UCZPSO 20.09(5)(B) SOCIAL - requires a finding that "the development would not result in the loss of or cause significant adverse impact to, a rare, one-of-a kind or irreplaceable resource." UCZPSO 20.09(5) lists those resources that are designated as 'irreplaceable" for purposes of this evaluation and does not include the big game habitat within the WR and CH Overlay areas. As the applicant explains, land within the WR and CH Overlay areas provide big game areas historically used by big game during periods of above normal snowfall and low temperatures. As discussed in ASC Exhibit P1 and under the Fish and Wildlife standard, these areas of big game habitat are regarded as Category 2 habitat in accordance with ODFW's Fish and Wildlife Habitat Mitigation Policy, and by definition are not "irreplaceable."

UCZPSO 20.09(5)(C): ENERGY – requires a finding that the development "would support energy efficient land use activities for such things as transportation costs, efficient utilization of urban services, and retention of natural features which create micro climates conducive to energy efficiency" The proposed transmission line would transmit power and enhance reliability of the regional electric transmission system, which is only indirectly related to energy efficiency. As the applicant describes, the proposed transmission line would have minimal impact to the existing land uses in Union County. It would have no adverse impacts on the transportation system or municipal facilities or services, including urban services.

UCZPSO 20.09(5)(D): ENVIRONMENTAL – requires that consideration should be given to alternative sites in Union County for proposed development that which would create less of an environmental impact of any on the resources listed in Section 20.09(1), if alternatives are available. As discussed in greater detail in ASC Exhibits B, J, P, and Q, the applicant has conducted a comprehensive avoidance and minimization analysis for all environmental resources and other resources to create the least overall impact. As discussed further in those exhibits, the applicant evaluated approximately 49 routes and route segments totaling over 3,000 miles before proposing the Proposed Route and alternatives.

In areas of big game winter range and critical habitat, UCZPSO 20.09(6) permits conditions to be imposed to require that new structures be located near adjacent existing structures and to share common access roads or locate near existing roads. As the applicant describes, new structures related to the proposed transmission line would follow existing electric, natural gas, and highway corridor as much as feasible in Union County. The Proposed Route follows segments of the existing 230-kV transmission line from Baker to La Grande and then from La Grande through the Wallowa-Whitman NF, deviating only to meet reliability criteria or to avoid

steep terrain or site-specific constraints.[155] Certain portions of the Union County Proposed Route also follow the I-84 corridor, both adjacent to existing transmission lines and separately.

Proposed access roads (both new roads and existing roads needing improvements) are depicted on maps in ASC Exhibit C, Attachment C-2. As demonstrated there, as part of the design of the proposed transmission line, the applicant has attempted to use existing roads and to limit the development of new roads in CH and WR overlay areas. These efforts have resulted in the development of a proposed access road system to support the construction of the transmission line that substantially relies on the system of publicly maintained roads as well as unimproved roads on public and private lands.

Based on the applicant's detailed evaluation, the Department recommends that the Council find that the proposed transmission line complies with the county's Goal 5 Resources Comprehensive Plan Element, as implemented through the provisions UCZPSO 20.09.

Recommended Land Use Conditions – Union County

Recommended Land Use Condition 6: For facility components in Union County, the certificate holder shall:

a. Prior to construction of any phase or segment of the facility, provide to the Department a copy of the following Union County-approved permits, if such permits are required by Union County zoning ordinances:
    i. Flood plain development permit;
    ii. Road approach permit; and
    iii. Work in county right-of-way permit.
b. During construction, the certificate holder shall comply with conditions of permits listed in (a) and (c).
c. During construction, if the certificate holder determines additional County-approved permits are required, the certificate holder shall provide to the Department a copy of those additional permits.

Recommended Land Use Condition 7: During construction of any phase or segment of the facility in Union County, the certificate holder shall construct the facility to comply with the following setback distances and other requirements:

<u>In All Zones:</u>

a. Buildings, the fixed bases of transmission line towers, and new access roads shall be set back from Class I streams at least 25-feet or one-half the stream width, whichever is greater.

[155] To meet reliability criteria a minimum separation from existing transmission lines of 230-kV or greater is required except in limited circumstances. For siting purposes that distance was assumed to be 1,500 feet, thereby dictating the minimum distance between existing and proposed transmission lines serving the same load.

b. Permanent vegetation removal within the riparian zone of all Class I streams shall retain 75% of all layers or stratas of vegetation.

In the EFU Zone (Based solely on certificate holder representations in the ASC):

c. Buildings shall be setback as follows: (i) front yards shall be set back at least 20 feet from property lines and road rights-of-way; (ii) and rear yards shall be set back at least 10 feet from property lines and road rights-of-way.

d. A clear-vision area shall be maintained on the corners of all multi-use area properties at the intersection of two or more streets or a street and a railroad as follows: (i) the clear-vision area shall consist of a triangular area with the two lot lines measuring a distance of 30 feet or at an intersection involving an alley of 10 feet; and (ii) the clear-vision area shall not contain any planting, fence, wall, structure, or temporary or permanent obstruction exceeding 2.5 feet in height, except for trees with branches removed to a height of 8 feet.

e. Concrete batch plants shall not be located within 2 miles of a vineyard totaling at least 40 acres and which was planted as of February 27, 2013.

In the Agricultural Grazing Zone:

f. Buildings shall be setback as follows: (i) front yards shall be set back at least 20 feet from property lines and road rights-of-way; and (i) rear yards shall be set back at least 10 feet from property lines and road rights-of-way.

g. All signage shall comply with the provisions of UCZPSO 3.08.

In the Timber-Grazing Zone:

h. Buildings shall be setback as follows: (i) front and rear yards shall be set back at least 20 feet from property lines and road rights-of-way; (ii) and side yards shall be set back at least 10 feet from property lines and road rights-of-way.

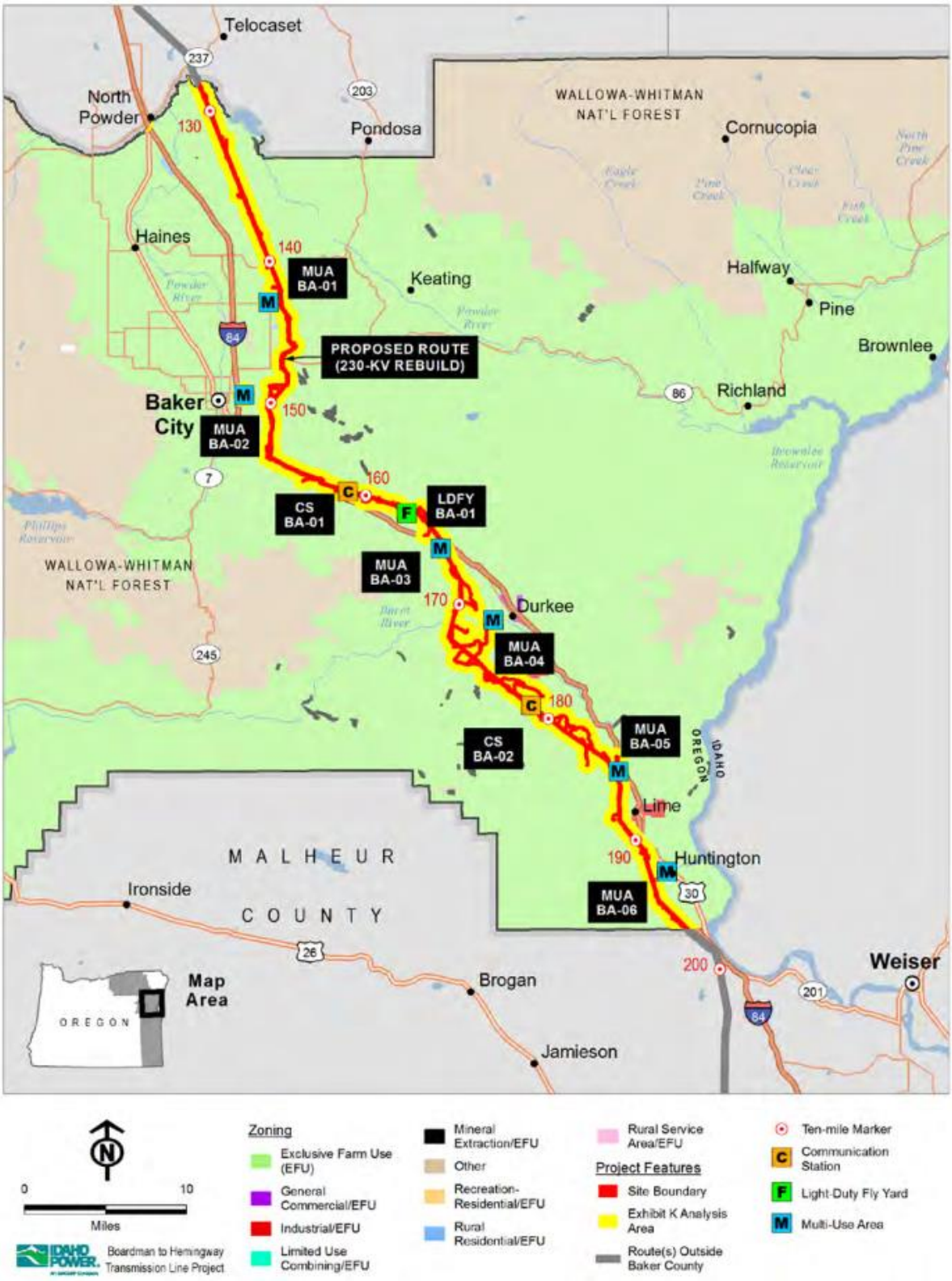
i. All signage shall comply with the provision of UCZPSO 5.08.

IV.E.1.4. Baker County

Facility components proposed within Baker County include approximately 68.4 miles of 500 kV transmission line, five multi-use areas, one light-duty fly yard, 48.2 miles of new access roads, 63 miles of substantially modified existing roads, pulling and tensioning sites, and two communication stations.[156] There are no alternative routes or facility component locations requested for approval in Baker County. The locations of proposed facility components are represented in ASC Exhibit K Figures K-47, and Figure 8 below.

[156] As described in ASC Exhibit B, multi-use areas would be approximately 30 acres in size and would include construction field offices, parking areas, construction vehicle maintenance area, helicopter operations (helipads), explosives storage, hazardous materials storage, water storage tank, portable concrete batch plant, concrete washout station, gravel tire scrub area, noxious weed wash-off station, and bulk materials storage area.

1 **Figure 8: Baker County and Proposed Facility Components**



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Facility components proposed in Baker County would be located on land zoned Exclusive Farm Use (EFU) and Rural Service Area (RSA).

In ASC Exhibit K, the applicant identifies potentially applicable substantive criteria based on underlying land use zone designation, in effect on the date the applicant submitted the pASC (February 27, 2013), which are also presented in Table LU-6, *Applicable Substantive Criteria for Proposed Facility Components in Baker County* below.

Table LU-6: Applicable Substantive Criteria for Proposed Facility Components in Baker County

Baker County Zoning and Subdivision Ordinance (BCZSO)[1]	
Article 3: Use Zones	
Section 301 Exclusive Farm Use Zone	
301.02	Conditional Uses
Section 305 Rural Service Area	
305.02	Conditional Uses
Article 4: Supplementary Provisions	
Section 401	Setbacks and Frontage Road Requirements Flood Plain Development
Section 412	Historic/Cultural and Natural Area Protection Procedure
Section 410	Flood Plain Provisions
Article 6: Conditional Uses	
Section 602	Standards for Granting a Conditional Use
Baker County Comprehensive Land Use Plan (BCCP)[2]	
Goal V Open Space, Scenic and Historic Areas and Natural Resources Open Spaces and Scenic Areas Natural Areas Historic and Cultural Sites, Structures, Districts	
Notes: 1. Omitted zoning provisions include: 301.02 (Conditional Uses); 301.05 (Minimum Parcel Sizes); 1001.01 (Purpose), 1002 (Applications for Approval of Tentative Plans); 1006.01 (Approval of Preliminary Partition Plans); 1006.02 (Approval of Final Partition Plan); 1006.03 (Land Partition Flat Requirements). BCZSO 401(B)(1) requires minimum parcel widths; and BCZO 1001, 1002 and 1006 address subdivisions, partitions and lot line adjustments and the county's tentative plan approval process. Those provisions would apply only if the applicant were to require a partition of any of the EFU-zoned property in Baker County. The applicant explains that it intends to secure easements where necessary and does not expect to require the partitioning of any parcel zoned EFU in Baker County. Because no partitions are proposed, BCZSO 301.05, BCZSO 401(B)(1) and BCZO 1001 are not applicable to the proposed transmission line.	

The following analysis addresses the applicable substantive criteria identified in the BCZSO.

Baker County Zoning and Subdivision Ordinance

Baker County Zoning Ordinance Article 3 Section 301 Exclusive Farm Use Zone

Proposed facility components within Baker County's EFU zone include 69.2 miles of 500 kV transmission line, five multi-use areas, one light-duty fly yard and two communication stations.

BCZSO Section 301 Exclusive Farm Use Zone

Section 301.02 In the EFU zone the following uses may be permitted when authorized in accordance with the requirements of Subsections 301.05 and 301.06 of this Section and Article 6 of this Ordinance…

D. Major utility facilities as defined in Section 108(B) of this ordinance.

BCZSO 301.02(D) establishes that "major utility facilities as defined in Section 108(B)" and their accessory uses are conditional uses within Baker County's EFU zone, subject to BCZSO 301.05, 301.06 and Article 6 of the ordinance.

As described above, proposed facility components within Baker County's EFU zone include 69.2 miles of 500 kV transmission line and five multi-use areas, one light-duty fly yard and two communication stations, which the Department recommends Council find would be a major utility facility and therefore a conditionally permitted use within EFU zoned land under BCZSO Section 301.02(D). However, notwithstanding the language in the County's code, the conditional use requirements beyond those that are consistent with ORS 215.275 are not applicable to proposed facility components because, as a utility facility necessary for public service under ORS 215.283(1)(g), the use is permitted subject only to the requirements of ORS 215.275 and the county cannot impose additional approval criteria. Therefore, BCZSO 301.05 (Minimum Parcel Size), 301.06 and Article 6 of the ordinance are not evaluated as applicable substantive criteria; however, it is noted that the applicant evaluates these criteria and based on review, the Department considers the analysis to represent consistency with these provisions.

Proposed facility components would be located in EFU-zoned land across five Oregon counties including Morrow, Umatilla, Union, Baker, and Malheur. Therefore, for these locations, the land use compliance evaluation is limited to ORS 215.275, as presented in Section IV.E.2.1.*, ORS 215.283, ORS 215.275 and ORS 215.296 (Exclusive Farm Use Requirements)* of this order.

Baker County Zoning Ordinance Article 3 Section 305 Rural Service Area Zone

Proposed facility components within Baker County's Rural Service Area (RSA) zone include approximately 0.2 miles of substantially modified roads.

BCZSO Section 305.02: Conditional Uses

In an RSA zone the following uses and their accessory uses are permitted when authorized in accordance with the provisions of Article 6 of this Ordinance and the provisions of Subsection 305.03 of this Section…

D. Major utility facilities as described in Section 108(B) of this Ordinance.

BCZSO Section 305.02 identifies "major utility facilities as described in Section 108(B) of this Ordinance" as a conditional use permitted in an RSA zone subject to the provisions of BCZO Article 6 and 305.03. Based on the reasoning and analysis provided under BCZSO 301.02(D), proposed facility components are collectively evaluated under the "major utility facility" land use category. Therefore, the Department recommends Council find that the proposed facility components within RSA zoned land is a conditionally permitted use under BCZSO Section 305.02(D). The applicable section of Article 6 is presented below.

BCZSO Section 602: Standards for Granting a Conditional Use

To determine whether a Conditional Use proposal shall be approved or denied, the Commission shall find that the following standards, where applicable, are met.

A. The proposal will be consistent with the Comprehensive Plan and objectives of this Zoning and Subdivision Ordinance and other applicable policies of the County.
B. Taking into account location, size, design and operating characteristics, the proposal will have a minimal adverse impact on the (1) livability, (2) value, and (3) appropriate development of abutting properties and the surrounding area compared to the impact of development that is permitted outright.
C. The location and design of the site and structures for the proposal will be as attractive as the nature of the use and its setting warrant.
D. The proposal will preserve assets of particular interest to the community.
E. In permitting a new Conditional Use or the alteration of an existing Conditional Use, the Planning Commission may impose in addition to those standards and requirements expressly specified by this Ordinance, additional conditions which the Planning Commission considers necessary to protect the best interests of the surrounding area or the County as a whole. These conditions may include, but are not limited to,…

BCZSO Section 602(A) – (E) establish approval standards for conditional uses within RSA zoned land, including requiring a demonstration of consistency with zoning provisions and objectives of the comprehensive plan; a demonstration if minimal adverse impacts on livability and value of surrounding properties; and, a demonstration that community interests would be preserved.

Proposed facility components within Baker County RSA zone includes an accessory use to the proposed utility facility, including 0.2 miles of substantially modified roads. Impacts resulting from the proposed segment of substantially modified road would predominately occur from short-term noise and traffic generated during construction activities, with operational impacts limited to use of the substantially modified road approximately two times per year during line inspection. As described in Section IV.M. *Public Services*, the applicant proposes and the Department recommends Council impose a condition requiring that, prior to construction, the applicant submit for review and approval by the Department in consultation with the affected county of a Transportation and Traffic Plan. The condition also requires that, through county-issued road-related permits, the applicant execute a formally binding agreement with the county for use of and potential impacts to roads during construction activities. Moreover, the substantially modified road would provide road improvements that would support livability, value and access within the area. Neither the applicant nor the county have identified any "assets of particular interest to the community' that would be impacted by the location of the proposed roads. Due to the limited potential impacts resulting during construction and operation of proposed facility components within RSA zoned land, the Department recommends Council find that the proposed facility would satisfy BCZSO Section 602(A) – (E) approval standards; and, find that no additional conditions are necessary to protect the interests of the surrounding community or ensure compliance with the conditional use criteria.

Historic/Cultural and Natural Area Protection

<u>BCZSO Section 412: Historic/Cultural and Natural Area Protection Procedure</u>

This Section shall not apply to sites designated as 3A or 3B sites, pursuant to OAR 660-16-010 (1) and (2), respectively. Major alteration or destruction of a Natural Area designated as 2A or 3C shall first require an ESEE analysis, justification, and Plan Amendment.

A permit shall be required to destroy or make major alteration to a historic/cultural/natural site or structure inventoried as significant in the County Comprehensive Plan. Upon receipt of an application for said permit, the Planning Department shall institute a 30-day hold. During that time various actions will be initiated by the County depending upon the nature of the threatened resource. All of the inventoried natural sites, historic sites and the cultural sites identified with one, two or three stars will be subject to a public hearing. Notice of the proposed change and public hearing will be provided to the general public, the State Historic Preservation Office, the State Natural Heritage Advisory Council, the State Department of Fish and Wildlife and/or affected local historical, cultural, or governmental entities. The opportunity to educate, persuade, pay for, and/or require the preservation of a significant resource will be provided by the County. At the hearing before the Planning Commission a review will be conducted to determine:

a. If the change will destroy the integrity of the resource.
b. If the proposal can be modified to eliminate its destructive aspects.
c. If any agency or individual is willing to compensate the resource owner for the protection of the resource.

d. If the resource can be moved to another location.
If, after this review, it is determined by the County that the integrity of a significant historic/cultural structure or other to allow, allow with conditions, or disallow the proposed change.

. . . FOR SIGNIFICANT HISTORIC/CULTURAL STRUCTURES AND TOWNSITES.
A. The historic/cultural structure or townsite constitutes a hazard to the safety of the public occupants and cannot reasonably be repaired; or
B. The retention of the historic/cultural structure or townsite would cause financial hardship to the owner which is not offset by public interest in the structure's/townsite's preservation; or
C. The improvement project is of substantial benefit to the County and cannot be reasonably located elsewhere, and overrides the public's interest in the preservation of the historic/cultural structure or townsite; or
D. Major exterior alteration shall, to the extent possible, be consistent with the historic/cultural character of the structure.

BCZSO 412 requires an analysis of significant historic/cultural structures and townsites, as well as significant natural areas and resources not inventoried or otherwise designated. To support the assessment under this provision, the applicant reviewed Baker County's inventory of Historic and Cultural Sites, Structures, Districts contained within the Baker County Comprehensive Plan Goal V Supplement. ASC Exhibit K, Figure K-50 depicts the inventoried historic and cultural resources in and around the analysis area, which include the following:[157]

- The Rattlesnake Springs Landmark is located approximately 0.5 mile west of the proposed facility and would largely be screened from view by Gold Hill. The proposed transmission line would not destroy or alter the resource. Therefore, the proposed facility would be consistent with BCZSO Section 412 criteria.

- The Farewell Bend State Park is located more than a mile from proposed facility components. The proposed facility would not destroy or alter the resource. Potential impacts of the facility construction to the Farewell Bend State Park are evaluated in ASC Exhibit T (Recreation), which explains that the transmission line would have no long-term adverse effect on the opportunity for visitors to use Farewell Bend. Indirect/disturbance impacts would be limited to visual resource effects, which would be minimal or nonexistent. Therefore, the proposed facility would be consistent with BCZSO Section 412 criteria.

- The Flagstaff Hill Monument is in the analysis area of the proposed transmission line but is not within the site boundary. Based on the applicant's review of photographs taken from this location along with site visits, it appears that the proposed facility would not

[157] B2HAPPDoc3-19 ASC 11 ASC Exhibit K Land Use, page K-301. 2018-09-28.

be viewed from this location; however, several structures may be visible at a certain distance and back-dropped by the valley and mountains in the background. Due to the nature of the resource and the fact that the proposed transmission line would not affect the characteristics that make the monument important, the applicant does not propose to conduct additional analysis as a part of the VAHP study. Therefore, the proposed facility would be consistent with BCZSO Section 412 criteria.

- The Virtue Flat Oregon Trail is between MP 146 and 146.5 and would be crossed by the proposed facility. The Virtue Flat Oregon Trail (visible undisturbed wagon train ruts) is designated "of probable National Register eligibility or local significance" in Baker County's inventory of Historic and Cultural Sites, Structures, Districts. The proposed facility could result in adverse visual impacts to the resource; the applicant proposes to further address potential impacts and necessary mitigation in the intensive level survey for the VAHP study (Exhibit S, Attachment S-2). Therefore, the proposed facility would be consistent with BCZSO Section 412 criteria.

Based on the information provided by Baker County, there are no inventoried natural areas within the site boundary. Based on its analysis of historic, cultural, and archeological resources in the analysis area the applicant is also unaware of any resources of unknown significance or resources not on the inventory which are located within the analysis area of the proposed transmission line. Based on the above-analysis, the Department recommends Council find that the proposed facility would be consistent with BCZSO Section 412 criteria.

Special Flood Hazard Area

<u>BCZSO Section 410: Flood Plain Provisions</u>

A. *When during the planning, sanitation or building permit sign-off procedure the Planning Director, by use of the Federal Insurance Administration (FIA) flood hazard maps and SCS soil maps, determines that unusual soil or flooding conditions present a hazard to the structure or land use being proposed, such conditions shall be noted on the permit application and brought to the attention of the applicant. These conditions include, but are not limited to: flood plain, slope, soil instability, shrink-swell, and high water table.*
B. *For Exceptions areas, any application for a building permit in flood hazard areas or upon soils judged unstable by SCS and inventoried as such by the County shall be denied. The Planning Office shall inform the applicant of the reasons for denial within 30 days. Before a building permit can subsequently be authorized, the County shall require submittal of a method and plan to the Planning Commission to ensure a reasonably safe building and site during and after construction; such a plan must be endorsed by an appropriate professional such as a registered, professional engineer, licensed in the State of Oregon or a professional engineer employed by a federal agency who is not required to be licensed in the State of Oregon, or a registered surveyor or hydrologist. If*

construction has already begun, construction shall not proceed until certification is received.

C. For structures in resource zones, the Planning Office will provide the information regarding inventoried hazardous soil conditions in an advisory capacity, on the premise that resource lands offer a variety of building sites and that a safer site will be selected.

D. In addition to hazard procedures, described above, the Flood plain Ordinance of Baker County, (Ordinance No. 84-3), will be implemented wherever applicable.

E. Requirements made pursuant to this Section may be appealed in conformance with Section 1104 of this Ordinance.

BCZSO 410 establishes requirements for developments within a flood plain or Special Flood Hazard Area (SFHA), including obtaining a county-approved Flood Plain Development Permit. The applicant explains that to the extent proposed facility components would be located within a SFHA, the certificate holder would obtain any required Flood Plain Development Permit directly from Baker County. That permit would not be included in or governed by the site certificate. However, in order to provide assurance to the Council that the site certificate holder has obtained any county-required Flood Plan Development permit(s), the applicant proposes and the Department recommends that the Council adopt Land Use Condition 9.

County Road Approach and Right-of-Way Permits

Pursuant to ORS 374.305(1), Baker County requires a Road Approach Permit for improvements to access roads that intersect with county road ROWs and requires a right-of-way permit for construction activities within existing Baker County road ROWs. Access roads are proposed to intersect with public roads and construction would require modifications within existing county road ROW's, including improvements to county roads that may be used as access roads. The applicant explains that site certificate holder would obtain any necessary Road Approach and Right-of-Way permits directly from Baker County. As explained in ASC Exhibit E, required Road Approach and Right-of-Way permit would not be included in or governed by the site certificate. However, in order to provide assurance to the Council that the site certificate holder has obtained any county-required Road Approach and Right-of-Way permits, the applicant proposes and the Department recommends that the Council adopt Land Use Condition 9.

Baker County Comprehensive Plan

The proposed facility and site boundary would be located within Baker County's Big Game Overlay zone and could potential impact several scenic resources protected under the Baker County Comprehensive Plan Goal 5 Resources element.

Goal 5 Inventoried Big Game Habitat

Proposed facility components in Baker County would predominately be located in EFU zoned land, which a small segment (0.2 miles) of a substantially modified road to be located in RSA zoned land. Within EFU zoned land, approximately 4,000 of 5,400 acres within the site

boundary would be located within Baker County's Big Game Overlay zone, as presented in ASC Exhibit K Figure K-51. Except for riparian habitat setbacks, Baker County's comprehensive plan finds that the County's land use regulations for the EFU zone are compatible with big game habitat, and does not include any Goal 5 protection program applicable to permitted uses in the EFU zone, including transmission line projects. To minimize potential impacts to riparian vegetation, the applicant proposes and the Department recommends Council impose Land Use Condition 9. Based on compliance with recommended Land Use Condition 9 and because the proposed facility is a permitted use in the EFU Zone, the Department recommends Council find that the proposed use would be in consistent with the county's Goal 5 planning goals for protecting big game habitat.

Goal 5 Inventoried Scenic Resources

Goal 5 inventoried scenic resources within the analysis area includes Oregon Highway 86, a portion of the NHOTIC ACEC and certain segments of I-84, as presented in ASC Exhibit K Figure K-52. Baker County has not adopted any specific Goal 5 protection program for any of these scenic areas that would constitute approval criteria subject to evaluation for compliance under the County's comprehensive plan. In ASC Exhibit K, the applicant evaluates these resources to confirm that the proposed facility would not result in significant adverse impacts. However, the impact assessment is not evaluated in this section because, in the absence of a county adopted protected program for these resources, there is not applicable criteria for which to evaluate the potential impacts.

Noxious Weed Management Plan

<u>ORS 569.390: Noxious Weed Management Plan</u>

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.
THEREFORE, IT SHALL BE THE POLICY OF BAKER COUNTY TO:

1. *Increase awareness of potential economic loss due to existing and new invading weeds through continuous education with the public.*
2. *Rate and classify weeds at the county level*
3. *Prevent the establishment and spread of noxious weeds.*
4. *Encourage and implement the control or containment of infestations of designated weed species and, where possible, their eradication. When budgets allow, offer a landowner cost share program for "A" rated weeds, as well as those weeds designated appropriate for cost share assistance by the Board of Commissioners.*
5. *Manage a biological control of weeds program for yellow starthistle, leafy spurge, St. Johnswort, Canada thistle, rush skeletonweed, diffuse knapweed, spotted knapweed,*

and others, in cooperation with ODA's Biological Control of Weeds Program. 6. Cooperate with other states, federal agencies, private citizens, the Tri-County Weed Management Area and other groups in enhancing the Baker County Vegetation Management Program.

Baker County implements a Weed Control Plan based on statutory requirements for imposed under ORS 569.530 through ORS 569.450. The applicant maintains that it would comply with these statutory requirements through implementation of a Reclamation and Revegetation Plan (Attachment P1-3 of this order) and Vegetation Management Plan (Attachment P1-4 of this order), to be reviewed, finalized and approved by the Department in consultation with the affected counties. Based on compliance with recommended Fish and Wildlife Conditions 2 and 3, the Department recommends Council find that the proposed facility would be in compliance with Baker County's Weed Control Plan requirements.

Recommended Land Use Conditions – Baker County

Recommended Land Use Condition 8: Prior to construction of any phase or segment of the facility in Baker County, the certificate holder shall provide to the Baker County Planning Department a list of the suppliers that will be supplying the aggregate used in construction in Baker County along with a copy of the suppliers' land use permits.

Recommended Land Use Condition 9: For facility components in Baker County, the certificate holder shall:

a. Prior to construction in Baker County, the certificate holder shall provide to the department a copy of the following Baker County-approved permits, if such permits are required by Baker County ordinances:
   (i) Flood plain development permit;
   (ii) Road approach permit; and
   (iii) Work in county right-of-way permit.
b. If after commencement of construction the certificate holder determines additional County-approved permits are required, the certificate holder shall provide to the department a copy of those additional permits.
c. During construction, the certificate holder shall comply with conditions of permits listed in (a) and (b).

Recommended Land Use Condition 10: During construction in Baker County, the certificate holder shall construct the facility to comply with the following setback distances and other requirements:

<u>In the EFU Zone (Based solely on certificate holder representations in the ASC)</u>:

a. Buildings shall be setback as follows: front yards shall be set back at least 20 feet from property lines and road rights-of-way.

b. Buildings and the fixed bases of transmission line towers shall be set back at least 60 feet from the center line of a road or street or 30 feet from any right-of-way in excess of 60 feet.
c. Buildings and the fixed bases of transmission line towers shall be set back at least 10 feet from property lines.
d. Buildings and the fixed bases of the transmission line towers shall be set back at least 50 feet from the high-water mark of naturally-occurring riparian area, bog, marsh, or waterway.

IV.E.1.5. Malheur County

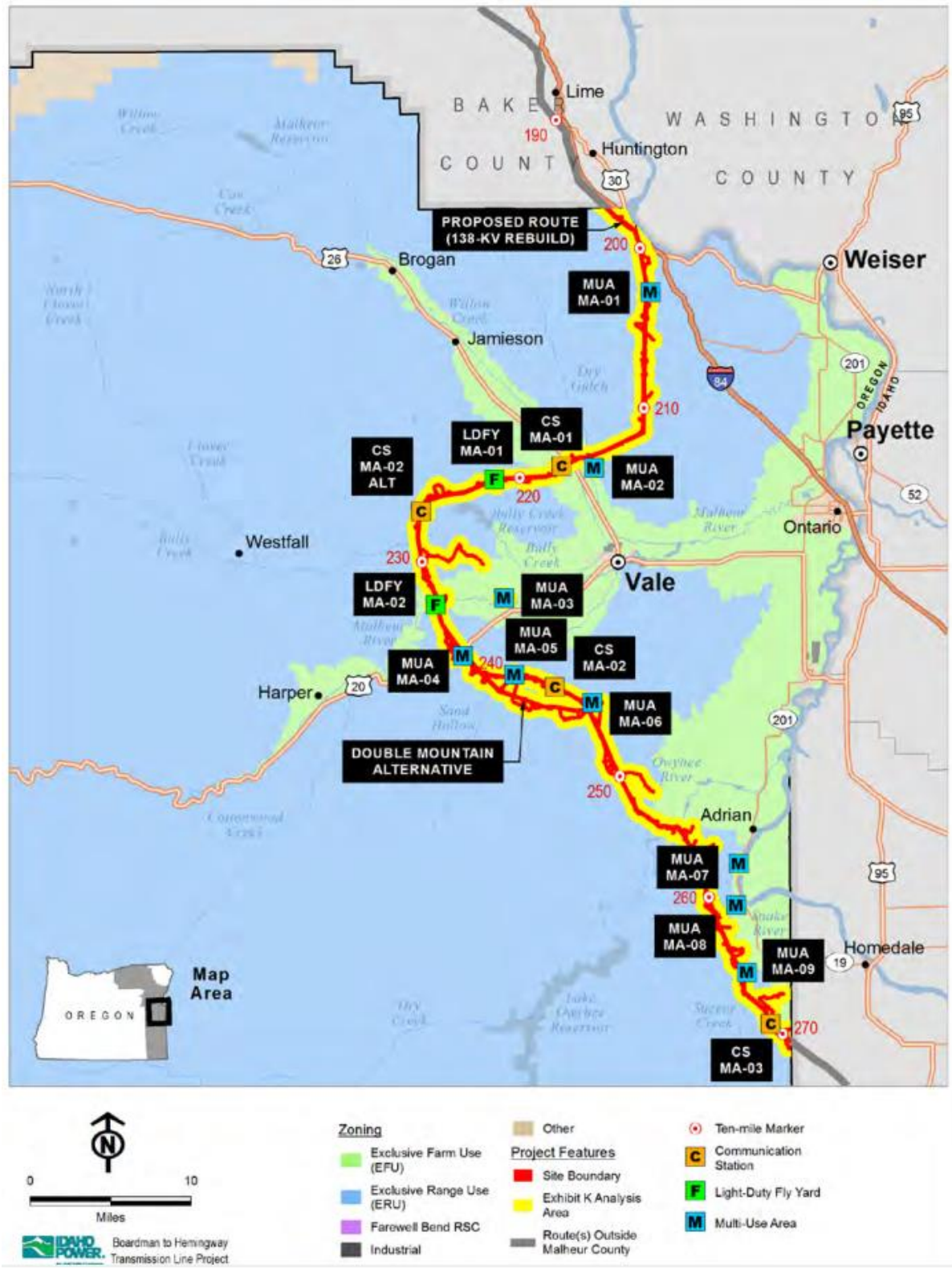
Facility components proposed within Malheur County include approximately 75.1 miles of 500 kV transmission line, nine multi-use areas, two light-duty fly yards, 66.9 miles of new access roads, 54.5 miles of substantially modified existing roads, pulling and tensioning sites, and three communication stations.[158]

In addition to proposed facility components, the applicant proposes a 7.4-mile alternative segment, Double Mountain alternative, and ancillary facilities including five miles of new access roads, seven miles of substantially modified roads, pulling and tensioning sites, and an alternative communication station.

The locations of proposed and alternative facility components are represented in ASC Exhibit K Figures K-54, and Figure 9, *Malheur County Zoning and Proposed Facility Components* below.

[158] As described in ASC Exhibit B, multi-use areas would be approximately 30 acres in size and would include construction field offices, parking areas, construction vehicle maintenance area, helicopter operations (helipads), explosives storage, hazardous materials storage, water storage tank, portable concrete batch plant, concrete washout station, gravel tire scrub area, noxious weed wash-off station, and bulk materials storage area.

1 **Figure 9: Malheur County and Proposed Facility Component Locations**



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The above-described facility components proposed in Malheur County would be located on land zoned Exclusive Farm Use (EFU), Exclusive Range Use (ERU), and Rural Industrial (RI) Uses. The applicable substantive criteria, as presented in Table LU-7, *Applicable Substantive Criteria for Proposed Facility Component in Malheur County* below, is identical for uses in EFU and ERU zoned land; additionally, the County has not adopted specific zoning provisions for uses within RI zoned land. Alternative facility components would be located entirely within ERU zoned land. Proposed and alternative facility components are evaluated as a utility facility necessary for public service within EFU and ERU zoned land, as further evaluated below.

Applicable substantive criteria for proposed and alternative facility components in Malheur County, in effect on the date the applicant submitted the pASC (February 27, 2013), are presented in Table LU-7 below.

Table LU-7: Applicable Substantive Criteria for Proposed Facility Components in Malheur County

Malheur County Code (MCC)[1,2]	
Exclusive Farm Use and Exclusive Range Use	
MCC 6-3A-2	Permitted Uses
Flood Plain Management Zone	
MCC 6-3K-3	Flood Plain Development Standards
MCC 5-2-5-1; 5-2-5-2	Flood Hazard Reduction
Malheur County Comprehensive Plan	
Goal 3 Agricultural Lands, Policies 2, 7, 8 and 9	

Notes:
1. Code provisions identified by the applicant as potentially applicable substantive criteria include MCC 6-3A-5, 6-3A-6(A), and MCC 6-6-7. Based on review, the Department recommends Council not make findings of compliance with these requirements because they are not considered applicable substantive criteria. Malheur County identified MCC 6-3A-3(I) as applicable substantive criteria for the helipads at the light duty fly-yards and multi-use areas. However, the Department recommends Council evaluate the proposed facility comprehensively under one land use category – for the transmission line – and find that ancillary uses are necessarily evaluated as part of the land use category applied to the transmission line. Nonetheless, the applicant provides a compliance demonstration for these provisions in ASC Exhibit K, which the Department reviewed and considers representative of code provision consistency.
2. In ASC Exhibit K Section 6.10.4 Malheur County Goal 5 Resources, the applicant describes that, to date, Malheur County has not responded to requests for confirmation of Goal 5 resource and resource location, and provides an assessment concluding that the County has not inventoried any Goal 5 resources.

The following analysis addresses the applicable substantive criteria identified in the MCC.

Malheur County Code Provisions

Malheur County Code 6-3A Exclusive Farm Use Zone and Exclusive Range Zone

Proposed facility components with EFU and ERU zoned land in Malheur County would include approximately 75.1 miles of a single-circuit 500 kV transmission line with structures that could extend up to 200-feet in height. The applicant identifies that ancillary facilities to the proposed transmission line located within EFU and ERU-zoned land would include nine multi-use areas,

two light-duty fly yards, 66.9 miles of new access roads, 54.5 miles of substantially modified existing roads, pulling and tensioning sites, and three communication stations.[159] An evaluation of the applicable substantive criteria for these uses within EFU and ERU-zoned land is presented below.

MCC 6-3A-2: Permitted Uses

(A) The following uses may be permitted outright by ministerial permit in each of the three (3) resource zones except as specifically added or excluded:…

(14)Utility facilities necessary for public service, including wetland waste treatment systems but not including commercial facilities for the purpose of generating electrical power for public use or sale or transmission towers over two hundred (200) feet in height. A utility facility necessary for public service may be established as provided in ORS 215.275 and section 6-6-8-8- "Wireless Communication Facilities" of this title.

MCC 6-3A-2 establishes that utility facilities necessary for public service are uses permitted outright in the EFU and ERU zones, subject to compliance with applicable criteria in ORS 215.275.

As described in ASC Exhibit K, proposed facility components within EFU and ERU zoned land in Malheur County would include 75.1 miles of a single-circuit 500 kV transmission line with structures that could extend up to 200-feet in height. The applicant identifies that ancillary facilities to the proposed transmission line located within EFU and ERU-zoned land would include nine multi-use areas, two light-duty fly yards, 66.9 miles of new access roads, 54.5 miles of substantially modified existing roads, pulling and tensioning sites, and three communication stations, which based on a 2001 and 2005 court decision, the applicant asserts should be considered under the "utility facility necessary for public service" land use category.[160] The Department agrees and recommends Council find that the proposed facility components located in EFU and ERU-zoned land would be a use permitted outright under MCC 6-3A-2.

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[159] In ASC Exhibit K, the applicant describes that Umatilla County identified UCDC Sub-section 152.060(G) *Personal Use Airports* as potentially applicable to the helipads to be located within each of six multi-use areas in EFU-zoned land. Because the multi-use area is an ancillary facility to the proposed facility, the Department recommends Council evaluate all facility components within EFU-zoned land as a utility facility necessary for public service. In the alternative, however, the applicant provides a compliance demonstration if UCDC Sub-section 15.2060(G) is determined applicable, which is incorporated into ASC Exhibit C, K and the draft Helicopter Use Plan (Recommended Public Services Condition 2, to be provided to the Department and applicable counties prior to helipad use.

[160] See Save Our Rural Or. v. Energy Facility Siting Council, 339 Or. 353, 384 (2005) (upholding Council's determination that ancillary facilities are considered "utility facilities necessary for public service"); Cox v. Polk County, 174 Or. Ct. App. 332, 343-44 (2001) ("utility facilities necessary for public service" may include ancillary or off-site equipment).

Malheur County Code 6-3K Flood Plain Management Zone

The proposed route and alternative routes would cross several areas designated as Special Flood Hazard Areas (SFHA) (ASC Exhibit K Figure K-56).

MCC 6-3K-3: Flood Plain Management

The following standards shall be applicable to any area designated as being within the 100-year flood plain:

A. Any development shall comply with Title 5, Chapter 2 of this Code and the Federal Insurance Administration requirements for minimizing flood hazards.

B. Any development shall also comply with the standards of the underlying primary zone.

C. If a conflict in regulations or procedures occurs, the more restrictive provisions shall govern.

MCC 6-3K-3 establishes flood hazard minimization standards for development within SFHA's, including compliance with primary underlying zone development standards and MCC Title 5, Chapter 2 and the Federal Insurance Administration.

In ASC Exhibit K, the applicant explains that construction activities, such as temporary bridge construction for stream crossings, could occur within SFHA's. However, permanent facility structures would not be located within a SFHA. Nonetheless, if a flood plain development permit is required for construction activities, the applicant would work directly with the County to obtain the necessary permit, demonstrating compliance with MCC 6-3K-3. The applicant proposes Land Use Condition 11, provided below, to demonstrate a minimization of potential risk from flood hazards during facility construction.

Malheur County Comprehensive Plan Provisions

Goal 3: Agricultural Lands

Goal: To preserve and maintain the agricultural land in the county for agricultural purposes.

1. *Public and private land classified by the Natural Resources Conservation Service (formerly U.S. Department of Agriculture Soil Conservation Service) as being in Capability Classes I through VI, as well as High Value Farmland as defined by applicable Oregon Revised Statutes and Oregon Administrative Rules and any other lands determined to be necessary and required for farm use, are considered to be agricultural lands.*
2. ***High Value Farmlands (ORS and OAR designated) shall be given the greatest protection. Lands classified by the Natural Resources Conservation Service, as Capability Classes through VI shall be afforded the next highest protection with Class I having the highest protection and Class VI the least.***

3. *In addition to the Natural Resources Conservation Service classification system, county assessor's records may be considered in evaluating individual parcels for the purpose of planning and zoning.*
4. *Urban growth boundaries, exclusive farm use zoning, and farm use tax assessment be will be the major tools used to protect agricultural lands.*
5. *The county will support viable water resource projects for additional storage, power generation, water quality, conservation and recreation.*
6. *The county will review and consult with the irrigation and drainage districts on land use decisions to assure they will not negatively impact the integrity or operation of water for irrigation or drainage purposes.*
7. ***In addition to county code and the State of Oregon's land use laws and administrative rules for non-farm dwellings, it is the policy of Malheur County that there be no net loss of farmlands listed on the High Value Farmlands Soils list or soils classified as types I-III by the Natural Resources Conservation Service.***
8. ***Current and future accepted farming and ranching practices and activities shall have priority and continue without interference.***
9. ***Any utility transmission line should avoid adverse impacts on any agricultural operation in the entire agricultural area. This protection should prioritize High Value Farmland [ORS and OAR designated] and the Natural Resources Conservation soil classes I through III.***
10. *The County Court will appoint a citizens advisory committee on agriculture to review the agricultural lands element of the comprehensive plan on an as needed basis.*
11. *The county will not discourage the creation of special land use districts so that landowners can impose more restrictive land use regulations than those imposed by the county.*

Malheur County's Goal 3 provides policy direction to the county regarding its compliance with Statewide Planning Goal 3 and is implemented through the County's zoning code. Policies 2 and 9 direct the county to protect High Value Farmland and Natural Resources Conservation Service (NRCS) Soil Classes I through III. Policy 9 specifically addresses transmission lines.

In furtherance of this policy direction, the applicant has worked with landowners in Malheur County to avoid impacts to irrigated agricultural land located within the EFU zone. As the applicant explains in ASC Exhibit K, throughout development of the proposed route, the applicant has continued to avoid irrigated agricultural land to the extent possible.[161] As depicted on ASC Exhibit K, Figure K-57, the EFU zone encompasses both High Value Farmland soil, and the NRCS soil classes I through III across Malheur County. As shown in Table K-34 and Figure K-57, the applicant has avoided High Value Farmland soils and NRCS soil classes I through III to the extent possible.

[161] B2HAPPDoc3-19 ASC 11 Exhibit K Land Use, page K-301. 2018-09-28.

Policy 7 expresses the County's policy that there be no net loss of high value farmland. That policy is implemented through the County's code and through compliance with the statutory framework. As discussed above, the proposed transmission line satisfies the requirements of the Malheur County code and is permitted under ORS 215.283. In addition, the applicant has attempted to avoid and minimize impacts to High Value Farmland and NCRS Soil Classes 1 through III to the extent practicable.

Policy 8 gives priority to current and future accepted farming and ranching practices to "continue without interference." As with policy 7, this policy is implemented through the code and compliance with the statutory framework, which permits the proposed transmission line as a use permitted under ORS 215.283(1). This policy is also furthered through compliance with ORS 215.275(4) and (5), discussed above.

The Department recommends that the Council determine that the Malheur County Comprehensive Plan provision provisions identified by the county constitutes the applicable substantive approval criteria. Based on the applicant's evaluation of the proposed transmission line for compliance with the applicable substantive criteria, the Department further recommends that the Council find that the proposed use satisfies those criteria.

Recommended Land Use Conditions – Malheur County

Recommended Land Use Condition 11: For facility components in Malheur County, prior to construction of any phase or segment of facility components, the certificate holder shall provide to the Department a copy of a Malheur County-approved Flood plain development permit. If after construction commencement, the certificate holder determines additional County-approved permits are required, the certificate holder shall provide a copy of those permits to the Department.

Recommended Land Use Condition 12: For facility components in Malheur County, the certificate holder shall design the facility to comply with the following setback distances and other requirements:

<u>In the EFU and ERU Zones (Based solely on certificate holder representations in the ASC):</u>

a. Buildings shall be setback as follows:
   (ii) at least 40 feet from a street or road right-of-way; and
   (iii) at least 25 feet from any other property line.
b. No sight obscuring fence exceeding three feet in height shall be placed within the 40-foot street setback, also within this setback shrubbery other than trees shall be maintained at heights not exceeding three feet.

IV.E.1.6. City of North Powder

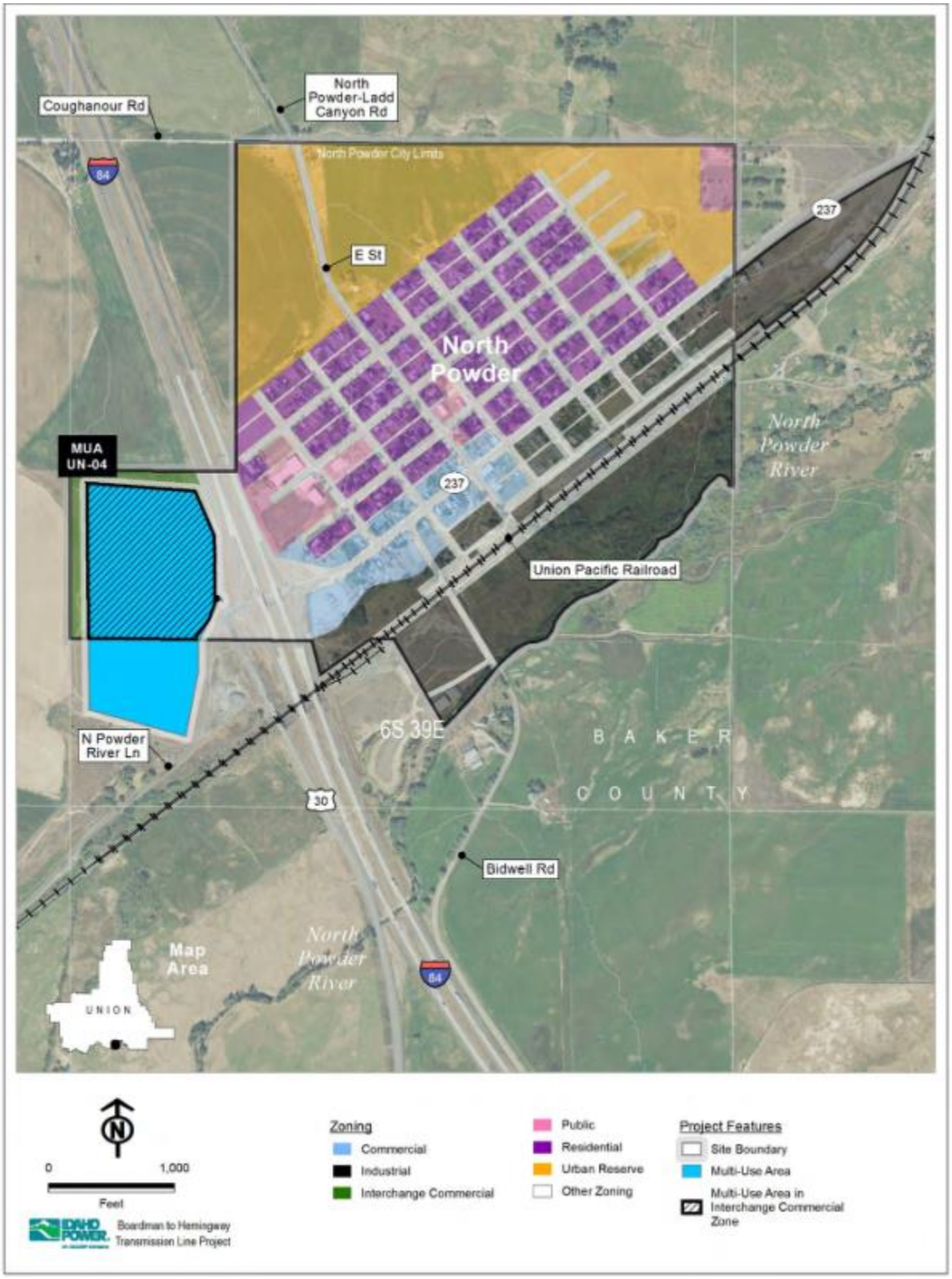
Facility components proposed within City of North Powder include an approximately 27.2-acre portion of a multi-use area, with the remaining portion of the multi-use area located within

Union County, as evaluated in Section IV.E.1.3., *Union County* of this order.[162] There are no alternative routes or facility component locations proposed within City of North Powder.

The proposed multi-use area would be located within the Commercial Interchange Zone, as represented in ASC Exhibit K Figures K-46, and Figure 10, *City of North Powder Zoning and Proposed Multi Use Area* below. The proposed multi-use area is evaluated as an "other use" within the Commercial Interchange Zone.

[162] As described in ASC Exhibit B, multi-use areas would be approximately 30 acres in size and would include construction field offices, parking areas, construction vehicle maintenance area, helicopter operations (helipads), explosives storage, hazardous materials storage, water storage tank, portable concrete batch plant, concrete washout station, gravel tire scrub area, noxious weed wash-off station, and bulk materials storage area.

1 **Figure 10: City of North Powder Zoning and Proposed Facility Component Locations**



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Applicable substantive criteria for proposed facility components in City of North Powder, in effect on the date the applicant submitted the pASC (February 27, 2013), are presented in Table LU-8, *Applicable Substantive Criteria for Proposed Facility Components in City of North Powder* below.

Table LU-8: Applicable Substantive Criteria for Proposed Facility Components in City of North Powder

North Powder Zoning Ordinance (NPZO)[1]	
Commercial Interchange Zone	
Section 4.02	Conditional Uses/Other Uses
Section 4.04	Development Standards; Signs
Section 3.02	Conditional Use Findings

Notes:

1. Code provisions identified by the applicant for informational purposes include NPZO Section 4.03 (dimension standards) and Section 8.06 (front yard exceptions); and therefore because these requirements were not identified by the City as applicable substantive criteria, compliance with these requirements is not further evaluated in this order. NPZO 10.02 (application requirements) include application requirements such as a site plan and adjacent property owner information, which are superseded by the Council's application requirements under OAR Chapter 345 Division 21. Nonetheless, the Department reviewed the applicant's compliance assessment with these provisions and considers the evaluation to be consistent with the requirements.

The following analysis addresses the applicable substantive criteria identified in the NPZO.

North Powder Zoning Ordinance

North Powder Zoning Ordinance 4 Commercial Interchange Zone

<u>NPZO 4.02: Conditional Uses</u>

In a (C-2) Commercial Interchange Zone the following uses and their accessory uses are permitted by conditional use approval when authorized in accordance with Articles VIII and X of this ordinance:…

12. Other uses per criteria in Section 3.02(9).

NPZO Section 4.02 establishes conditional uses permitted within CI zoned land, and includes "other uses," which the applicant describes as the appropriate land use category for the multi-use area, based on an April 10, 2013 memorandum from by the City of North Powder. Therefore, the Department recommends Council find that the proposed multi-use area within City of North Powder is a conditional use permitted within CI zoned land subject to the criteria in NPZO Section 3.02(9).

NPZO 4.04(B): Development Standards

In the (C-2) Commercial Interchange Zone, the following signs are permitted:

A. Businesses and firms in the Commercial Interchange Zone are permitted to use signs provided the aggregate of the signs do not exceed an area equal to one square foot of sign face for each foot of lot frontage or 300 square feet of sign face, whichever is the least, and the sign is not in or extending over a street. Such sign shall not exceed a maximum height of forty-five (45) feet above the grade below the sign. Such sign shall be located on the premises of the business or firm which it advertises or identifies and within 300 feet of the advertised activity.

B. On premise signs advertising the sale or lease of property provided the sign does not exceed forty-two (42) square feet in area and the sign is not in or extending over a street.

C. Signs in the Commercial Interchange Zone may be illuminated, but shall not be a flashing or moving type of lighting.

D. Permitted signs may not be erected or maintained within one hundred (100) feet of an occupied dwelling unless the owner thereof consents in writing to the erection or maintenance of such a sign.

E. All off-premise signs within the view of any State Highway shall be regulated by State regulations under ORS Chapter 377 and receive building permit approval.

F. All off-premise signs not within view of a State Highway shall be limited to identification and location of a business and be no larger than sixteen (16) square feet in area and receive building permit approval.

NPZO Section 4.04(B), A-F, establish development standards for signs installed at permitted uses within CI zoned land. The applicant describes that the multi-use area would include signs identifying construction areas, “no trespassing” or similar, and signs warning of potential danger; all signage would adhere to NPZO Section 4.04(B) requirements, as applicable. The applicant proposes a condition to ensure compliance the NZPO Section 4.04(B), which is referenced in Recommended Land Use Condition 13. Based on compliance with Recommended Land Use Condition 13, the Department recommends Council find that the proposed facility would comply with NPCZ Section 4.04(B) development standards.

NPZO 3.02(9): Conditional Use Findings

Based upon the following finding the City Council may approve other uses similar to those enumerated and consistent with purpose and intent of this zone if:

a. The proposed use will be compatible with the traffic flow of vehicles and/or pedestrians frequenting the area.

b. The site plan and use are compatible with the surrounding commercial uses and the intent of this zone.

c. The proposed use will encourage an influx of people who are likely to benefit from the availability of adjacent commercial wares and/or services.

NPZO Section 3.02(9) includes criteria that must be satisfied for conditionally permitted uses within CI zoned land. Criteria require a demonstration that the proposed use would be compatible with traffic and pedestrian flow and surrounding uses and intent of the zone; and, that the proposed use would encourage an influx of people likely to benefit from the availability of commercial uses and services.

The proposed multi-use area would result in vehicular traffic to and from the site, using the on and off-ramps for I-84, and Highway 30, to access equipment and materials such as fuel and concrete. In ASC Exhibit K, the applicant represents that there is very limited pedestrian traffic within the CI zone, and that most vehicular traffic is related to adjacent agricultural operations. The applicant also describes, based on communication with ODOT, that potential increases in construction-related traffic during use of the multi-use area would not be expected to impact traffic flow because the predominant roadways to be used have sufficient capacity and the increase in vehicular traffic would be temporary.

Surrounding uses within the CI zone, intended to provide a place for businesses to operate, include a motel, restaurants, and convenience stores. These commercial uses are located on the opposite side of I-84 where I-84 would act as a buffer between the adjacent commercial uses and any construction related noise or dust generated at the multi-use area. The multi-use area would be located within a historically vacant lot which, through use by the applicant, would satisfy the intent of the zone.

The multi-use area would serve as field offices, reporting locations for workers, parking space for vehicles and equipment, sites for material delivery and storage, fabrication assembly of towers, cross arms and other hardware, concrete batch plants, and stations for equipment maintenance. Accordingly, during use of the multi-use area, construction related workers would result in an influx of people within the CI zone that would benefit from the proposed and existing commercial uses within the surrounding area.

Based on the reasons and analysis provided above, the Department recommends Council find that the proposed multi-use area would satisfy the NPZO Section 3.02(9) conditional use findings.

Recommended Land Use Conditions – City of North Powder

Recommended Land Use Condition 13: For the multi-use area in City of North Powder, the certificate holder shall design the site to comply with the following setback distance and other requirements:

<u>In the Commercial Interchange Zone</u>

a. All signs shall comply with NPZO 4.04(B) development standards (ASC Exhibit K p. K-275)
b. Based solely on certificate holder representations in ASC, buildings shall not exceed 45 feet in height and shall be setback per NPZO Section 4.03 (ASC Exhibit K p. K-277):

i. Front yards shall be set back at least 30 feet from property lines;
ii. Side yards shall be setback at least 20 feet from a Residential Zone, street, or corner lot; and
iii. Rear yards shall be set back at least 20 feet from a Residential Zone.

IV.E.1.7. City of Huntington

Facility components proposed within City of Huntington include one multi-use area.[163] There are no alternative routes or facility component locations proposed within City of Huntingon.

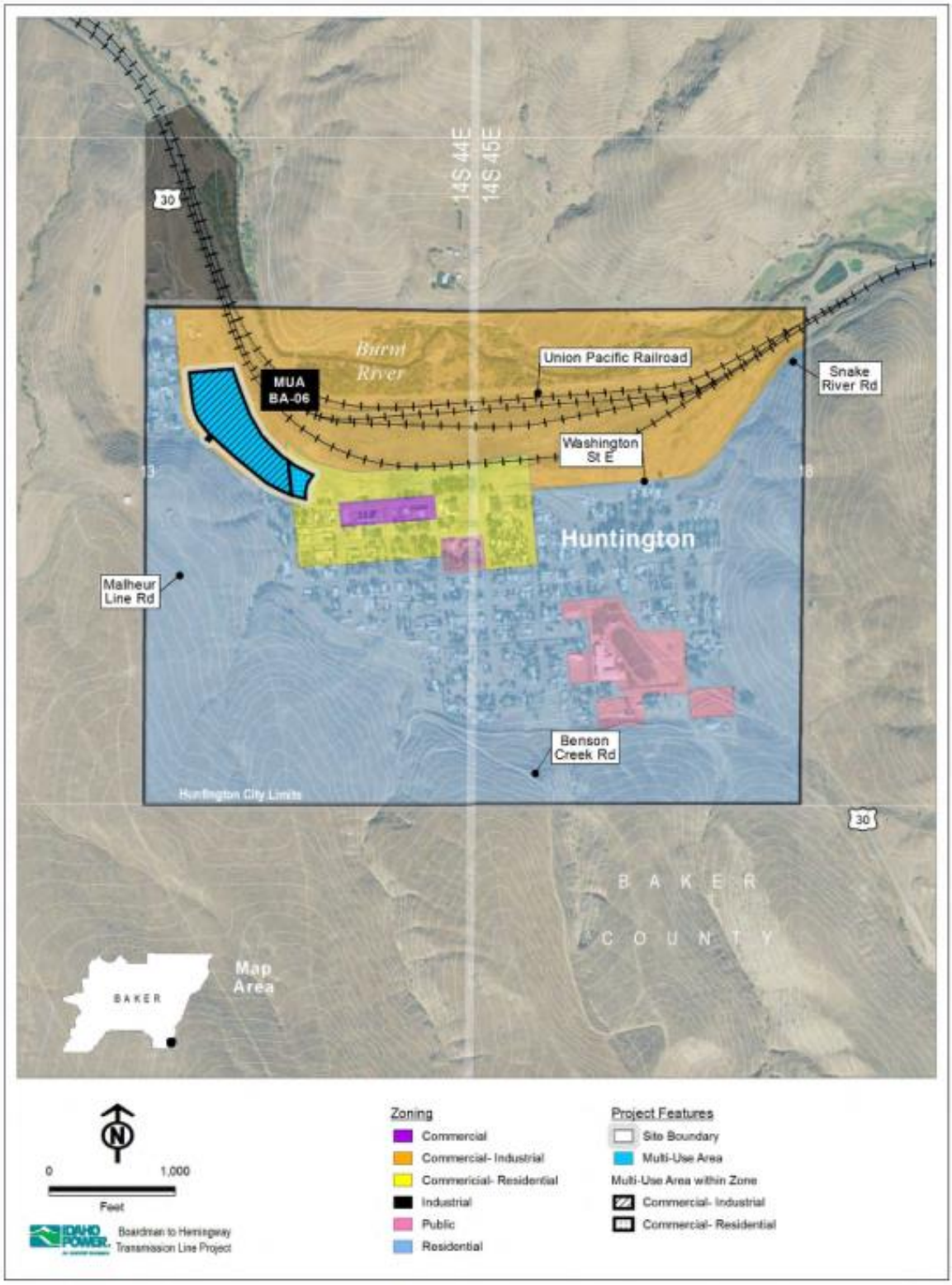
The proposed multi-use area would be located within both the Commercial Industrial (CI) Zone and Commercial Residential (CR) Zone, as represented in ASC Exhibit K Figures K-53, and Figure 11, *City of Huntington Zoning and Proposed Multi Use Area* below. In ASC Exhibit K Section 6.9.2.1., the applicant describes that, in a June 2, 2016 email, the City of Huntington indicated that because the multi-use area would be a temporary use, no provisions of the City of Huntington Zoning Ordinance (CHZO) would apply and no City permits would be required.

For informational purposes only, the applicant provides an analysis demonstrating compliance with CHZO provisions that would apply to an "industrial, manufacturing, compounding, processing, repairing, packing or storing" land use within CI zoned land, including CHZO 153.082 (minimum lot size), CHZO 153.083 and -053 (property line setbacks). For informational purposes only, the applicant provides an analysis demonstrating compliance with CHZO provisions that would apply to conditional uses within CR zoned land, including CHZO 152.050 and -051.

Because there are no applicable substantive criteria for the multi-use area within City of Huntington, the Council is not obligated to make findings of compliance for this temporary use under the Land Use standard.

[163] As described in ASC Exhibit B, multi-use areas would be approximately 30 acres in size and would include construction field offices, parking areas, construction vehicle maintenance area, helicopter operations (helipads), explosives storage, hazardous materials storage, water storage tank, portable concrete batch plant, concrete washout station, gravel tire scrub area, noxious weed wash-off station, and bulk materials storage area.

Figure 11: City of Huntington Zoning and Proposed Multi-Use Area



IV.E.2. Directly Applicable State Statutes and Administrative Rules

IV.E.2.1. ORS 215.283, ORS 215.275 and ORS 215.296 (Exclusive Farm Use Zone Requirements)

Statutes which apply directly to the proposed facility include ORS 215.275 and 215.283; ORS 215.296 has been adopted by the applicable counties, but because it is the same criteria across counties, is addressed in this section.

ORS 215.283, in relevant part, states:

(1) The following uses may be established in any area zoned for exclusive farm use:
*****
(c) Utility facilities necessary for public service, including wetland waste treatment systems but not including commercial facilities for the purpose of generating electrical power for public use by sale or transmission towers over 200 feet in height. A utility facility necessary for public service may be established as provided in:
(A) ORS 215.275;
*****

ORS 215.275 states:

(1) A utility facility established under ORS 215.213 (1)(c)(A) or 215.283 (1)(c)(A) is necessary for public service if the facility must be sited in an exclusive farm use zone in order to provide the service.
(2) To demonstrate that a utility facility is necessary, an applicant for approval under ORS 215.213 (1)(c)(A) or 215.283 (1)(c)(A) must show that reasonable alternatives have been considered and that the facility must be sited in an exclusive farm use zone due to one or more of the following factors:
(a) Technical and engineering feasibility;
(b) The proposed facility is locationally dependent. A utility facility is locationally dependent if it must cross land in one or more areas zoned for exclusive farm use in order to achieve a reasonably direct route or to meet unique geographical needs that cannot be satisfied on other lands;
(c) Lack of available urban and nonresource lands;
(d) Availability of existing rights of way;
(e) Public health and safety; and
(f) Other requirements of state or federal agencies.

(3) Costs associated with any of the factors listed in subsection (2) of this section may be considered, but cost alone may not be the only consideration in determining that a utility facility is necessary for public service. Land costs shall not be included when considering alternative locations for substantially similar utility facilities. The Land Conservation and

Development Commission shall determine by rule how land costs may be considered when evaluating the siting of utility facilities that are not substantially similar.

(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.

ORS 215.283(c) establishes that a "utility facility necessary for public service" is a use permitted in EFU zoned land subject to compliance with ORS 215.275. ORS 215.275 first requires an evaluation of reasonable alternatives to determine whether the proposed transmission line and its related or supporting facilities may be sited on land other than EFU-zoned land. Then, following an evaluation of reasonable alternatives on non-EFU zoned land, ORS 215.275 establishes a list of factors, of which one must be satisfied, that must be considered to determine whether a utility facility is necessary for public service, and includes standards related to mitigating the impact of the utility on farm uses and farm land.

The proposed facility is evaluated as a "utility facility necessary for public service." The evaluation of "reasonable alternatives" does not require an evaluation of all alternative EFU zoned routes on which the proposed transmission line and its related or supporting facilities could be located. Rather, the certificate holder must consider reasonable alternatives and show that the transmission line and its related or supporting facilities must be sited on EFU-zoned land in order to provide the service. In ASC Exhibit K Section 4.1.1.4, *Non-EFU Alternatives*, the applicant describes consideration of numerous alternative routes, but that unless the route were located almost entirely outside of the state of Oregon, no route could avoid EFU zoned land entirely (displayed in ASC Exhibit K Figure K-3). Reasonable alternative routes on non-EFU zoned land is discussed in greater detail below under the evaluation of the ORS 215.275(2)(b) and (c) factors for locational dependence and lack of available non-resource lands.

Technical and Engineering Feasibility

ORS 215.275(2)(a) requires that, in order to site the proposed facility on EFU zoned land, the applicant demonstrate that the proposed facility must be sited in an EFU zone due to technical and engineering feasibility constraints. The Department interprets this factor as requiring identification of specific technical reasons, such as extreme topographic features, which cannot be overcome but for siting/engineering the proposed facility in EFU zoned land.

In ASC Exhibit K, the applicant indicates that the need for siting the proposed facility in EFU-zoned land was generally not driven by technical or engineering feasibility considerations, but argues that the siting of communication stations, access roads, multi-use areas, pulling and tensioning sites, and station distribution lines were based on technical and engineering considerations.[164] Although the applicant argues that these features should be located on EFU zoned land, due to required proximity to the proposed transmission line, the applicant has not offered sufficient evidence or arguments that demonstrate the required transmission line must be sited on EFU zoned land due to "technological and engineering feasibility" constraints. The applicant did not provide examples or present a discussion of geophysical areas that would present technical or engineering feasibility constraints; as such, the Department recommends that the Council find that the applicant would not satisfy ORS 215.275(2)(a).

Locational Dependence

ORS 215.275(2)(b) requires that, in order to site the proposed facility on EFU zoned land, the applicant demonstrate that the proposed facility must cross EFU zoned land to achieve a reasonably direct route and therefore is locationally dependent.

In ASC Exhibit K, the applicant describes that, after consideration of siting constraints, the proposed transmission route is "the most direct route" to interconnect the Hemingway Substation to a proposed substation in Boardman, Oregon.[165] As demonstrated in ASC Figure K Figure K-3, a large portion of the area between the two points of interconnection is EFU zoned land. Because large areas of EFU zoned lands exist between the two points of interconnection, it would be impossible to construct the proposed facility while avoiding all EFU zoned lands (with the exception that the transmission line would be required to completely bypass Oregon and travel only within Washington and Idaho states). Given that large areas of EFU zoned land exist between the two proposed transmission endpoints, the Department agrees that there would be no reasonably direct route that would allow the applicant to construct the transmission line while also avoiding all impacts to EFU zoned land. As such, the Department recommends that the Council find the associated transmission line is "locationally dependent" and therefore satisfies ORS 215.275(2)(b).

Lack of Available Nonresource Lands

ORS 215.275(2)(c) requires that, in order to site the proposed facility on EFU zoned land, the applicant demonstrate that the proposed facility must be sited on EFU zoned land due to a lack of available urban and nonresource lands.

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[164] B2HAPPDco3-19 ASC 11 Exhibit K Land Use Section 4.1.2.1 2018-09-28.

[165] B2HAPPDco3-19 ASC 11 Exhibit K Land Use Section 4.1.2.2 2018-09-28.

In ASC Exhibit K, the applicant describes that almost the entirety of the land between the two transmission endpoints is "resource" land (i.e. Goal 3 agricultural lands and Goal 4 forest lands), as presented in ASC Exhibit K Figure K-4, with only 1.2 percent of land within the study area represents urban or nonresource lands. The Department agrees with the applicant's review of nonresource lands, which is limited to "reasonable proximity" to the proposed transmission line. As such, the Department recommends that the Council find that the applicant has demonstrated a "lack of available nonresource lands" for which to site the proposed facility and therefore would satisfy ORS 215.275(2)(c).

Availability of Existing Rights-of-Way

ORS 215.275(2)(d) requires that, in order to site the proposed facility on EFU zoned land, the applicant demonstrate that the proposed facility must be sited in EFU zoned land in order to utilize existing rights-of-way.

In ASC Exhibit K, the applicant notes that there was no existing right-of-way extending the entire route between transmission endpoints in a "reasonably direct" route. The applicant describes that it made "reasonable efforts" to locate to the proposed facility in or adjacent to existing federal right-of-way utility corridors such as the BLM Vale District Utility Corridor, the West-wide Energy Corridor, and the Wallowa-Whitman National Forest Utility Corridor; and, further describes that the 35.1 miles of the proposed facility would be located in an existing utility corridor. The applicant provides a map of "utility corridors" in ASC Exhibit K Figure K-5.

The Department acknowledges that the applicant proposed the route to utilize some available right-of-ways, and the proposed route follows an existing utility right-of-way for 35.1 miles. Therefore, the Department recommends Council find that the proposed transmission line would satisfy ORS 215.275(2)(d).

Public Health and Safety

ORS 215.275(1)(e) provides that if the applicant can demonstrate specific health and safety reasons that would require the siting of the utility facility on EFU zoned land, then the applicant meets its regulatory burden under the statute and may site the utility facility on EFU zoned land.

The applicant indicates that siting decisions were "generally not driven" by public health and safety considerations but argues that "certain public health and safety considerations dictated the need to site the multi-use areas in certain EFU lands" as discussed in Section 4.1.2.7. ASC Exhibit K Section 4.1.2.7 relates to the proposed siting of communications stations, access roads, multi-use areas, pulling and tensioning sites, and communication station distribution lines. The applicant does not make a clear argument as to why the proposed transmission line must be sited on EFU zoned land to respond to public health and safety issues; the mere reason that a transmission line would not function without the previously listed related or supporting

facilities is not a sufficient "public health and safety" reason. As such, the Department recommends that the Council find the proposed transmission line is not required to be sited on EFU zoned land to specifically respond to a public health or safety concern and therefore would not satisfy the criteria under ORS 215.275(1)(e).

Other Requirements of State and Federal Agencies

ORS 215.275(1)(f) provides that if the applicant can demonstrate that there are specific requirements imposed by state or federal agencies that would require the siting of the utility facility on EFU zoned land, then the applicant meets its regulatory burden under the statute and may site the utility facility on EFU zoned land.

The applicant states that the proposed transmission line was not proposed on EFU zoned lands due to state or federal requirements; however, the applicant indicates that it considered US Fish and Wildlife Service preferences, EFSC protected areas, and environmentally sensitive areas.[166] While the Department acknowledges that the applicant has proposed the transmission line such that it would be consistent with the siting constraints imposed by these areas, and that the applicant has attempted to utilize utility corridors, the applicant did not specifically identify state or federal requirements other than the arguments already presented above in the *locational dependence* and *lack of available nonresource lands* sections. As such, the Department recommends that the Council find the proposed transmission line is not required to be sited on EFU zoned land to comply with additional state or federal requirements and therefore would not satisfy the criteria under ORS 215.275(1)(f).

Costs

Under ORS 215.275(3), cost may be a consideration associated with any of the factors listed in subsection (2) but that it may not be the only consideration. As explained in ASC Exhibit B and in the siting studies, the applicant considered numerous factors in determining the proposed route. Consequently, based on the applicant's analysis, the Department recommends that the Council find that cost is not the only consideration associated with any of the ORS 215.275(2) factors and the facility complies with ORS 215.275(3).

Under ORS 215.275(4), the owners of a utility facility must be responsible for restoring, as nearly as possible, to its former condition, any agricultural land and associated improvements that are damaged or otherwise disturbed. The applicant has prepared an Agricultural Lands Assessment (Attachment K-1 of this order), which describes the current agricultural uses within the analysis area and analyzes impacts of the proposed transmission line on those uses. Most of the impacts would be temporary; however, impacts on certain portions of agricultural crops

[166] B2HAPPDoc3-19 ASC 11 Exhibit K Land Use Attachment K-1, Section 4.1.2.6. 2018-09-28.

would extend through the life of the transmission line [167] ASC Exhibit K, Table K-2 depicts the acres of temporary and permanent impacts to agricultural lands, compared to the total acreage of agricultural lands for each county.[168]

The applicant further explains that, as proposed in the Agricultural Land Assessment, land used during construction of the transmission line would be restored, as nearly as possible, to former productivity. Where permissible, crop reestablishment and crop production would be expected following construction. Structures (drainage systems, irrigation systems, fences, etc.) would be repaired, or landowners would be compensated to make repairs. Damage to crops and other crop losses due to construction of the transmission line would be assessed, and compensation paid at fair market rates. Specific construction practices would be implemented to mitigate construction impacts on soil productivity. A post-construction monitoring plan would identify remaining soil and agricultural impacts associated with construction that require additional mitigation. The applicant proposes to implement follow-up mitigation as necessary. The department agrees that adherence to the construction plan and Agricultural Lands Assessment would identify, minimize, and mitigate impacts to agricultural land. Specific measures to minimize and mitigate agricultural impacts in each County, and recommended conditions to ensure compliance with those measures, are discussed below in the evaluation of compliance with each County's land use criteria. In addition, the applicant has provided restoration plans in ASC Exhibit W, and the Department recommends conditions of approval to ensure site restoration is completed consistent with the requirements of the Council's standards.

ORS 215.275(5) requires that the reviewing body impose clear and objective conditions of approval on the application to mitigate the impacts. The Agricultural Lands Assessment proposes specific measures to avoid, mitigate, and minimize impacts to agricultural practices and uses on lands within the site boundary. These measures are based upon the assessment of all agricultural crops and practices on lands within the analysis area of the Agricultural Lands Assessment and are similar to the restoration measures described above. The Department agrees that compliance with these measures would "prevent a significant change in accepted farm practices or increase in the cost of farm practices on surrounding farmlands" as required under ORS 215.275(5). To ensure compliance with the Agricultural Lands Assessment, the applicant proposes and the Department recommends that the Council adopt the following site certificate condition:

Recommended Land Use Condition 14: The certificate holder shall:

a. Prior to construction of any phase or segment of the facility, the certificate holder submit to the Department a final Agricultural Assessment and Mitigation Plan (based on

[167] B2HAPPDoc3-19 ASC 11 Exhibit K Land Use, page K-27. As explained in the Agricultural Lands Assessment, Attachment K-1, the applicant expects minimal disturbance to agricultural lands during operation of the transmission line. 2018-09-28.

[168] B2HAPPDoc3-19 ASC 11 Exhibit K Land Use P. K-28. 2018-09-28.

the draft plan included as Attachment K-1 of the *Final Order on the ASC*) for review and approval, in consultation with Morrow, Umatilla, Union, Baker and Malheur counties.

b. During construction of any phase or segment of the facility, the certificate holder shall implement the mitigation, monitoring and reporting measures as detailed in the final Agricultural Assessment and Mitigation Plan.

EFU Zoned Land Restoration

ORS 215.275(3) provides that the owner of a utility facility shall be responsible for the restoration of agricultural lands to their former condition. The applicant's Agricultural Mitigation Plan is discussed with the ORS 215.296 compliance section this section of the draft proposed order; the applicant's required facility retirement obligations are discussed in Section *IV.G., Retirement and Financial Assurance.* The applicant is required to minimize impacts to farming practices; the applicant must restore lands to a useful, nonhazardous condition and; the applicant must maintain a bond or letter of credit in the unlikely scenario that a third party would be required to decommission the facility and return lands to a pre-construction condition. As such, the applicant has provided the relevant information and the conditions contained within Section *IV.G., Retirement and Financial Assurance* would ensure that the applicant restores agricultural lands.

215.275 Conclusion

As noted above, the applicant is required to meet one of the factors provided in subsection (1) to demonstrate compliance with ORS 215.275. The Department recommends that the Council find that the proposed facility is "locationally dependent" and that the applicant demonstrated that there is a "lack of available urban or nonresource lands" for which to site the proposed facility. Therefore, the Department recommends Council find that the proposed facility would satisfy two of the factors set forth in subsection (1) and therefore demonstrates that the utility facility must be sited on EFU zoned land.

ORS 215.296 states:

> *A use allowed under ORS 215.213 (Uses permitted in exclusive farm use zones in counties that adopted marginal lands system prior to 1993) (2) or (11) or 215.283 (Uses permitted in exclusive farm use zones in nonmarginal lands counties) (2) or (4) may be approved only where the local governing body or its designee finds that the use will not:*
>
> *i. Force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use; and*
> *ii. Significantly increase the cost of accepted farm or forest practices on surrounding lands devoted to farm or forest use."*

ORS 215.296(1) requires that the local governing body or its designate (in this instance the Council) may approve a use permitted under ORS 215.283(2) only when it determines that the use: "(a) Will not force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use; and (b) Will not significantly increase the cost of accepted farm or forest practices on surrounding lands devoted to farm or forest use."

ORS 215.296, which is mirrored in applicable county zoning provisions presented in this order, establishes approval standards for all conditional uses within EFU zoned land and requires the Council to find that the conditional use would not force a significant change in, or significantly increase the cost of, accepted farm or forest practices on surrounding lands. While there are forest practices employed on surrounding lands in Umatilla and Union counties, the underlying land use zone in these counties is Grazing Farm and Timber Grazing, respectively, and not EFU. Therefore, the analysis focuses on potential impacts to farm practices and the cost of farm practices on surrounding lands in EFU zone.

The applicant describes agricultural land as lands that are annually cultivated or rotated and used in the production of crops; land in perennial field crops, orchards, or vineyards; land used for small fruit, nursery crops, greenhouses, or Christmas trees; improved pasture/range and hayfields; land in the CRP; and previously cultivated land in government-sponsored environmental or conservation programs, not including land converted to wetlands. Cropland includes all agricultural land except land used for pasture/range.

Accepted Farm Practices on Surrounding Lands

As provided in ASC Exhibit K Attachment K-1, the applicant assessed accepted farm practices within and extending 500-feet of the site boundary (Agricultural Assessment Area) in EFU zoned lands in Morrow, Umatilla, Union, Baker, and Malheur counties. The applicant's methodology for assessing accepted agricultural practices included mapping using aerial imagery from the 2014 and 2015 National Agriculture Imagery Program and 2016 Google Earth. Using aerial imagery mapping, lands were then visually surveyed from public roads for confirmation of farm practices. Customized data collection allowed for the recordation of field sites, crop types, and irrigation practices. The applicant also, in 2011, conducted an online survey requesting landowner feedback on agricultural practices; the applicant contacted 344 landowners of parcels that would be crossed by the proposed facility. Of the 344 landowners contacted, 211 responded to the survey (61.3 percent). The survey data was compiled and separated into four datasets including (1) individual parcels; (2) county boundaries; (3) field / land use boundaries and (4) Agricultural Assessment Area. Additional information on the assessment methodology is provided in ASC Exhibit K Attachment K-1 Sections 2.1 through 2.6.

Surrounding EFU zoned lands include both irrigated and non-irrigated agriculture. Most of the agricultural lands within the Agricultural Assessment Area can be considered suitable for the production of field crops. Field crops include a variety of different crop types, and production techniques vary somewhat between each crop. Field crops include all plants grown for

agricultural purposes in cultivated fields but do not include orchards, Christmas trees, vineyards, or nursery stock. The most common perennial field crops grown within the Agricultural Assessment Area are field seed and grass seed crops (multiple types), wheat, and alfalfa hay. Crops and uses within non-irrigated agriculture lands includes: rangeland; rangeland timber; wheat; Conservation Reserve Program (CRP); fallow; road/transport ROW; pasture; livestock; and, river/stream ROW.

Accepted farm practices for establishing field crops include weed control; field preparation including mowing or chopping using a plow, disc, field chisel, or harrow; seed bed preparation; fertilization using ground-based equipment, a broadcast spreader, aerially, during seed application, or by injection through irrigation lines; herbicide application; and, seeding or planting using a seed drill of the crop.

Weeds, insects, plant diseases, and rodents are controlled as necessary with the use of agricultural chemicals. Row crops are cultivated to remove weeds from between plant rows. Additional fertilizer may be applied to increase crop production. Certain crops are supplemented with irrigation water pumped from a well or nearby waterbody, generally through an underground mainline. Sprinklers attached to the mainline deliver water to the crops during dry summer growing periods. Sprinkler types vary by region and crop type, but the most common types used within the Agricultural Assessment Area are center-pivot and side-roll (wheel-line) lines. Center-pivot irrigation lines propel themselves automatically in a circular pattern around the field and result in a round field (crop circle). Side-roll or wheel-line irrigation systems are generally moved mechanically with the assistance of an operator. Other irrigation methods used within the Agricultural Assessment Area are hose/pipe and sprinkler type, drip-irrigation, and flood irrigation. Impacts to irrigated lands are discussed in Section 5.0, Potential Impacts to Irrigated Lands.

Field crops are generally harvested from May to late fall, depending on the crop and annual weather conditions. Certain crops, such as alfalfa hay, may be harvested several times during the summer. Other field crops such as wheat, grass seed, and vegetables are harvested once annually. Corn may be harvested as late as December or January depending on soil moisture levels. Cereal grain crops, including wheat, oats, and barley, are harvested directly when the grain is mature and are harvested from standing plants with a self-propelled field combine. In eastern Oregon, wheat is most commonly planted in the fall and harvested in late summer to early fall. Most dryland wheat fields are only farmed every other year, and the field is allowed to lie fallow for one crop season between plantings to help increase soil moisture. Occasionally, back-to back crops are grown when conditions or market demand are appropriate. Some farmers use a “no-till” method where the field is sprayed with an herbicide following harvest. Crop stubble is left on the field during periods when the field is fallow. This term is commonly referred to as “chem-fallow.”

Grass seed is swathed into rows at maturity and allowed to dry until the seed is sufficiently dry for safe storage. Self-propelled combines pick up the rows of cut plant material and separate

the seed from the straw. The harvested seed is transferred to a nearby truck and hauled to a seed processing and storage facility. After harvest, the straw remaining in the field is baled or burned, depending on seed type. Some grass seed fields are sanitized by propane flaming with a propane-fueled burner that is pulled slowly over the field.

Forage crops such as alfalfa hay, grass hay, and silage are harvested at a time when forage nutritional quality and crop yields are both relatively high. Hay crops are swathed by cutting the plants close to ground level and placing the material into windrows. The windrows are allowed to dry and then picked up and baled using a baling machine that is towed behind a tractor when the crop is sufficiently dry. If moisture is high, windrows may be turned and fluffed using a hay rake. If moisture levels become too low, baling may need to occur at night when dew is present.

Bales are picked up mechanically or by hand and moved to a storage facility. After harvest, alfalfa fields are usually irrigated to stimulate growth for the next cutting. Vegetable crops are harvested at maturity by hand or with specialized mechanical equipment. Certain crops are rotated with other crops on a regular basis to increase soil fertility and to prevent establishment of certain pests and diseases. For instance, in potato cropping rotations, a crop of mustard may be grown and incorporated into the soil to suppress nematodes, weeds, and soil-borne fungal pathogens. Many farmers now use a GPS on farm equipment to increase efficiency and to avoid over or under coverage of seed, herbicide, and other chemicals.

Crop types within irrigated agriculture land include: field crops; wheat; Christmas trees/woody crops; alfalfa hay; fallow; and, irrigated pasture.[169] Specific agricultural practices for these crop types is summarized below:

Alfalfa hay: the agricultural lands assessment indicates that application of herbicides are generally only applied once per year. Otherwise, acceptable farm practices include measures aimed to minimize leaf and root disease. These measures include removing infested plant debris from farm equipment, mowing dry plants, rotating non-legume plants for two or more years, and avoiding excessive irrigation.

Onions: Onions are considered higher cost production because of its water requirements and susceptibility to pests. Onions are generally harvested through the use of a harvesting machine.

[169] The applicant noted that some of the landowners have land currently under contract with U.S. Department of Agriculture reserve programs including the Farm Service Agency's CRP, Natural Resources Conservation Service Grassland Reserve Program, and the Wetland Reserve Program. These lands are not currently used for agriculture, but would potentially be converted to agricultural use in the future if not maintained under contract in reserve programs. The Food, Conservation and Energy Act limits the disclosure of information of individual landowners participating in the CRP program; using aerial imagery ranging from 1996 through 2014, the applicant determined whether lands underwent tilling, crop cycling, or harvest.

Berries: Berry crops include blueberries, strawberries, marionberries, blackberries, and raspberries. Berry fields are "sometimes" fumigated to control pests.

Canola: Canola may be cultivated under dryland or irrigated conditions; seeds are planted with a conventional grain drill and tilled into the field. Canola is generally planted in mid-august or springtime.

Livestock: Cows are generally bred in late spring. During wintertime, pastures generally do not provide adequate grazing and supplemental feed and shelter are often required. Sheep are generally raised in pasture and bred in fall; lambs are born in the winter.

Pasture / Rangeland: some pastures are used annually, but soils that become excessively wet or snow covered may be difficult to utilize. Pasture areas include areas of natural grass, seeded grass, or grass and clover combinations. In eastern Oregon, livestock are generally allowed to range freely across large tracts of land. In well managed pasture areas, livestock are allowed to graze pasture plants to a certain height, and livestock are rotated between pastures to allow plants to recover before the next grazing period.

Potential Impacts to Accepted Farm Practices

Potential impacts to accepted farm practices would primarily be temporary disturbance resulting from construction activities, but would also result in permanent and indirect impacts. The applicant describes indirect impacts as growth-inducing impacts such as changes in the pattern of land use, population density or growth rate, and the related effects of those changes on agriculture. As presented in ASC Exhibit K Attachment K-1 Tables 5-1 through 5-8, temporary work sites and areas used during construction including multi-use areas, light duty fly yards, pulling and tensioning sites, and structure work areas would temporarily disturb approximately 3,684 acres of agricultural land. Placement of transmission towers and access roads within agricultural land would permanently disturb approximately 860 acres.[170]

Direct temporary impacts to crops would occur during the construction phase. Direct temporary impacts to field crops would arise from construction dust, damage to standing crops, temporary access restrictions to farm equipment or livestock, temporary disruptions of irrigation equipment, and disruptions to farm practices such as harvesting, field preparation, spraying, and fertilization.

The presence of the transmission towers and transmission line is expected to result in an increase in farming costs, which may be "one-time" costs as well as recurring costs. "One time"

[170] B2HAPP Attachment K-1 Agricultural Lands Assessment, Table 5-8. The Department notes that Table 5-8 presents 20 acres for the Longhorn Station. However, while the proposed Longhorn Station would be located in an area within existing agricultural use, the underlying land use designation is LI zone. The evaluation under ORS 215.283, 215.275, and 215.296 is specific to EFU and Agriculture-Grazing.

costs depend on the crops grown and the month that construction begins in the relevant area. Recurring costs will arise through loss of crops in tower footprint or access roads, as well as from to added difficulty in traversing land around the towers. Furthermore, many crops such as potatoes, onions, and corn require the use of large equipment; some equipment requires up to 40 feet on both ends to allow for ample maneuvering. Thus, some crops may be more difficult to cultivate if they are located near transmission towers.[171]

Permanent direct impacts to crops would occur during the operations phase, although the applicant represents that most types of agricultural operations would resume after construction is complete. Although the applicant indicates that it does not expect transmission towers to limit the type of field crops that may be cultivated directly below a tower, the presence of transmission towers would result in some impacts to agricultural practices. For instance, use of equipment taller than 15 feet would be restricted under transmission towers, and field burning would not be allowed within the right-of-way. Additional permanent impacts to agricultural land include the loss of farmable land dues to the presence of access roads or transmission towers, loss of farmable acreage due to indirect impacts such as equipment maneuverability, damage to drainage systems, a restricted range of irrigation systems, soil erosion, distribution of noxious weeds, movement of soil-borne pathogens, vehicle dust, restrictions on type of crop that may be farmed, safety issues, and yield loss due to water restrictions. As described in Attachment K-1, construction would affect livestock access to certain areas of the property, helicopter use could damage crops, noise levels could impact livestock, and destructive plant diseases or insect outbreaks may affect the aerial application of chemicals. Some of these impacts are discussed in further detail below.

The aerial application of chemicals through helicopter or airplane use would be affected by the proposed facility. Some crops require the application of chemicals five to six times per year; the applicant indicates that transmission towers would affect areas directly beneath the transmission line, and may affect other areas of agricultural property depending on factors such as tower orientation and wind direction. Specifically, aerial application of chemicals may be useful to avoid soil damage if the soils are wet, or if crops are close to maturity and the use of heavy equipment could damage crop quality. In an effort to reduce risk to aerial applicators, the applicant represents that guy wires would not be attached to transmission towers. Nevertheless, a “safe distance” between the aircraft and transmission towers must be maintained, which may result in “less than optimal” coverage or application rate. Increased costs could arise from its reduced ability to utilize aerial applications, which include costs associated with acquiring specialized equipment, chemicals, and increased labor costs. The applicant represents that the project would not meaningfully impact drone use.

Although the applicant represents that field burning of grass seed crops has declined during the past two decades, it acknowledges that field burning has served purposes such as to clear crop residue remaining after harvest, control disease and weeds, stimulate yield, and to recycle

[171] B2HAPPDoc3-19 ASC 11 Exhibit K Land Use Attachment K-1 Agricultural Lands Assessment, p. 34. 2018-09-28.

nutrients into the soil. The applicant states that field burning would not be allowed within a 150 foot wide strip directly beneath the lines, so as to protect the lines and to reduce the possibility that smoke would impact the lines. The applicant acknowledges that the presence of transmission lines increases the cost of burning, and that "no-burn" areas are not as productive.[172] The applicant represents that no suitable alternative to burning exists (specifically, in relation to grass seed agriculture), and that some landowners have preferred to switch crops in affected areas.

The applicant indicates that approximately 104 of the 993 parcels within the site boundary are irrigated; 889 parcels are non-irrigated.[173] Twenty-six of the proposed 1,461 towers are proposed to be sited within an irrigated portion of an agricultural field.

The applicant indicates that the presence of transmission towers would affect mechanical irrigation, and the severity of impacts would depend on the type of irrigation system that is utilized. Production costs increase as farmers are required to divert equipment around structures or make additional passes; some landowners may choose to skip irrigating some acreage. Circular pivot irrigation is designed to complete an entire circle on a "permanent basis;" application imbalance may occur if a transmission line is placed within a crop circle. The placement of a transmission tower within a center-pivot style irrigated system would require the irrigation line to stop and reverse direction when it reaches the tower, which results in a "pie shaped" wedge that is not farmable. Figure 5-2 of Attachment K-1 (displayed at right) shows an aerial photograph of the reduced farmable acreage if a transmission line is sited within an irrigated circle. If a tower is placed within an area that is irrigated through a "wheel-line" system, then the irrigation line must be partially disassembled, moved around the tower, and reassembled for continued operation.

The applicant attests that "extraordinary effort" was utilized in proposing transmission towers that would avoid irrigated areas. A review of the maps provided within Attachment K-1 confirm that many towers are proposed at the edge of irrigated areas, in an effort to reduce impacts to irrigation techniques. Maps 1 and 2 (portions displayed below) of Attachment K-2 demonstrate how the proposed placement of tower would reduce agricultural impact.

Potential Impacts to Cost of Accepted Farm Practices

Potential impacts to the cost of accepted farm practices from construction and operation of the proposed facility include: a one-time costs to landowners, such as physical disturbance arising from the construction areas and roadways; annual costs, such as costs associated with weed control around towers and increased costs associated with farming around tower equipment;

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[172] B2HAPPDoc3-19 ASC 11 Exhibit K Land Use Attachment K-1 Agricultural Lands Assessment, p. 24. 2018-09-28
[173] B2HAPPDoc3-19 ASC 11 Exhibit K Land Use Attachment K-1 Agricultural Lands Assessment, p. 26. 2018-09-28

costs associated with land removed from production (other than areas containing a transmission tower), such as roadways or areas that are not readily irrigated due to field obstructions; costs associated with the disruption of a CRP program and; (5) costs associated with re-organizing irrigation systems.[174]

Mitigation Measures to Reduce Potential Impacts to, and Costs of, Accepted Farm Practices

As noted above, the applicant's proposed route attempts to minimize impacts to irrigation equipment, and the applicant has attempted to site towers along agricultural field boundaries when feasible. The applicant would negotiate with landowners to ameliorate impacts relating to the placement of a transmission tower; when the preliminary design is complete, landowners will have an opportunity to review the proposed tower locations. Landowners would be consulted relating to the timing of the construction schedule, which would allow landowners to alter crop practices to minimize the potential to soil damage. Landowners would likewise be consulted relating to the use of helicopters, and the applicant would minimize helicopter use in areas where tall crops are sensitive to rotor blow, and the applicant would site fly yards in areas free from tall agricultural crops.

The placement of towers could also damage agricultural drainage tiles, which are used to control the water table to ensure that crops are not saturated in water. The applicant would probe subsurface areas to determine the location of drainage tiles and would repair damage that occurs to tiles from the probe. Likewise, any tiles damaged from construction related activities would be repaired. The landowner may also repair drainage tiles, and the applicant would provide a negotiated settlement to the landowner. Additionally, the applicant would restrict the operation of vehicles and heavy equipment to minimize deep rutting, which could damage tiles.

Relating to soils, the applicant represents that agricultural land that is compacted by construction equipment will be restored to its original condition using tillage equipment; rutted land will be restored to its pre-construction condition as practicable. Topsoil removed would be stored separately, and replaced after the cessation of construction. Otherwise, the applicant must comply with reseeding efforts described in the Vegetation Management Plan in Exhibit P of the ASC; must control excessive dust and; must implement stormwater and erosion control best management practices.

Relating to weed control, the applicant will assume responsibility for weed control in areas where it maintains control of the land, such as areas that contain towers, access roads, or substations. Herbicide application will be conducted through a state licensed contractor. To prevent the introduction of new weeds, contractors must clean construction equipment with high-pressure washing equipment prior to moving the equipment to the construction. Otherwise, equipment would be cleaned periodically.

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[174] B2HAPPDoc3-19 ASC 11 Exhibit K Land Use Attachment K-1 Agricultural Lands Assessment, p. 35. 2018-09-28.

If construction activities impact a spray irrigation system, the applicant would determine an acceptable amount of time that a spray system service may be interrupted (after discussions with the landowner); the maximum amount of time that construction would interrupt an irrigation system would be 24 hours unless otherwise agreed upon by the landowner. Temporary measures will be implemented to allow for the partial use of an irrigation system during construction operations. Damaged irrigation lines would be repaired by the applicant. Lastly, the applicant represents that it would reach an agreement with the relevant landowner relating to preferred ingress and egress routes, as well as an agreement relating to the final location of temporary roads used for construction. Efforts will be made to maximize the use of existing roadways and farm lanes. Based on the evaluation presented in ASC Exhibit K and reasoning and analysis presented in this order, and compliance with recommended Land Use Condition 14, the Department recommends Council find that the proposed facility would not result in significant adverse impacts to accepted farm practices nor result in a significant increase in the cost of accepted farm practices within the surrounding area and therefore would satisfy the requirements of ORS 215.296.

IV.E.2.2. ORS 772.210 and OAR 660-006-0025 (Forest Zone Requirements)

The Oregon Land Conservation and Development Department (LCDC) implemented rules in OAR 660 Division 6 which apply to proposed uses within forest zones. In circumstances where a county has not adopted LCDC rules into applicable code provisions, the LCDC rules apply directly. Authorized uses and conditional requirements pursuant to OAR 660 Division 6 are presented below.

<u>OAR 660-006-0025(4): Uses Authorized in Forest Zones</u>

> *The following uses may be allowed on forest lands subject to the review standards in section (5) of this rule: . . .*
>
> *(q) New electric transmission lines with right of way widths of up to 100 feet as specified in ORS 772.210. . . .*

OAR 660-006-0025(4)(q) establishes conditional uses authorized in forest zoned lands and includes new electric transmission lines with right-of-way widths up to 100 feet as specified in ORS 772.210, which is a statute establishing condemnation rights for transmission lines in forest lands. OAR 660-006-0025(4)(q) and ORS 772.210 must be evaluated together and interpreted consistently.

OAR 660-006-0025(4)(q) references transmission lines within a 100-foot right-of-way as a conditional use authorized in forest zoned land; ORS 772.210 establishes that for new transmission lines with voltage rated at 330 kV or above, an applicant has condemnation rights on lands *not to exceed* 300 feet in width [Emphasis added]. ORS 772.210 then establishes that, for lands not exceeding 100 feet on either side of the 100 foot corridor, condemnation is

limited to trees. The Department recommends Council find that rule and statute authorize condemnation of a transmission line corridor not to exceed 300-feet, but that proposed facility structures are limited to a 100-foot right-of-way, and that the additional area within the right-of-way corridor (100-feet on either side of the transmission line right-of-way) is limited to vegetative maintenance.

The applicant first argues that interpretation of rule and statute authorizes a right-of-way width of 500-feet (300-feet for structures, plus 100-feet on either side for vegetative maintenance), and then secondarily argues that rule and statute authorize a right-of-way width of 300-feet (100-feet for transmission line structures, plus 100-feet on either side for vegetative maintenance but with no limitation on placement of potential non-transmission line structures (e.g. roads, laydown areas)), which based on the above interpretation, the Department disagrees.

Nonetheless, the applicant proposes a 500 kV transmission line within a 300-foot right-of-way, mostly consistent with the Department's interpretation, but suggests that the 100-feet on either side of the transmission line right-of-way not be limited to vegetative maintenance, which the Department disagrees. Based on recommended Land Use Condition 15 below, the Department recommends Council find that the proposed facility would qualify as a conditional use in forest zoned lands under OAR 660-006-0025(4)(q):

> **Recommended Land Use Condition 15:** The certificate holder shall limit its transmission line right-of-way in Goal 4 forest lands to no wider than 300 feet.
>
> a. During construction, the certificate holder shall limit its use of the portion of the transmission line right-of-way located beyond the center 100 feet to vegetation maintenance activities.
> b. During operation, the certificate holder shall limit its use of the portion of the transmission line right-of-way located beyond the center 100 feet to vegetation maintenance activities.

The applicable conditional use requirements pursuant to OAR 660-006-0025(5) are evaluated below.

<u>OAR 660-006-0025(5): Uses Authorized in Forest Zones</u>

> *A use authorized by section (4) of this rule 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:*
>
> *(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;*

OAR 660-006-0025(5)(a) establishes requirements for conditional uses authorized in forest zoned land and requires the Council to find that the proposed use will not force a significant change or significantly increase the cost of accepted forest practices on forest lands.[175]

To identify accepted forest practices within surrounding forest lands, the applicant reviewed aerial photos from the 2013 National Agriculture Imagery Program (NAIP), conducted a ground survey, and mailed surveys to the owners of the forested parcels within the analysis area. Of the 60 landowners of parcels that contain forest land, 19 responded; the applicant reviewed the responses to confirm the results of field surveys and GIS imagery surveys.

Based on the applicant's review, forest practices within surrounding lands include long-term forest management for sawtimber, pole-sized trees, and reproduction. Potential impacts to these accepted forest practices include right-of-way clearing; road construction, repair and use; and, slash abatement.

Proposed Mitigation for Potential Impacts to Accepted Forest Practices

The applicant represents that it would implement logging best management practices, including seasonal restrictions, wildlife habitat restrictions, and riparian restrictions.

Relating to seasonal restrictions, the applicant states that it may restrict the hours of operations during fire season, and that it may require water trailers on site, fire watches after operations, and may restrict "spark emitting operations." The applicant also represents that it may implement restrictions during "freeze-thaw" conditions that could arise during the spring. During a spring thaw, use of roads would cause significant damage and reconstruction cost; however, the applicant represents that the duration of spring thaws are generally short.

Relating to wildlife habitat restrictions, the applicant represents that proposed Fish and Wildlife Conditions adequately mitigate potential harm to fish and wildlife habitat. The Department recommends that the Council adopt these Conditions in Section IV.H *Fish and Wildlife Habitat* of this draft proposed order. These conditions require, in pertinent part, the restriction of ground disturbing activities within elk or mule deer range between December 1 and March 31; the restriction of ground disturbing activities within certain areas around nesting bird species and during specific spring months; that biological surveys occur during avian migratory season, and that the applicant submit mitigation protocols for approval to the Department, which describes actions that would be implemented to avoid harming non-raptor bird species and their nests; that mitigation protocols be submitted if a state sensitive bat species is observed during biological surveys, which must describe actions that would be implemented to avoid the harm to relevant bat species and bat roosts; that construction be restricted in areas that

[175] OAR 660-006-0025(5)(a) also requires a finding that the proposed use would not force a significant change in accepted farm practices on adjacent lands used for agriculture, which is addressed under the ORS 215.296 evaluation of this order.

include state protected plant species, wetlands and waterways, areas of seasonal restriction, and category 1 habitat; that the applicant drive 25 hours per mile or fewer on access roads and; that construction work be compliant with the final Vegetation Management Plan.

Relating to riparian restrictions, the applicant represents that, in some instances, it may not be possible to maintain timber in steam buffers along powerline corridors if trees do not meet minimum clearance requirements; coniferous trees could be trimmed, however "crown reduction" of deciduous trees is not recommended. Additionally, the applicant represents that slash debris within stream buffers would be removed to prevent the smothering of shrubs, grass, and forb species.

Areas within the project boundary would be properly marked by flags to minimize the potential that trees could be inappropriately logged. Areas that would be flagged include: property lines, road centerlines, right-of-way corridor (clearing limits), critical area delineation, log landing delineation, and "off right-of-way" hazard tree designation.

Logging operations would require the use of hazardous materials such as motor fuel, hydraulic oil, and lubricants; these fluids could potentially leak during equipment operations or during refueling, repair, or maintenance. However, the applicant acknowledges that it would abide by ODF regulations regarding hazardous materials, including OAR Chapter 629, Division 620.

Herbicides would be used during logging operations. The right-of-way would be tailored to encourage growth of low growing plant species. Deciduous tree stumps would be treated with an herbicide to prevent re-sprouting; within 10 feet of a stream or other water source, the applicant would use Garlon 3A mixed with 50 percent herbicide with water and applied to the cambial region of the stump. In addition, herbicide would be applied to manage foliage.

Logging operations must abide by forest fire control rules prescribed by OAR 629-044-0200. In pertinent part, the applicant must observe fire precaution levels and it may also be required to institute a fire watch. The applicant must treat slash debris in a manner that minimizes fire risk, and as noted within this section, the applicant must also file a "smoke management plan" and obtain a burn permit to burn slash.

The applicant represents that it would protect existing access roads through road maintenance in accordance with Best Management Practices as detailed in *The Forest Practices Notes* (No. 4, 1999- ODF), and that the applicant would leave the road in as good or better of a condition as it was prior to use. Post-harvest betterment may include actions such as the cleaning of ditches and culverts, grading to eliminate potholes, improving surface drainage, assisting in the melting of snow and ice and drying of the surface, and moving road shoulders to improve visibility and safety.

Loggers must abide by Oregon Occupational Safety and Health Administration provisions, OAR Chapter 437 Division 7; the applicant must develop a logging safety plan and; in areas where

the corridor crosses electrical distribution or transmission facilities, operations must be compliant with OAR 437-007-0230 and OSHA 1910.266 and 1910.269, which relate to powerline safety.

Potential Impacts to Accepted Forest Practices

Forest lands exist within Umatilla and Union Counties. In Umatilla County, approximately 715,000 acres (35 percent) of the 2,058,000 acres is forest land. In Union County, approximately 899,000 acres (69 percent) of the 1,303,000 acres is forest land. The project would convert 245.6 acres and 530.1 acres of forestland, respectively, which would result in losses of 0.0034 percent and 0.00059 percent of the forest lands, respectively. Forest land losses through project construction and operation could still be productive as agricultural or rangeland. The applicant estimates that the economic impact to forest sector jobs in Umatilla County is valued at approximately $120,000, and the economic impact to forest sector jobs in Union County is valued at approximately $97,000; as noted earlier, these economic losses would be partially offset by agriculture or range use after conversion.

The applicant represents that roads present the highest risk of erosion potential; road construction and maintenance is regulated by either the Oregon Department of Forestry or the US Fish and Wildlife service rules.

Recommended Land Use Condition 16: The certificate holder shall:

a. Prior to construction, finalize and submit to the Department for its approval, a final Right-of-Way Clearing Assessment. The protected 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.

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).

(b) The proposed use will not significantly increase fire hazard or significantly increase fire suppression costs or significantly increase risks to fire suppression personnel; and

OAR 660-006-0025(5)(b) establishes requirements for conditional uses authorized in forest zoned land and requires the Council to find that the proposed use will not significantly increase fire hazard, significantly increase fire suppression costs, or significantly increase risks to fire suppression personnel.

Proposed facility components in Umatilla and Union counties located within forest-zoned land include approximately:

- 42 miles of 500 kV transmission line (9.9 miles in Umatilla County; 32.1 miles in Union County)
- 37.5 miles of substantially modified roads (8 miles in Umatilla County; 29.5 miles in Union County)
- 17.4 miles of new roads (4.3 miles in Umatilla County; 13.1 miles in Union County)
- 2 light-duty fly yards (Umatilla County)
- 1 communication station (Union County

Construction activities would include right-of-way clearing; road construction, repair, and use; and slash abatement. Right-of-way clearing would include timber felling, using mechanical machines or hand-falling; ground based logging; and cable-based logging systems. Road construction, repair and use would be completed in adherence to Oregon Forest Practices Act road construction standards. Trees logged during right-of-way clearing and road construction, referred to as slash, would be piled and burned, masticated using a mower, or lop and scattered, as further described in Attachment K-2, Right of Way Clearing Assessment, of this order. Maintenance activities during operations would include vegetative maintenance.

Potential wildfire risk from the above-described construction and operational activities and the applicant's proposed measures to reduce potential wildfire risk are discussed in ASC Exhibits K – Land Use, P – Fish and Wildlife, U – Public Services, and BB – Forest Practices Act. As described in these sections, potential construction related wildfire risk could result from operation of construction vehicles and equipment; refueling; welding activities necessary to repair equipment; and workers smoking. Additionally, clearing of vegetation and resulting soil disturbance during construction could create optimal conditions for the establishment of invasive-plant species, which could result in changes in fire regime increasing the frequency and severity of fires.[176] Potential operational related wildfire risk could result from siting the proposed facility in forest lands where, wildfire risks increase if a tree were to fall on the transmission line; overgrown vegetation; equipment failure; or from unauthorized users of new roads constructed for the proposed facility.

During construction, the applicant proposes to minimize potential increases in wildfire risk by implementing a Fire Prevention and Suppression Plan, to be reviewed and approved by the Department and affected counties. The draft Fire Prevention and Suppression Plan requires: fire prevention and response worker training; designated smoking areas; construction equipment be equipped with federally-approved spark arresters; and restriction of motorized equipment, including worker transportation vehicles, within designated and approved work limits.

[176] B2HAPPDoc3-25 ASC 16A_Exhibit P1_Wildlife_ASC_Part 1. 2018-09-28.

The draft Fire Prevention and Suppression Plan also establishes response procedures in the event of a fire, including:

- Site personnel would aid in extinguishing a fire ignition before it gets out of control and take action that a prudent person would take to control the fire while still accounting for their own and others safety.
- Immediately notify the nearest fire-suppression agency of the fire location, action taken, and status.
- Immediately notify the construction contractor and applicant of the fire location and action taken.
- Relinquish fire-suppression activities to agency fire-management officers upon their arrival.

The draft Fire Prevention and Suppression Plan also establishes that on-site earthmoving equipment could be used to combat any fires that occur and that could be used to assist local fire departments and districts and that trucks with water holding tanks would be on-site during construction so water would be in the immediate vicinity to be used to combat any fire that may ignite. As further described in Section IV.M. *Public Services* of this order, the applicant would be required to submit to the Department and affected counties, for review and approval, a final Fire Prevention and Suppression Plan.

During operations, the applicant proposes to minimize potential wildfire risk in forested lands from danger trees and overgrown vegetation by implementing a Vegetation Management Plan designed to comply 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), and the North American Electric Reliability Council's (NERC) Standard FAC-003-3 Transmission Vegetation Management Program (TVMP).[177]

The applicant proposes to minimize potential wildfire risk in forested lands from potential equipment failure through adherence to Public Utility Commission of Oregon (OPUC) Construction Standards and National Electric Safety Code requirements pertaining to the prevention of fire hazards related to outdoor public utility installations. In addition, transmission line protection and control systems would be incorporated into the system designed to detect faults (such as arcing from debris contacting the line) and would rapidly shut off power flow (in 1/60th to 3/60th of a second) if arcing is detected.

The applicant proposes to minimize potential wildlife risk in forested lands by strategic installation of new gates on new and substantially modified access roads, as identified in the

[177] B2HAPPDoc3-25 ASC 16A_Exhibit P1_Wildlife_ASC_Part 1_Main thru Attach P1-6 rev 2018-09-28, Attachment P1-4 p. 4.

Road Classification Guide and Access Control Plan provided as Attachment B-5 to this order, to minimize wildfire risks from unauthorized use.

Based on compliance with the Fire Prevention and Suppression Plan, the impact minimization measures included in the Right of Way Clearing Assessment, and Vegetation Management Plan, the Department recommends Council find that the proposed use would not significant increase the wildfire hazards, fire suppression costs, or risk to fire suppression personnel within the surrounding area.

(c) A written statement recorded with the deed or written contract with the county or its equivalent is obtained from the land owner that recognizes the rights of adjacent and nearby land owners to conduct forest operations consistent with the Forest Practices Act and Rules for uses authorized in subsections (4)(e), (m), (s), (t) and (w) of this rule.

OAR 660-006-0025(5)(c) specifically applies to uses authorized under subsections (4)(e) (private parks and campgrounds), (m) (reservoirs and water impoundments), (s) (home occupations), (t) (hardship dwellings) and (w) (private fishing accommodations) of this rule. The proposed facility is a conditional use authorized under (4)(q) of the rule. Therefore, this rule provision does not apply.

IV.E.3. Statewide Planning Goals

As discussed above, under OAR 345-022-0030, which implements ORS 469.504(1)(b), the Council must find either that:

(A) The proposed facility complies with applicable substantive criteria as described I 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);

(B) For a proposed facility that does not comply with one or more of the applicable substantive criteria as described in section (3), the facility otherwise complies with the statewide planning goals or an except ion to any applicable statewide planning goal is justified under section (4); or

(C) For a proposed facility that the Council decides, under sections (3) or (6) to evaluate against the statewide planning goals, the proposed facility complies with the applicable statewide planning goals or that an exception to any applicable statewide planning goal is justified under section (4).

Based on the analysis above, the Department recommends that the Council evaluate the proposed transmission line under OAR 345-022-0030(A) and conclude that the proposed facility complies with the applicable substantive criteria discussed above. However, in the alternative, if the Council determines that the applicant has not satisfied one or more of the substantive criteria, or if the Council chooses to evaluate the proposed transmission line only against the statewide planning goals, the applicant has addressed how the proposed transmission line

satisfies each of the applicable goals, or why an exception to goal compliance would be justified.

Goal 1: Citizen Involvement

> Statewide Planning Goal 1 requires each jurisdiction "*[t]o develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process.*"

Goal 1 applies to the jurisdictions with authority over the land use process, rather than to the applicant. In this case, the EFSC process takes the place of each local jurisdiction through which the proposed transmission line would cross. As the applicant explains, the EFSC site certificate process provides public involvement opportunities through informational meetings, public hearings, a written comment period, and the option of a contested case proceeding, if requested by a participant in the process.

Goal 2: Land Use Planning

> Statewide Planning Goal 2 requires each jurisdiction "*[t]o establish a land use planning process and policy framework as a basis for all decisions and actions related to use of land and to assure an adequate factual base for such decisions and actions.*"

As with Goal 1, Goal 2 applies to the jurisdictions with authority over the land use process, rather than to the applicant. In this case, because the applicant has elected to obtain a Council determination of compliance under ORS 469.504(1)(b) and OAR 345-022-0030(2)(b), the EFSC process takes the place of each affected local jurisdiction. The framework of that statute and implementing rule provide a reasoned basis for the Council's factual evaluation and determinations regarding compliance with the land use standard.

Goal 3: Agricultural Lands

> Statewide Planning Goal 3 is "*[t]o preserve and maintain agricultural lands.*"

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.

Goal 4: Forest Lands

Statewide Planning Goal 4 is *"[t]o 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 the forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture.*

Goal 4 is implemented through OAR 660, Division 6. As discussed above, most 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). However, in the event that the Council finds that OAR 660-006-0025(4)(q) does not cover access roads outside the transmission line corridor, the applicant demonstrates that the substantially modified existing roads outside of the corridor nonetheless comply with statewide planning Goal 4.

Substantially Modified Existing Roads

Under OAR 660-006-0025(3)(h) "[w]idening of roads within existing rights-of-way in conformance with the transportation element of acknowledged comprehensive plans and public road and highway projects as described in ORS 215.213(1) and 215.283(1)" are permitted as allowed uses. The proposed transmission line's "substantially modified existing roads" are existing roads that would require improvements. As further discussed in Exhibit B, the exact nature of the improvements would vary depending on the condition of the existing roads, but generally would include widening of roads to provide a 14-foot-wide travel surface, with a 16- to 20-foot-wide travel surface for horizontal curves. Additional improvements could be needed for the passage of heavy equipment. None of these activities would result in the removal of a significant amount of Goal 4 land from forest use. Accordingly, the department recommends that the Council find that the substantially modified existing roads would appropriately be considered "widening of roads," permitted outright in forest lands under OAR 660-006-0025(3)(h, and therefore in compliance with Goal 4.

Alternatively, in the event the Council were to conclude that the substantially modified existing roads outside the transmission line corridor are not conditionally permitted as part of the new electric transmission line or permitted outright under OAR 660-006-0025(3)(h), as discussed below with regard to new access roads, the applicant has established that the substantially modified roads nonetheless comply with Goal 4.

New Access Roads

As discussed above, the proposed new access roads needed to access the transmission line would cross forest lands in Umatilla and Union counties. As discussed above in Exhibit B, the applicant has attempted to minimize the development of new roads in forested areas, relying on existing roads where possible. While the new access roads would inevitably require a certain amount of forest lands to be removed from forest use, the overall acreage would not be significant. Therefore, in the event the Council determines that the new access roads outside of the transmission line corridor may not satisfy all applicable use criteria for siting in a forest zone, there is substantial evidence to support a finding by the Council that the new access roads are consistent with Goal 4 because the roads would remove minimal Goal 4 land from forest use, would not restrict forest practices on adjacent land, and may even promote economically efficient forest practices on and recreational use of adjacent forest lands.

Alternatively, in the event EFSC concludes that the new roads outside the transmission line corridor are not conditionally permitted as part of the new electric transmission line and are inconsistent with Statewide Planning Goal 4, the applicant has established a basis for the Council to grant an exception to compliance with Goal 4 for the new access roads. That exception request is addressed below.

Goal 5: Natural Resources, Scenic and Historic Areas, and Open Space

Statewide Planning Goal 5 is *"[t]o conserve open space and protect natural and scenic resources."*

Goal 5 requires Counties to inventory natural resources, based on DLCD Guidelines that identify the following as Goal 5 resources: riparian corridors, wetlands, wildlife habitat, federal wild and scenic rivers, state scenic waterways, groundwater resources, approved Oregon recreational trails, natural areas, wilderness areas, mineral and aggregate resources, energy sources, and cultural areas. In addition to the individual county inventories, most of the resources identified in the DLCD guidelines are also addressed in and protected through compliance with other EFSC Standards. As the applicant describes, the following EFSC Standards effectively establish compliance with the objectives of Goal 5:

Protected Areas: Under OAR 345-022-0040, the Council must find that, taking into account mitigation, the design, construction and operation are not likely to result in significant adverse impact to the protected areas listed in the standard (including inventoried Goal 5 resources if enumerated in standard). The applicant establishes how the proposed transmission line complies with this standard in ASC Exhibit L.

Wildlife Habitat: Under OAR 345-022-0060, the Council must find that the design, construction, and operation of the facility, taking into account mitigation, are consistent with ODFW's habitat mitigation policy. This standard protects inventoried Goal 5 wildlife and habitats that are also protected by ODFW's habitat mitigation policy. The applicant

establishes how the proposed transmission line complies with this standard in ASC Exhibits P1-P3.

Scenic Resources: Under OAR 345-022-0080, 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. The applicant establishes how the proposed transmission line complies with this standard in ASC Exhibit R.

Historic, Cultural and Archaeological Resources: Under OAR 345-022-0090, 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 qualified historic, cultural, and archaeological resources (including all inventoried Goal 5 cultural and historic resources that fall within definitions of protected resources under the standard). The applicant establishes how the proposed transmission line complies with this standard in ASC Exhibit S.

Wetlands: Under OAR 345-022-0000, and as identified in the Project Order, the Council must conclude that the proposed transmission line would comply with the criteria required for issuance of Removal/Fill permit by the Department of State Lands (DSL), including impacts to any inventoried Goal 5 riparian corridors, wetlands. The applicant establishes compliance with the DSL permit criteria in ASC Exhibit J.

Recreation: Under OAR 345-022-0100, 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, including inventoried Goal 5 recreation resources determined to be "important" resources by the Council. The applicant establishes how the proposed transmission line complies with this standard in ASC Exhibit T.

In addition, as discussed above, the applicant has established how the proposed transmission line complies with applicable provisions of each County's Goal 5 inventory, as determined applicable by each County.

Goal 6: Air, Water, and Land Resources Quality

Statewide Planning Goal 6 is *"[t]o maintain and improve the quality of the air, water and land resources of the state."*

Goal 6 provides for the maintenance of the quality of air, water, and land resources, and is implemented through applicable local state and federal environmental quality statutes, rules and standards. The applicant has demonstrated compliance with those implementing measures by demonstrating that its waste and process discharges do not violate, or threaten to violate those applicable regulations. As discussed ASC Exhibit V (Waste and Waste Water), the

proposed transmission line would have minimal waste discharges and would not degrade any air, water, or land resources. The applicant further demonstrates compliance with this goal in Exhibit G (Materials Analysis), and Exhibit E (Other Permits).

Goal 7: Areas Subject to Natural Hazards

Statewide Planning Goal 7 is *"[t]o protect life and property from natural disasters and hazards."*

Goal 7 requires the protection of people and property from natural hazards, including floods, landslides, earthquakes, tsunamis, coastal erosion, and wildfires. As discussed in Exhibit H (Geological Hazards and Soil Stability) and under the Structural standard (OAR 345-022-0020), the proposed transmission line has been designed and would be constructed to account for floods, landslides, and earthquakes in a manner that would not pose a risk of injury to persons or property. In Exhibit H, the applicant has proposed adequate safeguards for those portions of the proposed transmission line that would cross hazardous areas, including addressing geological risks and landslide hazards. Accordingly, the proposed transmission line complies with Goal 7.

Goal 8: Recreation Needs

Statewide Planning Goal 8 is *"[t]o satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts."*

The object of Goal 8 is to ensure that the state's recreational needs are satisfied. While the proposed transmission line is not intended to the satisfying recreational needs, the applicant's compliance with the Recreational Standard ensures that existing important recreational needs would not be adversely impacted by the proposed transmission line. Thus, to the extent it is considered applicable, the proposed transmission furthers Goal 8 through ensuring important recreational opportunities are protected.

Goal 9: Economic Development

Statewide Planning Goal 9 is *"t]o provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare and prosperity of Oregon's citizens."*

As more fully described in ASC Exhibit N and under the Need standard (OAR 345-023-0005) the purpose of the proposed transmission line is to strengthen the state and region's critical transmission infrastructure. Additionally, as discussed extensively above, the applicant has proposed to locate the transmission line to maximize positive impacts to Oregon's economy, while minimizing impacts to protected resources, including agricultural and forest lands. Additionally, as described in ASC Exhibit U and under the Public Services standard, construction of the proposed transmission line would provide economic development opportunities through the length of the transmission line, in compliance with Goal 9.

Goal 12: Transportation

Statewide Planning Goal 12 is *"[t]o provide and encourage a safe, convenient and economic transportation system."*

Goal 12 requires local governments to develop and implement transportation planning consistent with LCDC's rules in OAR Chapter 660, Division 12. To the extent the proposed transmission line impacts compliance with any local government's transportation-related criteria, compliance with those local criteria also furthers Goal 12.

In addition, as discussed in ASC Exhibit U and the applicant's Transportation and Traffic Plan (Exhibit U, Attachment U-2), and as addressed under the Public Services standard, the proposed transmission line does involve construction of both temporary and permanent access roads, most of which would be private roads. Construction and operation of the proposed transmission line would not result in any permanent impacts to local transportation systems, other than improvements to public roads in some cases. As reflected in the Transportation and Traffic Plan, and as would be reflected in the applicable recommended Land Use conditions, during the final design phase and before construction, the certificate holder propose to and would be required to coordinate with the affected local public works and road departments regarding any transportation-related improvements. Construction-related activities would have only temporary short-term impacts, which are not addressed by Goal 12 or its implementing rules. Accordingly, the proposed transmission line would be consistent with Goal 12.

IV.E.4. Goal 4 Exception

The proposed facility would include a 500 kV transmission line segment and related or supporting facilities including new roads, substantially modified roads, communications stations, light duty fly yards, and pulling and tensioning sites located on forest lands. OAR 660-006-0025(4)(q) establishes conditional uses authorized in forest zoned lands and includes new electric transmission lines with right-of-way widths up to 300 feet, limited to 100 feet for the transmission line and 200 feet for vegetative maintenance.

While the Department agrees that related or supporting facilities within forest land should be considered ancillary facilities to the transmission line and evaluated as a conditional use authorized in forest lands under OAR 660-006-0025(4)(q), permanent related or supporting facilities beyond the designated 300 foot right-of-way, specifically proposed new and substantially modified roads (spanning 10 to 14 feet in width), would not comply with OAR 660-006-0025(4)(q) unless a goal exception is taken.[178] Pursuant to ORS 469.504(1)(b)(B) which is

[178] In ASC Exhibit K, the applicant requests a Goal 4 exception for new access roads, substantially modified roads, and light duty fly yards. Because light-duty fly yards would be a temporary use, and would be reforested in

implemented under OAR 345-022-0030(4), non-compliance with a statewide planning goal requires a determination by the Council that an exception to Goal 4 is warranted.

OAR 345-022-0030(4):

> *The Council may find goal compliance for a proposed facility that does not otherwise comply with one or more statewide planning goals by taking an exception to the applicable goal. Notwithstanding the requirements of ORS 197.732, the statewide planning goal pertaining to the exception process or any rules of the Land Conservation and Development Commission pertaining to the exception process, the Council may take an exception to a goal if the Council finds:*
>
> *(a) The land subject to the exception is physically developed to the extent that the land is no longer available for uses allowed by the applicable goal;*
>
> *(b) The land subject to the exception is irrevocably committed as described by the rules of the Land Conservation and Development Commission to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable; or*
>
> *(c) The following standards are met:*
>
> *(A) Reasons justify why the state policy embodied in the applicable goal should not apply;*
>
> *(B) The significant environmental, economic, social and energy consequences anticipated as a result of the proposed facility have been identified and adverse impacts will be mitigated in accordance with rules of the Council applicable to the siting of the proposed facility; and*
>
> *(C) The proposed facility is compatible with other adjacent uses or will be made compatible through measures designed to reduce adverse impacts.*

The provisions of OAR 345-022-0030(4)(a) and (b) are not applicable to the proposed facility. The certificate holder submitted an assessment as to why a goal exception under OAR 345-022-0030(4)(c) is appropriate for the proposed facility; the Department's evaluation of the OAR 345-022-0030(4)(c) is provided below.

<u>Reasons Supporting an Exception</u>

Under OAR 345-022-0030(4)(c)(A) (and ORS 469.504(2)(c)(A)), in order for the Council to determine whether to grant an exception to a statewide planning goal, the certificate holder must provide reasons justifying why the state policy embodied in the applicable goal should not apply. The state policy embodied in Goal 4 is the preservation and maintenance of forest land

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accordance with ODF's Forest Practices Act, the Department does not consider a Goal 4 exception necessary, as the reforestation practices and temporal loss of forested lands would be replaced consistent with commercial forest practices.

for forest use. The certificate holder's arguments relating to "reasons supporting an exception" are discussed below.

Proposed Facility Cannot be Built without Proposed Access Roads in Forest Lands

The first reason relied upon to support the request for a Goal 4 exception is that the proposed new and substantially modified roads outside of the 300-foot right-of-way must be sited in forest land to, predominately, interconnect to existing roads to provide access to the proposed transmission line during construction and operation; avoid extreme topographical features, such as drainage areas and rivers within Umatilla National Forest Region; and, utilize the designated utility corridor within the Wallowa-Whitman National Forest.[179] In ASC Exhibit K, the applicant describes that a thorough evaluation of new and substantially modified road locations was completed during the 2010 siting study (provided in ASC Exhibit B, Attachment B-1), which is also supported by the forest clearance mapbook provided in ASC Exhibit BB Appendix A.

As the applicant describes in ASC Exhibit B, the proposed access roads are an essential component of the proposed transmission line. During construction, the access roads would be required to allow materials, equipment, and personnel to access the construction sites. During operations, the access roads would be required to allow for necessary maintenance of the transmission line and structures. Without the access roads, the proposed transmission line could not be built or maintained.

The applicant also establishes that the location of the roads proposed to extend through Goal 4 forest lands cannot reasonably be avoided. As described in Exhibit B and Attachment B-1 (2010 Siting Study), the applicant has considered numerous alternatives and has proposed the locations of the access roads following consideration of numerous constraints and locational challenges. The proposed transmission line, and the roads to access that line, are locationally dependent, in that there were a limited number of potential routes that would meet the purpose and need. More specifically, the proposed transmission line's fairly limited crossing of Goal 4 forest lands is necessary for the transmission line to cross the Wallowa-Whitman NF in the designated utility corridor. Alternative routes would have resulted in a far greater number of acres of Goal 4 forest land being removed from forest or related uses.

The applicant's demonstration of the public interest is explained in ASC Exhibit N (Need) and further evaluated under the Need Standard. As summarized in Exhibit K, the applicant explains how the proposed transmission line would allow the company to accomplish critical objectives, including (1) serving native loads; (2) meeting transmission reliability standards; (3) providing transmission service to wholesale customers; and (4) providing sufficient capacity.[180] The

[179] B2HAPPDoc3-19 ASC 11 Exhibit K Land Use 2018-09-28. As described in ASC Exhibit K, approximately 6.3 miles of the proposed transmission within Union County would be located within the designated Wallowa-Whitman National Forest utility corridor.

[180] B2HAPPDoc3-19 ASC 11 Exhibit K Land Use p.317-318. 2018-09-28.

applicant's analysis establishes a public need for and a public interest in the proposed transmission line, which is dependent upon the access roads.

Finally, the applicant demonstrates that the access roads proposed to be improved or constructed in forest lands would impose relatively minor impacts. Significantly, the improvements proposed for existing roads would not remove any significant amount of forest lands from existing uses. They would not result in significant adverse impacts to, or significantly increase the cost of, commercial forest operations; and, in some cases the new and improved roads could actually assist commercial forest operations.

The department agrees with the applicant and recommends that the Council find that there are adequate reasons to find that the public interest in developing the transmission line would outweigh the state policy embodied in Goal 4.

Proposed Facility Serves a Critical Public Interest – Benefits Outweigh the Impacts

The second reason relied upon to support the request for a Goal 4 exception is that the proposed facility would meet critical public interest objectives including providing additional transmission capacity to serve the applicant's retail customers; meet transmission reliability standards; and, provide transmission service to wholesale customers. This reason is not specific to the need for siting the proposed new and substantially modified roads outside of the 300-foot right-of-way in forest land to support the proposed transmission line. Therefore, the Department recommends Council not consider this a valid reason for justifying why the state embodies policy in Goal 4 should not apply.

Minimal Impact to Forest Lands

The third reason relied upon to support the request for a Goal 4 exception is that the proposed facility components outside of the 300-foot right-of-way would result in minimal impacts to forest lands and therefore would not result in significant adverse impacts to, or significantly increase the cost of, commercial forest operations. The applicant also asserts that in some cases the new and improved roads might actually assist commercial forest operations.

<u>Significant Environmental, Economic, Social and Energy Consequences</u>

Prior to determining whether to grant an exception to the state policy embodied in LCDC's Statewide Planning Goal 4 for forest lands, the Council must find that the applicant has evaluated "the significant environmental, economic, social and energy consequences" of the proposed facility and proposed mitigation in accordance with Council standards.[181]

[181] OAR 345-022-0030(4)(c)(B); ORS 469.504(2)(c)(B).

Environmental Consequences

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 environmental consequences of the proposed facility have been identified and mitigated in accordance with Council standards. For this evaluation, the Department interprets the relevant environmental consequences of the proposed facility as those that would occur within forest lands, rather than a general evaluation of all potential impacts evaluated under applicable Council standards.

The applicant requests a Goal 4 exception for clearing of trees within forest lands for new and substantially modified roads, outside of the 300-foot right-of-way (limited through Land Use Condition 15 to 100 feet for the transmission line, and 200 feet for vegetative maintenance, consistent with ORS 772.210). Potential environmental consequences would include loss of trees suitable for production of commercial forest products during forest clearing activities and loss of forest/woodland habitat. To mitigate these potential impacts to forest lands, the applicant proposes to obtain approval of a Plan for Alternative Practice, in accordance with ODF's Reforestation Rules at OAR 629-610-0090, and mitigate temporary and permanent forest/woodland habitat impacts in accordance with Council's Fish and Wildlife Habitat standard through implementation of a Fish and Wildlife Habitat Mitigation Plan, which the Department recommends be imposed in Fish and Wildlife Condition 4.

Based on the above-reasoning and analysis, the Department recommends Council finds that the proposed energy facility, including mitigation, would not cause significant adverse environmental consequences or impacts.

Economic Consequences

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 0.0034 percent and 0.00059 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.[182] 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

[182] B2HAPPDoc3-19 ASC 11_Exhibit K_Land Use_ASC_ 2018-09-28, Attachment K-2, Section 7.0

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.[183] According to the applicant, the project was selected as a "vital transmission project" by the Council on Environmental Quality; projects designated as such as expected to "address reliability and / or provide capacity for new commercial scale renewable and clean energy sources."

As described in Section 8.1.2.2 of Exhibit K of the ASC, the applicant represents that one of the purposes of the transmission project is to provide transmission services to wholesale customers; increased transmission capacity would result in the ability to accept electricity from power producers, which would increase incentives to build and operate additional energy facilities near transmission substations. As described in Section 8.1.2.1 of Exhibit K of the ASC and within the *Reasons Supporting an Exception* subsection of the *Land Use Section* of this draft proposed order, the applicant argues that the project would not be feasible if access roads were not allowed to be constructed on forest zoned lands outside the transmission right-of-way corridor. Specifically, access roads beyond the statutorily allowed corridor are necessary to allow for the delivery of materials, equipment, and personnel to the construction sites.

The Department agrees that the transmission facility would benefit the local economy through job creation and increased tax base, and that the transmission facility would benefit the greater Pacific Northwest economy through increasing transmission capacity to allow for it to provide services to wholesale customers (potential energy sellers). Therefore, the Department recommends that the Council conclude that the proposed transmission facility represents a net economic benefit compared to the site's existing uses.

Social/Energy Consequences

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 social/economic consequences of the proposed facility have been identified and mitigated in accordance with Council standards.

As further discussed in ASC Exhibit U (Public Services), the proposed transmission line would have no significant adverse impacts on public services or facilities, including hospitals, schools, or transportation systems. ASC Exhibit N (Need) demonstrates that the proposed transmission line is a necessary part of the company's resource management strategy and is designed to support IPC in its continuing efforts to promote energy efficiency and demand response as an alternative to the construction of additional generation plants. Additionally, the proposed transmission line is important for renewable resource development in northeastern Oregon such as wind and geothermal resources. The 500-kV transmission line is expected to relieve congestion on the existing 230-kV transmission system, which could facilitate transmission of renewable energy.

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[183] B2HAPPDoc3-19 ASC 11_Exhibit K_Land Use_ASC_ 2018-09-28, Section 8.1.3.2

Based on the applicant's analysis, the Department recommends that the Council find that the applicant has identified the ESEE consequences of both the access roads, and that adverse impacts would be mitigated in accordance with the Council's standards.

Compatibility with Other Adjacent Uses and Measures Designed to Reduce Adverse Impacts

In its exception request, the applicant explains how development of the proposed access roads associated with the transmission line would be compatible with adjacent land uses. Although there may be temporary disturbances to adjacent commercial forest operations during the development of access roads, there would likely not be any long-term impacts.

Commercial forest operations on surrounding lands occur periodically and could continue during road construction. Potential interference with commercial forest operations during construction would be limited to traffic interference between logging activities—primarily log hauling—and movement of construction equipment and supplies, or improvement of access roads concurrent forest operations. To the extent necessary, the certificate holder would coordinate with local road departments and other forest operators to time large-load deliveries to the extent such deliveries could potentially conflict with other forest or agricultural uses on surrounding lands. Ongoing forestland maintenance activities on surrounding lands are unlikely to be impacted by the access road construction.

To further ensure compatibility, as explained in ASC Exhibit I (Soil Protection), Attachment I-3, any grading to prepare the roads would be conducted under an NPDES 1200-C permit, and which would incorporate an erosion and sediment control plan. As described in the Reclamation and Revegetation Plan and the Vegetation Management Plan (Attachments P1-3 and P1-4), temporarily disturbed areas to preconstruction conditions would be restored and the certificate holder would implement a weed control plan.

During operations, limited activities would occur on access roads. The certificate holder would use the access roads to inspect the transmission line components located within the ROW and manage vegetation, consistent with the Vegetation Management Plan (Attachment P1-4). Generally, those activities would have relatively low impact and would be unlikely to cause potential adverse impacts on surrounding forest operations. Access roads would be monitored for drainage or erosion control problems and repaired as necessary.

Based on the applicant's analysis, the Department recommends that the Council find that the proposed access roads would be compatible with adjacent land uses, and that measures would be taken to reduce any potential adverse impacts.

In the event that the Council determines that an Exception to Goal 4 is required for either the proposed access roads outside the rights-of-way in the forest zones in Umatilla and Union Counties, or for the three light duty fly yards in Umatilla and Malheur counties, the Department

recommends that the Council find that, based on the above analysis, the applicant has satisfied the criteria in ORS 469.504(2)(C) and OAR 345-022-0030(2)(C) for a Goal 4 Reasons Exception.

IV.E.5. Federal Land Management Plans

In ASC Exhibit K, the applicant provides an evaluation of compliance with Federal Land Management Plans including: Wallowa-Whitman National Forest Land and Resource Management Plan, BLM Vale District Resource Management Plan, BLM Baker Resource Management Plan, BLM Southeastern Oregon Resource Management Plan, and Sage-Grouse Amendments to Resource Management Plans. The applicant also describes compliance and consistency with applicable provisions of these plans was included and part of the BLM's 2017 record of decision.

Conclusions of Law

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.

IV.F. Protected Areas: OAR 345-022-0040

(1) Except as provided in sections (2) and (3), the Council shall not issue a site certificate for a proposed facility located in the areas listed below. To issue a site certificate for a proposed facility located outside the areas listed below, 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 areas listed below. References in this rule to protected areas designated under federal or state statutes or regulations are to the designations in effect as of May 11, 2007:

(a) National parks, including but not limited to Crater Lake National Park and Fort Clatsop National Memorial;

(b) National monuments, including but not limited to John Day Fossil Bed National Monument, Newberry National Volcanic Monument and Oregon Caves National Monument;

(c) Wilderness areas established pursuant to The Wilderness Act, 16 U.S.C. 1131 et seq. and areas recommended for designation as wilderness areas pursuant to 43 U.S.C. 1782;

(d) National and state wildlife refuges, including but not limited to Ankeny, Bandon Marsh, Baskett Slough, Bear Valley, Cape Meares, Cold Springs, Deer Flat, Hart

Mountain, Julia Butler Hansen, Klamath Forest, Lewis and Clark, Lower Klamath, Malheur, McKay Creek, Oregon Islands, Sheldon, Three Arch Rocks, Umatilla, Upper Klamath, and William L. Finley;

(e) National coordination areas, including but not limited to Government Island, Ochoco and Summer Lake;

(f) National and state fish hatcheries, including but not limited to Eagle Creek and Warm Springs;

(g) National recreation and scenic areas, including but not limited to Oregon Dunes National Recreation Area, Hell's Canyon National Recreation Area, and the Oregon Cascades Recreation Area, and Columbia River Gorge National Scenic Area;

(h) State parks and waysides as listed by the Oregon Department of Parks and Recreation and the Willamette River Greenway;

(i) State natural heritage areas listed in the Oregon Register of Natural Heritage Areas pursuant to ORS 273.581;

(j) State estuarine sanctuaries, including but not limited to South Slough Estuarine Sanctuary, OAR Chapter 142;

(k) Scenic waterways designated pursuant to ORS 390.826, wild or scenic rivers designated pursuant to 16 U.S.C. 1271 et seq., and those waterways and rivers listed as potentials for designation;

(l) Experimental areas established by the Rangeland Resources Program, College of Agriculture, Oregon State University: the Prineville site, the Burns (Squaw Butte) site, the Starkey site and the Union site;

(m) Agricultural experimental stations established by the College of Agriculture, Oregon State University, including but not limited to: Coastal Oregon Marine Experiment Station, Astoria Mid-Columbia Agriculture Research and Extension Center, Hood River Agriculture Research and Extension Center, Hermiston Columbia Basin Agriculture Research Center, Pendleton Columbia Basin Agriculture Research Center, Moro North Willamette Research and Extension Center, Aurora East Oregon Agriculture Research Center, Union Malheur Experiment Station, Ontario Eastern Oregon Agriculture Research Center, Burns Eastern Oregon Agriculture Research Center, Squaw Butte Central Oregon Experiment Station, Madras Central Oregon Experiment Station, Powell Butte Central Oregon Experiment Station, Redmond Central Station, Corvallis Coastal Oregon Marine Experiment Station, Newport

Southern Oregon Experiment Station, Medford Klamath Experiment Station, Klamath Falls;

(n) Research forests established by the College of Forestry, Oregon State University, including but not limited to McDonald Forest, Paul M. Dunn Forest, the Blodgett Tract in Columbia County, the Spaulding Tract in the Mary's Peak area and the Marchel Tract;

(o) Bureau of Land Management areas of critical environmental concern, outstanding natural areas and research natural areas;

(p) State wildlife areas and management areas identified in OAR chapter 635, Division 8.

(*2) Notwithstanding section (1), the Council may issue a site certificate for a transmission line or a natural gas pipeline or for a facility located outside a protected area that includes a transmission line or natural gas or water pipeline as a related or supporting facility located in a protected area identified in section (1), if other alternative routes or sites have been studied and determined by the Council to have greater impacts. Notwithstanding section (1), the Council may issue a site certificate for surface facilities related to an underground gas storage reservoir that have pipelines and injection, withdrawal or monitoring wells and individual wellhead equipment and pumps located in a protected area, if other alternative routes or sites have been studied and determined by the Council to be unsuitable.*

(3) The provisions of section (1) do not apply to transmission lines or natural gas pipelines routed within 500 feet of an existing utility right-of-way containing at least one transmission line with a voltage rating of 115 kilovolts or higher or containing at least one natural gas pipeline of 8 inches or greater diameter that is operated at a pressure of 125 psig.

Findings of Fact

The Protected Areas standard first prohibits Council from granting approval of a site certificate if a proposed facility would be located within a designated protected area, unless the proposed facility is a transmission line located within 500 feet of an existing utility right-of-way containing at least one transmission line with a voltage rating of 115 kV or higher; and, if this cannot be met, a demonstration that alternative routes have been studied and determined to result in greater impacts. For proposed facilities located outside protected areas, including transmission lines, the Protected Areas standard requires the Council to find that, taking into account mitigation, the design, construction and operation of a proposed facility are not likely to result in significant adverse impacts from noise, increased traffic, water use, wastewater disposal,

visual impacts of facility structures or plumes, and visual impacts from air emissions to any protected area as defined by OAR 345-022-0040.[184]

In accordance with OAR 345-001-0010(59)(e) (definitions), and as defined in the second amended project order, the analysis area is the area within and extending 20 miles from the site boundary. The applicant addresses protected areas in ASC Exhibit L.[185] The applicant's assessment of impacts to protected areas also relies on information presented in ASC Exhibit R (Scenic Resources) and ASC Exhibit X (Noise).

To identify protected areas, the applicant reviewed geographic information system (GIS) data, maps and other information on the 16 categories of protected areas listed in OAR 345-022-0040(1). Based on this evaluation, the applicant identifies 80 protected areas within the analysis area, of which 74 are located within Oregon (six are located in Idaho and Washington). Table PA-1, *Protected Areas within Analysis Area and Distance from Proposed and Alternative Transmission Line Routes* lists each of the protected areas within the analysis area and its distance from the centerline of the proposed and alternative routes, as applicable.

[184] OAR 345-001-0010(53) defines "Significant" as "…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."

[185] Additionally, the applicant submitted an Exhibit R errata sheet that contains additional information related to Protected Areas, specifically to provide additional information and assessment related to an ODOT request for more information on the facility's potential impacts to the "Grande Tour Route" and other Oregon Scenic Byways.

Table PA-1: Protected Areas within Analysis Area and Distance from Proposed and Alternative Transmission Line Routes

Protected Areas	Protected Area Category	County	Proposed Route		Alternative Route	
			Distance	Direction	Distance	Direction
Blue Mountain Forest State Scenic Corridor	State Parks and Waysides	Umatilla, Union	0 mi		3.7 mi	NW
Ladd Marsh WA/SNHA	State Wildlife Areas and Management Areas	Union	0 mi		208.3 ft	E
Oregon Trail ACEC[186] - NHOTIC Parcel	BLM ACECs	Baker	123.4 ft	NE	-	-
Owyhee River Below the Dam ACEC	BLM ACECs	Malheur	249 ft	SW	7.6 mi	SE
Oregon Trail ACEC - Straw Ranch 1 Parcel	BLM ACECs	Baker	0.1 mi	SW	-	-
Oregon Trail ACEC - Birch Creek parcel	BLM ACECs	Malheur	0.2 mi	SW	-	-
Hilgard Junction State Recreation Area	State Parks and Waysides	Union	0.3 mi	E	0.4 mi	N
Deer Flat National Wildlife Refuge (including Snake River Island Units)	National and State Wildlife Refuge	Malheur	0.4 mi	E	12.2 mi	E
Oregon Trail ACEC - Tub Mountain Parcel	BLM ACECs	Malheur	0.5 mi	W	17.2 mi	N
Columbia Basin - Coyote Springs WA	State Wildlife Areas and Management Areas	Morrow	0.5 mi	W	8.9 mi	N
Farewell Bend State Recreation Area	State Parks and Waysides	Baker	0.7 mi	NE	-	-
Oregon Trail ACEC - Blue Mountain Parcel	BLM ACECs	Union	0.9 mi	NE	6.7 mi	NW
Oregon Trail ACEC - Straw Ranch 2 Parcel	BLM ACECs	Baker	1.1 mi	NE	-	-

[186] BLM designated Area of Critical Environmental Concern (ACEC).

Table PA-1: Protected Areas within Analysis Area and Distance from Proposed and Alternative Transmission Line Routes

Protected Areas	Protected Area Category	County	Proposed Route		Alternative Route	
			Distance	Direction	Distance	Direction
Oregon Trail ACEC - Powell Creek Parcel	BLM ACECs	Baker	1.2 mi	E	-	-
Umatilla National Wildlife Refuge	National and State Wildlife Refuge	Morrow	1.3 mi	N	9.6 mi	N
Powder River WSR (Scenic)	Scenic Waterway	Baker, Union	1.4 mi	E	14.8 mi	SE
Powder River Canyon ACEC	BLM ACECs	Baker	1.4 mi	E	16.3 mi	SE
Lindsay Prairie Preserve/ SNHA	State Natural Heritage Areas	Morrow	1.6 mi	W	3.9 mi	SW
Five Points Creek (Wild)	Scenic Waterway	Umatilla, Union	2.0 mi	NE	2.1 mi	NE
South Alkali Sand Hills ACEC	BLM ACECs	Malheur	2.1 mi	E	12.6 mi	N
Oregon Trail ACEC - White Swan Parcel	BLM ACECs	Baker	2.9 mi	E	-	-
Emigrant Springs State Heritage Area	State Parks and Waysides	Umatilla	3.3 mi	N	16.5 mi	NW
Succor Creek State Natural Area/SNA	State Parks and Waysides	Malheur	3.4 mi	SW	-	-
Red Bridge State Wayside	State Parks and Waysides	Union	4.8 mi	SW	-	-
Owyhee Views ACEC	BLM ACECs	Malheur	5.3 mi	SW	14.7 mi	S
Umatilla Hatchery	National and State Fish Hatcheries	Morrow	5.5 mi	N	15.0 mi	NE
Oregon Trail ACEC - Keeney Pass Parcel	BLM ACECs	Malheur	5.7 mi	E	5.7 mi	NE
Lake Owyhee State Park	State Parks and Waysides	Malheur	6.0 mi	W	15.4 mi	S
Eastern Oregon Ag Research Station	Agricultural Experimental Station	Union	6.4 mi	NE	7.0 mi	E
Irrigon Hatchery	National and State Fish Hatcheries	Morrow	6.6 mi	N	14.7 mi	NE

Table PA-1: Protected Areas within Analysis Area and Distance from Proposed and Alternative Transmission Line Routes

Protected Areas	Protected Area Category	County	Proposed Route		Alternative Route	
			Distance	Direction	Distance	Direction
Irrigon Hatchery	National and State Fish Hatcheries	Morrow	6.6 mi	N	14.7 mi	NE
Jump Creek Canyon ACEC	BLM ACECs	Idaho	6.8 mi	SE	-	-
Rogers WA	State Wildlife Areas and Management Areas	Malheur	7.1 mi	E	12.0 mi	SE
Columbia Basin - Irrigon WA	State Wildlife Areas and Management Areas	Morrow, Umatilla	7.4 mi	NE	14.9 mi	NE
Elkhorn - North Powder WA Tract	State Wildlife Areas and Management Areas	Baker, Union	7.5 mi	W	7.8 mi	S
Catherine Creek State Park	State Parks and Waysides	Union	7.7 mi	NE	-	-
Elkhorn - Auburn WA Tract	State Wildlife Areas and Management Areas	Baker	7.9 mi	SW	-	-
Starkey Experimental Forest/Game Management Area	Experiment Area	Umatilla, Union	8.0 mi	S	12.8 mi	W
Battle Mountain Forest State Scenic Corridor	State Parks and Waysides	Umatilla	8.0 mi	S	-	-
McKay Creek National Wildlife Refuge	National and State Wildlife Refuge	Umatilla	9.7 mi	N	-	-
Unity Forest State Scenic Corridor	State Parks and Waysides	Baker	10 mi	W	-	-
Upper Grande Ronde River (Recreational)	Scenic Waterway	Union	10.9 mi	SW	10.6 mi	S
Oregon Trail ACEC - Echo Meadows Parcel	BLM ACECs	Umatilla	11.1 mi	NE	15.2 mi	E
Keating Riparian ACEC/RNA	BLM ACECs	Baker	11.2 mi	E	-	-
North Fork Catherine Creek (Recreational)	Scenic Waterway	Union	11.3 mi	E	17.2 mi	E
Honeycombs RNA	BLM ACECs	Malheur	11.3 mi	SW	-	-

Table PA-1: Protected Areas within Analysis Area and Distance from Proposed and Alternative Transmission Line Routes

Protected Areas	Protected Area Category	County	Proposed Route		Alternative Route	
			Distance	Direction	Distance	Direction
Squaw Creek RNA	BLM ACECs	Idaho	11.4 mi	SE	-	-
Elkhorn - Roth WA Tract	State Wildlife Areas and Management Areas	Baker	11.6 mi	W	18.4 mi	S
Ontario State Recreation Site	State Parks and Waysides	Malheur	11.9 mi	E	-	-
Elkhorn - Muddy Creek WA Tract	State Wildlife Areas and Management Areas	Baker	12.1 mi	W	16.5 mi	S
Malheur Experiment Station	Agricultural Experimental Station	Malheur	13.1 mi	E	19.8 mi	NE
Hunt Mountain ACEC	BLM ACECs	Baker	13.1 mi	W	19.7 mi	W
North Fork Catherine Creek (Wild)	Scenic Waterway	Union	13.4 mi	E	18.3 mi	E
Eagle Cap Wilderness	Wilderness area	Baker, Union, Wallowa	13.7 mi	NE	16.6 mi	NE
Long-billed Curlew Habitat Area ACEC	BLM ACECs	Idaho	14.7 mi	E	19.6 mi	E
Dry Creek Gorge ACEC	BLM ACECs	Malheur	15 mi	W	18.7 mi	S
South Ridge Bully Creek RNA	BLM ACECs	Malheur	15.1 mi	W	-	-
North Powder River (Scenic)	Scenic Waterway	Baker	15.2 mi	W	17.8 mi	S
McBride Creek RNA	BLM ACECs	Idaho	15.3 mi	S	-	-
Upper Grande Ronde River (Wild)	Scenic Waterway	Grant, Union	15.7 mi	SW	14.9 mi	S
Columbia Basin - Power City WA	State Wildlife Areas and Management Areas	Umatilla	15.7 mi	NE	-	-
Hermiston Ag Research and Extension Center	Agricultural Experimental Station	Umatilla	15.8 mi	E	18.6 mi	E
Columbia Basin Ag Research Station	Agricultural Experimental Station	Sherman, Umatilla	16.6 mi	N	-	-
Eagle Creek (Recreational)	Scenic Waterway	Baker	16.7 mi	E	-	-

Table PA-1: Protected Areas within Analysis Area and Distance from Proposed and Alternative Transmission Line Routes

Protected Areas	Protected Area Category	County	Proposed Route		Alternative Route	
			Distance	Direction	Distance	Direction
Columbian Sharp-tailed Grouse Habitat Area ACEC	BLM ACECs	Idaho/Washington	17.7 mi	NE	-	-
North Ridge Bully Creek RNA	BLM ACECs	Malheur	17.7 mi	W	-	-
Horn Butte ACEC	BLM ACECs	Gilliam, Morrow	18.1 mi	W	18.2 mi	W
Leslie Gulch ACEC	BLM ACECs	Idaho	18.1 mi	SW	-	-
Columbia Basin - Willow Creek WA/SNHA	State Wildlife Areas and Management Areas	Gilliam	18.3 mi	W	18.8 mi	NW
North Fork Umatilla Wilderness	Wilderness area	Umatilla, Union	18.7 mi	NE	-	-
North Fork John Day Wilderness	Wilderness area	Baker, Grant, Umatilla	19.1 mi	SW	19.2 mi	SW
Hammond Hill Sand Hills RNA	BLM ACECs	Malheur	19.2 mi	W	-	-
Ukiah-Dale Forest State Scenic Corridor	State Parks and Waysides	Umatilla	19.3 mi	S	-	-
Minam River (Wild)	Scenic Waterway	Union, Wallowa	19.4 mi	E	-	-
The Minam Scenic Waterway	Scenic Waterway	Union, Wallowa	19.6 mi	E	-	-
Cold Springs National Wildlife Refuge	National and State Wildlife Refuge	Umatilla	20.9 mi	NE	-	-
Sumpter Valley Dredge SNHA	State Natural Heritage Areas	Baker	21.3 mi	W	-	-
Hat Rock State Park	State Parks and Waysides	Umatilla	21.3 mi	E	-	-
North Fork John Day River (Recreational)	Scenic Waterway	Grant, Umatilla	21.4 mi	W	-	-
North Fork John Day River (Wild)	Scenic Waterway	Baker, Graint	21.7 mi	W	-	-
McNary National Wildlife Refuge	National and State Wildlife Refuge	Umatilla	24.5 mi	NE	-	-

As presented in Table PA-1, *Protected Areas within Analysis Area and Distance from Proposed and Alternative Transmission Line Routes,* of the 74 protected areas identified within Oregon, 34 protected area would be located at distances greater than 10 miles from the proposed facility. The remaining 40 protected areas would be located within 10 miles of the proposed facility – including three protected areas located between five to 10 miles; 24 protected areas located within five miles; and 13 protected areas location within one mile of the proposed facility.

For proposed alternative routes (Morgan Lake, Double Mountain, West of Bombing Range Road alternatives 1 and 2), there would be 42 protected areas within the analysis area, of which 41 would be located within Oregon. Of the 41 protected areas within Oregon within the analysis area of the alternative route site boundary, 29 protected areas would be located 10 miles or greater, seven protected areas would be located between five and 10 miles, and five protected areas would be located within five miles.

Council rules do not prescribe specific methodology for assessing impacts to protected areas, or outline specifically what constitutes a potential significant adverse impact from a proposed facility to a protected area. In general, impacts to a protected area associated with the proposed facility, or proposed alternative routes, are a function of distance from the protected area, as well as impact duration (e.g., short-term construction, or long-term operation). The applicant's methodology for evaluated impacts under the Protected Areas standard is described in Section IV.F.2., *Potential Noise Impacts* through IV.F.5.*, Potential Visual Impacts from Facility Structures* below.

IV.F.1. Protected Areas Crossed by Transmission Line – Exceptions (OAR 345-022-0040(2) and (3))

The proposed facility would cross portions of two protected areas, including the Blue Mountain Forest State Scenic Corridor and the Ladd Marsh Wildlife Management Area. A portion of the site boundary for the Morgan Lake alternative route would cross the Ladd Marsh Wildlife Management Area; as described in Section III.B.1., *Site Boundary and Right of Way Dimensions* of this order, the site boundary is recommended for approval as a micrositing corridor, authorizing construction and operation of facility components anywhere within the site boundary based on the extent of the evaluation presented in the ASC. Therefore, the Department evaluates the site boundary for the Morgan Lake alternative route that would cross the Ladd Marsh Wildlife Management Area as a crossing of the protected area, similar to the proposed route.[187]

[187] In ASC Exhibit L, the applicant represents that alternative transmission line segment as being 0.4 miles from the protected area, which the Department corrects to 0.04 miles consistent with Table L-1-1, and as described above is based on distance from transmission line centerline and not site boundary.

As described above, Council is prohibited from issuing a site certificate for proposed facilities within a designated protected area, unless the proposed facility is a transmission line located within 500 feet of an existing utility right-of-way containing at least one transmission line with a voltage rating of 115 kV or higher, or if this cannot be achieved, a demonstration that alternative routes have been studied and determined to result in greater impacts (see OAR 345-022-0040(2) and (3)). The Department's analysis and recommendations to Council as to whether the facility, including proposed and alternative routes, would satisfy OAR 345-022-0040(2) and (3) is presented below.

Blue Mountain Forest State Scenic Corridor (State Park and Wayside)

The proposed facility includes a short crossing (approximately 1,000 feet) of the southernmost parcel of the Blue Mountain Forest State Scenic Corridor, a designated state park and wayside protected area, near milepost (MP) 94.6 to 94.8 (see ASC Exhibit C, Figure C-2, Map 47). The applicant describes that at this location, the proposed facility would be located entirely within a utility corridor designated by the Wallowa Whitman National Forest as a "Power and Transportation Facility Retention Corridor;" however, while the utility corridor currently includes a segment of Union Pacific Railroad, it does not include an existing transmission line. Therefore, the evaluation of whether the proposed facility is authorized to cross this protected area relies on OAR 345-022-0040(3), which authorizes siting based on a demonstration that an evaluation of alternative locations was completed and determined to result in greater impacts.

In ASC Exhibit L Section 3.5.1.1, the applicant describes that, based on discussions with Oregon Parks and Recreation Department (OPRD), a conceptual alternative route was evaluated, which would extend approximately 3.2 miles and would avoid the Blue Mountain Forest State Scenic Corridor (see ASC Exhibit L Figure L-2a). The conceptual alternative route would impact approximately 16 more acres of forestland than the proposed route, and would require two crossings of I-84 within approximately a one-mile stretch along the interstate. Under the conceptual alternative route, at least one structure and a set of conductors would be visible from viewpoints within the parcel of the Blue Mountain Forest State Scenic Corridor.[188]

As described in Exhibit L, Section 3.5.1.1, OPRD reported that a crossing accomplished in a "discreet way is better than crossing the interstate twice from an aesthetic perspective."[189] The applicant describes that traffic and noise impacts during construction would be similar between the proposed route and the conceptual alternative route, though due to the longer route of the conceptual alternative route and the double-crossing of I-84, the conceptual alternative route would likely take longer to construct and therefore construction-related local traffic and noise impacts would be greater.

[188] B2HAPPDoc3-20 ASC 12_Exhibit L_Protected Areas_ASC 2018-09-28, Section 3.5.1.1. Additional details are provided in ASC Exhibit L, Attachment L-3.
[189] Id.

Based on the analysis presented in ASC Exhibit L, the Department recommends that Council find that an alternative route was considered, the conceptual alternative route, and would result in greater impacts than the proposed route, when considering visual impacts, two crossings of I-84 and more disturbance to forestland (approximately 16 acres). As such, the Department recommends that Council find that the proposed facility is allowed to be sited through the Blue Mountain Forest State Scenic Corridor in accordance with OAR 345-022-0040(2).

Ladd Marsh Wildlife Area/State Natural Heritage Area (SNHA)

The proposed facility would cross the Ladd Marsh Wildlife Area (WA), a designated State Wildlife and Management Area, between MP 110.4 and MP 111.5, approximately 0.5 mile east of Foothill Road (see ASC Exhibit C Figure C-2 Map 54). ODFW owns and manages the WA. The proposed facility would be located within 500 feet of the applicant's existing utility right-of-way containing the 230 kV Quartz-La Grande transmission line, satisfying the requirements of OAR 345-022-0040(3).[190] As such, the Department recommends Council find that the proposed facility is allowed to be sited through Ladd Marsh Wildlife Area. On the record of the ASC, ODFW provided a comment letter which included two specific comments regarding the proposed facility crossing Ladd Marsh WA. The first comment notes that the area crossed by the proposed facility is big game winter range (considered Category 2 habitat), and as such, ODFW requests that mitigation plans and best management practices be followed (see Attachment P1-6). As described in Section IV.H., *Fish and Wildlife Habitat*, the requested mitigation and management practices will be followed. ODFW additionally requests that facility construction activities be coordinate with the WA manager. Finally, ODFW notes that it is aware of cultural resources at the WA that should be protected during facility construction, and requests that the SHPO or federal government concurrence be provided to ODFW prior to facility construction. Based on these requests, the Department recommends the following condition:

Recommended Protected Areas Condition 1: During design and construction of the facility, if the proposed facility route is selected, the certificate holder must:

a. Coordinate construction activities in Ladd Marsh Wildlife Area with the Wildlife Area manager.
b. Provide evidence to ODFW that the certificate holder has received Section 106 NRHP compliance for the proposed facility, including the final HPMP for the portion of the facility that would cross Ladd Marsh Wildlife Area.

[190] OAR 345-022-0040(3); "The provisions of section (1) do not apply to transmission lines or natural gas pipelines routed within 500 feet of an existing utility right-of-way containing at least one transmission line with a voltage rating of 115 kilovolts or higher or containing at least one natural gas pipeline of 8 inches or greater diameter that is operated at a pressure of 125 psig."

In addition, a segment of site boundary for the proposed Morgan Lake alternative route would extend into the Ladd Marsh Wildlife Area (see ASC Exhibit C Figure C-3 Map 10), but that would not be located within an existing utility right-of-way. In ASC Exhibit L, the applicant assumes that because the site boundary of the proposed Morgan Lake alternative route would cross the protected area, and not the transmission line, that the evaluation under OAR 345-022-0040(3) is not applicable. However, as described above, the site boundary is recommended as the micrositing corridor, resulting in the possibility that the alternative route could cross the protected area. Because an evaluation of an alternative with greater impacts was not completed, in order to satisfy OAR 345-022-0040(1), the Department recommends Council restrict the site boundary of the Morgan Lake alternative to avoid crossing or siting of facility components within the protected area, as follows:

> **Recommended Protected Areas Condition 2:** During design and construction of the facility, if the Morgan Lake alternative route is selected, the certificate holder shall ensure that facility components are not sited within the boundary of the Ladd Marsh Wildlife Area. The certificate holder shall provide to the Department a final design map for Union County demonstrating that the site boundary and facility components are located outside of the protected area boundary.

Based on compliance with the recommended condition, the Department recommends that Council find that the proposed alternative route would not be sited within the protected area and therefore would satisfy OAR 345-022-0040(1).

IV.F.2. Potential Noise Impacts

Construction

Potential noise impacts during construction would predominately result from operation of construction vehicles and equipment (i.e. auger drill rig, backhoe, crane, dump truck, grader, pickup truck, and tractor) at a construction site. As described in Section IV.Q.1. *Noise Control Regulations*, the applicant evaluates potential noise levels from general construction activities based on an assumed operation of five construction vehicles, at 40 percent hourly usage. As presented in Table PA-2, *Predicted Noise Levels from General Construction* Activities, the one-hour average predicted noise level from the combined operation of five pieces of equipment is 83 dBA at 50 feet, 79 dBA at 100 feet, and attenuates to 46 dBA at 6,400 feet. Representative noise levels for general construction equipment was obtained from the Federal Highway Administration (FHWA) Roadway Construction Noise Model User's Guide (FHWA 2006).

Table PA-2: Predicted Noise Levels from General Construction Activities

Noise Source and Assumptions	Distance from Construction Activity (feet)	Leq Noise Level (dBA)
5 construction vehicles at 40% usage factor: 1 at 50 ft 2 at 100 ft 2 at 200 ft	50	83
	100	79
	200	74
	400	69
	800	63
	1,600	58
	3,200	52
	6,400	46
Leq = Equivalent sound pressure level Usage factor = Percent of time equipment is in use over time period (1 hr)		

Noise generating construction activities would also include blasting and rock breaking (140 dBA at the blast location or over 90 dBA within 500 feet), implosive devices used during conductor stringing, helicopter operations (62 to 84 dBA at 1,000 feet), and vehicular traffic.

There are ten protected areas within half-mile of the centerline of the proposed facility; there are two protected areas within half-mile of the centerline of the proposed Morgan Lake alternative route. As listed in Table PA-1, *Protected Areas within Analysis Area and Distance from Proposed and Alternative Transmission Line Routes* above, these are:

<u>Proposed Route</u>

- Blue Mountain Forest State Scenic Corridor
- Ladd Marsh Wildlife Area
- Oregon Trail ACEC[191] – National Historic Oregon Trail Interpretive Center Parcel (NHOTIC)
- Owyhee River Below the Dam ACEC
- Oregon Trail ACEC - Straw Ranch 1 Parcel
- Oregon Trail ACEC – Birch Creek Parcel
- Hilgard Junction State Recreation Area
- Deer Flat National Wildlife Refuge
- Oregon Trail ACEC - Tub Mountain Parcel
- Columbia Basic Coyote Springs Wildlife Area

[191] BLM designated Area of Critical Environmental Concern (ACEC).

Morgan Lake Alternative Route

- Ladd Marsh Wildlife Area
- Hilgard Junction State Recreation Area

Construction of the proposed facility, including proposed and alternative routes, would cause short-term noise impacts to nearby protected areas. Construction activities that would cause noise impacts at protected areas include blasting and rock breaking, implosive devices used during conductor stringing, helicopter operations, and vehicular traffic. The construction activities would progress along the corridor of the proposed transmission line, and no area would be exposed to construction noise for the entire construction period.

At a distance of half-mile or less, these areas would experience noise impacts during facility construction. However, noise would attenuate with distance, topography, and vegetative screening so it is possible that the decibel volume represented in Table PA-2 may be lower during actual facility construction. Helicopter use during construction would be audible at nearby protected areas and would cause a short-term impact to users of protected areas at those areas near the helicopter fly-yards and MUAs, and during facility transmission line construction at times of helicopter use. However, construction noise including helicopter use would only occur during facility construction, which is a short-term impact likely only over a period of months at any one location. [192]

Operation

Potential noise impacts during facility operation would include vegetation maintenance (including chain saws or other power equipment), inspections, corona noise from the transmission line, and potential noise from operation of Longhorn Station. Inspections typically occur once per year, but could be more frequent during weather or emergency events, and while usually would consist of vehicle inspection, helicopters could be used. As during construction, vegetative maintenance and inspection-related noise would only be short term.

The Longhorn Station would be approximately 0.7 miles from a protected area, the Columbia Basic Coyote Springs Wildlife Area. However, the Station would be located in the Port of Morrow industrial park, adjacent to I-84, and noise from the Station would not be distinguishable from other existing noise at the wildlife area.

During typical operating conditions, corona noise is estimated at 27 dBA at the edge of the facility right of way. Twenty-seven dBA is barely audible and would not cause a significant noise impact at any protected area. As described further in Section IV.Q.1*, Noise Control Regulations*, during certain foul weather conditions and low wind, corona noise would be greater than 27 dBA at certain noise-sensitive receptors. It is also possible that corona noise would be audible at certain locations in protected areas very near the proposed facility. However, corona noise is

[192] B2HAPPDoc3-20 ASC 12_Exhibit L_Protected Areas_ASC 2018-09-28, Section 3.5.3.1.

never anticipated to be above 50 dBA during foul weather at any noise sensitive receptor. At any nearby protected area, the conditions that give rise to a louder corona noise (namely, rainy weather) likely also limits the users at a protected area. Other designations of protected areas could include protection of wildlife or cultural resources; however, the low-level of corona noise, during infrequent weather conditions, is unlikely to cause a significant noise impact at these areas. While the proposed route would cross the Blue Mountain State Scenic Corridor, operational noise would not affect the primary user experience of the protected area, which is driving along the road and experiencing the scenery.

IV.F.3. Potential Traffic Impacts

Construction

Facility construction would cause short-term impacts to those protected areas that are near the proposed facility, or where construction traffic routes pass near those protected areas. The impacts would be short-term and limited in duration to construction related traffic. Construction traffic would include multiple vehicle types, but the majority of traffic trips would be for construction workers daily commuting to work sites. General traffic impacts from the proposed facility is also discussed in Section IV.M*, Public Services*, which also includes a number of recommended site certificate conditions that would manage and reduce potential impacts from facility construction traffic, including finalizing county-specific traffic management plans. Implementation of these measures will reduce facility traffic impacts.

Construction-related traffic impacts are expected to vary at each protected area. Some protected areas would have no impacts from facility construction due to the distance from the proposed facility as well as planned haul and commuting routes. Some protected areas would have minor construction-related traffic impacts due to proximity of the facility, or haul/commute routes, near the protected areas. However, in all circumstances, construction traffic would be short term. See ASC Exhibit L, Attachment L-1, Table L-1-1 for specific information related to each protected area and anticipated traffic. Additionally, recommended conditions in Section IV.M*, Public Services*, specifically including the requirement to finalize a county-specific traffic management plan prior to facility construction, would be expected to mitigate potential construction traffic impacts at any particular protected area.

Operation

No traffic impacts to protected areas are anticipated during facility operation. Facility operation would involve very infrequent maintenance and inspections by the certificate holder, expected at one or two inspections per year.

IV.F.4. Potential Impacts from Water Use and Wastewater Disposal

Construction and Operation

Construction-related water use would include approximately 36.5 million gallons over an approximately 36-month period for transmission line structure foundation and Longhorn Station foundation; preparation of drilling slurry; moisture conditioning during access road construction; dust control right-of-way clearing; station grading and site work; drilling and fire prevention; and re-seeding restoration upon construction completion. As explained in ASC Exhibit O, construction-related water would be obtained from municipal sources, with noted capacity to serve the applicant's construction-related water need. Operational water use would be limited to the proposed Longhorn Station and would result in approximately 11,000 gallons per year for landscaping activities and potable employee-use purposes. As explained in ASC Exhibit O Section 3.4., operational water would likely come from a direct connection to the Port of Morrow's water system. Because facility related water use would be served by municipal sources and not any protected area, the Department recommends Council find that construction and operational water use would not result in significant adverse impacts to protected areas within the analysis area.

Construction-related wastewater would predominately be generated during foundation construction for transmission line towers and the Longhorn Station, from concrete wash water. Concrete wash water would include water with residual concrete, concrete associated liquids, and the wash water from cleaning trucks, hoppers, and chutes. As described in ASC Exhibit V, washout liquids would generally be allowed to evaporate or would be pumped out and properly disposed of by the construction contractor. Washout liquids would not be discharged into storm drains, ditches, streams or other water bodies. Concrete washout areas would be located in designated aboveground earthen berms or straw bale enclosures lined with plastic, a storage tank, or other structure approved by the engineer or inspector. These washouts would be located within each structure work area at least 50 feet away from storm drains, ditches, streams, or other water bodies. Washouts would be visually inspected on a daily basis to ensure there are no leaks and that they are operating effectively. They would be cleaned out when they reach 75 percent of their design capacity.

As described in ASC Exhibit V, some foundations may require slurry to stabilize foundation shafts during drilling. Slurry fluids would consist of a mixture of bentonite and water. Excess and degraded slurry fluids would be contained in designated aboveground washouts similar to those described above for concrete. The slurry fluids would be allowed to completely evaporate or they would be pumped out and properly disposed of by the construction contractor. Slurry fluids would not be discharged into storm drains, ditches, streams, or other water bodies. Because the applicant would not utilize or rely upon a protected area for disposal of construction related wastewater, and because the predominant source of construction-related wastewater, while adjacent and in proximity to some protected areas, would be properly

managed and contained, the Department recommends Council find that proposed construction related wastewater would not be likely to result in significant adverse impacts to any protected areas.

IV.F.5. Potential Visual Impacts from Facility Structures

Construction and Operation

Methodology for Visual Impact Assessment

The analysis area for protected areas is 20 miles; however, the applicant's visual impact assessment extends five miles from the proposed site boundary in non-forested settings, and 10 miles in forested settings to account for the potential additional visibility of a cleared forested right of way. Beyond those distances, the applicant asserts that visibility of the proposed facility, including proposed alternative routes, would be negligible. Based on this method, there are 28 protected areas that were carried forward for additional assessment of visual impacts. These specific protected areas are shown in Table PA-3, *Summary of Protected Areas with Potential Visual Impacts,* below (which is reprinted from ASC Exhibit L, Table L-2, with edits).

In order to assess the anticipated impacts of the proposed facility to specific protected areas, in the absence of specific Council methods, the applicant proposes a specific methodology based on prescribed methods used by the BLM and the US Forest Service for assessing visual impacts.[193] For EFSC protected areas not located on BLM or USFS land, the applicant used one of the two procedures based on whether the resource was located in forested or non-forested areas; resources located in non-forested areas were analyzed using the BLM methodology, and those located in forested areas were analyzed using the USFS methodology.[194]

ASC Exhibit L, Attachment L-3 includes the complete visual impact assessment methodology. To determine whether potential visual impacts would be "significant," the methodology considers the combined outcome of context of the impact, impact intensity, and the degree to which the possible impacts are caused by the proposed action. Additionally, the applicant applied the

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[193] Id, Section 3.2.4.

[194] For context, the BLM manages visual resources through its 1986 Visual Resource Management (VRM) System, which classifies scenic resources based on "Class Objectives," which are based on scenic quality, visual sensitivity, and distance. Under this system, a Visual Resource Inventory process assigns visual resources to management classes with established objectives based on the level of change to the character of the landscape. The USFS manages scenic resources through its Visual Management System established in 1974 to inventory, classify, and manage lands for visual resource values. Visual resources are managed by visual quality objectives, which describe a degree of acceptable alteration of the natural landscape, ranging from preservation, retention or partial retention, and modification or maximum modification.

EFSC definition of "significant" when conducting its evaluation. The definition of "significant" is at OAR 345-001-0010(53): "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."

The applicant implemented the visual impact methodology and impact assessment using a three parts process: [195]

(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;
    b. Magnitude of impact – duration;
    c. Magnitude of impact – visual contrast and scale domination; and
    d. Magnitude of impact – resource change and viewer perception.
(3) Consideration of intensity, causation, and context (based upon Council's definition of "significant" OAR 345-001-0010(53).
    a. Impact intensity
    b. Degree to which the possible impacts are caused by the proposed action
    c. Context
    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.

The Department agrees and supports the use of these methods for the proposed facility, specifically because 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. As such, utilizing those same 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." As is mentioned in Sections IV.J *Scenic Resources* and IV.L*, Recreation*, the same visual resource impact assessment methodology was used by the applicant to assess visual impacts from the proposed facility to resources considered in those sections.

[195] B2HAPPDoc3-20 ASC 12_Exhibit L_Protected Areas_ASC 2018-09-28, Section 3.2.4.

Visual Impact Assessment

The applicant provided a comprehensive visual impact assessment of all protected areas, these are included in ASC Exhibit L, Attachment L-3. As shown on Table PA-3, of the 28 protected areas evaluated for potential visual impacts due to the proximity of the protected areas to the proposed facility, 12 protected areas were determined by the applicant to have a "low intensity" visual impact, and as such, could not have a significant adverse impact ("low intensity" is defined as not having the potential to alter scenic quality or landscape character, or not be perceived by viewers). Four additional protected areas were determined to be located outside of the modelled viewshed and would not have a significant adverse impact from visibility because visibility of the proposed facility would be screened by topography. These 16 protected areas are not further evaluated in this order.[196]

The applicant then determined that the remaining 12 of 28 protected areas could have a potential adverse visual impact and therefore further evaluated impacts to these areas from potential facility visibility to determine level of impact significance based on the management and protection of the area. Assessment of these 12 protected areas is summarized below in Table PA-3, *Summary of Protected Areas with Potential Visual Impacts* and assessment of the significance of potential facility visibility for each protected area is included below the table.[197] Additionally, while not required by Council rules, the applicant provided visual simulations from certain protected areas, demonstrating what the proposed facility may look like once built. The photo simulations are provided in ASC Exhibit L, Attachment L-4.

Table PA-3: Summary of Protected Areas with Potential Visual Impacts

Protected Area within Analysis Area[1]	Location of Protected Area Relative to Route Centerlines[2]
Ladd Marsh Wildlife Area/SNHA	Crosses Proposed Route[5] / Morgan Lake Alt. within 200 ft SW
Oregon Trail ACEC – National Historic Oregon Trail Interpretive Center (NHOTIC) Parcel	123.4 ft NE of proposed route
Owyhee River Below the Dam ACEC	249 ft SW of proposed route
Oregon Trail ACEC – Straw Ranch 1 Parcel	0.1 mi SW of proposed route
Oregon Trail ACEC – Birch Creek Parcel	0.2 mi SW of proposed route

[196] Id. Section 3.2.4.
[197] Id. Section 3.5.6.

Table PA-3: Summary of Protected Areas with Potential Visual Impacts

Protected Area within Analysis Area[1]	Location of Protected Area Relative to Route Centerlines[2]
Oregon Trail ACEC – Tub Mountain Parcel	0.5 mi W of proposed route
Farewell Bend State Recreation Area	0.7 mi NE of proposed route
Oregon Trail ACEC – Powell Creek Parcel	1.2 mi E of proposed route
Umatilla National Wildlife Refuge	1.3 mi N of proposed route
Powder River Wild and Scenic (Scenic)	1.4 mi E of proposed route
Powder River Canyon ACEC	1.4 mi E of proposed route
Lindsay Prairie Preserve/ SNHA	1.6 mi SW of proposed route

[1] The analysis area for Exhibit L, as defined in the Second Amended Project Order, is "the area within the site boundary and 20 miles from the site boundary, including areas outside the state if applicable to the Council's standard."
[2] Location of each protected area is relative to each route segment's centerline, not the Site Boundary. There may be values greater than 20 miles listed because temporary Project features (multi-use areas, pulling and tensioning sites) are located several miles away from route centerlines. The Second Amended Project Order describes the analysis area as the "area within the site boundary and 20 miles from the site boundary, including areas outside the state if applicable to the Council's standard" and therefore these features beyond 20 miles from centerline are still analyzed in Exhibit L.
[3] Resource is greater than five miles from the proposed route and/or alternative route centerline and outside of the modeled cleared right-of-way viewshed so there will be no visual impacts to the resource.
[4] Resource is completely outside of the modeled bare-earth viewshed so there will be no visual impacts to the resource.
[5] Crossing of the protected area is allowed per OAR 345-022-0040(3).
ft – feet; mi – miles

Visual Impact Assessment of Specific Protected Areas

As described above, there are 12 protected areas (listed in Table PA-3) that would have "medium to high intensity visual impacts" and as such, additional assessment of the significance of those impacts is provided below.[198]

Ladd Marsh Wildlife Area/State Natural Heritage Area (SNHA)

Ladd Marsh Wildlife Area (WA) is an approximately 6,019 acre wildlife area and state natural heritage area, managed for wildlife and habitat by ODFW, located in Grande Ronde Valley, approximately six miles southeast of La Grande in southern Union County. Ladd Marsh WA

[198] Id.

predominately consists of seasonally and permanently flooded wetlands, with the western portion consisting of upland hillsides with mixed conifer forestland.[199]

The proposed route would cross the protected area, which is authorized under OAR 345-022-0040(3) because, at this location, would be located within 500 feet of an existing utility right of way containing a high-voltage transmission line of at least 115 kV. However, the proposed Morgan Lake alternative route, which based on recommended Protected Areas Condition 1, would be located outside of but within 200 feet of the protected area, requires an impact assessment under OAR 345-022-0040(1).

Potential visual impacts of the proposed Morgan Lake alternative route would include the introduction of moderate contrast and co-dominant visual features to natural and other man-made features with the WA. Other man-made features within the WA include an existing 230 kV transmission line, four home sites, a wastewater treatment facility, and several scattered buildings. In ASC Exhibit L, the applicant describes that views of the transmission line would be intermittent or continuous, depending on vantage point within the WA, and that impacts to viewer perception would be medium. However, the WA is a protected area because of its importance for the protection of wildlife and habitat, which would not be impacted by facility visibility. Therefore, while visitors could experience visual impacts – which is further evaluated under the Council's Recreation standard, the Department recommends that, based on the purpose of the protected area for wildlife and habitat management, Council find that views of the proposed Morgan Lake alternative route would not be likely to result in significant adverse impacts to the protected area.

Oregon Historic Trail ACEC - National Historic Oregon Trail Interpretive Center Parcel

The National Historic Oregon Trail Interpretive Center (NHOTIC) Area of Critical Environmental Concern (ACEC) parcel is 507 acres, managed by BLM for the preservation of its unique historic resource and visual qualities. The NHOTIC is located on the north side of Oregon State Highway (OR) 86, approximately four miles northeast of Baker City, in Baker County. The NHOTIC is one of the largest of the Oregon Trail ACEC parcels, characterized by high recreational use, and includes the interpretive center itself as well as adjacent land surrounding the center.[200]

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 (see ASC Exhibit L Attachment L-4, photo simulations 5-25a, 5-25c, and 5-25e). The highest magnitude impacts would be experienced from the western portion of the parcel near Panorama Point. The

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[199] Id. Section 3.5.1.2.

[200] B2HAPPDoc3-20 ASC 12_Exhibit L_Protected Areas_ASC 2018-09-28, Section 3.5.6, and Section 3.6.1. See also ASC Exhibit L, Attachment L-3, Section 3.15.

applicant states that impacts would slightly reduce the scenery adjacent to the NHOTIC parcel but would not alter the overall scenic quality of the NHOTIC parcel.

As the applicant explains, the NHOTIC parcel was designated to preserve the unique historic resource and visual qualities. The Oregon Trail ACECs, including NHOTIC, was 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.[201] 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 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. The recommended condition is further discussed in Section IV.J*, Scenic Resources*, and is recommended Scenic Resources Condition 2. The condition would require the applicant to use the modified structure (shorter tower height, natina finish, H-frame).

It is also important to note that there were alternative route options previously proposed in the area around NHOTIC, including a route to the east of Flagstaff Hill and the NHOTIC center ("Virtue Flat alternative"), and other routes near the current proposed route. The route to the east of the center was eliminated from consideration due to impacts to sage grouse habitat and potential impacts to an important OHV recreation area. Alternative routes near the current proposed route were eliminated to reduce impacts to irrigated agriculture. The proposed route follows very close to the existing 230 kV transmission line in this area, including using the existing 230 kV line right of way for the proposed facility and rebuilding the 230 kV line. Finally, the Department notes that 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 its Record of Decision (ROD), the federal agency (BLM) that administers the Management Plan for NHOTIC is authorizing the placement of the proposed facility in this location as permissible within the scenic designations in the Management Plan. Considering that the agency that manages the NHOTIC land and has identified the NHOTIC has having significant or important

[201] Id. See Section 3.3.2.5, page R-82.

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.[202] 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.

Owyhee River Below the Dam ACEC

The Owyhee River below the Dam ACEC encompasses 11,239 acres and includes public land of the Owyhee River canyon and its associated viewshed located just north of the Owyhee Dam. The applicant describes the dominant attributes of the Owyhee River below the Dam ACEC include the Owyhee River, narrow canyon bottom, and rugged canyon slopes and walls, all of which contribute to the scenery of the area. A paved two-lane asphalt road runs through the Owyhee River below the Dam ACEC, paralleling the river.[203]

Citing BLM's 2002 Southeastern Oregon Resource Management Plan, in ASC Exhibit L the applicant explains the relevant and important values of the Owyhee River below the Dam ACEC are identified as "high scenic values of diverse landscape elements in a substantially natural setting, a special status plant species (Mulford's milkvetch), the rare presence of a black cottonwood gallery in a riverine system, and the combined wildlife values of diverse habitat types supporting a large number of wildlife species and an important migratory corridor for neotropical birds." The Owyhee River below the Dam ACEC receives some of the highest recreational use within the Southeastern Oregon planning area and is also designated as a Special Recreation Management Area. The area is managed for visual resources pursuant to VRM Class II objectives under the Southeastern Oregon Resource Management Plan.[204]

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[202] B2HAPPDoc13-17 ASC Reviewing Agency Comment Baker County_Kerns 2018-12-14. In a comment on the ASC, Baker County Planning Department expressed concerns of potential visibility of the proposed facility at NHOTIC. The County disagreed with the applicant's conclusion that the proposed facility, even with the mitigation measures as described here (H-frame, weathered finish, shorter structures), would result in less than significant visual impacts. Additionally, the county requested that the applicant fund a study of the costs and feasibility of undergrounding the proposed transmission line in the short segment (approximately 1.6 miles) directly west of, and visible from, NHOTIC, which the applicant completed (see ASC Exhibit BB Errata). The applicant's study makes two general conclusions: 1) the costs to underground the approximately 1.6 mile 500 kV segment in this area would be very high, approximately $98.6 to 107.6 million more than building the segment traditional overhead configuration, and 2) the ground disturbance from underground installation would be "substantially greater" than for overhead, including large amounts of cut-and-fill because the area contains hillslopes, as well as "transition stations," which are required where the transmission line transitions from aboveground to belowground.

[203] Id. See also ASC Exhibit L, Attachment L-3, Section 3.20.

[204] Id.

As described in ASC Exhibit L, in evaluating alternatives for the proposed transmission line, the applicant concluded that, as originally proposed, the transmission line could potentially result in significant visual impacts to the Owyhee River ACEC. Consequently, mitigation options were considered aimed at minimizing adverse impacts, including: (1) relocating the 175-foot tower to an alternate location (Option 1); and (2) reducing the height of the structure and moving it to an alternate location (Option 2). As described below, the proposed facility incorporates Option 1 and is now located to the north of the previous proposal, aligned with the existing utility corridor administered by the BLM.[205]

The proposed facility would be approximately 249 feet outside of the Owyhee River Below the Dam ACEC. Two structures would be visible from the Lower Owyhee Canyon Watchable Wildlife Area interpretive site. The structures would be sited approximately 0.75-1.0 mile from the interpretive site. As described by the applicant, the geometrical form and smooth texture of the tower, though visible, would introduce weak contrast against the surrounding steep to rolling hills and valley walls, brown to red color, and rough texture of the rock. Because of the steep canyon walls and enclosed landscape character at the interpretive site, the applicant concludes the towers would appear "subordinate" on the landscape. The application includes a photosimulation of this location in ASC Exhibit L, Attachment L-4, Figure L-4-9 and -10.

Considering the ACEC as a whole, the applicant explains that viewers would primarily be within the background distance zone, and the steep topography and winding river valley would block most views of the transmission line from the middleground distance zone. The Snively Hot Springs recreation site is outside of the modeled viewshed and would not be impacted.

Views of the proposed facility from Owyhee Lake Road would be primarily intermittent due to screening by topography. When viewed from the interpretive site, the transmission line features would be primarily behind or adjacent to the viewer, and therefore considered primarily peripheral. Viewer perception would be low. The application states that the proposed facility would result in long-term visual impacts to the Owyhee River below the Dam ACEC, which would be medium intensity as measured by medium resource change, and low viewer perception. However, the Owyhee River Below the Dam ACEC would continue to provide the scenic resource value and recreation opportunity identified as valued attributes of the Owyhee River Below the Dam ACEC, since the transmission line features would not be visible from the majority of the canyon where specific scenic features have been identified in the 2002 Southeastern Oregon Resource Management Plan. VRM Class II objectives would be achieved within the Owyhee River below the Dam ACEC, since the landscape character and quality of the resource would not change. [206] It is also important to note that the proposed facility was purposefully sited outside of the ACEC itself, and the Department understands that this decision was made by the BLM and finalized on the Record of Decision (ROD). It is also noted that this decision by the BLM moved the facility from public land (BLM land) onto a short

[205] Id.
[206] Id.

crossing of private land. Also, as shown on Attachment L, Figure L-3-20, the proposed facility is within a BLM designated utility corridor until it must exit the corridor at the northern point of the ACEC, which is the location where the proposed facility would cross Owyhee Lake Road and be somewhat visible from the interpretive site; however, here, based on the BLM's decision, the facility leaves public (BLM) land in order to avoid impacting the BLM ACEC, but as a consequence, crosses private land. For purposes of the Council's Protected Area standard, this routing decision does result in reduced visual impacts to the ACEC, but at a trade-off with impacts to other resources, namely private farmland.

Based on this analysis, and considering the proposed mitigation, the Department recommends that the Council find that visual impacts to the protected area would be less than significant.

Oregon Trail ACEC - Straw Ranch 1 Parcel

The Straw Ranch Parcel 1 is one of the seven Oregon Trail ACEC parcels within the Baker Resource Management Area. There are no recreation facilities within the Straw Ranch Parcel 1.[207]

Existing development visible from the Straw Ranch ACEC Parcel 1 includes I-84 immediately to the south, a gravel quarry to the northwest, scattered residential and ranching development, gravel surface roads, and existing 69-kV and 138-kV transmission lines that cross through the southern half of the Straw Ranch Parcel 1 in an east to west direction. The natural landscape features are co-dominant with the development, with expansive views across the landscape in all directions providing some evidence of the historic landscape of the Oregon Trail. BLM ranked the scenic quality as low (class C).[208]

The proposed transmission towers would lower the quality of Straw Ranch Parcel 1's adjacent scenery. However, this change would result in only a small reduction in scenic quality. The scenic quality class would not change and the cultural landscape character would be maintained, as described in Exhibit L. Viewer perception would be medium, as views of the proposed route would be equally head-on and peripheral and experienced generally from a neutral vantage point.

As shown on ASC Exhibit L, Attachment L-3, Figure L-3-17, there are two existing transmission lines that cross the parcel, and the proposed facility was purposefully routed to the north of and to avoid directly crossing the Straw Ranch 1 ACEC. 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 BLM, the agency that manages the Strawn Ranch 1 ACEC has approved the facility in this location. Based on this

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[207] B2HAPPDoc3-20 ASC 12_Exhibit L_Protected Areas_ASC 2018-09-28, Section 3.5.6. See also Exhibit L, Attachment L-3, Section 3.17.
[208] Id.

analysis, the Department recommends that the Council find that visual impacts to the protected area would be less than significant

Oregon Trail ACEC – Birch Creek Parcel

The Birch Creek Parcel of the Oregon Trail ACEC includes 119 acres encompassing the Oregon National Historic Trail. It is located in Malheur County, approximately two miles south of Farewell Bend and is an important landmark of the National Historic Oregon Trail. This segment of the trail was historically used as a camping area on approach to the Snake River at Farewell Bend. Features at the site include a parking turnout, a wagon rut swale within a fenced enclosure, a short trail adjacent to the ruts, and interpretive panels. The area around the Birch Creek Parcel is characterized by a mixture of privately owned rangeland and federal lands managed by the BLM. The Birch Creek Parcel has a historic landscape character because of the Historic Oregon Trail and relative lack of additional development in the foreground. A wind power facility is present on the ridge to the north and is visible from the ACEC. The BLM Visual Resource Management (VRM) system characterizes the overall scenic quality low (class C), due to the simplicity and uniformity of land form, colors and textures of the landscape. Viewers include tourists and historic trail enthusiasts.[209]

The proposed facility in this area would include the rebuild of 1.1 miles of the existing Quarts to Weiser 138-kV transmission line to a new ROW, and the 500 kV proposed transmission line would be located in the existing 138-kV transmission line ROW, which is owned and operated by the applicant. In proposing to site the proposed transmission line at this location, and to reduce visibility from the ACEC parcel, the applicant has located the line as far north as feasible without encroaching on active agricultural areas. [210] To further reduce visibility, the applicant proposes to use shorter stature H-frame structures ranging in height from 65 to 100 feet for towers between MP 198 and MP 199. This structure type, combined with constructing towers at lower elevations than the ACEC, would minimize the proportion of the facility that could be viewed from the ACEC due to screening by topography.[211] To ensure compliance with this proposal, Scenic Resources Condition 3 would require the applicant to incorporate these mitigation measures. The applicant has included visual photosimulations of the proposed facility in the area of Birch Creek ACEC, included in ASC Exhibit L, Attachment L-4, Figures L-4-7 and 8.

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[209] B2HAPPDoc3-20 ASC 12_Exhibit L_Protected Areas_ASC 2018-09-28, Section 3.5.6 and Section 3.6.2 See also ASC Exhibit L, Attachment L-3, Section 3.13.

[210] Upon review of a draft of the ASC, the Department requested that the applicant consider "potential mitigation measures such as alternative structure finishes (e.g., natina finish) and alternative structure types (e.g., H-frame) and then prepare visual simulation and re-conduct the impact assessment to scenic resources at Birch Creek ACEC." ASC Exhibit L, pages L-45 through L-46. As discussed in detail in ASC Exhibit L, pages L-46 through L-47, the applicant evaluated different types and locations of structures and, ultimately, determined that the proposed "Birch Creek North Route" would effectively mitigate impacts and ensure no adverse visual impacts on this protected area.

[211] B2HAPPDoc3-20 ASC 12_Exhibit L_Protected Areas_ASC 2018-09-28, Section 3.5.6.

With its proposed mitigation measures, views of the towers would still primarily be head-on and experienced by both stationary and transient viewers. The applicant's analysis indicates that, though visible, the 500 kV transmission towers would not substantially lower the quality of the adjacent scenery outside the Birch Creek ACEC Parcel. The landscape character would remain historic due to the prominence of natural features in the viewshed; and the overall scenic quality of the landscape would remain low ("class C"). Because the proposed facility would be sited outside the Birch Creek ACEC Parcel, there would be no changes to the landscape within the boundary of the Birch Creek ACEC Parcel. The proposed facility would conform to VRM Class II objectives within the Birch Creek Parcel, and is therefore consistent with BLM's VRM direction to protect visual values within the Birch Creek Parcel.[212] Additionally, as shown on ASC Exhibit L, Attachment L-3, Figure L-3-13, the proposed facility in this area exits a BLM designed utility corridor just east of the ACEC; the proposed facility would then utilize the existing 138 kV corridor so as to not create a new ROW, and then the proposed facility trends northwest/southeast in order to reenter the BLM utility corridor along I-84. In this area, the Department concludes that the proposed facility has been sited to reduce impacts to the Birch Creek ACEC parcel, while reducing impacts to other lands (including farming and sage grouse habitat in this area) as well as staying along the BLM utility corridor near I-84.[213] 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. Based on this analysis, and considering the proposed mitigation, the Department recommends that the Council find that visual impacts to the protected area would be less than significant.

Oregon Trail ACEC – Tub Mountain Parcel

The Oregon National Historic Trail Area of Critical Environmental Concern (ACEC) – Tub Mountain Parcel is a long, narrow geographic area located in northeastern Malheur County. The Tub Mountain Parcel includes approximately 5,900 acres of BLM-administered lands. The Tub Mountain Parcel includes one interpretive site at Alkali Springs, which was the "nooning" spot for wagon trains leaving Vale. The Tub Mountain Parcel is remote and accessible only by local gravel roads. The Tub Mountain Parcel is managed under the BLM's Southeastern Oregon Resource Management Plan to maintain the integrity of the historic landscape; scenery is considered a valued attribute. BLM manages this area according to VRM Class II objectives, meaning that the change in landscape character should be low and the existing landscape character retained within the VRM Class II boundary.[214]

The proposed facility would traverse along the eastern and southern boundary of the Tub Mountain Parcel at a distance of 0.5 mile at its closest point, approximately 1.5 miles east of

[212] Id.

[213] Id. ASC Exhibit L, Attachment L-3, Figure L-3-13.

[214] Id. See also ASC Exhibit L, Attachment L-3, Section 3.19.

the Alkali Springs interpretive site. The transmission towers and conductors would be partially screened from view by rolling terrain in the foreground. The transmission towers would be the primary source of visual contrast experienced from the Tub Mountain Parcel.

Viewers from Alkali Springs would have views of the proposed route transmission towers to the east, which would be partially blocked by vegetation with the result that the proposed towers would appear co-dominant with the landscape and produce moderate visual contrast. While traveling along Old Oregon Trail Road or the Oregon Trail route, the proposed facility would be generally located to the east, and most towers would either not be visible or only the top portions would be visible. Some towers would be sky-lined and some "backdropped" depending on location within the Tub Mountain Parcel, which would introduce moderate to strong visual contrast. Views of the proposed route would primarily be experienced from a neutral vantage point and would be peripheral and intermittent due to topographic screening.

The transmission line has been sited outside the Tub Mountain Parcel, and there would be no change to the landscape within the boundary of the lands managed under VRM Class II. Consequently, the applicant concludes that the proposed facility would conform to the BLM management standard and is consistent with BLM's management of the Tub Mountain Parcel's visual qualities.[215] As shown on ASC Exhibit L, Attachment L-3, Figure L-3-19, the proposed facility has been sited in this area to avoid other impacts, specifically sage grouse habitat, and is also located on BLM land to avoid private land. Additionally, the proposed route in this area connects to a BLM designated utility corridor northeast of the Tub Mountain ACEC near I-84 Highway, and the location of the route minimizes impacts to multiple resources, recognizing that there will be visual impacts to the Tub Mountain ACEC. 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 BLM, the manager of Tub Mountain ACEC and the land upon which the proposed route is located in this area (which is not Tub Mountain ACEC) has approved the proposed facility route via its ROD. Based on this analysis, the Department recommends that the Council find that visual impacts to the protected area would be less than significant.

Farewell Bend State Recreation Area

Farewell Bend State Recreation Area is an Oregon state park administered by OPRD. It is located about 3 miles southeast of Huntington in Baker County on the western shore of Brownlee Reservoir (Snake River). Although there is no management plan for the Farewell Bend State Recreation Area, OPRD includes scenery as one of the park's attributes for visitor enjoyment; therefore, visual resources are considered a valued attribute to this resource.[216]

[215] Id.
[216] Id.

The applicant states that the proposed facility would have "medium magnitude" impacts from the proposed facility, specifically from 500-kV towers placed approximately 0.7 mile from the Farewell Bend State Recreation Area, to the west and southwest of the park. The structures would introduce moderate visual contrast and appear "co-dominant."

As mitigation for the potential visual impacts to Birch Creek, located south of Farewell Bend, in this area the applicant proposes to use H-Frame structures with heights of 65 to 100 feet in the segment from MP 197.9 to MP 199.1 to reduce the scale of the structures (recommended Scenic Resources Condition 3). Although developed for impacts to Birch Creek, impacts to the Farewell Bend protected area are also minimized by the reduced scale of these structures.

Views of the proposed transmission towers would be head-on and peripheral, depending on where the viewer is located within the Farewell Bend State Recreation Area, and would generally be experienced from a neutral vantage point such that viewer perception would be medium. Views of the Brownlee Reservoir from the Farewell Bend State Recreation Area, the primary scenic attribute, would not be affected. As is further described in Attachment L-3, Section 3.6, and shown on Figure L-3-6, the primary views at the park are to the reservoir (Snake River), while the proposed facility would be away from the reservoir and "behind" a person looking towards the reservoir. Additionally, as shown on Figure L-3-6, I-84 is between the park and the proposed facility. [217] Based on this analysis, the Department recommends that the Council find that visual impacts to the protected area would be less than significant.

Oregon Trail ACEC - Powell Creek Parcel

The Powell Creek Parcel is one of the seven Oregon Trail ACEC parcels within the Baker Resource Management Area and is located slightly east of I-84, approximately 0.6 mile southeast of Dixie and 5 miles north of Lime, in Baker County.[218]

The Powell Creek Parcel sits slightly above I-84 and the Burnt River. Existing development includes I-84 and existing 69- and 138-kV transmission lines located approximately 0.3 mile to the west of the Powell Creek Parcel, and existing gravel-surfaced roads that travel through the Powell Creek Parcel and along the western boundary. The application describes that this existing development competes for visual attention with the natural features of the landscape and is co-dominant. The landscape provides some evidence of the historic landscape of the Oregon Trail. The scenic quality of the existing landscape for the Oregon Trail ACEC – Powell Creek Parcel is considered low (class C) by the BLM.[219]

[217] Id. See also ASC Exhibit L, Attachment L-3, Section 3.6.
[218] B2HAPPDoc3-20 ASC 12_Exhibit L_Protected Areas_ASC 2018-09-28, Section 3.5.6. See also Exhibit L, Attachment L-3, Section 3.16.
[219] Id.

The proposed facility would be located about 1.2 miles to the east of the Powell Creek Parcel. However, as described in ASC Exhibit L, views of the proposed route would be largely shielded by topography between the ACEC parcel and the facility. Improvements would be made to an existing road located to the southwest of the parcel, across I-84. An approximately 735-acre multi-use area would be located to the southwest along Rye Valley Road. Three sky-lined towers would appear prominent on the ridgeline, as these structures support the span of the conductor across Rye Valley Road.[220]

The Powell Creek Parcel was designated to preserve the unique historic resource of the Oregon Trail, and visual qualities within this geographic area. Although the transmission line would result in visual impacts to some locations at the Powell Creek Parcel, the applicant's assessment is that these impacts would not preclude its ability to provide the scenic value for which it was designated.[221] As is shown on Exhibit L, Attachment L-3, Figure L-3-16, the Power Creel Parcel is located across I-84 from the proposed facility. 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. Additionally, while the large MUA would be visible during construction, after construction was completed the MUA would be restored. Based on this analysis, the Department recommends that the Council find that visual impacts to the protected area would be less than significant.

Umatilla National Wildlife Refuge

The Umatilla National Wildlife Refuge is part of the Mid-Columbia River National Wildlife Refuge complex in Morrow and Umatilla Counties. The Umatilla National Wildlife Refuge is managed under the Umatilla National Wildlife Refuge Comprehensive Conservation Plan. The first priority of each refuge, according to the comprehensive plan, is to conserve, manage, and if needed, restore fish and wildlife populations and habitats. Scenery is not specifically identified as a valued attribute for which the area was designated a National Wildlife Refuge.

The Columbia River is located along the northern boundary of the Umatilla National Wildlife Refuge. Existing 500- and 230-kV transmission lines run north and south of the McCormack Unit, located in the southeast portion of the Umatilla National Wildlife Refuge, along with several major highways, including I-84 to the south.[222]

The proposed facility would be located approximately 1.3 miles from the National Wildlife Refuge. In this area the towers would be "sky-lined," meaning sited on or near a ridgeline and silhouetted against the sky. It is also possible that views from the Refuge to the proposed facility could include Longhorn Station. However, the facility would be partially obstructed by the two existing transmission lines (BPA transmission lines) that are located between the

[220] Id.
[221] Id.
[222] Id.

National Wildlife Refuge and the proposed transmission line. According to the comprehensive plan, scenery is not considered a specific valued attribute for which the National Wildlife Refuge was designated (rather, the primary purpose is to protect wildlife and habitat). It is important to also note that most vantage points from the Umatilla National Wildlife Refuge to the proposed facility would have to look across the Port of Morrow, urban development, state route 730, a railroad, existing BPA transmission lines, and other development features.[223] Based on the analysis presented here, the Department recommends that the Council find that visual impacts to the protected area would be less than significant.

Powder River Wild and Scenic River

The Powder River is designated as a scenic river for 11.7 miles, covering 2,385 acres, from the Thief Valley Dam to Oregon Highway 203 within the BLM Vale District, in Baker County. Scenery is identified as an "Outstandingly Remarkable Value" for this segment of the river. As the applicant explains, the Powder River flows through a rugged canyon with scenic geologic formations. Recreation opportunities include boating in the spring, fishing, and hunting, although access is limited. The Wild and Scenic Rivers segment is located within the Powder River Canyon ACEC. [224]

The applicant states that the proposed facility would have medium magnitude impacts associated with 500-kV towers, but that the towers would be located at distances of 1.6 miles or more. These medium magnitude impacts would be limited to the uplands portion of the river and ACEC, and not affect the scenery within the river canyon itself, from which no visibility of the proposed facility is anticipated. The proposed facility would lower the quality of adjacent scenery in upland portions of the resource; however, the overall scenic quality and landscape character would not change, and resource change would be medium. Viewers would primarily be located near the bottom of the canyon where the transmission line would not be visible, so viewer perception would be low. As such, visual impacts of the ACEC would be medium intensity, but with low intensity impacts to the river corridor, the primary location of most users of the ACEC and river. The application further explains that the scenic quality of this resource following construction of the proposed transmission line is the result of the combined influence of the transmission line along with other "past or present actions," including an existing 230-kV transmission line, which would appear subordinate to the natural appearing landscape character.[225]

The Powder River Canyon ACEC was designated to preserve scenic values of the Powder River Canyon. As such, if the scenic resources within the geographic boundary of the Powder River

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[223] Id. See also ASC Exhibit L, Attachment L-3, Section 3.2.
[224] Id.
[225] Id.

Canyon ACEC are maintained, the resource values for which the Powder River Canyon ACEC was designated to protect would also continue. Additionally, because recreation activities would be focused near the bottom of the canyon where the transmission line would not be visible, visual impacts would not disrupt recreation activities for which the Powder River Canyon ACEC is also managed to protect. The proposed transmission line would not preclude the scenic Outstandingly Remarkable Value for which the Powder River Canyon ACEC was designated.[226] Based on this analysis, the Department recommends that the Council find that visual impacts to the protected area would be less than significant.

Powder River Canyon ACEC

The Powder River Canyon ACEC is managed to protect raptor habitat, wildlife habitat, and cultural resources and to maintain scenic qualities while allowing for compatible recreation uses. The Powder River Wild and Scenic Rivers segment is located within the Powder River Canyon ACEC. The Powder River Canyon ACEC includes approximately 5,880 acres.[227] The Powder River Wild and Scenic River was considered a separate protected area by the applicant, and is described and evaluated above.

As explained by the applicant in Exhibit L, the 11.7 miles of the Powder River Wild and Scenic Rivers segment of the Powder River flows through a rugged, incised canyon with steep walls, jagged outcrops, and geologic formations recognized for their outstanding scenic quality. The portion of the Powder River Canyon ACEC above the canyon appear flat to gently rolling with low-growing grass and shrub vegetation that stipples the landscape. Existing development in the area includes dirt roads within the Powder River Canyon ACEC and an existing 230-kV transmission line visible to the west. Wind turbines are visible in the distance outside of the Powder River Canyon ACEC boundary. Although there is existing development within and visible from the Powder River Canyon ACEC, the landscape character is naturally appearing. The BLM ranks the scenic quality of the Powder River Canyon ACEC as medium (class B).[228]

The proposed facility would be located approximately 1.4 miles or more from the ACEC. The facility would be visible from the uplands portion of the ACEC, and would not affect the scenery within the canyon itself. While the proposed facility would lower the quality of the Powder River Canyon ACEC's adjacent scenery in upland portions of the ACEC, viewers would primarily be located near the bottom of the canyon where the proposed route would not be visible, so viewer perception would be low. The proposed facility would not be visible from the wild and scenic river, which contains "Outstandingly Remarkable Value," and the primary importance of the ACEC is protecting the value of the Powder River and particularly the wild and scenic portion of the river. The proposed facility would not visually impact the wild and scenic river.[229]

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[226] Id.
[227] Id. See also ASC Exhibit L, Attachment L-3, Section 3.21.
[228] Id.
[229] Id.

Based on this analysis the Department recommends that the Council find that visual impacts to the protected area would be less than significant.

Lindsay Prairie Preserve / State Natural Heritage Area

The Lindsay Prairie Preserve/State National Heritage Area is a small preserve owned and managed by The Nature Conservancy in Morrow County, south of the NWSTF Boardman. The Lindsay Prairie Preserve includes approximately 377 acres and is dominated by bluebunch wheatgrass and Sandberg's bluegrass, a habitat type that is extremely rare in the Columbia Basin. According to The Nature Conservancy, the Preserve is not managed for scenery, and its purpose is dedicated to preservation of rare grassland habitat. Therefore, scenery is not considered a valued attribute for which the area was designated.[230]

While the Lindsay Prairie Preserve is primarily located within a small canyon, the landscape also includes a small upland plateau above the canyon. Views from the upland plateau are open and panoramic; however, human development includes roads, a gravel quarry, agricultural fields, an existing 69-kV transmission line along the western border, and dispersed rural development. The area has a cultural landscape character. The BLM VRM ranks the scenic quality as Class C.[231]

Proposed transmission towers would be located approximately 1.6 miles from the Lindsay Prairie Preserve. Views from the majority of Lindsay Prairie Preserve would be experienced from within the canyon and would be primarily blocked and intermittent such that viewer perception would be low. Scenery is not considered a valued attribute for which the area was designated. Additionally, an existing BPA transmission line is in the area adjacent to the preserve.[232] Based on this analysis, the Department recommends that the Council find that visual impacts to the protected area would be less than significant.

<u>Conclusions of Law</u>

Based on the foregoing findings and the evidence in the record, and subject to compliance with the recommended conditions of approval, the Department recommends the Council conclude that, taking into account mitigation, the design, construction and operation of the proposed facility, including proposed and alternative routes, is not likely to result in significant adverse impacts to any protected areas, in compliance with the Council's Protected Areas standard.

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[230] Id.

[231] Id. (citing 1986 BLM VRM inventory).

[232] Id. See also ASC Exhibit L, Attachment L-3, Section 3.10

IV.G. Retirement and Financial Assurance: OAR 345-022-0050

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 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.

Findings of Fact

The Retirement and Financial Assurance standard requires a finding that the facility site can be restored to a useful, non-hazardous condition at the end of the facility's useful life, should either the certificate holder stop construction or should the facility cease to operate.[233] In addition, it requires a demonstration that the applicant can obtain a bond or letter of credit to restore the site to a useful, non-hazardous condition.

Restoration of the Site Following Cessation of Construction or Operation

OAR 345-022-0050(1) requires the Council to find that the proposed facility site can be restored to a useful non-hazardous condition at the end of the proposed facility's useful life, or if construction of the facility were to be halted prior to completion. The applicant states that the proposed facility's useful life is in excess of 100 years. 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.[234]

As described by the applicant in ASC Exhibit W, restoring the site to a useful, nonhazardous condition 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.[235] The foundations for each support structure

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[233] OAR 345-022-0050(1).

[234] B2HAPPDoc3-40 ASC 23_Exhibit W_Retirement_ASC 2018-09-28, Section 3.1 and B2HAPPDoc3-21 ASC 13_Exhibit M_Financial Capability_ASC 2018-09-28, Section 3.2.1.

[235] The applicant explains that if the transmission line was decommissioned, the switching station would remain in place and not be decommissioned because it would continue to be used by other transmission lines entering and

would be removed to a depth of three feet below grade within land zoned EFU and to a depth of one foot below grade (depending on ground slope) in all other areas. All structure locations and access roads would be restored to a useful, nonhazardous condition that would be consistent with the site's zoning and suitable for uses comparable to surrounding land uses.[236] Following gravel removal at the locations of tower pads and communication stations, these sites would be re-graded as necessary (for restoration of natural contours) and then re-seeded.[237]

The majority of facility access roads would be primitive (non-graveled) overland travel roads. Following construction of the primitive roads, vegetation may regrow adjacent to and within the traveled roadway, and new or modified drainages may develop depending on the construction and location of the roads. The applicant explains that re-grading or reshaping primitive roads to match previous land contours would have the potential to create a greater impact compared to leaving in place the contours that developed during the service life of the transmission line. Therefore, restoration of primitive overland travel roads would consist of only minimal re-grading, as well as reseeding and scarifying the road bed. In contrast, built-up all-weather roads, including all communication station roads, would be fully restored. Following gravel removal, built-up all-weather roads would be re-graded as necessary (for restoration of natural contours) and then re-seeded.[238]

Even if the remainder of the facility were to be removed from service, the Hemingway Substation, 230-kV line segment, and the 138-kV line segment all would remain necessary for operation of the larger transmission grid; therefore, these components would not be removed and would remain in place following decommissioning of the rest of the facility.[239]

The Council's rules include several mandatory site certificate conditions relating to the obligation of the certificate holder to prevent the development of conditions on the site that would preclude restoration of the site and requiring the certificate holder to obtain Council approval of a retirement plan in the event that the facility ceases construction or operation. The mandatory conditions are as follows:

> **Recommended Retirement and Financial Assurance Condition 1:** The certificate holder shall 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.
> [Mandatory Condition OAR 345-025-0006(7)]

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exiting the station. B2HAPPDoc19 ASC IPC Responses to ASC RAIs and Agency Comment Letters_ 2019-01-14 to 2019-04-12.

[236] B2HAPPDoc3-40 ASC 23_Exhibit W_Retirement_ASC 2018-09-28, Section 3.2.

[237] B2HAPPDoc3-40 ASC 23_Exhibit W_Retirement_ASC 2018-09-28, Attachment W-1.

[238] B2HAPPDoc3-40 ASC 23_Exhibit W_Retirement_ASC 2018-09-28, Section 3.2, Section 3.4, and Attachment W-1.

[239] B2HAPPDoc3-40 ASC 23_Exhibit W_Retirement_ASC 2018-09-28, Section 3.4. Additionally, the Hemingway substation in Idaho is not subject to EFSC rules.

Recommended Retirement and Financial Assurance Condition 2: The certificate holder must retire the facility in accordance with a retirement plan approved by the Council if the certificate holder permanently ceases construction or operation of the facility. The retirement plan must describe the activities necessary to restore the site to a useful, nonhazardous condition, as described in OAR 345-027-0110(5). After Council approval of the plan, the certificate holder must obtain the necessary authorization from the appropriate regulatory agencies to proceed with restoration of the site.
[Mandatory Condition OAR 345-025-0006(9)]

Recommended Retirement and Financial Assurance Condition 3: The certificate holder is obligated to retire the facility upon permanent cessation of construction or operation. If the Council finds that the certificate holder has permanently ceased construction or operation of the facility without retiring the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110, the Council must notify the certificate holder and request that the certificate holder submit a proposed final retirement plan to the department within a reasonable time not to exceed 90 days. If the certificate holder does not submit a proposed final retirement plan by the specified date, the Council may direct the department to prepare a proposed final retirement plan for the Council's approval.

Upon the Council's approval of the final retirement plan, the Council may draw on the bond or letter of credit described in OAR 345-025-0006(8) to restore the site to a useful, nonhazardous condition according to the final retirement plan, in addition to any penalties the Council may impose under OAR Chapter 345, Division 29. If the amount of the bond or letter of credit is insufficient to pay the actual cost of retirement, the certificate holder must pay any additional cost necessary to restore the site to a useful, nonhazardous condition. After completion of site restoration, the Council must issue an order to terminate the site certificate if the Council finds that the facility has been retired according to the approved final retirement plan.
[Mandatory Condition OAR 345-025-0006(16)]

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

biphenyls (PCB).[240] 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.

Estimated Cost of Site Restoration

OAR 345-022-0050(2) requires the Council to find that the applicant has a reasonable likelihood of obtaining a bond or letter of credit in a form and amount necessary to restore the proposed facility site to a useful non-hazardous condition. A bond or letter of credit provides a site restoration remedy to protect the state of Oregon and its citizens if the certificate holder fails to perform its obligation to restore the site. The bond or letter of credit must remain in force until the certificate holder has fully restored the site.

The applicant estimates that the total site restoration cost (calculated in 3rd Quarter 2016 dollars) would be approximately $140,779,000. A summary of the applicant's cost estimate from Attachment W-1 of ASC Exhibit W, and attached to this order, is presented in Table RFA-1, *Applicant's Decommissioning and Site Restoration Cost Estimate* below.

Table RFA-1: Applicant's Decommissioning and Site Restoration Cost Estimate

General Costs	
A. PERMITS	$49,183
B. MOBILIZATION	$5,226,223
C. ENGINEERING	$188,799
D. PROJECT OVERHEAD	$1,739,946

[240] B2HAPPDoc3-40 ASC 23_Exhibit W_Retirement_ASC 2018-09-28, Section 3.5, and B2HAPPDoc3-13 ASC 07_Exhibit G_Materials_ASC 2018-09-28, Section 3.2.

Table RFA-1: Applicant's Decommissioning and Site Restoration Cost Estimate

E. HAZARDOUS MATERIALS INSPECTIONS	$60,000
F. PROTECTION	$173,320
General Costs Subtotal	**$7,437,471**
Site Construction	
A. UTILITY DISCONNECTS	$64,692
B. PRELIMINARY WORK	$71,100
C. SITE GRADING	$10,698,452
C. UNDERGROUND UTILITY REMOVAL	$41,212
Site Construction Subtotal	**$10,875,456**
Concrete Wrecking	
A. REINFORCED CONCRETE	$3,791,302
B. NON-REINFORCED CONCRETE	$0
Concrete Wrecking Subtotal	**$3,791,302**
Building Wrecking	$95,337
Steel Wrecking	$59,658,800
Timber Wrecking	$0
Equipment Wrecking	$22,062,320
Load & Haul	$5,830,000
Costs Subtotal	$109,750,686
Specialty Contracts (subcontracted work)	$485,400
Subtotal	**$110,236,086**
Subtotal Adjusted to Current Dollars	**$112,407,253**
Performance Bond @ 1%	$1,124,073
Gross Cost (Adjusted)	**$113,531,326**
Administration and Project Management @ 4%	$4,541,253
Future Developments Contingency @ 20%	$22,706,265
Hazardous Materials Management Contingency	$0
Total Site Restoration Cost (Q3 2016 dollars)	**$140,778,844**
Total Site Restoration Cost (rounded to nearest $1,000)	**$140,779,000**

The applicant used, as a starting place, the Department's former *Cost Estimating Worksheet* but provided the required updated assumptions, labor rates, and unit costs.[241] The applicant estimated the number of days or hours to perform a site restoration activity, and then applied

[241] The Department no longer maintains the *cost estimating worksheet*, and as such, the applicant's updates to labor rates, unit costs, and other assumptions was necessary to reflect more current costs.

loaded crew rates from RS Means construction cost estimating data to determine the unit costs for the given activity.[242]

Based upon the applicant's stated methods and assumptions, the loaded crew rates applied to the applicant's site restoration cost estimate include contractor overhead charges, profit, and insurance costs.[243]

The applicant increased the sum of all line items (cost subtotal) by one percent (1%) to account for the cost of a performance bond that would be posted by the contractor as assurance that the work would be completed as agreed. An additional four percent (4%) was then added as contingency funds for administrative and management expenses, which are the anticipated direct costs borne by the State in the course of managing site restoration and would include the preparation and approval of a final retirement plan; obtaining legal permission to proceed with the demolition of the facility; legal expenses for protecting the State's interests; preparing specifications, bid documents, and contracts for demolition work; and managing the bidding process, the negotiation of contracts, and other tasks. This administration and management contingency is approximately $4.5 million, as shown on Table RFA-1.

If it becomes necessary for the State to draw upon the bond, it might be many years in the future. Other factors contribute to uncertainty; for example, different environmental standards or other legal requirements might be in place in the future, new disposal sites might need to be found for demolition debris, and the cost of labor and equipment available might increase at a rate exceeding the standard inflation adjustment. The certificate holder's decommissioning and site restoration cost estimate applied a 20 percent (20%) future developments contingency to account for these uncertainties.

The Department reviewed the applicant'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. Therefore, based on the preceding analysis, the Department recommends 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.

Ability of the Applicant to Obtain a Bond or Letter of Credit

The applicant provided information about its financial capability in ASC Exhibit M. To demonstrate its ability to receive a financial assurance bond or letter of credit in a form approved by the Council, the applicant provided a letter from Wells Fargo Bank, N.A., dated

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[242] B2HAPPDoc3-40 ASC 23_Exhibit W_Retirement_ASC 2018-09-28, Section 3.4.

[243] Loaded crew rates include wages and benefits, per diem, equipment rates, contractor overheads, and profit. B2HAPPDoc3-40 ASC 23_Exhibit W_Retirement_ASC 2018-09-28, Section 3.4 and Attachment W-1.

August 14, 2018, describing its "long standing" business relationship with the applicant. The bank stated that it would be highly interested in arranging a syndicated letter of credit for the facility in an amount up to $141 million for a period not to exceed three years. The letter does not constitute a commitment from Wells Fargo to issue the letter of credit.[244] Wells Fargo is on the Council's list of pre-approved financial institutions.

As previously discussed, the Department recommends that the Council find that a cost of $140,779,000 (3rd Quarter 2016 dollars) is a reasonable estimate of an amount satisfactory to restore the site to a useful, nonhazardous condition. The applicant proposes that the amount of bond or letter of credit required at any given time be commensurate with the level of risk that the facility would be abandoned or retired. The applicant argues that there is almost no risk that the facility would ever be retired, for the following reasons:[245]

- The facility would be designed, constructed, and operated to be in service in perpetuity (with repair and replacement as needed throughout the life of the facility);
- Transmission line retirements occur only when a line is re-routed and are therefore extremely rare;
- The facility would remain a valuable resource necessary to serve the region: The federal Interagency Rapid Response Team for Transmission identified the proposed facility as one of seven nationally significant transmission projects, the proposed facility is a part of the Western Electric Coordinating Council regional foundational transmission projects, and the Public Utility Commission of Oregon (OPUC) acknowledged the need for the facility through the applicant's Integrated Resource Plan. Due to the facility's value as part of the regional transmission system, in the unlikely event that the applicant were to cease to exist as a company, the facility would remain in service under the ownership of another entity.

The applicant further asserts that even if the facility were to eventually be retired, there is very little risk that the applicant would be unable to restore the site to a useful, non-hazardous condition, for the following reasons:[246]

- For almost 100 years the applicant has remained in business without default or interruption. As a utility, the applicant provides an essential service; therefore, in the unlikely event of the applicant experiencing bankruptcy, the applicant would recapitalize and continue operating, or a third-party would assume control of the applicant's business (including its assets, such as the proposed facility).
- Both the Idaho Public Utilities Commission (IPUC) and the OPUC set rates for utilities that include the costs associated with retiring facilities that are taken out of service. The applicant is a rate-regulated utility under the jurisdiction of both

[244] B2HAPPDoc3-21 ASC 13_Exhibit M_Financial Capability_ASC 2018-09-28, Attachment M-2.
[245] B2HAPPDoc3-21 ASC 13_Exhibit M_Financial Capability_ASC 2018-09-28, Section 3.2.1.
[246] B2HAPPDoc3-21 ASC 13_Exhibit M_Financial Capability_ASC 2018-09-28, Section 3.2.1.

IPUC and OPUC; therefore, the costs of retiring the applicant's facilities are recoverable through the rates charged to the utility's customers.

- The applicant's ability to finance construction of the proposed facility is indicative of their financial capability to decommission and remove the facility, if necessary.
- The letter from Wells Fargo shows that the applicant is reasonably likely to secure a letter of credit in an amount sufficient to restore the site to a useful, non-hazardous condition.

At the same time that the applicant argues that it is highly unlikely that the facility would ever be retired or that the applicant would at any time become financially incapable of restoring the site to a useful, non-hazardous condition, the applicant acknowledges that some level of risk remains. While the risk that the proposed facility would be abandoned during the first 50 years of operation is very low, this risk is slightly increased during the construction phase of the facility (with some risk that the facility could be terminated after construction commencement and prior to placement in service). In addition, this risk would also be slightly increased after the first fifty years of operation, when there is some probability that an unforeseen disruption (major change, e.g., from technological advances affecting the Northwest power grid) would result in the need to retire the facility. As a result, the applicant proposes to obtain and maintain a bond or letter of credit during the facility construction phase and then again after the facility has been in service for 50 years.

The applicant proposes that the amount of bond or letter of credit required during the construction phase be increased on a quarterly basis throughout the estimated four-year construction period (comprised of 16 quarterly periods) to generally correspond with the progress made on construction of the facility. As proposed, the amount of the bond or letter of credit at the beginning of any such quarterly period would be equal to the product of (a) the applicant's estimated facility decommissioning costs and (b) a fraction, the numerator of which would be the number of quarters that have passed since commencement of construction, and the denominator of which would be 16.0 (provided that in all cases the number resulting from the calculation shall not exceed 1.0). For example, at the end of the first year of construction—i.e., four quarters—the amount of the bond or letter of credit would be equal to four-sixteenths (4/16) of the estimated decommissioning costs. The Department agrees that the farther along construction progresses, the more of the facility would be on the landscape, and the greater the cost would be to remove the components and restore the site. The Department further agrees that adjusting the bond amount on a quarterly basis is a reasonable way to ensure that the bond amount generally corresponds with the progress made on construction of the facility (and therefore how much it could cost to remove the facility from the landscape). Accordingly, the applicant proposes and the Department recommends with modifications, that the Council adopt the following site certificate condition:

Recommended Retirement and Financial Assurance Condition 4: Consistent with Mandatory Condition OAR 345-025-0006(8), before beginning construction of the facility,

the certificate holder shall submit to the State of Oregon, through the Council, a bond or letter of credit naming the State of Oregon, acting by and through the Council, as beneficiary or payee. During the construction phase (defined as the period of time from the beginning of construction as defined in ORS 469.300(6) to the date when the facility is placed in service), the certificate holder shall adjust the amount of the bond or letter of credit on a quarterly basis, as follows:

a. The amount of the bond or letter of credit will be increased on a quarterly basis to correspond with the progress of the construction of the facility at the beginning of each quarter. The amount of the bond or letter of credit at the beginning of any such quarterly period will be equal to the product of (i) the estimated total decommissioning cost for the facility, adjusted for inflation, as specified in section (c) of this condition; and (ii) a fraction, the numerator of which is the number of quarters that have passed since commencement of construction, and the denominator of which will be the number of quarters during which the certificate holder must complete the construction phase; provided that in all cases the number resulting from the calculation shall not exceed 1.0.
b. The certificate holder and the Department shall assume a four-year construction phase comprising sixteen quarterly periods. Therefore, for the first quarter of the construction phase, the bond or letter of credit will be maintained in an amount equal to one-sixteenth (1/16) of the total estimated decommissioning cost specified in section (c) of this condition. At the end of the first year of construction—i.e., four quarters—the amount of the bond or letter of credit will be equal to four-sixteenths (4/16) of the total estimated decommissioning costs.
c. 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, and on a quarterly basis thereafter during the construction phase. For the purposes of calculating the bond or letter of credit amount required by section (a) of this condition, the certificate holder shall adjust the estimated total decommissioning cost using the following calculation:
    i. Adjust the estimated decommissioning cost to correspond with the progress of the construction of the facility at the beginning of each quarter, based on the unit costs identified in Tab 01 of Attachment W-1 of the Final Order on the ASC.
    ii. Adjust the estimated total decommissioning cost (expressed in Q3 2016 dollars) to present value, using the U.S. Gross Domestic Product Implicit Price Deflator, Chain-Weight, as published in the Oregon Department of Administrative Services' "Oregon Economic and Revenue Forecast" or by any successor agency and using the third quarter 2016 index value and the quarterly index value for the date of issuance of the new bond or letter of credit. If at any time the index is no longer published, the Council shall select a comparable calculation to adjust third quarter 2016 dollars to present value.
    iii. Round the result total to the nearest $1,000 to determine the inflated-adjusted estimated total decommissioning cost.

d. The certificate holder shall use an issuer of the bond or letter of credit approved by the Council.
e. The certificate holder shall use a form of bond or letter of credit approved by the Council. The certificate holder shall describe the status of the bond or letter of credit in the annual report submitted to the Council under OAR 345-026-0080(1)(b). The bond or letter of credit shall not be subject to revocation or reduction before the facility has been placed in service, at which time the certificate holder must provide the bond or letter of credit specified in Retirement and Financial Assurance Condition 5.
f. The amount of the bond or letter of credit may be amended from time to time by agreement of the certificate holder and the Department to account for adjustments in the construction schedule. Subject to Department approval, the certificate holder may request an adjustment of the bond or letter of credit amount based on final design configuration of the facility by applying the unit costs presented in the 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.

Once the facility is placed in service, the applicant proposes that its obligation to maintain a bond or letter of credit terminate until the facility has been in service for 50 years. The Department points to the mandatory condition in OAR 345-025-0006(8) which requires the certificate holder to maintain a bond or letter of credit in a form and amount satisfactory to the Council in effect at all times until the facility has been retired. However, in light of the very low level of risk that the facility would be abandoned or retired after construction and before 50 years of service (as previously discussed), the Department recommends that the Council require the certificate holder to submit a bond or letter of credit in the nominal amount of $1.00 by adopting section (a) of Retirement and Financial Assurance Condition 5 below.

After the facility has been in service for 50 years, the applicant proposes to begin maintaining a bond or letter of credit in an amount that would increase on an annual basis for the next 50 years. As proposed, in year 51 the amount of the bond or letter of credit would be set at one-fiftieth (1/50) of the total estimated decommissioning costs. Each year, through the 100th year of service, the bond or letter of credit would be increased by one-fiftieth (1/50) of the estimated decommissioning costs. For example, in year 75, the bond or letter of credit would be maintained in an amount equal to twenty-five fiftieths (25/50) or 50 percent of the estimated decommissioning costs. Once the bond or letter of credit reaches an amount equal to 100 percent of decommissioning costs, it would remain at that level for the remainder of the facility's life.[247]

[247] B2HAPPDoc3-21 ASC 13_Exhibit M_Financial Capability_ASC 2018-09-28, Section 3.2.2.

The Department agrees that the risk that the facility would be abandoned or would need to be retired would increase after the transmission line is in service for 50 years. This risk would continue to increase over time, as future unforeseen technological and electricity market changes could affect the applicant's financial condition or the facility's performance in the context of the greater Northwest power grid (and therefore the facility's continued viability). The Department agrees that the applicant's proposed methodology to incrementally increase the financial assurance instrument on an annual basis after the transmission line has been in service for 50 years is a reasonable approach to accounting for the possibility that a facility designed and constructed for an indefinite service life could eventually need to be retired. However, the Department's position is based on our current understanding of the present electric utility industry and technology and our assumptions about the power grid in the near and medium terms. Major market disruptions that could impact the continued viability of the facility or the applicant's financial condition could occur sooner than 50 years from the date the transmission line would be placed in service. As a result, the applicant proposes that on the fifth anniversary of the facility's in-service date, and on each subsequent fifth anniversary thereafter, the certificate holder would report to the Council on the following subjects: (a) the physical condition of the facility; (b) any evolving transmission or electrical technologies that could impact the continued viability of the facility; (c) the facility's performance in the context of the larger Northwest power grid; and (d) the certificate holder's financial condition, including the certificate holder's credit rating at that time.[248] The Department agrees that this information would allow the Council to consider whether or not the approach towards the financial assurance instrument remains appropriate and would account for unforeseen shifts in the power grid or the applicant's financial condition. Therefore, based upon the preceding analysis, the Department recommends that the Council adopt the following condition:

> **Recommended Retirement and Financial Assurance Condition 5**: Consistent with Mandatory Condition OAR 345-025-0006(8), no later than the date the facility is placed in service (the In-Service Date), the certificate holder shall submit to the State of Oregon, through the Council, a bond or letter of credit naming the State of Oregon, acting by and through the Council, as beneficiary or payee. The certificate holder shall 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

[248] B2HAPPDoc3-21 ASC 13_Exhibit M_Financial Capability_ASC 2018-09-28, Section 3.2.2.

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 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 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 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. The certificate holder shall adjust the decommissioning cost for inflation using the following calculation:

(i) Adjust the estimated total decommissioning cost (expressed in Q3 2016 dollars) to present value, using the U.S. Gross Domestic Product Implicit Price Deflator, Chain-Weight, as published in the Oregon Department of Administrative Services' "Oregon Economic and Revenue Forecast" or by any successor agency and using the third quarter 2016 index value and the quarterly index value for the date of issuance of the new bond or letter of credit. If at any time the index is no longer published, the Council shall select a comparable calculation to adjust third quarter 2016 dollars to present value.

(ii) Round the result total to the nearest $1,000 to determine the inflated-adjusted estimated total decommissioning cost.

e. The certificate holder shall use an issuer of the bond or letter of credit approved by the Council.

f. The certificate holder shall use a form of bond or letter of credit approved by the Council. The certificate holder shall describe the status of the bond or letter of credit in the annual report submitted to the Council under OAR 345-026-0080(1)(b). The certificate holder shall maintain a bond or letter of credit in effect at all times as

described in this condition and Retirement and Financial Assurance Condition 4 until the facility has been retired.

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.

Conclusions of Law

Based on the foregoing findings of fact, and subject to compliance with the recommended Retirement and Financial Assurance conditions, the Department recommends that the Council find that the proposed facility, including the proposed and alternative routes, would comply with the Council's Retirement and Financial Assurance standard.

IV.H. Fish and Wildlife Habitat: OAR 345-022-0060

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

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

IV.H.1. General Fish and Wildlife Habitat Mitigation Goals and Standards

Findings of Fact

The first part of the EFSC Fish and Wildlife Habitat standard requires the Council to find that the design, construction and operation of a proposed facility is consistent with the Oregon Department of Fish and Wildlife's (ODFW) habitat mitigation goals and standards, as set forth in OAR 635-415-0025. The ODFW Habitat Mitigation Policy and EFSC Fish and Wildlife Habitat standard creates requirements to mitigate impacts to fish and wildlife habitat, based on the quantity and quality of the habitat as well as the nature, extent, and duration of the potential

impacts to the habitat.[249] The policy also establishes a habitat classification system based on value the habitat would provide to a species or group of species. There are six habitat categories; Category 1 being the most valuable and Category 6 the least valuable, as further described below.

The Fish and Wildlife Habitat standard also includes specific requirements for potential impacts from proposed energy facilities to sage-grouse habitat. Those requirements are addressed in Section IV.H.2., *Sage-Grouse Specific Habitat Mitigation Requirements* below.

The analysis area for the Fish and Wildlife Habitat standard includes all areas within the site boundary.[250]

Methodology

The applicant's methodology for evaluating habitat quantity and quality within the analysis area included a GIS-based habitat modeling tool based on Terrestrial Visual Encounter Survey (TVES) data. The GIS-based habitat modeling tool was then used to identify ecological systems and assign an initial habitat category based on vegetation characteristics. The applicant then overlaid Washington Ground Squirrel Habitat (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. For wildlife habitat subject to an overlay, the applicant moved that habitat category "up" to the overlay category. The applicant assessed fish habitat using GIS-mapping, incorporating data from the existing GIS data layers and sources such as StreamNet, ODFW, and ODF. The applicant then created maps of fish-bearing streams along the proposed and alternative routes, which were reviewed by local biologists at ODFW, USFS, and BLM.

The applicant also conducted a literature review using the Oregon Biodiversity Information Center (ORBIC) (2016), StreamNet (2016), ODFW (2005, 2012, 2015a, 2016), Oregon Department of Agriculture (2016), Oregon Department of Forestry (ODF; 2013), USFS (2015), BLM (2015 and 2016), watershed basin plans, the Geographic Biotic Observation (GeoBOB) database (2016), the Natural Resource Information System database (USFS 2016), the Federal Register, BPA, Northwest Power and Conservation Council, and the National Oceanic and Atmospheric Administration Fisheries Division (NOAA Fisheries).

The applicant consulted with State and Federal Department of Fish and Wildlife Habitat staff to discuss State-sensitive species with a potential to occur within the analysis area and sought concurrence with State-sensitive species survey protocols. The applicant's methodology for

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[249] OAR 635-415-0005 defines habitat as, ".the physical and biological conditions within the geographic range of occurrence of a species, extending over time, that affect the welfare of the species or any sub-population or members of the species."
OAR 635-415-0005 defines habitat quality as, "the relative importance of a habitat with regard to its ability to influence species presence and support the life-cycle requirements of the fish and wildlife species that use it."
[250] B2HAPPDoc ApASC Second Amended Project Order 2018-07-26 .Table 2, Page 23.

identifying and evaluating impacts on fish and wildlife habitat and presence of and use by species within the analysis area is described in the Revised Final Biological Survey Work Plan (ASC Exhibit P1, Attachment P1-2), which includes protocols reviewed and approved by ODOE, ODFW, USFS, FWS, NOAA Fisheries and BLM. The Revised Final Biological Survey Work Plan contains a list of the seven agency-required biological surveys, which are listed in Table P1-1 and described in Attachment P1-2. The survey areas are shown in Exhibit P1, Figures P1-1 through P1-5 and the details of the protocols and processes of each type of survey are explained in Exhibit P1.[251]

Surveys were conducted on all state and federal public lands. However, for the reasons discussed below, field surveys have not yet been completed on some private lands within the site boundary.

Habitat Assessment

The analysis area encompasses multiple general vegetation types that serve as fish and wildlife habitats including (1) agriculture/developed, (2) bare ground, (3) open water/unvegetated wetland, (4) riparian vegetation, (5) forest/woodland, (6) shrub/grass, and (7) wetland. ASC Exhibit P1, Table P1-2 describes these general vegetation types as well as the habitat types found within the analysis area.[252]

As the applicant explains in ASC Exhibit P1, agricultural/developed lands are common in Morrow and Umatilla counties, and are less common in Union, Baker, and Malheur counties. Bare ground, cliffs, and talus are rare in the analysis area. Open water/unvegetated wetland, including streams and ponds, is also limited. Most streams in the analysis area are intermittent and fed by stormwater. Riparian vegetation is associated with open water/unvegetated wetlands and wetlands, and occurs between upland habitat and the edge of delineated wetlands or delineated non-wetland waters. For more information on wetlands and waters of the state see Section IV.Q.2., *Removal Fill Law*, of this order.

Forests are rare within the analysis area and occur primarily in the Blue Mountains region. Most of the analysis area consists of shrub/grass, which 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

[251] B2HAPPDoc3-25 ASC 16A_Exhibit P1_Wildlife_ASC_Part 1_Main thru Attach P1-6 2018-09-28. Section 3.2.3.
[252] B2HAPPDoc3-25 ASC 16A_Exhibit P1_Wildlife_ASC_Part 1_Main thru Attach P1-6. 2018-09-28. Section 3.2.3.

shrub species. Fire has historically played an important role in maintaining grassland and shrubland communities, and served as a cyclical disturbance regime.[253]

Wetlands include 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 the area. As described further in ASC Exhibit J (Waters of the State) and under the Removal Fill Law Section IV.Q.2., wetlands are sparsely distributed in the analysis area, but are found in all Oregon counties the proposed transmission line would cross.[254]

Identification of Habitat within Habitat Categories

The ODFW Fish and Wildlife Habitat Mitigation Policy assigns the six Habitat Category types based on the relative importance of these habitats to fish and wildlife species.[255] Those categories are depicted in ASC Exhibit P1, Table P1-3.[256] Table P1-4 lists the acres of each habitat type by ODFW habitat category.[257] The applicant classified each of the following habitats within the analysis area in accordance with OAR 635-415-0025:

Category 1 Habitat:

- Trees or structures containing a special status raptor nest;[258]
- Occupied WAGS colonies, defined as a single hole or cluster of holes as well as the required habitat for squirrel survival;[259] and
- Caves that provide roosts and hibernacula for bats.

Category 2 Habitat:

- ODFW-identified elk (*Cervus canadensis nelson*) winter range;[260]
- ODFW-identified mule deer (*Odocoileus hemionus*) winter range;

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[253] B2HAPPDoc3-25 ASC 16A_Exhibit P1_Wildlife_ASC_Part 1_Main thru Attach P1-6. P. p1-21 (citing ODFW 2006 Oregon Conservation Strategy). 2018-09-28.

[254] Id. (citing US Department of Interior 1979 Classification of Wetlands and Deepwater Habitats).

[255] B2HAPPDoc3-25 ASC 16A_Exhibit P1_Wildlife_ASC_Part 1_Main thru Attach P1-6. In ASC Exhibit P, the applicant describes the metrics and habitat components the Applicant used to classify habitats into these six category types, based on the presence of habitat characteristics and species observations.

[256] B2HAPPDoc3-25 ASC 16A_Exhibit P1_Wildlife_ASC_Part 1_Main thru Attach P1-6. Rev 2018-09-28. Section 3.3.2.

[257] B2HAPPDoc3-25 ASC 16A_Exhibit P1_Wildlife_ASC_Part 1_Main thru Attach P1-6. Pp. Section 3.3.2. The applicant notes that the acreage numbers in Table P1-4 do not directly relate to impacts because portions of the analysis area would not be impacted. Rev 2018-09-28.

[258] 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.

[259] The required habitat for squirrel survival is a 785-foot buffer around the holes in suitable habitat.

[260] ASC Exhibit P3 further discusses elk habitat categorization at pages P3-5 (Table P3-1 (Habitat Categorization Types).

- Bighorn sheep (Ovis canadensis) herd ranges;
- Areas of potential WAGS use;[261]
- Fish-bearing streams;[262]
- Bat roosts and hibernacula other than cave; and
- Pygmy rabbit (Brachylagus idahoenisis colonies)

Category 3 Habitat:

- Elk summer range;[263]
- Mule deer summer range;[264] and
- Non-fish-bearing streams.

Potential Impacts to Fish and Wildlife Habitat

Construction and operation of the proposed facility would result in temporary, temporal and permanent habitat impacts to Categories 2, 3, 4, 5 and 6. Impacts to Category 6 habitat do not require compensatory mitigation under the Council's Fish and Wildlife Habitat standard. Temporary habitat impacts are those that would last for less than the operational lifetime of the proposed facility and would result during construction and installation of some transmission line components from vegetation clearing.[265] Temporary vegetation clearing activities would encompass the entire footprint of pulling and tensioning sites, multi-use areas, and light-duty fly yards. Vegetation clearing would also occur around the perimeter of permanent facilities including transmission structures, the Longhorn station, communication stations, and access roads. The duration of temporary impacts to habitat is variable, based on

[261] Areas of potential WAGS use are 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;

[262] Fish categorization is further described in the Fish Habitat Report in Attachment P1-7B. As the applicant further describes in ASC Exhibit P1, Attachment P1-1, fish presence also informed the categorization of stream habitats. The applicant assumed the presence of fish 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, the applicant refined its fish presence analysis through additional coordination with ODFW and field surveys.

[263] Elk summer range is defined by the 1999 Rocky Mountain Elk Foundation M.A.P. (Measure and Prioritize) Elk Habitat Project.

[264] Mule deer summer range is defined by the 2002 Western Association of Fish and Wildlife Agencies Mule Deer Habitat of the Western United States.

[265] B2HAPPDoc3-25 ASC 16A_Exhibit P1_Wildlife_ASC_Part 1_Main thru Attach P1-6 rev 2018-09-28. Section 3.5.3.2. The applicant explains that habitat cleared for construction would be restored and the duration of the impact would not exceed the life of the proposed transmission line and, therefore, clearing vegetation followed by restoration would constitute a temporary impact to habitat. While restoration of certain habitat (e.g., forestlands) can take decades and restoration could span generations of wildlife, those impacts are considered temporary because they would last less than the life of the transmission line, which is expected to be in place indefinitely.

vegetation type and extent. Temporary impacts to habitat requiring a longer restoration timeframe (+five years) are considered temporal impacts and typically require additional mitigation beyond revegetation to account for the loss of habitat function and values from the time of impact to the time when the restored habitat provides a pre-impact level of habitat function.

Permanent impacts are defined as impacts that would exist for the operational life of the proposed facility and would result from placement of permanent facility structures and ongoing vegetation management within the right-of way determined necessary to protect the proposed facility from vegetation encroachment and hazards.

As presented in Table FW-1, *Estimated Temporary and Permanent Habitat Impacts and Proposed Mitigation,* the proposed facility would temporarily disturb approximately 2,123, 948, 165 and 329 acres of Category 2, 3, 4 and 5 habitat, respectively, resulting in temporary and temporal habitat impacts.[266] The proposed facility would permanently disturb approximately 883, 489, 26 and 43 acres of Category 2, 3, 4 and 5 habitat, respectively.[267] All Category 1 habitat would be avoided; there are no proposed facility components that would destroy or remove any trees with active raptor nests; and no components proposed to be located within WAGS category 1 habitat.[268]

Table FW-1: Estimated Temporary and Permanent Habitat Impacts and Proposed Mitigation

Habitat Category and Vegetation Type	Proposed Route		Mitigation	
	Temp	Perm	Temp	Perm
	Acres		Acres	
Category 2				
Agriculture/Developed	95.0	10.6	>1 acre: 1 acre	>1 acre: 1 acre
Bare Ground	2.0	0.3		
Forest/Woodland	6.8	536.1		
Open Water/Wetlands	1.0	0.5		
Riparian Vegetation	0.6	0.4		
Shrub/Grassland	1,990.9	334.2		
Category 3				
Agriculture/Developed	10.1	0.8		1 acre: 1 acre
Bare Ground	0.3	0.1		

[266] While temporal loss applies to habitat subtypes expected to require a longer restoration timeframe, and therefore would apply to impacted sagebrush steppe but not grasslands, the certificate holder did not delineate between habitat subtypes to be temporarily impacted and provides mitigation for temporal loss for Category 2, 3 and 4 regardless of habitat subtype.

[267] See Revised Table P-3, provided in Attachment B of this order.

[268] B2HAPPDoc3-25 ASC 16A_Exhibit P1_Wildlife_ASC_Part 1_Main thru Attach P1-6 rev 2018-09-28. Section 3.5.1. The applicant's avoidance of WAGS Category 1 habitat is further described in ASC Exhibit Q (Threatened and Endangered Species) and evaluated under the Threatened and Endangered Species Standard.

Table FW-1: Estimated Temporary and Permanent Habitat Impacts and Proposed Mitigation

Habitat Category and Vegetation Type	Proposed Route		Mitigation	
	Temp	Perm	Temp	Perm
	Acres		Acres	
Forest/Woodland	16.0	458.0	<1 acre: 1 acre	
Open Water/Wetlands	0.4	0.1		
Riparian Vegetation	5.5	0.1		
Shrub/Grassland	312.4	489.1		
Category 4				
Shrub/Grassland	165.3	26.1	1 acre: 1 acre	1 acre: 1 acre
Category 5				
Shrub/Grassland	329.3	43.3	0	<1 acre: 1 acre
Category 6				
Agriculture/Developed	310.5	259.8	0	0
Source: ASC Exhibit P, Attachment P1-6 Table 1				

Retirement of the proposed facility would involve activities and equipment similar to those that would be used during construction. Therefore, potential impacts on fish and wildlife habitat during retirement would be similar to the temporary impacts described for construction.

Proposed Habitat Mitigation – Temporary and Permanent Impacts

The applicant proposes to reclaim areas cleared for construction activities, and not encompassed by components or not needed for normal transmission line operation and maintenance, through measures described in the applicant's Reclamation and Revegetation Plan (Attachment P1-3 of this order). The applicant describes that, if the facility were retired, temporary impacts resulting from decommissioning activities would be restored in accordance with the measures included in the draft Reclamation and Revegetation Plan. To ensure the protective measures in the draft Reclamation and Revegetation Plan are incorporated into the final Reclamation and Revegetation Plan and to ensure compliance with the final Reclamation and Revegetation Plan, the applicant proposes and the Department recommends the Council include the following conditions in the site certificate:

Recommended Fish and Wildlife Condition 1: The certificate holder shall:

a. Prior to construction of a phase or segment of the facility, finalize, and submit to the Department for its approval, in coordination with ODFW, a final Reclamation and Revegetation Plan. The protective measures described in the draft Reclamation and Revegetation Plan in Attachment P1-3 of the Final Order on the ASC shall be included and implemented as part of the final Reclamation and Revegetation Plan, unless otherwise approved by the Department.
b. During construction, the certificate holder shall conduct all work in compliance with the final Reclamation and Revegetation Plan referenced in sub(a) of this condition.

The applicant proposes to control vegetation during construction and maintenance of the proposed transmission line to ensure adequate ground-to-conductor clearances. The proposed vegetation clearing would have the potential to benefit some wildlife species that prefer non-forested habitat for foraging and breeding activities. However, to the extent that forest/woodland areas are subject to ongoing vegetation clearing, the habitat types would be considered permanently and directly impacted for purposes of the certificate holder's mitigation obligations. The applicant's proposed Vegetation Management Plan, provided as Attachment P1-4 of this order, describes protective measures and mitigation obligations. To ensure compliance with the final Vegetation Management Plan, the applicant proposes and the Department recommends the Council include the following condition in the site certificate:

Recommended Fish and Wildlife Condition 2: The certificate holder shall:

a. Prior to construction, finalize and submit to the Department for its approval, in consultation with ODFW, a final Vegetation Management Plan. The protective measures described in the draft Vegetation Management Plan in Attachment P1-4 of the Final Order on the ASC, shall be included and implemented as part of the final Vegetation Management Plan, unless otherwise approved by the Department.
b. During construction, the certificate holder shall conduct all work in compliance with the final Vegetation Management Plan referenced in sub(a) of this condition.
c. During operation, the certificate holder shall conduct all work in compliance with the final Vegetation Management Plan referenced in sub(a) of this condition.

The applicant also proposes to implement noxious weed control measures in accordance with a Noxious Weed Control Plan to support success of revegetation efforts and to comply with statutory and local weed control requirement. The applicant proposes and the Department recommends the Council include the following condition in the site certificate:

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

a. Prior to construction, 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.

To the extent compensatory mitigation would be required for temporary impacts, the applicant addresses the recovery periods associated with lost habitat functionality in the draft Fish and Wildlife Habitat Mitigation Plan, provided as Attachment P1-6 of this order. The applicant's proposed Fish and Wildlife Habitat Mitigation Plan includes provisions to compensate for impacts to Category 2 through 5 habitats that cannot be avoided or minimized. Through the Fish and Wildlife Habitat Mitigation Plan, the applicant commits to provide mitigation for

permanent direct impacts resulting from construction and installation of all proposed transmission line components, based on the methodology summarized in Table FW-1 above.

The applicant proposes offsetting fish and wildlife habitat impacts by either purchasing credits or conducting its own compensatory mitigation projects. With respect to purchasing credits, the applicant proposes that it may do so through one or both of the following mechanisms:

- Mitigation Banking: Purchasing mitigation credits from mitigation banks to address proposed facility 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, the applicant would seek to accomplish all or part of its mitigation for the proposed facility 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. The applicant is not aware of any ILF sponsors within the proposed facility mitigation service area. In the event that an ILF sponsor becomes available within the mitigation service area, the applicant would seek to accomplish all or part of its mitigation for the proposed facility by participation through an ILF sponsor.

In addition to proposing compensatory mitigation, the certificate holder proposes to implement and monitor specific enhancement actions within the HMA, such as stream habitat enhancement, upland habitat enhancement, and Juniper removal, as further described in Table 12 of Attachment P1-6 of this order. Habitat enhancement actions are proposed to further satisfy the Category 2 “net-benefit” mitigation goal.

The applicant also describes that it would seek out mitigation opportunities that would fund private, state, or federal programs and/or proposed facility that would not necessarily involve a land acquisition component. The applicant 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 proposed facility. 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.

Prior to commencement of construction, the applicant would secure mitigation sites with sufficient credits to offset the permanent and temporal habitat impacts of the proposed facility. In order to show there are mitigation site opportunities sufficient to meet the needs of the proposed facility and to demonstrate how the applicant’s debiting and crediting approach would be implemented, the applicant identified 14 potential mitigation sites, which demonstrate that adequate mitigation opportunities exist to address all of the proposed facility’s impacts on wildlife habitat. The 14 mitigation sites included in this Fish and Wildlife HMP collectively exceed the quantity of mitigation that would ultimately be needed for the proposed facility by approximately ten- to twenty-fold. The draft HMP addresses credit

"stacking," which is the concept of utilizing a single mitigation "credit" to account for mitigation obligations for multiple habitat types. For example, if a mitigation credit (either a project, a fee-in-lieu payment or other acceptable method) provides mitigation for multiple mitigation needs on a single location, such as elk winter range and mule deer winter range, that single mitigation credit can provide the mitigation obligation for both habitat type needs. However, it is important to note that the EFSC Fish and Wildlife Habitat standard and ODFW Fish and Wildlife Habitat Mitigation policy require mitigation corresponding to the habitat category in total. Meaning, for illustrative purposes, for locations where the proposed facility would impact one acre of habitat that is both elk winter range and mule deer winter range, the mitigation obligation is one-plus acre, to meet the "no net loss plus net benefit" standard as applies to Category 2 habitat (big game winter range is Category 2 habitat). The mitigation obligation is not one-plus acre of elk winter range AND one-plus acre of mule deer winter range. The mitigation credit could be a single location that provides the one-plus acre of mitigation habitat for both elk and mule deer winter range, and that would meet the standard. To the extent that "stacking" means what is described here, it is a concept that can be used to meet the proposed facility's compensatory mitigation obligation. However, as a counter example, if the proposed facility impacts one acre of elk winter range that is not also mule deer winter range, and elsewhere, impacts one acre of mule deer winter range that is not elk winter range, the mitigation obligation is for one-plus acre of elk winter range AND one-plus acre of mule deer winter range, for a total of two-plus acres of compensatory mitigation obligation.

The applicant would continue to coordinate with the Department in preparation of a final Fish and Wildlife HMP that would be sufficient to compensate for the proposed facility's impacts on wildlife habitats and achieve the mitigation goals set forth in ODFW's Habitat Mitigation Policy. The applicant would begin funding mitigation once a site certificate is issued by EFSC and prior to construction of the proposed facility.

To ensure that the Fish and Wildlife Habitat Mitigation Plan is sufficient to meet the ODFW habitat mitigation goals and standards described in OAR 635-415-0025, the applicant proposes and the Department recommends the Council include the following condition in the site certificate:

Recommended Fish and Wildlife Condition 4: The certificate holder shall:

a. Prior to construction of any phase or segment of the facility, finalize, and submit to the Department for its approval, a final Fish and Wildlife Habitat Mitigation Plan, based on the plan provided as Attachment P-6 of the Final Order on the ASC. The final Fish and Wildlife Habitat Mitigation Plan shall include the following, unless otherwise approved by the Department:

<u>Information To Be Included in Final Habitat Mitigation Plan:</u>

i. The areas that were surveyed for biological resources;
ii. The location of all facility components and related and supporting facilities;
iii. The areas that will be permanently and temporarily disturbed during construction;

iv. The protective measures described in the draft Fish and Wildlife Habitat Mitigation Plan in Attachment P-6 of the Final Order on the ASC; and
v. The results of the biological surveys referenced in Fish and Wildlife Conditions 14, 15 and 16.

Final Habitat Mitigation Plan Shall Address the Following: The final Fish and Wildlife Habitat Mitigation Plan shall 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.

i. To the extent the certificate holder shall develop its own mitigation projects, the final Habitat Mitigation Plan shall:
    1. Identify the location of each mitigation site, including a map of the same;
    2. Identify the number of credit-acres that each mitigation site will provide for the certificate holder;
    3. Include a site-specific mitigation management plan for each mitigation site that provides for:
        A. A baseline ecological assessment;
        B. Conservation actions to be implemented at the site;
        C. An implementation schedule for the baseline ecological assessment and conservation actions;
        D. Performance measures;
        E. A reporting plan; and
        F. A monitoring plan.

ii. To the extent the certificate holder shall utilize a mitigation bank or in-lieu fee program, the final Habitat Mitigation Plan shall:
    1. Describe the nature, extent, and history of the mitigation bank or in-lieu fee program; and
    2. Identify the number of credit-acres that each mitigation site will provide for the certificate holder.

iii. Oregon's Elk Mitigation Framework shall be used to calculate the amount of elk habitat compensatory mitigation required for the facility.

iv. The final Fish and Wildlife Habitat Mitigation Plan may be amended from time to time by agreement of the certificate holder and the Department. Such amendments may be made without amendment to the site certificate. The Council authorizes the Department to agree to amendments of the plan and to mitigation actions that may be required under the plan; however, the Council retains the authority to approve, reject, or modify any amendment of the plan agreed to by the Department.

b. During construction, the certificate holder shall commence implementation of the conservation actions set forth in the final Fish and Wildlife Habitat Mitigation Plan referenced in sub(a) of this condition.

Recommended Fish and Wildlife Condition 5: During the third year of operation, the certificate holder shall provide to the Department a report demonstrating that fish and wildlife habitat mitigation is commensurate with the final compensatory mitigation calculations.

a. The final calculations shall be based on the as-constructed facility.
b. Oregon's Elk Mitigation Framework shall be used to calculate the amount of elk habitat compensatory mitigation required for the facility, and the information from the pre- and post-construction traffic studies shall be used in the calculation.

Impact Assessment for Elk Habitat

Due to specific requirements particularly for indirect impact assessment, the applicant developed a subsection of Exhibit P to assess the proposed facility's potential impacts to elk habitat. This is called "Exhibit P3." The exhibit includes assessment of both elk summer and winter habitat, and provides the applicant's assessment of facility impacts to that habitat based on ODFW guidance. ODFW considers elk winter range (and all big game winter range) as habitat Category 2, and elk summer range as habitat Category 3. In order to identify the elk winter range habitat, the applicant relied on 2013 GIS data provided by ODFW; and to identify the summer range habitat, the applicant relied on data from the 1999 Rocky Mountain Elk Foundation Measure and Prioritize Elk Habitat Project, as requested by ODFW. Consistent with ODFW's 2015 Elk Mitigation Framework guidance document, the applicant then removed any elk winter range and summer range identified in the GIS datasets that occurred within developed areas, cultivated fields, and elk de-emphasis areas. Habitat not identified in the GIS datasets were not included as either winter or summer range habit, even if the vegetation could support elk.[269]

Potential Impacts from the Proposed Transmission Line

Elk Winter Range: As described in Exhibit P3, the proposed facility is anticipated to include 178.7 acres of permanent direct impacts and 237.6 acres of temporary direct impacts to elk winter range. For this route, proposed components occurring in the elk winter range include: 69.17 line miles of the proposed transmission line, 42.47 miles of new access roads; 63.04 miles of substantially modified existing roads; six multi-use areas, and three communication stations. The Morgan Lake alternative would include 13.1 acres of permanent direct impacts and 76.5 acres of temporary direct impacts to elk winter range, including the following components: 16.54 line miles of the proposed transmission line; 14.69 miles of new access roads; 12.14 miles of substantially modified existing roads; and one communication station. The applicant's analysis shows that the Double Mountain alternative and the Bombing Range Road alternatives would not include any facility components in elk winter range.[270]

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[269] B2HAPPDoc3-33 ASC 16C_Exhibit P3_Elk_ASC 2018-09-28, Section 3.3.
[270] Id. See Section 3.5.3.3, Table P3-4.

Elk Summer Range: Exhibit P3 describes that for elk summer range, the proposed route would include direct impacts of 189.1 acres of permanent direct impacts and 43 acres of temporary direct impacts. Proposed components in elk summer range would include 28.89 line miles of the proposed transmission line; 11.31 miles of new access roads; 24.88 miles of substantially modified existing roads; and one multi-use area. The Morgan Lake alternative would include 9.5 acres of permanent direct impacts and 51.8 acres of temporary direct impacts to elk summer range. For the Morgan Lake alternative, facility components that would occur in elk summer range include 15.61-line miles of the proposed transmission line; 12.56 miles of new access roads; 14.52 miles of substantially modified existing roads; and one communication station. The applicant's analysis shows that the Double Mountain alternative and the Bombing Range Road alternatives would not include any proposed components in elk summer range.[271]

Potential Impacts from the Proposed Access Roads

As described in Exhibit P3, Table P3-10, for the proposed route, 119.27 miles out of a total of 751 miles of new and existing roads would be within elk winter range or summer range. A total of 27.88 miles of those roads do not have proposed access control and therefore are included in the indirect impact calculation. The roads with access control are not included because access control is anticipated to eliminate unauthorized and non-project related use of the access roads during facility operation. For the Morgan Lake alternative, 31.06 miles out of a total of 59 miles of new and existing roads would be within elk winter or summer range. Of those, 8.5 miles of new and existing roads do not have proposed access control and therefore are included in the direct impact calculation. The roads with access control are not included, for the same reasoning, access control is assumed to eliminate unauthorized and non-project use of facility access roads. The certificate holder is not responsible for unauthorized use of facility access roads. The ODFW Elk Mitigation Framework only considers indirect impacts from roads to elk, not from other facility components during facility operation.

Elk Winter Range: As described in Exhibit P3 and above in Table P3-10, for the proposed facility, 2.63 miles of new access roads and 15.28 miles of substantially modified existing roads are included in the elk winter range indirect impact analysis. As depicted in Table P3-11, new roads would result in 400.25 acres of indirect impacts. There would be no indirect impacts resulting from substantially modified existing roads. For the Morgan Lake alternative, 2.42 miles of new access roads and 4.43 miles of substantially modified existing roads are included in the elk winter range indirect impact analysis. New roads would result in 17.26 acres of indirect impact. There would be no indirect impacts resulting from substantially modified existing roads.[272]

Elk Summer Range: For the proposed facility, 1.69 miles of new access roads and 10.18 miles of substantially modified existing roads without access control are included in the elk summer

[271] Id.

[272] Id. Section 3.5.4.3. Table P3-10.

range direct impact analysis. There are no indirect impacts resulting from new roads or substantially modified roads. For the Morgan Lake alternative, 2.42 miles of new access roads and 6.05 miles of substantially modified existing roads are included in the elk winter range indirect impact analysis. New roads would result in 15.77 acres of indirect impact. There would be no indirect impacts resulting from substantially modified existing roads.[273]

Direct Impacts

The applicant characterizes direct impacts as those impacts that would have an adverse effect upon elk habitat or elk individuals, and that would occur at the same, or in close proximity in, time and place. The applicant calculated direct impacts for winter range and summer range using disturbance limits for construction (temporary impacts) and operation (permanent impacts) in ASC Exhibit C, Table C-24. Temporary impacts are calculated from the edge of the permanent disturbance; thus, there is no overlap of temporary and permanent impacts.

The applicant has calculated direct impacts separately between winter and summer range habitat; however, as noted in Table P3-4, there is extensive overlap of winter range and summer range, and impacts are also calculated for the overlapping ranges. Table P3-5 breaks down the impacts by facility component.

Permanent Direct Impacts

Table P3-2 summarizes the type, timing, duration, quantification metric, and mitigation measures related to the proposed transmission line's potential permanent direct impacts in elk winter range and summer range.

Permanent Vegetation Clearing Direct Impacts: The proposed facility would result in permanent loss of elk habitat and would permanently and directly convert other elk habitat from one habitat type to another. Permanent loss of habitat would occur within the operation disturbance areas for transmission structures, the Longhorn Station, communication stations, and access roads. In Exhibit B (and Attachment B-5; Road Classification Guide and Access Management Plan;) and Exhibit U (and Attachment U-2, Traffic and Transportation Management Plan), the applicant provides details regarding the permanent direct impacts from vegetation clearing necessary for access road construction and modification, and includes information related to road construction activities and methods, including types of improvements to existing roads and projected traffic volumes.

Direct Mortality: While the risk is quite low, direct mortality to individual elk could occur as a result of collisions with construction or maintenance vehicles. As further discussed in Exhibits P1 and P2, through Recommended Fish and Wildlife Conditions 8, 21 and 22, the applicant

[273] Id.

proposes to avoid or minimize impacts by restricting speeds and employing access controls in elk winter range.

Temporary Direct Impacts

Table P3-3 summarizes the type, timing, duration, quantification metric, and mitigation measures related to the proposed transmission line's potential temporary direct impacts in elk winter range and summer range.[274]

Temporary Vegetation Clearing Direct Impacts: As described ASC Exhibit P3, construction-related activities and installation of some facility components would require ROW clearing of vegetation and forestlands that provide habitat for elk. In most areas there would be a 250-foot-wide ROW in which to construct the 500-kV portions of the transmission line and a 100-foot-wide ROW to construct the 138-kV portions of the line. Within that ROW, temporary vegetation clearing activities would encompass the entire footprint of pulling and tensioning sites, multi-use areas, and light-duty fly yards. Temporary clearing activities would also occur around the perimeter of permanent facility components, including transmission structures, the Longhorn station, communication stations, and access roads. Areas cleared for construction activities, and not required for transmission line components or needed for maintenance, would be reclaimed as described in the applicant's Reclamation and Revegetation Plan (Attachment P1-3; Recommended Fish and Wildlife Condition 1) and Vegetation Management Plan (Attachment P1-4; Recommended Fish and Wildlife Condition 2).

Elk habitat that is cleared for construction would be restored. While restoration of certain elk habitat (e.g., forestlands) could take decades and restoration could span generations of elk, the applicant states that those impacts are considered temporary because they would last less than the life of the transmission line which is expected to be in place indefinitely. However, the Department requires that mitigation be provided for all vegetation clearing of forestlands because of the very long time before the habitat is restored to pre-disturbance conditions. Impact to forestlands would be quantified and mitigated as required by the Habitat Mitigation Plan (Exhibit P1; Attachment P1-6; Recommended Fish and Wildlife Condition 4).

Retirement: Retirement of the transmission line would involve activities and equipment similar to those that would be used during construction. Therefore, potential impacts on elk during retirement of the transmission line would be similar to the temporary impacts described for construction. As described in Mandatory Conditions 7 and 12, specific mitigation requirements to address impacts incurred during retirement of the facility would be included in the retirement plan, including a description of the activities necessary to restore the site to a useful, non-hazardous condition, as required by OAR 345-027-110(5).

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[274] B2HAPPDoc3-25 ASC 16A_Exhibit P1_Wildlife_ASC_Part 1_Main thru Attach P1-6 rev 2018-09-28. Section 3.5.3.3.

Indirect Impacts

Indirect impacts are those that would have an adverse effect upon elk habitat or elk individuals, and that would occur later in time or in a different place than the facility construction activities. Indirect impacts may be permanent or temporary and are typically associated with noise or other disturbance that adversely impacts elk and elk habitat. In ASC P3, Table P3-6, the applicant provides a summary of the type, timing, duration, quantification metric, and mitigation measures related to the facility's potential permanent indirect impacts in elk winter range and summer range.[275]

Transmission Line-Related Permanent Indirect Impacts

As explained in Exhibit P3, the applicant does not anticipate that, once constructed, the transmission line would restrict elk movement or otherwise adversely impact elk habitat. Accordingly, there would be no permanent indirect impacts related to the transmission line itself. The ODFW Elk Mitigation Framework is specific to roads, as discussed below.

Access Road Permanent Indirect Impacts

New and substantially modified existing access roads are unlikely to act as a barrier to elk movement of and by themselves. However, the introduction of traffic and the presence of human activity on those roads may have a negative indirect impact on elk, including reduced utilization of habitat, fragmentation of migration corridors, and the associated disruption of elk life processes. Compliance with Recommended Fish and Wildlife Conditions 8, 20 and 21 would help minimize those impacts through speed limits and access controls. In addition, ODFW has developed a methodology in its Elk Mitigation Framework for quantifying indirect impacts to elk habitat resulting from road use. The applicant would be required to implement the methodology, quantify the indirect impacts from the access roads, and provide appropriate mitigation including compensatory mitigation via the Elk Mitigation Framework as part of the Habitat Mitigation Plan (Attachment P1-6; see also Recommended Fish and Wildlife Condition 4).

Access Road Temporary Indirect Impacts

ASC Exhibit P3, Table P3-7 includes a summary of the type, timing, duration, quantification metric, and mitigation measures related to the facility's potential temporary indirect impacts in elk winter range and summer range. The applicant explains that construction activities would result in noise, visual disturbance from heavy equipment, traffic and people, fugitive dust dispersing from the immediate construction area, and small amounts of air pollution from construction equipment's exhaust. Indirect construction impacts may also include an increased risk for the spread or establishment of invasive-plant species, which can degrade habitats and

[275] Id. Section 3.5.4.1.

exclude native species from areas; and increased access to areas previously inaccessible to the public due to the construction of facility-related roads, which can further degrade habitats as a result of increased human presence. These activities can impact elk behavior in areas beyond the facility's construction areas, with noise impacts likely having the farthest-reaching effect. Some construction activities would result in predicted noise levels of 80 to 90 A-weighted decibels at 50 feet from the work site. Increases in noise would be concurrent with any disturbance associated with the presence of humans and their activities (e.g., dust and visual disturbances). Thus, construction activities may affect elk and reduce the functionality of habitat at varying distances from the construction areas. These disturbances could render habitats unsuitable during construction, with disturbances ceasing once construction or maintenance activities have ceased. To minimize and mitigate those impacts, and as discussed above relative to impacts on mule deer, Recommended Fish and Wildlife Conditions 8, 9 and 21 would impose spatial and timing restrictions near sensitive elk habitat, limiting the construction window to time periods when elk are less sensitive to disturbances.[276]

Access roads would be used by maintenance crews and vehicles for inspection and maintenance of the facility. Trips would be limited to regular inspection and maintenance of the transmission line. During these maintenance trips, the noise, traffic, dust, and human presence may adversely affect elk behavior around the relevant roads and work areas. As noted by ODFW and as the applicant acknowledges, human activity on those roads could indirectly impact elk habitat through reduced habitat utilization, fragmentation of migration corridors, and disruption of elk life processes. The applicant has calculated the quantity of indirect impacts related to the access roads using the methods set forth in the Elk Mitigation Framework, which provides the area of indirect impact by comparing the increase in traffic volume to the baseline traffic volume of an existing road. As depicted in ASC Exhibit P3, Table P3-8 (reprinted in the ASC from the ODFW Elk Mitigation Framework), the higher the increase in traffic volume during operation, the larger the disturbance buffer.

In order to confirm and quantify the amount of required mitigation, the applicant proposes to conduct a traffic study to evaluate pre- and post-construction traffic on public roads used for the proposed facility. As explained above with regard to the sage-grouse habitat, that traffic study would be conducted for one year in the year prior to construction and for one year during the second year the transmission line is in operation. The details of the proposed traffic study are included in the applicant's Road Classification Guide and Access Control Plan, Attachment B-5 of Exhibit B. Recommended Fish and Wildlife Condition 20 would require that the traffic study be conducted, and Recommended Fish and Wildlife Condition 9 would require that the results of the traffic study inform final facility mitigation obligation.

[276] Id. Section 3.5.4.2. The applicant notes that it may seek exceptions from ODOE and ODFW to the timing restrictions if site conditions allow. For example, if elk are not using the sensitive habitat, the certificate holder may request permission to start work in the area sooner than what would normally be allowed.

The applicant explains the proposed traffic studies, which include a traffic monitoring program, are necessary to ensure that indirect impacts to elk winter Range and Summer range, are adequately mitigated in accordance with the EFSC Fish and Wildlife Habitat standard and ODFW policy. Compliance with Recommended Fish and Wildlife Conditions 4, 9 and 20 would ensure compliance with those proposed traffic studies and ensure adequate mitigation. As is described in the general fish and wildlife habitat section with regards to compensatory mitigation, the Department has assessed the applicant proposed mitigation projects and concludes that the proposed mitigation projects are sufficient representations to demonstrate compliance with the EFSC Fish and Wildlife Habitat standard. Recommended Fish and Wildlife Condition 4 would obligate the applicant to finalize and implement a Habitat Mitigation Plan, as outlined in the condition, which would include mitigation for both direct and indirect impacts to big game winter and summer range.

Temporary Invasive Species Impacts

The applicant explains that the initial clearing of vegetation and resulting soil disturbance during construction could create optimal conditions for the establishment of invasive-plant species. The establishment of invasive-plant species can affect the quality of wildlife habitat through competition with, and the eventual replacement of, desirable native plant species. The replacement of native plant species with invasive species could have environmental effects on wildlife habitat, including changes in fire regime, changes in the nutrient regime of soils, increased soil erosion, or reductions in the abundance of important forage species (due to invasive species excluding them from the area). These alterations to habitat quality can extend beyond the area of initial impacts. Finalization and implementation of the Noxious Weed Plan (Attachment P1-5; Recommended Fish and Wildlife Condition 3) and the Reclamation and Revegetation Plan (Exhibit P1, Attachment P1-3; Recommended Fish and Wildlife Condition 1) would minimize the risk of invasive-plant species spread or establishment.

<u>Analysis and Recommended Conclusion Regard Elk Habitat</u>

Based on the evidence in the record and the assessment provided here, and subject to compliance with the recommended site certificate conditions, the Department recommends the Council find that the proposed facility would comply with the EFSC Fish and Wildlife Habitat standard at OAR 345-022-0060(1) with regards to elk habitat.

Identification of Sensitive Species

EFSC rules require an applicant to identify all ODFW-listed State Sensitive Species that might be present in the analysis area and to establish a baseline survey of the use of the habitat in the analysis area by those species. ODFW defines State Sensitive Species as “wildlife species, subspecies, or populations that are facing one or more threats to their populations, habitat quantity or habitat quality or that are subject to a decline in number of sufficient magnitude such that they may become eligible for listing on the state Threatened and Endangered Species

List."[277] 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 species are those with 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.[278]

The applicant's list of State Sensitive Species that could potentially occur within the analysis area is included in ASC Exhibit P1, Table P1-5.[279] The sensitive species within the analysis area include 11 mammals (two of which have been documented in the analysis area), 23 birds (20 of which have been documented or potentially documented in the analysis area), five reptiles/amphibians (two of which have been documented in the analysis area), and six fish (one of which has been documented in the analysis area).[280]

General Impacts to State Sensitive Species

There are a number of general impacts that could affect state sensitive species during construction and operation of the proposed facility, including both direct and indirect impacts. These general impacts, including specific mitigation measures proposed by the applicant to reduce and minimize these impacts, are discussed here.

In general, the applicant has proposed and the Department supports a worker training program that will inform and train all workers on the project of their obligations under the site certificate and other permits of approval. As part of new employee worker orientation and training, the applicant would require that all construction personnel attend mandatory training on protection of sensitive resources, as well as the need to adhere to all applicable restrictions and permit requirements. The training would ensure that all construction and maintenance personnel understand and are aware of the environmental requirements, protection measures, and compliance. To ensure compliance with the environmental training program, the applicant proposes and the Department recommends the Council include the following condition in the site certificate:

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[277] OAR 635-100-0040(1).

[278] The ODFW Sensitive Species list is available on the ODFW website: https://www.dfw.state.or.us/wildlife/diversity/species/sensitive_species.asp.

[279] B2HAPPDoc3-25 ASC 16A_Exhibit P1_Wildlife_ASC_Part 1_Main Thru Attach P1-6 rev 2018-09-28, Table P1-5. The applicant developed this list through a review of pertinent literature and databases (including 2016 Oregon Biodiversity Information Center data), consultation with applicable land-management agencies, and the results of field surveys. Baseline surveys were conducted to better determine habitats that could support State Sensitive Species within the analysis area.

[280] Id. Additional details regarding locations of State Sensitive Species detected during surveys are included in the biological survey summary report at Attachment P1-7A.

Recommended Fish and Wildlife Condition 6: Prior to any phase or segment of 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. Prior to the training, the certificate holder must provide the Department with a copy of training materials that will be used such as Power Point slides, information hand-outs, maps, and other materials.

Traffic-Related Mortality: Direct mortality to individual species could occur as a result of collisions with vehicles during construction or operation of the proposed facility. The applicant explains in Exhibit P1 that it expects this risk to be very low, since most species would likely avoid the work sites.[281] However, species or individuals that are less mobile or less sensitive to these disturbances could be directly threatened by construction activities. In order to avoid or minimize the risk of traffic-related direct mortality, the applicant proposes to require drivers of construction and maintenance vehicles to reduce speed to a level sufficient to anticipate and avoid striking individual wildlife. Accordingly, to avoid or minimize direct mortality to wildlife, the applicant proposes and the Department recommends the Council include the following conditions in the site certificate establishing speed limits on access roads when applicable:

To ensure Category 1 Habitat in particular, as well as other environmentally sensitive areas, are clearly identified during construction activities, the applicant proposes to flag sensitive wildlife resources that occur within or adjacent to the ROW and work areas to ensure they are avoided. To ensure compliance with that proposal, the applicant proposes and the department recommends the Council include the following condition in the site certificate:

Recommended Fish and Wildlife Condition 7: Prior to and 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.

Recommended Fish and Wildlife Condition 8: During construction and operation, the certificate holder shall employ a speed limit of 25 miles per hour or less on private facility access roads.

[281] Id. Section 3.5.3.1.

In addition, the applicant proposes to minimize and substantially reduce potential vehicle-wildlife collisions on facility access roads through controlling the use of those roads. The applicant proposes to implement access control as set forth in the draft Road Classification Guide and Access Control Plan (Exhibit B, Attachment B-5). Access control may involve fencing, gates, barriers, and/or signage as preferred by the landowner while maintaining effectiveness. To avoid or minimize indirect impacts related to access roads with respect to species that may be particularly sensitive to vehicle access (i.e., elk and sage-grouse), consistent with the Road Classification Guide and Access Control Plan, the applicant proposes and the Department recommends the Council include the following condition in the site certificate:

> **Recommended Fish and Wildlife Condition 9**: During operation, the certificate holder shall employ access control on facility access roads within elk habitat (elk summer range and elk winter range) and sage-grouse habitat (areas of high population richness, core area habitat, low density habitat, or general habitat), subject to approval by the applicable land-management agency or landowner.

Electrocution-Related Mortality: The applicant notes in ASC Exhibit P1 that concerns have been raised regarding the risk of bird electrocutions (especially raptors) along electrical lines. As the applicant explains, the risk of avian mortalities occurring as a result of electrocutions is very low for extra high-voltage transmission lines.[282] However, while electrocution due to the transmission line is not considered likely, the applicant has committed to designing and constructing the proposed transmission line to avoid or minimize direct mortality to avian species by following practices set forth in the applicant's Avian Protection Plan and certain other avian protection guidelines. Accordingly, the applicant proposes and the Department recommends the Council adopt the following condition in the site certificate:

> **Recommended Fish and Wildlife Condition 10:** During construction, the certificate holder shall construct the transmission line to avian-safe design standards, consistent with the certificate holder's Avian Protection Plan (Idaho Power 2015).

Indirect Impacts

As the applicant explains, indirect impacts are defined as the impacts that would have an adverse effect upon fish and wildlife habitat or individuals that would occur later in time or in a different place than the construction activities. Permanent indirect impacts would exist for the entire life of the transmission line, while temporary indirect impacts would last for less than the entire life.

[282] Id. The applicant explains that to be electrocuted from an extra high voltage transmission line, a bird would need to contact two phases of the line simultaneously; and that the spacing between phases of the proposed transmission line is much larger than the wing span of any North American bird.

Permanent Indirect Impacts

The applicant explains that the permanent loss or alteration of habitats could result in habitat fragmentation. Because most of the proposed transmission line crosses through low-lying vegetation that would not be permanently cleared, the applicant expects habitat fragmentation to be minimal in this ecosystem. However, vegetative clearing and maintenance in forested/woodland areas (mostly found in the Blue Mountains region) would result in undisturbed forest/woodland patches separated by 250-foot-wide areas around the line, resulting in habitat fragmentation in those habitats. [283] As is addressed in Exhibits P2 and P3 and evaluated by the Department below, the applicant has assessed, based on ODFW guidance and rule, that indirect impacts from the proposed facility are specifically considered for sage-grouse and elk habitats.

Temporary Indirect Impacts

The temporary indirect impacts are depicted in ASC Exhibit P1, Table P1-17. The applicant states in Exhibit P1 that temporary indirect impacts could result from both access roads and invasive species, if not appropriately controlled and managed. As noted above, based on ODFW guidance and rule, the applicant's impact assessment and mitigation for indirect impacts from the facility is focused on sage-grouse and elk habitat.

Temporary Invasive Species Indirect Impacts

The applicant explains that the initial clearing of vegetation and resulting soil disturbance during construction could create optimal conditions for the establishment of invasive-plant species, which can affect the quality of wildlife habitat through competition with, and the eventual replacement of, desirable native plant species. The replacement of native plant species with invasive species can have effects on wildlife habitat that can extend beyond the area of initial impacts. In addition to compliance with the Reclamation and Revegetation Plan (Attachment P1-3; Recommended Fish and Wildlife Conditions 1) to avoid or minimize the risk of invasive-plant species spread or establishment, the applicant proposes to implement the Noxious Weed Plan (Attachment P1-5). To ensure compliance with that plan, the applicant proposes and the Department recommends the Council include Fish and Wildlife Condition 3 in the site certificate.

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[283] Id. The applicant explains that the transmission line could be perceived by raptor and raven prey species as a form of habitat fragmentation in low-lying shrub and grassland habitats due to the potential for increased predation rates near the line as a result of increased perching opportunities. This effect would be most prominent where the transmission line is proposed to be located in areas that do not contain other tall structures, such as existing transmission lines or trees. Of the 147 miles of the proposed route that are not located within one mile of an existing line, about 115 miles are located within shrubland/grassland habitats. Of the 10 miles of the Morgan Lake alternative that are not located within one mile of an existing line, about four miles are located within shrubland/grassland habitats. Of the 7.4 miles of the Double Mountain alternative that are not located within one mile of an existing line, about seven miles are located within shrubland/grassland habitats.

Analysis of Direct and Indirect Impacts to State Sensitive Species

In addition to the impacts applicable to all species, ASC Exhibit P1 also describes the additional specific potential impacts and proposed mitigation to avoid or minimize impacts that apply specifically to State Sensitive Species.

Big Game

Big game species with potential to occur within the analysis area include elk, mule deer, bighorn sheep, and pronghorn antelope.[284] The only big game species listed by ODFW as state sensitive is Rocky Mountain Bighorn Sheep. Nevertheless, the applicant included in Exhibit P an assessment of the proposed facility's potential impacts to all big game species, and as such the Department includes its analysis here. Mule deer are expected to occur within the analysis area within seasonal ranges as depicted in ASC Exhibit P1, Figure P1-6. Figure P1-7 depicts the habitat of the Burnt River herd of California bighorn sheep within the Burnt River Canyon between the Bridgeport Valley and the Durkee Valley. Typical habitat characteristics of bighorn sheep include steep, rugged terrain associated with mountains, canyons, and escarpments. Pronghorn antelope are associated with sagebrush and grassland steppes of the intermountain and Great Basin regions. ODFW has not delineated important pronghorn habitat for eastern Oregon; therefore, the applicant has not specifically described acres of impacts to the pronghorn's habitat. However, as described below, the proposed transmission line's reduction of native habitat types within the shrub/grass general vegetation type has the potential to impact the pronghorn.

For big game species present during construction, there is a risk of mortality due to wildlife-vehicle collisions; however, as discussed above, and through compliance with Recommended Fish and Wildlife Condition 8, the risk of vehicle collisions would be minimized. In addition, displacement of big game from both winter and parturition areas can affect winter survival by causing animals to use energy reserves that are needed to survive the winter. The applicant proposes to minimize the risk of disturbing big game during sensitive periods through limiting construction periods and through seasonal restrictions, and will provide compensatory mitigation for impacts to big game winter range, which is considered Category 2 habitat. To ensure compliance with the restrictions, the applicant proposes and the Department recommends the Council adopt the following condition:

Recommended Fish and Wildlife Condition 11: During construction, the certificate holder shall not conduct ground-disturbing activities within elk or mule deer winter range between December 1 to March 31. Upon request by the certificate holder, the Department in consultation with ODFW may provide exceptions to this restriction.

[284] Id. Section 3.5.5.1. The applicant discusses impacts to elk in Exhibit P3 and those impacts are addressed elsewhere in this order.

The certificate holder's request must include a justification for the request, including any actions the certificate holder will take to avoid, minimize, or mitigate impacts to elk and mule deer in the relevant area.

The proposed facility crosses through ODFW-mapped elk and mule deer winter and summer ranges and likely crosses migration routes and calving/fawning areas, which could result in some loss and fragmentation of habitat. ROW clearing for construction in forested/woodland habitats could remove thermal and hiding cover for big game. However, the applicant argues that this clearing of vegetation has the potential to benefit big game species in some situations by providing clearings for use in foraging or traveling. The duration of these permanent impacts to habitat for big game species is expected to be indefinite, although areas cleared within the ROW may provide forage after three to seven years. The duration of temporary impacts to habitat for big game species would vary by vegetation type.[285] However, while the Department acknowledges that it is possible that the proposed facility could create some usable habitat for big game, the overall loss of Category 2 habitat must be mitigated appropriately. Mitigation for these impacts would be commensurate with impact duration as described in the Fish and Wildlife Habitat Mitigation Plan (Attachment P1-6; Recommended Fish and Wildlife Condition 4).

The applicant states that mule deer and pronghorn antelope are expected to readily pass under transmission lines and associated structures, so the applicant does not expect transmission line structures to limit the movement or distribution of big game species through fragmentation. Bighorn sheep utilizing the Burnt River Canyon also would not likely be affected, since the transmission line would span the canyon and the tower structures would be set back from the steep rock escape habitat preferred by bighorn sheep. Similarly, the applicant does not expect new and altered existing roads to act as a barrier to big game movement in and of themselves. However, as discussed above, the introduction of vehicles and human activity could have the potential to negatively impact big game.

As the applicant notes, indirect impacts to big game from increased traffic rates may include reduced utilization of habitat, fragmentation of migration corridors, and the associated disruption of important big game life processes. These indirect impacts from roads to big game and their habitat can be significantly reduced with the implementation of a traffic management plan and BMPs. In addition, as addressed above, the applicant proposes to implement access controls to minimize the effects that roads have on big game and big game habitat. Specific road segments proposed for access control are described in applicant's Road Classification Guide and Access Control Plan (Exhibit B, Attachment B-5; Recommended Fish and Wildlife Condition 9).[286] Indirect impact assessment to elk habitat is addressed elsewhere in this order.

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[285] Id. Agricultural and disturbed areas would likely recover in 1 to 3 years, grasslands and herbaceous wetlands would likely recover within 3 to 7 years, shrublands may require 30 to 100 years to recover, and forested and woodland areas could take anywhere from 50 to many hundreds of years to reach pre-construction conditions.
[286] Id.

Small Fur-bearing Mammals

As depicted on ASC Exhibit P1, Table P1-5, during field surveys one white-tailed jackrabbit was observed within the analysis area. No pygmy rabbits, martens, or fishers were observed, although potential habitat for these species is present, indicating there is some potential for the proposed transmission line to have impacts on the species.

As the applicant explains, many small fur-bearers are fossorial animals (i.e., living underground). Construction equipment could result in the crushing of burrows and underground tunnels that could contain small mammals, resulting in direct mortality. The disturbance of soils and loss of vegetative cover could make these species more obvious to predators (i.e., removing hiding cover), indirectly increasing their predation rates. These species could also experience a higher predation rate during operation, since they are likely to be a prey source for raptors and ravens that could consolidate along the transmission line due to increased perching opportunities.

Temporary impacts to habitat for State Sensitive small fur-bearing mammal species would vary by species and habitat type, and depend on the pre-construction conditions. Pygmy rabbit habitat requires dense stands of sagebrush, so temporary impacts to that habitat would likely last more than 50 years. For white-tailed jackrabbits, the grass and forb habitat component would likely recover relatively quickly, within three to seven years, while the shrubs required for winter forage would likely take over 30 years to establish. Martens and fisher require mature, unfragmented forest, so temporary impacts to habitat for these State Sensitive Species would likely to last 50 to many hundreds of years. Mitigation for both temporary and permanent impacts to habitat would be commensurate with impact duration as described in the Fish and Wildlife Habitat Mitigation Plan (Attachment P1-6; Recommended Fish and Wildlife Condition 4). [287]

Bats

The applicant explains that impacts to bats have been minimized by routing the proposed facility to avoid mines, caves, and known bat hibernacula. However, bats would utilize habitats outside of these structures and areas as well, and the sensitive bat species in the analysis area could utilize trees and snags as habitat. As depicted on ASC Exhibit P1, Table P1-5, State Sensitive bat species likely to use the analysis area include California myotis, long-legged myotis, hoary bat, silver-haired bat, fringed myotis, spotted bat, pallid bat, and Townsend's big-eared bat.[288] The applicant did not observe these species during field surveys, although two records from existing databases indicate past presence of long-legged myotis within the analysis area in ponderosa pine habitat within Union County. If present during construction, impacts could include disturbance at roosts and hibernacula sites, and a reduction in foraging

[287] Id. Section 3.5.5.2.
[288] Id. Section 3.5.5.3.

habitat as a result of vegetation removal. In order to minimize disturbance at bat roosts and hibernacula, the applicant proposes and the Department recommends the Council adopt the following condition:

Recommended Fish and Wildlife Condition 12: 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 14, 15 and 16, the certificate holder shall submit to the Department for its approval a notification addressing the following:

a. Identification of the State Sensitive bat species observed;
b. Location of pygmy rabbit colony or bat roost; and
c. Any actions the certificate holder will take to avoid, minimize, or mitigate impacts to pygmy rabbit colony or bat roost.
d. The Department in consultation with the Oregon Department of Fish and Wildlife (ODFW) will review and approve the proposed avoidance, minimization, or mitigation measures prior to the action by the certificate holder to impact State Sensitive bat species roosts or hibernacula.

The applicant anticipates that direct mortality during construction would be low, since bats would likely flush from trees and snags during construction. However, flushing of bats from day roosts or maternity colonies could result in the bats using up their bodily energy reserves, exposing themselves to predation, and potentially causing them to permanently abandon a suitable site. If disturbance occurs near winter hibernacula, bats could leave their roost and venture out to find a new one. This could result in mortality of the bats as bodily energy reserves are often low during winter and they may not find another suitable hibernaculum before their reserves are spent. Because all known bat hibernacula were avoided during routing, the applicant does not anticipate any direct impacts. Disturbance at maternity colonies could have a negative impact if the bats are induced to abandon the colony, as suitable maternity colony structures have specific characteristics and another suitable structure may not exist nearby.

Removal of vegetation, especially around riparian areas, could impact prey abundance for foraging bats. The duration of impacts to riparian habitat that would be removed during construction, but restored following construction would likely be 50 or more years depending on the tree species composition and sensitivity of the habitat to disturbance. Riparian habitats with fast growing tree and shrub species such as willow or alder could recover in less than 50 years, while riparian habitats with slower growing species or located in harsher conditions for plant growth could take hundreds of years to recover. Mitigation for both temporary and permanent impacts to riparian habitat would be commensurate with impact duration as

described in the Fish and Wildlife Habitat Mitigation Plan (Attachment P1-6; Recommended Fish and Wildlife Condition 4).[289]

Avian Species

As depicted in ASC Exhibit P1, Table P1-5, 25 State Sensitive bird species would be likely to use the analysis area, including eight raptor species. The applicant observed several State Sensitive avian species during field surveys, and confirmed breeding activity for four species within the analysis area: Swainson's hawk, long-billed curlew, burrowing owl, and Lewis' woodpecker.[290]

The applicant anticipates that, compared to other species, avian species could be more sensitive to direct mortality and disturbance during nesting than other species. In order to limit direct mortality and disturbance during nesting, the applicant proposes to limit construction activities to time periods outside of the primary avian breeding period to the extent practical. Maintenance and vegetation management activities during operations also have the potential to cause direct mortality and disturbance during nesting. Accordingly, the applicant proposes to conduct routine line maintenance and vegetation clearing activities outside the breeding season when possible. If construction and operation activities must be performed during the primary aviation breeding period, the applicant proposes and the Department recommends the Council adopt the following condition in order to identify presence of active raptor nest and avoid impacts to state sensitive raptors and other raptors during the nesting season:

Recommended 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.

Recommended Fish and Wildlife Condition 14: During construction, the certificate holder shall not conduct ground-disturbing activities within the following

[289]Id. The applicant noted that there is a single a record of a bat mortality resulting from a collision with a transmission line in 1989, indicating that there is a theoretical possibility of an adverse impact during operations. However, potential mortalities to State Sensitive bats are expected to be low to non-existent.
[290] Id. Section 3.5.5.4.

timeframes and spatial buffers surrounding occupied nests of certain raptor species. Upon request by the certificate holder, the Department in consultation with ODFW may provide exceptions to this restriction. The certificate holder's request must include a justification for the request, including any actions the certificate holder will take to avoid, minimize, or mitigate impacts to the raptor and its nest.

Raptor Nest Buffers		
Nesting Species	**Spatial Buffers (radius around nest site):**	**Temporal Restrictions**
Bald eagle	0.5 mile	January 1 to August 15
Golden eagle	0.5 mile	February 1 to August 15
Ferruginous hawk	0.50 mile	March 15 to August 15
Flammulated owl	0.25 mile	March 1 to August 15
Great gray owl	0.25 mile	March 1 to August 15
Northern goshawk	0.5 mile	May 1 to August 15
Peregrine falcon	0.25 mile	January 1 to July 1
Prairie falcon	0.25 mile	March 15 to July 1
Red-tailed hawk	300 to 500 feet	March 1 to August 15
Swainson's hawk	0.25 mile	April 1 to August 15
Western burrowing owl	0.25 mile	April 1 to August 15

If vegetation-clearing activities are performed during the primary avian breeding period, direct mortality and disturbance to native, non-raptor migratory bird nesting attempts could occur. To address that possibility, Recommended Fish and Wildlife Condition 13 requires the certificate holder to survey for native, non-raptor bird species no more than seven days before any ground-disturbing activities, if construction must occur during the migratory bird nesting season (between April 1 and July 15).

The applicant's analysis indicates the duration of impacts to habitat for State Sensitive avian species would vary by habitat type. As depicted in ASC Exhibit P1, Table P1-5, the State Sensitive avian species likely to use the analysis area require a range of habitat types, including grasslands, wetlands, and shrublands, as well as forests and riparian corridors.[291] As described above, temporary impacts to grasslands and herbaceous wetlands would likely last between three and seven years, shrublands may require 30 to 100 years to recover, and forested areas could take anywhere from 50 to many hundreds of years to reach pre-construction conditions. Mitigation must be provided commensurate with impact duration as described in the Fish and Wildlife Habitat Mitigation Plan (Attachment P1-6; Recommended Fish and Wildlife Condition 4).

[291] Id.

The applicant notes that there is a potential risk of avian collisions with transmission lines or other facility-related structures, which could result in elevated mortality rates for some avian species. The applicant explains that a variety of factors influence avian transmission line collisions. The applicant's existing Avian Protection Plan (Attachment P1-9) is in compliance with Avian Power Line Interaction Committee suggested practices, and includes measures that would be taken if avian mortalities are discovered (either as an incidental observation or during routine maintenance and monitoring), and modification and/or additions to the line that could be made if elevated mortalities of avian species are discovered. Compliance with that plan is required under Recommended Fish and Wildlife Condition 10.[292]

Reptiles and Amphibians

As depicted in ASC Exhibit P1, Table P1-5, State Sensitive reptile and amphibian species that may be present within the analysis area include the northern sagebrush lizard, western toad, Rocky Mountain tailed frog, northern leopard frog, western painted turtle, and Columbia spotted frog.[293] The applicant field surveys did not observe any of these species, although an observed sagebrush lizard, which was unidentifiable as to subspecies, could have been a northern sagebrush lizard. If present during construction or operation, direct impacts to State Sensitive reptiles and amphibians could include direct mortality and habitat loss.

The applicant anticipates that, compared to other species, State Sensitive reptile and amphibian species could be more susceptible than other species to direct mortality because of their defense method of remaining still when threatened. The impact of individual mortalities would vary depending on the reproductive strategy of the species and the robustness of the population. Mortality of an individual could have no discernible effect on a large, quickly reproducing population, but could have an effect that lasts generations on a small, vulnerable, or slowly reproducing population such as the northern sagebrush lizard.[294]

The applicant explains that the four State Sensitive amphibians and one of the reptiles (western painted turtle) likely to use the analysis area may be affected by impacts to waterbodies. Potential impacts to waterbodies including a description of the duration of impacts, and their effects to aquatic species, are addressed below in the discussion of impacts to State Sensitive

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[292] Id. The potential impacts caused by the transmission line structures providing additional nesting and perching opportunities for raptors and ravens is discussed above in the general discussion of direct and indirect impacts.
[293] Id. Section 3.5.5.5.
[294] B2HAPPDoc3-25 ASC 16A_Exhibit P1_Wildlife_ASC_Part 1_Main thru Attach P1-6 rev 2018-09-28. The applicant explains that most reptiles produce a moderate number of young per year (e.g., a few to a dozen, occasionally two dozen or more), do not reach maturity until their second or third year, and do not always reproduce every year. Amphibians may not reproduce until their second year, but can lay up to 1,000 eggs. Therefore, both reptiles and amphibians are moderate in their ability to recover from population perturbations such as the death of individuals, but amphibians are likely better able to recover than reptiles due to the greater number of young that they produce. A small population, however, would experience a greater impact than a large one, regardless of the species, due to the number of reproductive individuals remaining after the impact.

fish species and also in Section IV.Q.2., *Removal-Fill*. The two State Sensitive reptiles and the Western Toad may be affected by impacts to terrestrial habitats. Because northern sagebrush lizards require shrubs, as well as rocks, logs, or burrows of other animals for perching and hiding, habitat for this species could take 30 to 100 years to recover, both for the shrubs to re-establish and for other animals to burrow into the disturbed soil. Western painted turtles use terrestrial habitat for nesting and hibernation, with nesting habitat being sparsely vegetated with little to no canopy cover within 325 feet of aquatic habitat. Terrestrial habitat for western painted turtles includes shrubland and grassland areas adjacent to waterbodies; temporary disturbance to grasslands would likely last between three and seven years and temporary disturbances to shrublands between 30 and 100 years. Western toads use a variety of grassland, shrubland, woodland, and forest habitats outside of the breeding season; temporary impacts to these habitats would likely last between three and seven years in grasslands, between 30 and 100 years in shrublands, and between 50 and many hundreds of years in woodland and forest habitats. Mitigation would be commensurate with impact duration as described in the Fish and Wildlife Habitat Mitigation Plan (Attachment P1-6; Recommended Fish and Wildlife Condition 4).

Fish

As depicted in ASC Exhibit P1, Table P1-5, State Sensitive fish species with potential to occur within the analysis area include Columbia Basin rainbow trout, Lower Snake River summer steelhead, Middle Columbia River summer steelhead, Pacific lamprey, and western brook lamprey.[295] Habitat would vary among these fish species depending on their distribution. Based on results presented in the Fish Habitat Report (ASC Exhibit P1, Attachment P1-7B), the most complete known distribution for any of the State Sensitive fish species in the analysis area is for the trout and steelhead species. Pacific lamprey and western brook lamprey habitat is not well documented in the analysis area, but would not extend outside of streams known to contain rainbow trout. Therefore, the applicant used potential impacts to the known rainbow trout habitat as a proxy for potential effects to Pacific lamprey and western brook lamprey habitat within the analysis area.

The applicant explains that impacts to State Sensitive fish species and their habitat could occur at locations where the proposed transmission line either crosses areas that contain fish, at crossings directly upstream of occupied areas (approximately 600 feet upstream), as well as occupied areas that are not directly crossed but which are located adjacent to general soil disturbance and vegetation clearing that would occur during facility construction. The amount of soil disturbance adjacent to waterbodies, as well as the number of waterbody crossings, the types of waterbodies crossed (e.g., intermittent or seasonally dry ephemeral streams versus perennial streams), and the methods used to cross these waterbodies (i.e., transmission line spanning waterbodies versus access roads directly crossing them), could affect the type and magnitude of impacts that could occur to fish species and their habitats. Specific potential

[295] B2HAPPDoc3-25 ASC 16A-Exhibit P1_ASC_Part 1_Main Thru Attach P1-6 rev 2018-09-28, Section 3.5.5.6.

impacts to fish species and their habitats could include alterations to large woody debris input, temperature, suspended sediment, sedimentation, as well as the toxic effect of spills and use of chemicals adjacent to or within waterbodies.[296]

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.[297] 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.

Of these seven temporary crossings, none would require work inside the channel bankfull margins. In addition, there are two road crossings proposed to be located 600 feet upstream of fish-bearing streams; however, only the roads would be improved, so there would be no improvement to the existing crossing structures at these two crossings.[298]

The applicant explains that removal of riparian vegetation can have several potential adverse effects to aquatic systems, including an increase in erosion, reduced filtration of run-off, destabilization of stream banks, reduction of stream shade, reduced input of important terrestrial food source (i.e., allochthonous input), and a decrease in the availability of large woody debris. Riparian vegetation loss would initially occur during construction; however, ongoing vegetation maintenance in forested habitats would result in a permanent loss of taller trees within the analysis area. Because the proposed facility would cross through mostly low-lying shrubland vegetation, and forested/woodland habitats are mostly restricted to the Blue Mountains region, the removal of trees in riparian areas would be limited to the segments of the facility in the Blue Mountains.[299]

Construction of new and improvement of existing access roads across forested riparian areas could also result in removal of trees within the extent of the road bed. Of the 18 crossings over fish-bearing streams, two would be on new roads, three would be on roads needing 21 to 70 percent improvement, seven would be on roads needing 71 to 100 percent improvement, and six would be on existing roads not requiring improvements other than temporary structures at the crossing locations. As a result of the limited disturbance, road location, and vegetation type

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[296] B2HAPPDoc3-25 ASC 16A_Exhibit P1_Wildlife_ASC_Part 1_Main thru Attach P1-6 rev 2018-09-28.
[297] Id.
[298] Id.
[299] Id. In areas spanned by the transmission line, trees would not be removed if the height of the tree (once mature) would not come within 50 feet of the wires (Attachment P1-4, Vegetation Management Plan).

present at each of the 18 crossings, Exhibit P1, Table P1-18 shows that there would be some removal of woody vegetation from riparian areas at five of these crossings.

As the applicant describes, stream temperature can be affected by removal of streamside vegetation. For example, cool stream temperatures are required for proper completion of the life cycle functions of some fish species (e.g., salmon and trout in Northwest streams), while warm water temperatures can limit rearing, spawning, egg incubations, and migration of salmon and trout.[300] Temperatures changes from loss of riparian vegetation would likely to be varied among streams. It is noted that most riparian areas in the analysis area currently consist of shrubs and grasses, and much of this vegetation would not be permanently cleared or would be allowed to regrow in accordance with the Vegetation Management Plan (Attachment P1-4). Retained streamside vegetation may remain suitable to maintain adequate shade to prevent substantial temperature increases. As a result, construction activities are not anticipated to result in a substantial temperature increase that could result in a biological effect at most stream crossing locations with State Sensitive fish species.

The applicant further explains that the clearing of riparian vegetation, installation or modification of stream crossing structures, and the presence and use of access roads could increase the input of sedimentation into adjacent waterbodies. If not appropriate controlled, increased turbidity and sedimentation could impact fish behavior and physiological processes, and could result in reduced growth, health, and an increase in the risk of mortality. Sediment entering the water column could be redeposited on downstream substrates, which could bury aquatic macroinvertebrates (an important food source for some fish species). Additionally, downstream sedimentation could impact spawning habitat, spawning activities, eggs, larvae, and juvenile fish survival, as well as benthic community diversity and health. Because the impacts of increased sedimentation and turbidity are often limited to the period of soil disturbance, the duration of these impacts is expected to be relatively short. However, specific site characteristics including flow, substrate composition, relative disturbance, and other factors could extend the duration of construction impacts. Construction of access roads across waterbodies and installation or modification of stream crossing structures, as well as any other in-water work, would typically contribute to waterbody sedimentation. As depicted in Table P1-18, seven roads would cross fish-bearing streams that would require temporary structures over the road crossings. None of these seven crossings would require work inside the channel bankfull margins; no other instream work would occur for the other 11 crossings on fish-bearing streams.[301]

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[300] Id.

[301] Id. In addition to those 7 crossings over fish-bearing streams, there are 2 road crossings located 600 feet upstream of fish-bearing streams; however, at these 2 crossings only the roads would be improved so there would be no improvement to the existing crossing structure.

Use of existing access roads, soil disturbance adjacent to waterbodies, as well as clearing of riparian vegetation in areas where the transmission line would span waterbodies would contribute to the risk of erosion and sedimentation. The applicant explains that the most important factors in determining the risk of erosion and sedimentation to streams are soil disturbance, distance from the stream, and the presence of vegetation between the disturbance and the stream. ASC Exhibit P1 includes extensive analysis and reports documenting the potential impacts from erosion and sedimentation.[302] The applicant's Vegetation Management Plan (Attachment P1-4; Recommended Fish and Wildlife Condition 2) and the Reclamation and Revegetation Plan (Attachment P1-3; Recommended Fish and Wildlife Condition 1) would reduce the potential for the proposed transmission line to increase sedimentation and turbidity resulting from clearing of riparian vegetation, installation or modification of stream crossing structures, as well as the presence and use of access roads. Implementation of the NPDES 1200-C Erosion and Sediment Control Plan (Attachment I-3 to this order) would further reduce erosion and sediment transport during construction, providing additional protections to waterways crossed and near the proposed facility.

The applicant also notes that unrestricted access to habitat is important for both resident and anadromous salmonids. Upstream-migrating fish require access to suitable spawning gravel and juvenile fish must be able to disperse upstream and downstream to take advantage of available rearing habitat. If culverts or other types of road crossing structures are poorly designed, constructed, or maintained, they can affect the population of entire stream drainages. As discussed above, Exhibit P1, Table P1-18 depicts each of the road crossings of fish-bearing streams. 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.[303] 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.

Hazardous materials entering surface water supplies could also impact fish habitat during construction. The use of heavy and light equipment within the analysis area creates the potential for spills of fuel and oils from storage containers, equipment working in or near streams, and fuel transfers. In addition, construction of the tower footings would require concrete. Wet concrete or concrete cleaning water entering streams could have 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) could leach into waterbodies or run off into waterbodies during rain events, resulting in reduced fitness or

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[302] Id.

[303] Id. The applicant also notes that in addition to ODFW Fish Passage requirements, on federally managed lands, any crossing structure not already approved would be installed in accordance with BLM and USFS requirements.

mortality. To reduce the risk of oils, wet concrete, or wash water entering streams, and as discussed in ASC Exhibit J (Waters of the State) and Section IV.D., *Soil Protection Standard*, the applicant proposes to follow the avoidance and minimization measures outlined in the SPCC Plan (Attachment G-4). Use of herbicides would be subject to and regulated under the Noxious Weed Plan; (Recommended Fish and Wildlife Condition 3), and the Vegetation Management Plan (Recommended Fish and Wildlife Condition 2), which include restrictions on where herbicides could be used.

Finally, the applicant explains that fish salvage (i.e., removal or exclusion of fish from an area) would likely be 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. However, as proposed, all structure installations at the identified crossings would be temporary and require ODFW approval and none of the crossings would require work within the bankfull channel. Therefore, the proposed facility would not likely require any work area isolation and fish salvage. Although no fish salvage is currently proposed, if that became necessary, work area isolation and fish salvage would be subject to compliance with the Fish Passage Plan, which requires adherence to the ODFW-approved methods and therefore limit potential adverse effects to fish species (See Section IV.Q.4., *Fish Passage*).

To identify presence of State-sensitive species within the analysis area and ensure adequate protection and mitigation if identified, the applicant proposes and the Department recommends Council impose the following conditions:[304]

Recommended Fish and Wildlife Condition 15: 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, based on the survey protocols included in ASC Exhibit P Attachment P1-2 Revised Final Biological Survey Work Plan, unless otherwise approved by the Department in consultation with ODFW:

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

Recommended Fish and Wildlife Condition 16: Prior to construction, the certificate holder shall conduct, as applicable, the following biological surveys on all portions of the site

[304] B2HAPPDoc3-51 ASC Exhibit P - Errata Info 2019-03-28.

boundary, regardless of whether those portions have been surveyed at the time of issuance of the site certificate, based on the survey protocols included in ASC Exhibit P Attachment P1-2 Revised Final Biological Survey Work Plan, unless otherwise approved by the Department in consultation with ODFW:

a. Washington ground squirrels;
b. Raptor nests;
c. Pygmy rabbits;
d. Threatened and Endangered plants (in areas of known or anticipated occurrences)
e. Greater sage-grouse, as necessary for the State of Oregon to calculate the amount of sage-grouse habitat compensatory mitigation required for the facility used Oregon's Sage-Grouse Habitat Quantification Tool.

In order to further avoid or minimize any impact to State Sensitive Fish species, the applicant proposes to observe seasonal fisheries restrictions, which are depicted in ASC Exhibit P1, Table P1-19,[305] and required per compliance with the Fish Passage Plan. In addition to the seasonal fisheries restrictions associated with in-water work actions, under the Fish Passage Plans and designs (Exhibit BB, Attachment BB-3), additional seasonal restrictions may apply to operational use of each of the seven crossings.

IV.H.2. Sage-Grouse Specific Habitat Mitigation Requirements

The EFSC Fish and Wildlife Habitat standard has two parts. Sub(1), as described in the section above, relates to all fish and wildlife habitat except for sage-grouse habitat. Sub(2) of the standard is specific to sage-grouse habitat, and 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:

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(2) For energy facilities that impact sage-grouse habitat, the sage-grouse specific habitat mitigation requirements of the Greater sage-grouse conservation strategy for Oregon at OAR 635-415-0025(7) and OAR 635-140-0000 through -0025 in effects as of February 24, 2017.

In July 2015, the Oregon Department of Fish and Wildlife (ODFW) adopted sage-grouse conservation rules at OAR 635, Division 140, to specifically address the impacts of development to the sage grouse. In March 2016, the Fish and Wildlife Commission adopted its Sage Grouse Conservation Policy, which states, at OAR 635-415-0025(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

[305] Id. Section 3.5.6.1.

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.

OAR 635-415-0025(7) became effective upon its adoption in March 2016. The pASC for the proposed transmission line was submitted in February 2013. Therefore, the requirements of OAR 635-140-0025, Policy 2, subsections (a), (b), (c), and (d)(A) are not applicable to the proposed facility.

The applicable provisions of OAR 635-140-0025(2) and (3) state:

> *(2) The Department [ODFW] may approve or recommend approval of mitigation for impacts from a large-scale development permitted by a county; or development actions permitted by a state or federal government entity on public land, within sage-grouse habitat only after the following mitigation hierarchy has been addressed by the permitting entity, with the intent of directing the development action away from the most productive habitats and into the least productive areas for sage-grouse (in order of importance: core area, low density, general, and non-habitat).*
>
> *. . .*
>
> > *(d) Minimization. If after exercising the above avoidance tests, the permitting entity finds the proposed development action cannot be moved to non-habitat or into a habitat category that avoids adverse direct and indirect impacts to a habitat category of greater significance (i.e., core or low density), then the next step applied in the mitigation hierarchy will be minimization of the direct and indirect impacts of the proposed development action. Minimization consists of how to best locate, construct, operate and time (both seasonally and diurnally) the development action so as to avoid or minimize direct and indirect impacts on important sage-grouse habitat and sage-grouse.*
> >
> > > *. . .*
> > >
> > > *(B) Minimizing impacts from development actions in general habitat shall include consultation between the development proponent and the Department that considers and results in recommendations on how to best locate, construct, or operate the development action so as to avoid or minimize direct and indirect impacts on important sage-grouse habitat within the area of general habitat.*
> >
> > *(e) Compensatory Mitigation. If avoidance and minimization efforts have been exhausted, compensatory mitigation to address both direct and indirect impacts will be required as part of the permitting process for remaining adverse impacts from the proposed development action to sage-grouse habitat, consistent with the mitigation standard in (3) Policy 3 below.*
>
> *(3) The standard for compensatory mitigation of direct and indirect habitat impacts in sage-grouse habitat (core low density, and general areas) is to achieve net conservation*

benefit for sage-grouse by replacing the lost functionality of the impacted habitat to a level capable of supporting greater sage-grouse numbers than that of the habitat which was impacted. Where mitigation actions occur in existing sage-grouse habitat, the increased functionality must be in addition to any existing functionality of the habitat to support sage-grouse. When developing and implementing mitigation measures for impacts to core, low density, and general sage-grouse habitats, the project developers shall:

(a) Work directly with the Department [ODFW] and permitting entity to obtain approval to implement a mitigation plan or measures, at the responsibility of the developer, for mitigating impacts consistent with the standard in OAR 635-140-0025 (3) or,
(b) Work with an entity approved by the Department [ODFW] to implement, at the responsibility of the developer, "in-lieu fee" projects consistent with the standard in OAR 635-140-0025 (3).
(c) Any mitigation undertaken pursuant to (a) or (b) above must have in place measures to ensure the results of the mitigation activity will persist (barring unintended natural events such as fire) for the life of the original impact. The Department will engage in mitigation discussions related to development actions in a manner consistent with applicable timelines of permitting entities.

OAR 635-140-0002 defines the sage grouse habitat categories as:

- *Areas of High Population Richness: Mapped areas of breeding and nesting habitat within core habitat that support the 75th percentile of breeding bird densities (i.e., the top 25%).*
- *Core Area: Mapped sagebrush types or other habitats that support greater sage-grouse annual life history requirements that are encompassed by areas: a) of very high, high, and moderate lek density strata; b) where low lek density strata overlap local connectivity corridors; or c) where winter habitat use polygons overlap with either low lek density strata, connectivity corridors, or occupied habitat." Core area maps are maintained by the Department.*
- *Low Density: Mapped sagebrush types or other habitats that support greater sage-grouse that are encompassed by areas where: a) low lek density strata overlapped with seasonal connectivity corridors; b) local corridors occur outside of all lek density strata; c) low lek density strata occur outside of connectivity corridors; or d) seasonal connectivity corridors occur outside of all lek density strata. Low density area maps are maintained by the Department.*
- *General Habitat: Occupied (seasonal or year-round) sage-grouse habitat outside impact core and low density habitats. As explained in Exhibit P2 of the ASC, the analysis area for sage grouse includes the entire Site Boundary, which the ASC defines as "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 micrositing corridors proposed by the applicant" (OAR 345-001-0010(55)).

As applicable to the proposed transmission line, OAR 635-140-0025(2), Policy 2 requires compliance with a mitigation hierarchy, which is intended to "direct[] the development action away from the most productive habitats and into the least productive areas for sage-grouse (in order of importance: core area, low density, general, and non-habitat." In areas where impacts cannot be avoided, Policy 2(d) requires the impacts to be minimized. As described in the rule, "[m]inimization consists of how to best locate, construct, operate and time (both seasonally and diurnally) the development action so as to avoid or minimize direct and indirect impacts on important sage-grouse habitat and sage-grouse." Policy 3 requires compensatory mitigation in the event avoidance and minimization efforts have been exhausted.

As explained in Section III.A., *Transmission Corridor Selection*, and above with regard to fish and wildlife habitat generally, the applicant conducted a series of siting studies in order to designate a proposed transmission line route to best reduce, minimize, and avoid, to the extent practical, sensitive species and resources, including sage-grouse habitat.[306] As described in the application and Section III.A, there are complete interests and trade-offs that have been made with the route selection proposed by the application. While it is important to note that the proposed facility must comply with applicable EFSC standards and rules, it is also recognized that it is not possible to completely avoid all impacts to all resources and interests. For example, in areas of sage-grouse habitat, the proposed facility has often been routed to minimize or avoid impacts to the Oregon Trail, or in particular, to private farmland including irrigated farmland. Additionally, in many locations on BLM land, the proposed route was directed by the BLM, understanding that there are trade-offs in potential impacts to the BLM's own resources and land uses.

The applicant explains in ASC Exhibit P2 that designing the proposed route to avoid or minimize impacts to sage-grouse habitat was particularly challenging because of the dynamic and evolving nature of Oregon's sage-grouse habitat protection policy. In ASC Exhibit P2, the applicant summarizes the numerous changes in the sage grouse policy and the applicant's attempt to route the proposed transmission line to comply with the policy changes since 2010.[307] The current policy, which the ODFW Commission adopted in March 2016 based on the

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[306] B2HAPPDoc3-23 ASC 16B-Exhibit P2 GRSG ASC 2018-09-28, Table P2-1 identifies the specific sage grouse surveys the applicant has conducted, the survey protocols used, the dates of the surveys, the approximately acreage of area requiring surveys, the total acreage that has been surveyed to date, and the strategy the applicant proposes to follow in order to complete a 100% survey coverage of the necessary area. Figure P2-1 depicts the sage-grouse habitat survey areas.

[307] B2HAPPDoc3-23 ASC 16B-Exhibit P2 GRSG ASC 2018-09-28 Section 3.7.5.1. The applicant explains that, in 2010, ODFW called for avoiding all areas within two miles of a lek. In 2012, ODFW changed its approach to address "core areas" based on the *Greater Sage-Grouse Conservation Assessment and Strategy for Oregon: A Plan to Maintain*

ODFW July 2015 conservation strategy, includes the rules applicable to the ASC, upon which these findings are based. As discussed above, these policies provide mitigation measures for avoiding and minimizing sage-grouse habitat impacts, and for compensating for unavoidable impacts.

Based on the current and applicable EFSC and ODFW rules, the applicant demonstrates that while the proposed route would impact some sage-grouse habitat; there is no reasonable alternative location that would avoid the habitat entirely. Based on the following analysis and findings, the Department agrees that the proposed facility route complies with the EFSC standard and ODFW rules, including the sage-grouse mitigation hierarchy. The proposed facility primarily avoids sage grouse habitat except in cases where there is no reasonable alternative. In those instances, the proposed facility route minimizes the direct and indirect impacts of the proposed transmission line on sage-grouse habitat, in compliance with OAR 625-140-0025(2)(d). To reiterate, the "typical" ODFW habitat categorizations, upon which the EFSC Fish and Wildlife Habitat standard is based, are not applicable in sage-grouse habitat per the EFSC Fish and Wildlife Habitat standard and the ODFW Sage-Grouse Habitat Conservation Plan. Instead, the EFSC standard and ODFW rules rely upon habitat categorization of "areas of high population richness," "core," and "low-density." These habitat categories are defined above.

Proposed Route Facility Components within Sage-Grouse Habitat[308]

ASC Exhibit P2, Figure P2-2 includes a map of the sage grouse habitat within the site boundary. Figure P2-3 includes a map of the sage grouse lek locations near the proposed transmission line. The applicant describes the locations of all facility components proposed to be located within sage-grouse habitat as follows: [309]

Sage-Grouse Areas of High Population Richness

The proposed facility would include 0.28 miles of existing access road that will be substantially modified within sage grouse areas of high population richness. No transmission line, new access

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and Enhance Populations and Habitat (ODFW 2011) (the "2011 Strategy"). Applying the 2011 Strategy, ODFW designated "core areas" of sage-grouse habitat and recommended that all mapped core areas be considered Category 1 habitat, subject to site-specific analysis. The proposed facility route in the applicant's 2013 pASC avoided most, but not all, Category 1 sage-grouse habitat. For remaining Category 1 impacts, the applicant worked with ODFW and the Department to determine the extent of Category 1 sage-grouse habitat within the Site Boundary, to minimize disturbance to Category 1 habitat through micro-siting. If this policy was still in place, the ODFW mitigation policy for Category 1 habitat is "no impact." However, as described in this section, this policy is no longer applicable to sage-grouse habitat. Concurrent with the applicant's siting efforts, BLM developed alternative routes designed to avoid sage-grouse habitat (see Exhibit B, Attachment B-4, 2015 Supplemental Siting Study), and those alternative routes became part of the agency's preferred alternative. To align with the BLM, the applicant incorporated the BLM's preferred sage-grouse avoidance alternatives into the route proposed to EFSC.

[308] No facility components associated with any alternative routes are proposed in any sage-grouse habitat; as such, the analysis here refers only to the proposed facility route.

[309] B2HAPPDoc3-32 ASC 16B_Exhibit P2 GRSG_ASC 2018-09-28, Section 3.7.1.

roads, multi-use areas, communication stations, or light-duty fly yards are proposed to be located in sage-grouse area of high population richness.

Sage-Grouse Core Area Habitat

The proposed facility would include the following facility components within sage-grouse core area habitat: 20.77-line miles of transmission line; 12.85 miles of new access roads; and 12.34 miles of substantially modified existing roads. No multi-use areas, communication stations or light-duty fly yards are proposed to be located in sage grouse core area habitat.

Sage-Grouse Low Density Habitat

The proposed facility would include the following facility components within sage-grouse low density habitat: 23.69-line miles of transmission line; 16.21 miles of new access roads; 11.28 miles of substantially modified existing roads, two communication stations (CS BA-01 and CS MA-01 ALT), and one light-duty fly yard (LDFY BA-01). No multi-use areas are proposed to be located in sage grouse low-density habitat.

Evaluation of Sage-Grouse and Sage-Grouse Habitat Impacts

Impacts to sage-grouse habitat would be both permanent and temporary. Permanent impacts are defined as those impacts that will exist for the entire life of the transmission line. Temporary impacts are those impacts that will last for a time less than the life of the transmission line; however, impacts to sage-brush habitat are typically very long to recover.[310]

Direct Impacts

OAR 635-140-0002(4) defines direct impacts to sage grouse as those impacts that have "an adverse effect of a development action upon sage-grouse habitat which is proximal to the physical footprint of the development action in time and place." As with other fish and wildlife species, direct impacts would be both permanent and temporary. As the applicant explains in Exhibit P2, vegetation removal, access road activity, and direct mortality from the proposed transmission line would potentially result in temporary or permanent direct impacts to sage-

[310] The applicant explains that the recovery period for directly disturbed agricultural areas could be as short as one to three years; grasslands and herbaceous wetlands generally recover within three to seven years; shrublands may require 30 to 100 years to recover (with the longer recovery periods associated with disturbances in mature sage-brush habitats located in arid regions or for specific sage-brush species). Arid sites with naturally sparse vegetation, as well as those with saline or alkaline soils, shallow soils, compacted soils, or areas that have a high erosion potential may be difficult to restore and could require special techniques or repeated revegetation efforts.

grouse habitat. Exhibit P2, Table P2-3 depicts the types of sage-grouse direct impacts associated with the proposed development.[311]

Permanent Direct Impacts

ASC Exhibit P2, Table P2-3 summarizes the types, timing, duration, quantification metrics and proposed mitigation measures related to permanent direct impacts to sage-grouse habitat from the proposed transmission line.[312]

Permanent Vegetation Clearing Impacts:

As discussed above regarding fish and wildlife habitat generally, the applicant explains that vegetation clearing to accommodate facility components required for operation would result in some permanent direct impacts to fish and wildlife habitat through habitat loss. Permanent loss of habitat would occur within the operations disturbance areas for transmission structures, communication stations, and access roads. Also as explained above, with respect to the permanent direct impacts specifically from access road construction and modification, the applicant provides details on road construction activities and methods, including types of improvements to existing roads and projected traffic volumes in the Road Classification Guide and Access Management Plan (Attachment B-5), and in the Traffic and Transportation Management Plan (Attachment U-2).

As applied specifically to sage-grouse habitat, the applicant is required to provide mitigation for permanent direct impacts resulting from construction of facility components as set forth in the Sage-Grouse Habitat Mitigation Plan (Attachment P2-3). As discussed in the plan, ODFW is currently developing a Sage-Grouse Habitat Quantification Tool that would be used to estimate direct and indirect impacts to sage-grouse grouse habitat resulting from transmission lines and roads, as well as associated compensatory mitigation obligations. Under ODFW's Greater Sage-Grouse Conservation Strategy, the applicant must account for direct and indirect impacts using the Sage-Grouse Habitat Quantification Tool.[313] Recommended Fish and Wildlife Condition 17 would require that prior to construction, the applicant finalize a Sage-Grouse Habitat Mitigation Plan, however, initially, the certificate holder has also proposed that it would not provide mitigation, either in the form of applicant-implemented mitigation project or fee-in-lieu or mitigation bank credits, until three years after facility operation which is the time necessary to conduct an operational traffic management study (see Fish and Wildlife Conditions 20 and 21 below). The Department agrees that the operational traffic management study is necessary in order to verify the mitigation obligation is accurate, for both sage-grouse habitat and for elk habitat impacts. In a comment letter on the ASC, the Oregon Department of Fish and Wildlife (ODFW) noted that delaying mitigation for the entire facility's impacts until three years after

[311] B2HAPPDoc3-32 ASC 16B_Exhibit P2 GRSG_ASC 2018-09-28, Section 3.7.3.1.
[312] Id.
[313] Id; ODFW Executive Order No. 15-18.

operation would result in a loss of functional habitat for three years without mitigation. Rather, ODFW suggested a "two-step" mitigation process, whereas the applicant/certificate holder provides mitigation prior to or at the time of facility construction based on the known facility impacts at that time, such as direct impacts from structures, roads, pulling and tensioning sites, multi-use areas (MUAs), and other facility components. Then, after three years and after completion of the operational traffic study, ODFW suggests that the certificate holder provide any additional mitigation based on the results of the traffic study.[314] All impacts would be calculated using the ODFW HQT, as described in this order. The applicant agreed with the ODFW comment, as does the Department. The Department recommends the Council include the following conditions in the site certificate:

Recommended Fish and Wildlife Condition 17: At least 90 days prior to construction of a facility phase or component in sage-grouse habitat as mapped by The Oregon Department of Fish and Wildlife (ODFW) at that time, unless otherwise agreed to by the Department, the certificate holder shall finalize, and submit to the Department for its approval, in consultation with ODFW, a final Sage-Grouse Habitat Mitigation Plan.

a. The certificate holder shall provide to the Department the information necessary for the State of Oregon to calculate the amount of sage-grouse habitat compensatory mitigation required for the facility using Oregon's Sage-Grouse Habitat Quantification Tool.
b. The final Sage-Grouse Habitat Mitigation Plan shall address the potential sage-grouse habitat impacts through mitigation banking, an in-lieu fee program, development of mitigation projects by the certificate holder, or a combination of the same.
    i. To the extent the certificate holder develops its own mitigation projects, the final Sage-Grouse Habitat Mitigation Plan shall:
        1. Identify the location of each mitigation site, including a map of the same;
        2. Identify the number of credit-acres that each mitigation site will provide for the certificate holder;
        3. Include a site-specific mitigation management plan for each mitigation site that provides for:
            A. A baseline ecological assessment;
            B. Conservation actions to be implemented at the site;
            C. An implementation schedule for the baseline ecological assessment and conservation actions;
            D. Performance measures;
            E. A reporting plan; and
            F. A monitoring plan.
    ii. To the extent the site certificate utilizes a mitigation bank or in-lieu fee program, the final Sage-Grouse Habitat Mitigation Plan shall:

[314] B2HAPPDoc13-21 ASC Reviewing Agency Comment ODFW_Reif 2019-01-25.

1. Describe the nature, extent, and history of the mitigation bank or in-lieu fee program; and
2. Identify the number of credit-acres that each mitigation site will provide for the certificate holder.

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 access roads. As referenced in Fish and Wildlife Condition 19, the certificate holder shall demonstrate during or about the third year of operation that sage-grouse habitat mitigation shall be commensurate with the final compensatory mitigation calculations, which will be based on the as- constructed facility and will include indirect impacts from access roads, either by showing the already-implemented mitigation is sufficient to cover all facility component impacts, or by proposing additional mitigation to address any uncovered impacts

c. Oregon's Sage-Grouse Habitat Quantification Tool shall be used to calculate the amount of sage-grouse habitat compensatory mitigation required for the facility and the number of credit-acres that each mitigation site will provide for the certificate holder.
d. Prior to facility construction and based on final facility design, Oregon's Sage-Grouse Development Registry shall be used to calculate and verify compliance with the metering and disturbance thresholds established at OAR 660-023-0115(17) and (18). Evidence of compliance must be provided to the Department prior to construction.
e. The Sage-Grouse Habitat Mitigation Plan may be amended from time to time by agreement of the certificate holder and the department. Such amendments may be made without amendment to the site certificate. The Council authorizes the Department to agree to amendments of the plan and to mitigation actions that may be required under the plan; however, the Council retains the authority to approve, reject, or modify any amendment of the plan agreed to by the Department.

Recommended Fish and Wildlife Condition 18: During construction, the certificate holder shall implement the conservation actions set forth in the final Sage-Grouse Habitat Mitigation Plan referenced in Fish and Wildlife Condition 17.

Recommended Fish and Wildlife Condition 19: During the third year of operation, the certificate holder shall provide to the Department and ODFW the information necessary for ODFW to calculate the final amount of indirect impact from facility roads to sage-grouse habitat and corresponding compensatory mitigation required using Oregon's Sage-Grouse Habitat Quantification Tool. After receiving the calculations from the State, the certificate holder shall provide to the Department a report demonstrating that sage-grouse habitat mitigation shall be commensurate with the final compensatory mitigation calculations.

a. The final calculations shall be based on the as-constructed facility.
b. Oregon's Sage-Grouse Habitat Quantification Tool shall be used to calculate the amount of sage-grouse habitat compensatory mitigation required for the facility, and the information from the pre- and post-construction traffic studies shall be used in the calculation.

Direct Habitat Impact – LCDC Metering Rule and Disturbance Threshold Rule

The Land Conservation and Development Commission (LCDC) implemented, concurrently with ODFW, sage-grouse habitat conservation rules into the Oregon land use planning rules. These rules are directly applicable to county-level and state-level permitting of projects and facilities that impact sage-grouse habitat. While the rules are housed in the LCDC rule division at OAR 660, Division 23, they are discussed in this section of the order because they are related to sage-grouse habitat. OAR 660-023-0115 is the rule section related sage-grouse habitat conservation. Subsection 2 of that rule lists exempt activities from most provisions of the rule, including 2(b), energy facilities that submitted a preliminary application for site certificate to EFSC prior to the effective date of the rule. This includes the proposed facility. Nevertheless, subsection 16 and 17 of the rule related to "metering" and "disturbance thresholds" do apply to the proposed facility, by rule.

> *OAR 660-023-0115(16) Metering. This rule is intended to ensure that the area of direct impact levels in any PAC [priority area for conservation], including energy facilities exempted under subsection (2)(b), does not increase by an amount greater than 1.0 percent of the total area of the PAC in any ten-year period. The initial period shall commence upon the effective date of this rule and continue for ten consecutive years, where upon the process shall be successively repeated. The commission will consider revisions to this rule if the department's yearly reports required by section (15) indicate that the development trends in any PAC indicate that the 1.0 percent direct impact threshold is in jeopardy of being exceeded before the ten-year period has expired. Any proposal to amend this rule undertaken by the department shall be developed in coordination with all affected counties and other stakeholders.*
>
> *OAR 660-023-0115(17) Disturbance Threshold. This rule is intended to ensure that direct impact level, including energy facilities exempted under subsection (2)(b), does not exceed three percent of the total area in any PAC. If this three-percent threshold is approached, then the department must report that situation to the commission along with a proposal to amend this rule to adapt the standards and criteria such that the threshold is not exceeded.*

The applicant has demonstrated that the proposed facility can comply with the metering and disturbance threshold rule requirements. Exhibit P2, Table P2-5, reprinted here as Table FW-2, shows that in both priority areas for conservation (PACs) that would be

impacted by the proposed facility (Baker PAC and Cow Valley PAC), based on a conservative estimate of facility design, there would remain sufficient acreage under both the metering and disturbance threshold caps, in compliance with the LCDC rules. The calculations were conducted by the Institute for Natural Resources, based on methods established by INR on contract to ODFW. The applicant states that the calculations were conservative and overestimate the proposed facility's impacts, particularly because the calculations by INR included access roads that will be used for facility construction that are existing and require no or limited improvements, such that they are not considered related or supporting facilities under EFSC jurisdiction. Regardless, the calculations demonstrate that the proposed facility would be well under the 1% and 3% thresholds. Since the time of the application development, INR and The Nature Conservancy, on contract to ODFW and the State of Oregon, have developed a tool called the Sage-Grouse Development Registry, which is used to quantify a facility's direct impacts to sage-grouse habitat for purposes of complying with the LCDC metering and threshold rules. To validate compliance with the rules after the facility has been constructed, the Department recommends Fish and Wildlife Condition 17, 18 and 19, to verify compliance with the LCDC rules using the Sage-Grouse Development Registry.

Table FW-2: Direct Impacts to Sage-grouse Habitat in Oregon

Existing Conditions (acres)	**Baker PAC**	**Cow Valley PAC**
Total area	336,415	368,442
Total development	2,938	1,501
Development percent of total	0.87%	0.41%
Project Direct Impacts (acres)	**Baker**	**Cow Valley**
Permanent (operations)	347	179
Temporary (construction)	24	30
Overlap with existing baseline	(28)	(9)
Net Project impacts	343	200
Area Remaining for Development after the Project		
Acres remaining to the 3% threshold[1]	6,811	9,352
Percent remaining to the 3% threshold	2.02%	2.54%
Acres remaining to the 1% threshold[2]	3,021	3,484
Percent remaining to the 1% threshold	0.90%	0.95%

Notes

1. The 3% disturbance cap is intended to ensure that direct impacts do not exceed 3% of the total area in any Priority Area of Concern (PAC) (see OAR 660-023-0115(17)). The 1% metering threshold provides that the area of direct impact levels in any PAC does not increase by an amount greater than 1% of the total area of the PAC in any ten-year period (see OAR 660-023-0115(16)). The initial period commenced on the effective date of OAR 660-023-0115, which was July 24, 2015.
2. The 1% metering threshold provides that the area of direct impact levels in any PAC does not increase by an amount greater than 1% of the total area of the PAC in any ten-year period (see OAR 660-023-0115(16)). The initial period commenced on the effective date of OAR 660-023-0115, which was July 24, 2015.

Traffic-Related Direct Mortality

Direct mortality to sage-grouse individuals may occur as a result of collisions with facility-related vehicles during construction or operation of the proposed facility; however, this risk is considered very low, as sage-grouse would likely avoid the work sites and vehicles. The risk of traffic-related direct mortality can be avoided or minimized by having facility-related vehicles reduce speed to a level sufficient to anticipate and avoid striking sage-grouse individuals.

Recommended Fish and Wildlife Condition 8 would establish speed limits on access roads in order to avoid or minimize direct mortality to sage-grouse.

Additionally, vehicle-wildlife collisions on facility-related access roads can be substantially reduced through controlling use of such roads. As discussed above, the applicant proposes to implement access control as set forth in the draft Road Classification Guide and Access Control Plan (Attachment B-5). Access control may involve fencing, gates, barriers, and/or signage as preferred by the landowner while maintaining effectiveness. Recommended Fish and Wildlife Condition 9 would establish access controls in order to avoid or minimize indirect impacts related to access roads, consistent with the Road Classification Guide and Access Control Plan.

Transmission-Line-Collision Mortality

Direct mortality to individual sage-grouse may occur from collisions with facility-related structures (e.g., birds flying into wires). The risk of mortality from such collisions is anticipated to be very low. As the applicant explains, the risk of sage-grouse mortalities occurring as a result of electrocutions is negligible for extra high-voltage transmission lines because a bird would need to contact two phases of the line simultaneously to be electrocuted and the spacing between phases of the proposed transmission lines is much larger than the wing span of sage-grouse. Therefore, electrocution due to the transmission line is not considered likely to occur. Even so, Recommended Fish and Wildlife Condition 10, which requires compliance with practices set forth in IPC's Aviation Protection Plan and certain other avian protection guidelines, would ensure that avoid or minimize direct mortality to avian species is avoided or minimized.

Temporary Direct Impacts

ASC Exhibit P2, Table P2-4 summarizes the type, timing, duration, quantification metric, and mitigation measures related to the proposed transmission line's potential temporary direct impacts to sage-grouse habitat.[315]

Temporary Vegetation Clearing Impacts

The applicant explains in Exhibit P2 that clearing of vegetation that provides sage grouse habitat within the right of way of the proposed transmission line would be required for construction-related activities and installation of some facility components. As described in Exhibit P2, in most areas there would be a 250-foot-wide right-of-way in which to construct the 500-kV portions of the transmission line and a 100-foot-wide right-of-way to construct the 138-kV portions of the line. Temporary vegetation clearing activities would encompass the entire footprint of pulling and tensioning sites, multi-use areas and light-duty fly yards. Temporary clearing activities would also occur around the perimeter of permanent facility components.

[315] B2HAPPDoc3-32 ASC 16B_Exhibit P2 GRSG_ASC 2018-09-28, Section 3.7.3.2.

Areas cleared for construction activities, and not required for transmission line components or needed for maintenance, would be reclaimed as described in the applicant's Reclamation and Revegetation Plan (Attachment P1-3).

The applicant characterizes the proposed clearing as a temporary impact because restoration of all temporarily impacted areas is required by EFSC rules. However, restoration of sage-brush habitat can take decades and restoration to pre-construction conditions could span several generations of sage-grouse, and the benefit of restoration are unlikely to be realized by sage-grouse in the short-term. As such, mitigation including compensatory mitigation must be provided in accordance with the Sage Grouse Habitat Mitigation Plan (Attachment P2-3; and Recommended Fish and Wildlife Conditions 17, 18 and 19).

Retirement: The applicant explains in ASC Exhibit P2 that retirement of the proposed transmission line would involve activities and equipment similar to those that would be used during construction. Accordingly, potential temporary impacts on sage-grouse during retirement of the transmission line would be similar to the temporary impacts described for construction. As described in Mandatory Conditions 7 and 12*,* specific mitigation requirements to address impacts incurred during retirement of the facility would be included in the retirement plan, including a description of the activities necessary to restore the site to a useful, non-hazardous condition, as described in OAR 345-027-110(5).

Indirect Impacts to Sage-Grouse Habitat

OAR 635-140-0002(6) defines indirect impacts to sage-grouse habitat as impacts that have "adverse effects to sage-grouse and their habitat that are caused by or will ultimately result from implementation of a development action, with such effects usually occurring later in time or more removed in distance as compared to direct effects." Indirect impacts to sage-grouse and sage-grouse habitat can result from multiple sources of sensory disturbance, typically such as noise and human presence during construction and on access roads during operation. Additionally, there is evidence that suggests that tall structures such as transmission lines provide perching habitat for corvids, particularly ravens and other predatory species, and that these birds use the perch provided by transmission lines to predate on sage-grouse eggs and chicks and generally disturb habitat. The application argues that the science linking tall structures to indirect sage-grouse disturbance including predation from corvids as being unsettled and unclear. Nevertheless, ODFW has incorporated an indirect disturbance consideration into the Habitat Quantification Tool and as such, use of the HQT for calculating the facility's impacts and corresponding mitigation obligation will account for indirect effects.[316]

Permanent Indirect Impacts

[316] Id. Section 3.7.4.1.

ASC Exhibit P2, Table P2-6 summarizes the types, timing, duration, quantification metrics and proposed mitigation measures related to permanent indirect impacts to sage grouse habitat from the proposed facility. ASC Exhibit P2 notes two studies that indicate that transmission lines and other tall structures could indirectly impact sage-grouse by offering opportunities for increased predator use thereby generating adversion behaviors among sage-grouse. It also includes references to studies indicating no evidentiary support that the transmission lines create an adverse indirect impact to sage grouse. As stated above, ODFW has concluded that transmission lines have indirect impacts on sage-grouse habitat and, as discussed further below, the HQT will account for these indirect impacts. As discussed above, Recommended Fish and Wildlife Conditions 17, 18 and 19 require that the applicant's Sage Grouse Mitigation Plan (Attachment P2-3) rely on, and provide mitigation commensurate with, the HQT results.

Permanent Indirect Impacts from Access Roads

The applicant explains in ASC Exhibit P2 that it does not anticipate that new and substantially modified existing access roads would act as a barrier to sage-grouse movement. However, the introduction of traffic (i.e., motorized on- or off-road vehicles) and the presence of human activity on roads used for the proposed facility could have negative indirect impacts on sage-grouse and sage-grouse habitat. Those indirect impacts could include reduced utilization of habitat, fragmentation of migration corridors, and the associated disruption of important sage-grouse life processes. As discussed in the applicant's Road Classification Guide and Access Control Plan (Exhibit B, Attachment B-5), and as would be required under Recommended Fish and Wildlife Conditions 8 and 9, speed limits and controlled access on facility access roads within sage-grouse habitat would help mitigate indirect impacts from roads to sage-grouse and sage-grouse habitat. In addition, the Sage-Grouse HQT would include permanent indirect impacts from roads in its calculation, including mitigation obligations for indirect impacts to sage-grouse and sage-grouse habitat.

Temporary Indirect Impacts

ASC Exhibit P2, Table P2-7 summarizes the types, timing, duration, quantification metrics, and proposed mitigation measures related to permanent indirect impacts to sage grouse habitat from the proposed transmission line.

Temporary Indirect Impacts from Access Roads

The applicant explains in ASC Exhibit P2 that construction activities would result in road-related surface disturbances that could directly impact sage-grouse. Those disturbances include noise, visual disturbance from heavy equipment, traffic and people, dust dispersing from the immediate construction area, and some air pollution from construction equipment exhaust. Individual sage-grouse may be disturbed if the species are located in or near the site boundary and the habitat near the construction area may temporarily be unsuitable during the construction period.

Noise would likely have a greater impact and extend further from the construction sites than other road-related disturbances. Some construction activities would likely result in sound levels with a maximum instantaneous predicted noise level of 80 to 90 A-weighted decibels at 50 feet from the work site. Increases in noise would be concurrent with any disturbance associated with the presence of humans and their activities (e.g., dust and visual disturbances). Surface disturbance has been associated with declines in sage-grouse lek attendance and negative population persistence, reducing the functionality of habitat at varying distances from the disturbance. These disturbances could render habitats unsuitable during construction, though this level of the disturbance would only occur construction or heavy maintenance.[317]

Recommended Fish and Wildlife Conditions 8 and 9, which require speed limits and access controls on facility-related roads in sage-grouse habitat, would help mitigate and minimize those impacts, though would not eliminate the impacts. In addition, the applicant proposes spatial and timing restrictions near sensitive sage-grouse habitat, which would limit the facility construction time to periods when sage-grouse are less sensitive to disturbances. The applicant proposes to develop a set of maps that depict the extent of spatial and temporal restriction areas within the analysis area. As required under Recommended Fish and Wildlife Condition 7, these maps would be maintained on-site to ensure construction workers are aware if and when their activities would occur within sage-grouse habitat and the applicability of the spatial and temporal restrictions. Recommended Fish and Wildlife Condition 7 requires flagging of environmentally sensitive areas. In addition, to prevent ground-disturbing activities within sage-grouse areas during high-sensitivity periods, the applicant proposes and the Department recommends the Council adopt the following condition:

> **Recommended Fish and Wildlife Condition 20:** During construction, the certificate holder shall not conduct ground-disturbing activities within sage-grouse areas of high population richness, core area habitat, low density habitat, or general habitat between March 1 to June 30. Upon request by the certificate holder, the Department in consultation with ODFW may provide exceptions to this restriction. The certificate holder's request must include a justification for the exception, including any actions the certificate holder will take to avoid, minimize, or mitigate impacts to sage-grouse in the relevant area.

Temporary Invasive Species Impacts

As the applicant explains in Exhibit P2, the initial vegetation clearing and resulting soil disturbance during construction could create optimal conditions for the establishment of invasive-plant species, which if established, would affect the quality of wildlife habitat, including sage grouse habitat. The replacement of native plant species can have various environmental effects on sage grouse habitat, including changes in fire regime (e.g., increasing the frequency and severity of fires), changes in the nutrient regime of soils (thereby reducing

[317] Id. Section 3.7.4.2.

the quality of forage species), increased soil erosion (resulting in additional loss of vegetated areas, as well as sedimentation to aquatic habitats), or reductions in the abundance of important forage species (due to invasive species excluding them from the area). These alterations to habitat quality can extend beyond the area of initial impacts (e.g., fires or invasive-plant species can spread to areas far beyond the initial area). Compliance with the applicant's proposed Noxious Weed Plan (Attachment P1-5; Recommended Fish and Wildlife Conditions 3) and Reclamation and Revegetation Plan (Attachment P1-3, Recommended Fish and Wildlife Conditions 2) would minimize the risk of invasive-plant species spread or establishment. Additional discussion of those two plans is included in the general fish and wildlife habitat section above.

Mitigation of Impacts

The Sage-Grouse Habitat Quantification Tool will be will be used to quantify both direct and indirect impacts from the proposed facility. It will also be used to determine the amount of compensatory mitigation required for impacts to sage-grouse and sage-grouse habitat.

The Sage-Grouse Habitat Quantification Tool analysis will include consideration of traffic volumes on facility-related roads it the calculation of facility habitat impact and corresponding mitigation obligation. Accordingly, the applicant proposes to conduct a traffic study to evaluate pre- and post-construction traffic on public roads used for the proposed facility. To most accurately characterize traffic pattern changes, if any, the traffic study would be conducted for one year in the year prior to construction and for one year during the second year the facility is operation. The results of the study will be used to assess the volume of traffic on access roads that can be attributed to the proposed facility (note that the traffic study will also assess traffic impacts in elk habitat, in addition to sage-grouse habitat, for purposes of finalizing mitigation obligations for both habitats). To ensure compliance with the proposed traffic monitoring program, the applicant proposes and the Department recommends the Council adopt the following conditions. The results of these studies will be used to inform final habitat mitigation as required by Recommended Fish and Wildlife Condition 1.

Recommended Fish and Wildlife Condition 21: Prior to construction, the certificate holder shall conduct a one-year traffic study in elk habitat (elk summer range and elk winter range, based on the most recent ODFW maps available at the time) and sage-grouse habitat (areas of high population richness, core area habitat, low density habitat, and general habitat, based on most recent ODFW maps available at the time). The certificate holder shall submit the traffic study to the Department for its review and approval in consultation with ODFW.

Recommended Fish and Wildlife Condition 22: During the second year of facility operation, the certificate holder shall conduct a one-year traffic study in elk habitat (elk summer range and elk winter range, based on the same maps used for the pre-construction traffic study) and sage-grouse habitat (areas of high population

richness, core area habitat, low density habitat, general habitat, based on the same maps used for the pre-construction traffic study).

In addition to developing thresholds, OAR 635-140-0025(2)(e) requires compensatory mitigation for unavoidable impacts to sage-grouse habitat. OAR 635-140-0025(3) provides procedures and standards for developing compensatory mitigation. As discussed above, the amount of sage-grouse habitat compensatory mitigation required for the proposed transmission line be determined by the Sage-Grouse Habitat Quantification Tool. The applicant's Greater Sage-Grouse Habitat Mitigation Plan (Attachment P2-4; Recommended Fish and Wildlife Condition 17, 18 and 19) identifies compensatory mitigation for the proposed facility's unavoidable impacts consistent with the mitigation standard in OAR 635-140-0025(3) and the Sage-Grouse Habitat Quantification Tool.

Monitoring Plan

In order to evaluate the success of measures to minimize and mitigate impacts, the applicant proposes to conduct post-construction surveys for a three-year period following the conclusion of ground-disturbing activities. If pre-designated success criteria are not met after three years, the applicant proposes to conduct monitoring and any necessary re-vegetation efforts (as applicable) until pre-designated success criteria are met. As described in ASC Exhibit P2, the applicant's draft Reclamation and Revegetation Plan (Attachment P1-3; Recommended Fish and Wildlife Condition 1) includes a description of the proposed monitoring plan, including the evaluation methods and success measures to determine whether post-construction revegetation efforts have been successful. The applicant also proposes to monitor mitigation actions to determine if mitigation success criteria have been met. The Greater Sage-Grouse Habitat Mitigation Plan (Attachment P2-4; Recommended Fish and Wildlife Conditions 16, 17 and 18) further discusses this monitoring commitment and requirement.

Conclusions regarding Sage-Grouse and Sage-Grouse Habitat

Based on the evidence in the record and the assessment provided here, and subject to compliance with the recommended site certificate conditions, the Department recommends the Council find that the proposed facility would satisfy the applicable provisions of the ODFW Sage-Grouse Conservation Strategy set forth in OAR 635-140-0025 as adopted in the EFSC Fish and Wildlife Habitat standard at OAR 345-022-0060(2), and that the proposed facility would comply with OAR 660-023-0115(16) and (17).

Conclusions of Law

Based on the foregoing findings of fact, and subject to compliance with the recommended conditions of approval, the Department recommends the Council conclude that, taking into account mitigation, the design, construction, and operation of the proposed facility, including

proposed and alternative routes, is in compliance with the Council's Fish and Wildlife Habitat standard.

IV.I. Threatened and Endangered Species: OAR 345-022-0070

To issue a site certificate, the Council, after consultation with appropriate state agencies, must find that:

(1) For plant species that the Oregon Department of Agriculture has listed as threatened or endangered under ORS 564.105(2), the design, construction and operation of the proposed facility, taking into account mitigation:

(a) Are consistent with the protection and conservation program, if any, that the Oregon Department of Agriculture has adopted under ORS 564.105(3); or

(b) If the Oregon Department of Agriculture has not adopted a protection and conservation program, are not likely to cause a significant reduction in the likelihood of survival or recovery of the species; and

(2) For wildlife species that the Oregon Fish and Wildlife Commission has listed as threatened or endangered under ORS 496.172(2), the design, construction and operation of the proposed facility, taking into account mitigation, are not likely to cause a significant reduction in the likelihood of survival or recovery of the species.

Findings of Fact

The Threatened and Endangered Species standard requires the Council to find that the design, construction, and operation of the proposed facility is not likely to cause a significant reduction in the likelihood of survival or recovery of a fish, wildlife, or plant species listed as threatened or endangered by Oregon Department of Fish and Wildlife (ODFW) or Oregon Department of Agriculture (ODA). For threatened and endangered plant species, the Council must also find that the proposed facility is consistent with an adopted protection and conservation program from ODA. Threatened and endangered species are those listed under ORS 564.105(2) for plant species and ORS 496.172(2) for fish and wildlife species. For the purposes of this standard, threatened and endangered species are those identified as such by either ODA or the Oregon Fish and Wildlife Commission.[318]

The analysis area for threatened or endangered plant and wildlife species was established in the second amended project order as the area within and extending ½-mile from the site

[318] Although the EFSC standard does not address federally-listed threatened or endangered species, certificate holders must comply with all applicable federal laws, including laws protecting those species, independent of the site certificate.

boundary. The applicant's assessment of the proposed facility's compliance with the Threatened and Endangered Species standard is included in ASC Exhibit Q.

The methodology for conducting desktop research, field surveys, analyzing potential facility impacts, and developing appropriate mitigation under the Threatened and Endangered Species standard broadly followed the same approach as described above in Section IV.H.*, Fish and Wildlife Habitat*. The applicant first conducted a literature and database review to identify threatened or endangered species that could be present in the analysis area, then conducted field surveys to identify species and habitat, and then conducted an impact assessment and developed mitigation measures including a Fish and Wildlife Habitat Mitigation plan (HMP) (Attachment P1-6).[319]

Based on the desktop reviews, database searches, and consultation with agencies, the applicant identified a list of state-listed threatened or endangered species that are potentially present in the analysis area, and for which field surveys and additional assessment were conducted. These species include two mammals (Washington ground squirrel and wolverine), one fish (Snake River spring/summer chinook salmon), and eight plants.

Field Survey Methods and Initial Desktop Review

The applicant first conducted searches of multiple databases In order to identify endangered and threatened species that could occur within the analysis area. The applicant also consulted ODFW, Oregon Department of Agriculture, and federal land management agencies in order to gather existing information regarding the potential location and previous recorded instances of threatened or endangered species and their habitats. The list of databases reviewed by the applicant are included in ASC Exhibit Q. Based on the initial database review and agency consultations, the applicant conducted a GIS exercise to overlay the proposed facility, the analysis area, previous locations of known occurrences, and habitat. Wildlife species were considered potentially present if there was a previous known occurrence within the analysis area, or if the species range and suitable habitat overlapped with the analysis area. Plant species were considered potentially present if their range and suitable habitat overlapped with a five-mile distance from the site boundary, or if the species was previously identified with five miles of the site boundary. The applicant explains in ASC Exhibit Q that a larger identification distance was used than the analysis area due to a high level of uncertainly in existing databases regarding plant locations. For fish species, potential fish-bearing streams that crossed the analysis area were considered for additional study.[320]

As further described in Section IV.H*, Fish and Wildlife Habitat*, as well as in Exhibit Q, the applicant prepared a Biologist Survey Work Plan to guide field surveys that would be used in support of the application. The Plan was reviewed by both federal and state agencies, including

[319] B2HAPPDoc3-34 ASC 17_Exhibit Q_TES Plant_Animal_ASC 2018-09-28, Section 3.2.
[320] B2HAPPDoc3-34 ASC 17_Exhibit Q_TES Plant_Animal_ASC 2018-09-28, Section 3.2.1.

the Department, ODFW, BLM, US Forest Service, US Fish and Wildlife Service, and NOAA Fisheries Service.

Field Surveys

The applicant conducted field surveys in the analysis area for threatened or endangered species and associated habitats between 2014 and 2016. A summary of field surveys conducted for threatened or endangered species and habitats is shown on Table TE-1, *Field Surveys Related to Threatened or Endangered Species*, (recreated from ASC Exhibit Q, Table Q-1). It is important to note that, as also described in Section IV.H.*, Fish and Wildlife Habitat*, and in Section III.D., *Survey Data Based on Final Design and Site Access*, the applicant has not and does not have access to all land proposed to be include in the site boundary. The proposed facility would cross both public and private land; field surveys have been conducted on all public land, but on privately-owned land, not all landowners granted survey access to the applicant. As such, segments of the route have not been fully surveyed for threatened or endangered species and habitats, and cannot be surveyed until site access is either secured or granted. However, as described in III.D., *Survey Data Based on Final Design and Site Access*, the Council's statutes allow proposed conditions in this order ensure compliance with the applicable Council standards via site certificate conditions requiring Department review and approval of future information associated with the construction of a phase or segment of the proposed facility.

ASC Exhibit Q includes three figures (figures Q-1, Q-2, and Q-3) that show where specific surveys have been conducted for threatened or endangered species and where surveys have not been conducted due to site access limitations or seasonal unavailability to survey. Additionally, specific species surveys are only necessary in areas where those species have potential to occur and be impacted by the proposed facility; for example, Washington ground squirrel and its habitat, a state-listed endangered species, only occurs west of the Blue Mountains in specific habitat type in Umatilla and Morrow counties. As shown on ASC Exhibit Q, Figure Q-1, field surveys for Washington ground squirrel have occurred, or are planned to occur (once site access is granted for a phase or segment of the facility), for all areas along the site boundary where the habitat and species could occur in Umatilla and Morrow counties.

Table TE-1: Field Surveys Related to Threatened or Endangered Species

Survey Name	Total Area Requiring Surveys (acres)	Surveys Completed to Date (acres / date)	Future Survey Efforts
Washington ground squirrel	18,263	1,757 / May 2014	Applicant will perform pre-construction WAGS surveys of all previously surveyed and unsurveyed areas of ground squirrel habitat within the three years prior to scheduled construction.

T&E Plant Survey	22,904	14,727 / June 2016	Applicant will perform pre-construction T&E plant surveys of all previously surveyed and unsurveyed areas with potential habitat and where species were previously observed and/or areas with known occurrences.
Terrestrial Visual Encounter Survey	22,904	15,331 / June 2016	Applicant will survey all previously unsurveyed parcels prior to construction.
Fish Presence and Crossing Assessment Surveys	Not Applicable	Not Applicable / August 2016	Applicant will survey all previously unsurveyed parcels prior to construction.

As described in Section IV.H., *Fish and Wildlife Habitat* and in Section III.D., *Survey Data Based on Final Design and Site Access,* of this order, the applicant represents that it would 1) conduct additional field surveys on those portions of the site boundary where site access has restricted surveys at the time of application (pASC and ASC), and 2) conduct field surveys for specific species on the entirety of the site boundary, regardless of whether surveys have been conducted on those areas or not (due to site access or other restrictions). The Department's recommended Fish and Wildlife Habitat Condition 15 would require surveys on those areas not surveyed at the time of site certificate application, and Fish and Wildlife Condition 15 would require field surveys for specific species in areas where these species are anticipated or potential to occur, regardless of whether those areas have been surveyed at the time of application: Washington ground squirrel, raptor nests, and state-listed threatened and endangered plant species. With the imposition of these two conditions, the entirety of the proposed site boundary would be surveyed prior to construction (once site access has been gained), and for some species and habitats, multiple surveys will have been conducted.

Identified Species

Table TE-2 (recreated from ASC Exhibit Q, Table Q-3) lists those species, their listed status (threatened or endangered) and the documented use of the analysis area based on both database searches and field surveys.

Table TE-2: State-listed Threatened or Endangered Species Potentially Present in Analysis Area

Common Name *Scientific Name*	State Status	Documented Use of Analysis Area[1]
WILDLIFE		
Wolverine *Gulo gulo*	Threatened	No records in existing databases. Not found during surveys. Potential habitat in analysis area.
Washington Ground Squirrel *Urocitellus washingtoni*	Endangered	Multiple records in existing databases, mostly along the Boardman Bombing Range; three active colonies identified in the analysis area during surveys.
FISH		
Snake River Spring/Summer Chinook Salmon *Oncorhynchus tshawytscha*	Threatened	ORBIC record in the Grande Ronde River. Current literature states that this species occurs in streams or drainages within the analysis area.
PLANTS		
Cronquist's Stickseed *Hackelia cronquistii*	Threatened	Eleven occurrences within the analysis area in Malheur County, based on BLM and ORBIC databases, as well as observations from 2012, 2013, and 2016 field surveys. Estimated 877 acres and 9,833 individuals within the analysis area.
Howell's Spectacular Thelypody *Thelypodium howellii* ssp. *spectabilis*	Endangered	One ORBIC occurrence in Union County within the analysis area. Not found during surveys. Estimated 40 acres and 1,000 individuals within the analysis area, based on a 1995 field visit reported by ORBIC. More recent field visits were made from the roadside, where only a few individuals were observed.
Lawrence's Milkvetch *Astragalus collinus* var. *laurentii*	Threatened	Three occurrences within the analysis area in Morrow and Umatilla counties, based on ORBIC database and observations from 2016 surveys in Umatilla County. Estimated 3 acres and 61 individuals within the analysis area.
Mulford's Milkvetch *Astragalus mulfordiae*	Endangered	Two occurrences within the analysis area in Malheur county, based on BLM and ORBIC databases and observations from 2016 surveys. Estimated 173 acres and 4,753 individuals within the analysis area.

Table TE-2: State-listed Threatened or Endangered Species Potentially Present in Analysis Area

Common Name *Scientific Name*	State Status	Documented Use of Analysis Area[1]
Oregon Semaphore Grass *Pleuropogon oregonus*	Threatened	No existing database records or survey observations within the analysis area. Closest known occurrence is 0.2 mile away from the analysis area.
Smooth Mentzelia *Mentzelia mollis*	Endangered	No existing database records or survey observations within the analysis area. Closest known occurrence is 0.2 mile away from the analysis area.
Snake River Goldenweed *Pyrrocoma radiata*	Endangered	Four occurrences within the analysis area in Baker County, based on BLM and ORBIC databases, as well as observations from 2012, 2013, and 2016 field surveys. Estimated 500 acres and 12,155 individuals within the analysis area.
Sterile Milkvetch (a.k.a. Cusick's Milkvetch) *Astragalus cusickii var. sterilis*	Threatened	No existing database records or survey observations within the analysis area. Closest known occurrence is nearly 5 miles west of the analysis area.

Potential Impacts to Identified Threatened and Endangered Species

The applicant describes potential impacts to identified threatened and endangered species from the proposed facility in ASC Exhibit Q, section 3.4.2. The Department describes the potential impacts here, as well as proposed and recommended mitigation measures to reduce impacts. ODFW commented on the record of the ASC regarding potential facility impacts to state-listed fish and wildlife species; those comments are referenced in this section. The Oregon Department of Agriculture is responsible for managing and conserving state-listed threatened and endangered plant species in Oregon; however, ODA did not respond to requests for review and comment on the ASC. ODFW provided comments on many of the draft management plans referenced in this section, including the draft Habitat Mitigation Plan (Attachment P1-6), Noxious Weed Plan (Attachment P1-5), and draft Reclamation and Revegetation Plan (Attachment P1-3). These comments have been addressed in Section IV.H., *Fish and Wildlife Habitat* above and are not repeated in this section.

A number of recommended site certificate conditions included in Section IV.H.*, Fish and Wildlife Habitat* would also provide protection and mitigation related to threatened or endangered species. Specific conditions are referenced in the analysis that follows, as applicable.

Wolverine

As noted in Table TE-2, *State-listed Threatened or Endangered Species Potentially Present in Analysis Area,* while there are no known documented occurrences of wolverines in the analysis area, and no individuals were noted during facility-specific field surveys, ASC Exhibit Q, notes that there is potential habitat in the analysis area specifically in Union County (in the Blue Mountains). Additionally, it is stated that due to the species large home ranges and dispersal distances, and the potentially suitable habitat, the applicant concludes that wolverines may occur in the analysis area.

Direct impacts to wolverines is highly unlikely during construction or operation of the facility due to anticipated lack of high numbers of species in the area, but also because the species, if present in the analysis area, is likely to avoid construction of the facility due to noise and other disturbance. The applicant also notes that in the area that is likely potential wolverine habitat, the proposed facility would roughly parallel I-84, which is an existing disturbance on the landscape that wolverine likely already avoids and that causes an existing barrier to the species movement.[321]

The proposed facility could cause an indirect impact to wolverine mostly from removal of, and alteration of, potentially suitable habitat. However, as noted, the proposed facility roughly parallels I-84 in the area of potential wolverine habitat in Union County. Following completion of construction, while there would remain a cleared corridor for the transmission line and access roads, areas of temporary impact would be restored. Additionally, operation of the facility would require only infrequent maintenance inspections. It is possible that, if present in the area, wolverines could cross the transmission line corridor.[322]

Washington Ground Squirrel

As noted in Table TE-2, *State-listed Threatened or Endangered Species Potentially Present in Analysis Area,* Washington ground squirrel (WAGS), a state-listed endangered species, is present in the analysis area. In additional to records of the species occurring in the analysis area, facility-specific field surveys identified three active WAGS colonies in Morrow County on or adjacent to the NWSTF Boardman. As described in Section IV.H., *Fish and Wildlife Habitat*, active WAGS burrows and an associated 785-foot buffer around the active burrows are considered habitat Category 1 by ODFW, and as such, cannot be impacted in accordance with the EFSC Fish and Wildlife Habitat standard. Additionally, 4,921 feet (1,500 meters) beyond the Category 1 habitat is considered Category 2 habitat, if in suitable WAGS habitat and not otherwise a break in habitat.[323] Habitat breaks include certain roads, active agriculture fields, and other development features. As described in Exhibit Q (and Exhibit P), large areas of

[321] B2HAPPDoc3-34 ASC 17_Exhibit Q_TES Plant_Animal_ASC 2018-09-28, Section 3.4.2.1.
[322] B2HAPPDoc3-34 ASC 17_Exhibit Q_TES Plant_Animal_ASC 2018-09-28, Section 3.4.2.1.
[323] B2HAPPDoc3-34 ASC 17_Exhibit Q_TES Plant_Animal_ASC 2018-09-28, Section 3.4.2.1.

potential WAGS habitat have not been surveyed due to site access restrictions and route changes in Umatilla and Morrow counties. The ODFW comment on the ASC confirmed that areas of active agriculture are not WAGS habitat due to ground disturbance from farming precluding occupancy of WAGS.[324]

The proposed facility could impact WAGS through direct mortality during construction, and through both temporary and permanent habitat impacts. As is described in Section IV.H., *Fish and Wildlife Habitat*, impacts to Category 1 habitat are not allowed and must be avoided, and impacts to Category 2 habitat are allowed if appropriate mitigation is implemented, including compensatory mitigation in the form of "no net loss plus net benefit." In order to determine the extent of WAGS habitat, the applicant would be required to conduct pre-construction field surveys to identify active WAGS burrows and associated Categories 1 and 2 habitat. The ODFW comment on the record of the ASC also confirmed that all areas of potential WAGS habitat need to be re-surveyed, even if previously surveyed, as WAGS surveys are only valid for three years.[325]

Recommended Fish and Wildlife Habitat Condition 15 would require these surveys and associated reporting requirements be met as a pre-construction condition of the site certificate. Additionally, the applicant has proposed a habitat mitigation plan (HMP), which is included as Attachment P1-6 to this order, which must be finalized, approved, and implemented prior to facility construction. As described in that plan, the applicant will microsite the facility in order to avoid Category 1 habitat based on pre-construction surveys for WAGS. As described in Section III., *Description of the Proposed Facility*, on the west side of Bombing Range Road, the removal of the existing BPA 69 kV transmission line would be done in manner to reduce impacts to WAGS habitat. The removal work would be accomplished either hand-crews on foot, or by using helicopters to remove the structures without ground disturbance, or by cutting off poles but leaving foundations in place.[326]

The HMP estimates 22.4 acres of Category 2 WAGS habitat would be impacted by facility construction, of which 2.7 acres would be permanent and 19.7 acres would be temporary (and restored after facility construction consistent with Attachment P1-3, Reclamation and Revegetation Plan). However, as described in Section III.D., *Survey Data Based on Final Design and Site Access*, these numbers would be finalized upon final design and after site access is granted for a phase or segment of the proposed facility, when field surveys can be conducted along the entire route in potential WAGS habitat. As is further described in Section IV.H., *Fish and Wildlife Habitat,* compensatory mitigation would be required for permanent impacts and temporary impacts that are not expected to recover within approximately two years (typically, this includes grasslands habitats). As such, the compensatory mitigation obligation for WAGS habitat may not be 22.4 acres plus a net benefit, and the exact mitigation obligation will be

[324] B2HAPPDoc13-21 ASC Reviewing Agency Comment ODFW_Reif 2019-01-25.
[325] Id.
[326] B2HAPPDoc3-34 ASC 17_Exhibit Q_TES Plant_Animal_ASC 2018-09-28, Section 3.5.2.2.

finalized prior to construction based on pre-construction field surveys and in accordance with the HMP. However, the applicant has identified potential compensatory mitigation projects in the HMP that could provide sufficient mitigation credit to account for any required mitigation obligations for facility impacts. Specific to WAGS habitat, the HMP identifies a potential compensatory mitigation project called the "Olex" site that potentially offers approximately 1,400 acres of available mitigation, and while it is stated in the HMP that not all the site is available for mitigation, the Department notes that the expected mitigation obligation for WAGS Category 2 habitat is likely available at the Olex property or other similar types of properties in the area.

It is noted in ASC Exhibit Q that during operation, the facility could cause an impact to WAGS if the transmission lines are used as perching habitat by raptors and ravens, which are known to predate on WAGS and other small mammals. However, as discussed above, in the area along the NWSTF Boardman, the proposed facility would largely replace an existing BPA transmission line and would not be a "new" perching opportunity for birds; additionally, field surveys in support of the ASC conducted along NWSTF Boardman identified active WAGS burrows under the existing BPA transmission line.[327]

The applicant proposes a condition related to protection of WAGS habitat to clarify that no ground-disturbing actions can occur in Category 1 WAGS habitat. Sub(b) of the recommended condition would allow actions in Category 1 habitat that do not cause ground-disturbing; this is particularly related to removing the existing BPA 69 kV transmission structure on NWSTF Boardman, which as described in this order and in Exhibit Q, is located in WAGS habitat with active WAGS burrows underneath the existing transmission line. The existing structures would be removed by hand-crews or by helicopter and would not cause ground disturbance. The applicant has proposed, and the Department recommends that Council include Threatened and Endangered Species Condition 1 in the site certificate, as follows:

Recommended Threatened and Endangered Species Condition 1: During construction, the certificate holder shall not conduct ground-disturbing activities within Category 1 Washington ground squirrel (WAGS) habitat, subject to the following:

a. The identification and categorization of WAGS habitat shall be based on the surveys referenced in Fish and Wildlife Condition 16 and the results of the surveys shall apply for up to three years.
b. The certificate holder may span Category 1 WAGS habitat and may work within Category 1 WAGS habitat, provided such work does not cause any ground disturbance.
c. If an occupied WAGS colony is encountered in non-Category 1 habitat (based on the surveys referenced in Fish and Wildlife Condition 16), the certificate holder shall submit to the department for its approval a notification addressing the following:

[327] B2HAPPDoc3-34 ASC 17_Exhibit Q_TES Plant_Animal_ASC 2018-09-28, Section 3.4.2.1.

i. Location of the colony; and
ii. Any actions the certificate holder will take to avoid, minimize, or mitigate impacts to the colony.

In addition, recommended Fish and Wildlife Condition 7 would require the certificate holder to flag Category 1 habitat as an environmentally sensitive restricted work zone. Flagging will provide on-the-ground notice to construction workers that the Category 1 area cannot be impacted, in accordance with the findings presented here.

Snake River Spring/Summer Chinook Salmon

The applicant has identified one state-listed threatened fish species with the potential to occur in the analysis area, the Snake River spring/summer chinook salmon evolutionarily significant unit (ESU). The species may be present in the Grande Ronde River. As described in Exhibit Q, the Grande Ronde River provides migration and rearing corridor for the species, but is not considered a spawning area. Tributaries of the Grande Ronde River are also not considered habitat for the species. Exhibit Q, Table Q-5 lists the potential crossings of the Grande Ronde by the proposed facility; as shown on the table, the proposed transmission line route and the Morgan Lake alternative would both cross the Grande Ronde River. Additionally, a proposed new access road would cross an unnamed stream that is not fish-bearing, but is within 600 feet upstream distance from the Grande Ronde River and as such, is considered in the Exhibit Q impact assessment.

The applicant conducted and submitted a detailed Fish Habitat and Stream Crossing Assessment Report (ASC Exhibit P, Attachment P1-7B). The report documents the assessment the applicant conducted to determine the habitat of streams crossed by the proposed facility, and potential fish presence in those streams. Additionally, the report describes measures that the applicant would take to reduce potential impacts to streams and waterways crossed by the proposed facility. While the report was included as an attachment to Exhibit P of the ASC and is primarily focused on demonstrating compliance with the Council's Fish and Wildlife Habitat standard, it is also used to document the assessment conducted by the application to demonstrate compliance with the Council's Threatened and Endangered Species standard.

As described in ASC Exhibit Q, the proposed facility may impact waterways (including the Grande Ronde River, habitat for the Snake River spring/summer chinook salmon) in multiple ways, including riparian vegetation removal, removal of a source of large wood and organic inputs, increased turbidity and sedimentation from soil disturbance that migrates into the waterway, barriers to fish passage (associated with roads, not transmission line spanning), and potential spills of hazardous or toxic materials during construction that migrates into the waterway. Potential impacts to waterways and avoidance measures are described in additional detail in Exhibit Q, Section IV.H.*, Fish and Wildlife Habitat,* and Section IV.Q.4.*, Fish Passage*, of this order. The transmission line crossing at the Grande Ronde River would involve removal of riparian vegetation including trees. Removal of vegetation and trees also slightly reduces the

availability of large wood and organic material that could fall into the river. Riparian vegetation loss impacts waterways in multiple ways, including an increased potential for streambank erosion and a reduction in streamside shade, which could affect water temperature particularly during summer. ASC Exhibit Q describes that salmon in particular rely upon cooler water and that increased temperature can adversely impact the species.

ASC Exhibit Q Table Q-5 shows that the applicant estimates that the crossing of the Grande Ronde River could result in up to 0.88 acres of impact to forested riparian habitat for the proposed route, and 0.68 acres of impact to forested riparian habitat for the Morgan Lake alternative route. While areas of temporary impact would be restored after facility construction, there would remain areas of permanent disturbance that would require compensatory mitigation in accordance with the HMP, as described in Section IV.H *Fish and Wildlife Habitat* of this order. No tall trees would be allowed to grow under or near the transmission line, which would cause a permanent reduction in shade trees along the Grande Ronde River as well as a source of large wood and organic matter available to the river. However, following restoration, lower-height vegetation including shrubs and bushes will provide some shade cover and a source of organic material. While there is anticipated to be a reduction of shade cover, large wood, and organic material associated with construction of the facility and long-term vegetation clearance of tall trees, the impact would be localized and focus on the single area of the transmission line crossing on the Grande Ronde River.

Increased turbidity and sedimentation could result from the construction of the transmission line crossing of the Grande Ronde River, as well as the construction of an access road along an unnamed and non-fish bearing stream but that is within 600 feet of the river. The applicant references studies that show that increased sedimentation is only likely to occur within 600 feet downstream of a project impact, and as such, the area of impact is anticipated to be limited to that 600 feet downstream zone. This 600 foot buffer was used by the applicant to consider potential facility impacts from sedimentation and increased turbidity on fish-bearing streams such as the Grande Ronde River.

Sedimentation and erosion, and in turn, turbidity, would be reduced and managed in multiple ways. Specifically, the applicant would be required to comply with a 1200-C NPDES permit, which includes an erosion and sediment control plan (ESCP) (See Attachment I-3 to this order). The NPDES and ESCP compliance is described in Section IV.D., *Soil Protection* standard section of this order. Additionally, there are measures included in the Reclamation and Revegetation Plan (Attachment P1-3), Vegetation Management Plan (Attachment P1-4), and Spill Prevention and Control and Countermeasure Plan (Attachment G-4) that would all further guide and manage reduction of sediment and erosion, as well as revegetation, further reducing potential impacts from sedimentation and turbidity to waterways.

It is possible that if spilled or otherwise released, toxic or hazardous materials could migrate to waterways and cause an adverse impact to the habitat and listed fish species. However, compliance with the Recommended Soil Protection Condition 2 and the Spill Prevention and

Control Plan (Attachment G-4), as well as compliance with measures included in the Removal-Fill permit related to wetlands and waterways impacts as reflected in Recommended Removal Fill Conditions 5 and 6, will help reduce and manage potential spills and control releases if such accidental spills do occur.

ODFW fish passage requirements apply to actions by developers that would potentially cause a restriction on the movement of fish on a waterway; typically, this means that roads crossing fish-bearing streams must include adequate fish passage design such as appropriately-designed culverts. The applicant has requested Council approval of the fish passage requirements, and this is discussed in Section IV.Q.4., *Fish Passage*, of this order. The single crossing of the Grande Ronde River is by the transmission line and as such, fish passage requirements would not affect listed fish species.

Plant Species

The applicant has identified five state-listed threatened or endangered plant species that are likely to occur in the analysis area based on historic database records and facility-specific field surveys; Cronquist's stickseed, Howell's spectacular thelypody, Lawrence's milkvetch, Mulford's milkvetch, and Snake River goldenweed. Three additional threatened or endangered plant species were identified during pre-survey reviews by the applicant as either possibly occurring or as having suitable habitat in the analysis area; of these, two species, Oregon semaphore grass and smooth mentzelia have no records of occurring in the analysis area and were not found during field surveys, but do have suitable habitat in the analysis area and recorded occurrences 0.2 miles from the analysis area. The third species, Sterile milkvetch or Cusick's milkvetch has no known occurrences in the analysis area, was not found during field surveys, and the closest document occurrence is five miles from the analysis area. As such, the proposed facility is not expected to impact the Sterile milkvetch.

The applicant's assessment of surveys results and anticipated impacts is include in Exhibit Q, Section 3.4.2.3. The applicant describes that occurrences of plant species are considered "separate" occurrences if greater than one kilometer (0.6 miles) apart, and considered the same occurrence if less than 1 km distance. Maps showing the location of the five species with historical records or field-identified occurrences in the analysis area are shown on ASC Exhibit Q, Figures Q-4 to Q-8. [328]

[328] The second amended project order and ASC Exhibit E note that if action on state-managed public land that could significantly impact state-listed plant species may require a permit ("public land action permit"), or, consultation with the Oregon Department of Agriculture. As is shown in ASC Exhibit Q, no state-listed threatened or endangered plant species are anticipated to occur on state-managed land in the analysis area. As such, the public land action permit is not required and additional consultation with the Oregon Department of Agriculture is not required for the proposed facility.

The applicant's impact analysis to each plant species with historic or field-verified occurrences in the analysis area is include in a series of tables in Exhibit Q. It is noted that not all areas of the proposed facility have been field-surveyed, due to site access restrictions.

As shown in ASC Exhibit Q, Howell's spectacular thelypody and Lawrence's milkvetch are not anticipated to occur within the disturbance footprint of the proposed facility and as such, would not be expected to be directly impacted by the facility. One occurrence of the Cronquist's stickseed may be present in the disturbance footprint of the facility and possibly impacted, but it is estimated by the applicant that less than 0.01 acre of disturbance and one plant may be impacted by the facility impact, which in this case would involve constructing an access road. The applicant estimates that one occurrence of the Mulford's milkvetch may occur in the disturbance footprint and be impacted by the facility, but this impact would be anticipated to be approximately 0.1 acres and a total of 52 plants. The applicant estimates that there are approximately 1,313 acres of occurrences of the Mulford's milkvetch. As noted above, two other species, Oregon semaphore grass and smooth mentzelia are not known to occur in the analysis area (or disturbance footprint) and are not anticipated to be directly impacted by the facility.

Snake River goldenweed is more prevalent than other listed plant species in the analysis area and direct disturbance footprint of the facility. The applicant estimates that the facility could impact up to 2.4 acres of occurrence of the species, and approximately 1,131 individual plants. However, the applicant also states that the total rangewide occurrences of the species include approximately 5,779 acres, and an impact of 2.4 acres represents 0.04 percent of the occupied habitat. The species occurs along the Baker/Malheur county border region, near the communities of Huntington and Lime. In this area, the proposed transmission line follows closely to I-84. Locating close to the freeway reduces impacts to other resources in this area, specifically sage grouse and sage grouse habitat. Avoiding the Snake River goldenweed occurrences in this area would involve a trade-off in impacts, likely to sage grouse habitat.

In addition to direct impacts to individual species and habitats, the applicant describes in Exhibit Q that there could be indirect impacts to rare plant species, including habitat fragmentation, introduction of noxious weeds, potential for fire, change in vegetation community, or dust deposition during construction. These indirect impacts would be common to all plants.

The applicant proposes a number of mitigation measures to reduce potential impacts to rare plants. Specifically, as described in Section IV.H, *Fish and Wildlife Habitat*, recommended Fish and Wildlife Condition 16 would require preconstruction field surveys for a number of species and habitat, including threatened and endangered plants. The surveys for threatened and endangered plants would occur prior to construction on the entire route of the proposed facility, including those areas that have been previously surveyed in connection with the application, in areas of known or anticipated occurrences of the plant species. This survey information would be used to microsite facility components, to the extent possible, to avoid

direct impacts to resources include threatened and endangered plants. Additionally, the certificate holder would be required to implement measures including a plan (Attachment P1-5 Noxious Weed Management Plan) to reduce the introduction and spread of noxious weeds. While reducing the introduction and spread of noxious weeds is important to protect native including rare plant species, herbicide used to control weeds can also impact desirable species such as rare plants and native plants.

In order to reduce impacts to rare plant species, the applicant proposes the following site certificate condition, which the Department recommends Council implement, with minor edits.

> **Recommended Threatened and Endangered Species Condition 2**: During construction, the certificate holder shall not conduct ground-disturbing activities within a 33-foot buffer around threatened or endangered plant species, based on pre-construction field surveys required per site certificate condition Fish and Wildlife Habitat 16, subject to the following:
>
> a. If complete avoidance is not possible (for example, if the threatened or endangered plant species is located within 33 feet of an existing road where upgrades are authorized), the certificate holder shall install temporary construction mats over soils where the threatened or endangered plant species have been observed and where construction vehicles will be operated; and
>
> b. If herbicides are used to control weeds, the certificate holder shall follow agency guidelines including guidelines recommended by the herbicide manufacturer, in establishing buffer areas around confirmed populations of threatened or endangered plant species and refrain from using herbicides within those buffers.

Additionally, as would be required by Fish and Wildlife Condition 1, the applicant must finalize and implement a Reclamation and Revegetation Plan (Attachment P1-3) which would require, among other beneficial actions to rare plants, that site specific reclamation revegetation, reseeding, and soil stabilization plans are developed for areas of disturbance with 100 feet of identified occurrences of threatened or endangered plants. Additionally, as would be required under the Reclamation and Revegetation Plan, site specific reclamation monitoring would be required after construction in order that areas of temporary disturbance area restored.

Impact Assessment Conclusions

The Council's Threatened and Endangered Species standard (OAR 345-022-0070) requires that the design, construction and operation of a proposed facility, taking into account mitigation, is consistent with the protection and conservation program that the Oregon Department of Agriculture has adopted for any specific threatened or endangered plant species under ORS 564.105(3). In this case, the Oregon Department of Agriculture has not adopted a protection or conservation program for any of the identified plant species.

As such, the EFSC standard for the threatened and endangered plant species identified in the analysis area, and the threatened and endangered fish and wildlife species (wolverine,

Washington ground squirrel, and Snake River spring/summer chinook salmon), is that the design, construction, and operation of the facility taking into account mitigation, is not likely to cause a significant reduction in the likelihood of survival or recovery of the species.

Based on the analysis presented here, in consideration of the information in the record, the Department recommends that subject to the recommended site certificate conditions, that the Council conclude that the design, construction and operation of the proposed facility is not likely to cause a significant reduction in the likelihood of survival or recovery of the species.

Conclusions of Law

Based on the foregoing findings of fact and conclusions of law, and subject to compliance with the recommended site certificate conditions, the Department recommends that the Council find that the proposed facility, including the proposed and alternative routes, complies with the Council's Threatened and Endangered Species standard.

IV.J. Scenic Resources: OAR 345-022-0080

(1) Except for facilities described in section (2), 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 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.
*****

Findings of Fact

OAR 345-022-0080 requires the Council to determine that the design, construction and operation of the proposed facility will not have a "significant adverse impact" to any significant or important scenic resources and values in the analysis area. In applying the standard set forth in OAR 345-022-0080(1), the Council assesses the visual impacts of facility structures on significant or important scenic resources described 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 second amended project order." For purposes of this rule, "local land use plans" includes applicable state and federal management plans.

The analysis area as described in the second amended project order, for Exhibit R is the site boundary and 10 miles from the site boundary. The site boundary is defined as "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 micrositing corridors proposed by the applicant" (OAR 345-001-0010(55)).

Applicable Land Use Management Plans

The Council's Scenic Resources standard requires an analysis of the proposed facility's potential visual 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." The analysis area is the site boundary and 10 miles from the site boundary. The applicant evaluated multiple land use planning documents and management plans to determine whether scenic resources were identified as significant or important within the analysis area. The plans that were reviewed are shown in ASC Exhibit R, Table R-1. The reviewed plans include the following:

- The comprehensive plans for the five counties crossed in Oregon: Morrow, Umatilla, Union, Baker, and Malheur.
- Comprehensive plans for three counties in Idaho and one county in Washington that are within the analysis area: Owyhee, Canyon, and Washington in Idaho, and Benton County in Washington state.
- Comprehensive plans for multiple cities in Oregon that are within the analysis area:
    - Boardman
    - Ione
    - Hermiston
    - Pilot Rock
    - La Grande
    - Union
    - Haines
    - Huntington
    - Adrian
    - Irrigon
    - Umatilla
    - Stanfield
    - Pendleton
    - Island City
    - North Powder
    - Baker City
    - Vale
- Planning documents from state agencies:
    - OPRD – Blue Mountain Forest State Scenic Corridor
    - OPRD – State Scenic Waterways
    - ODFW – Columbia Basin Wildlife Areas Management Plan
    - ODFW – Ladd Marsh Wildlife Area Management Plan
    - ODFW – Elkhorn Wildlife Area Management Plan
    - ODOT – Grande Tour Route Management Plan
    - ODOT – Hells Canyon Scenic Byway Corridor Management Plan
    - ODOT – Journey Through Time Tour Route Management Plan
    - ODOT – Elkhorn Drive National Forest Scenic Byway Management Plan
- Comprehensive Plan for the Confederated Tribes of the Umatilla Indian Reservation
- Federal land management plans including:
    - BLM Vale District Baker Resource Management Plan
    - BLM Vale District Powder River Plan
    - BLM Vale District Oregon National Historic Trail Management Plan
    - BLM Vale District Proposed SE Oregon Resource Management Plan and Final Environmental Impact Statement

- BLM Boise District Owyhee Resource Management Plan
- BLM Boise District Cascade Resource Management Plan
- BLM Spokane District Spokane Resource Management Plan
- USFS Wallowa-Whitman National Forest Land and Resource Management Plan
- USFS Umatilla National Forest Land and resource Management Plan
- USFS Wild and Scenic River Study for Eight Rivers
- US Navy, Natural Resource Management Plan NWSTF Boardman
- Bureau of Reclamation Owyhee Reservoir Resource Management Plan
- USFWS Umatilla National Wildlife Refuge Comprehensive Conservation Plan

Identification and description of the scenic resources identified as significant or important in the applicable management plans

In order to identify significant or important scenic resources within the analysis area, ASC Exhibit R includes a detailed review of all applicable local, state, tribal, and federal plans for lands within the analysis area. ASC Exhibit R, Table R-1 lists each of the local, state, tribal, and federal plans the applicant evaluated, and the scenic resources identified as significant or important, if any, in each of those plans. The plans that were reviewed are listed above. Table SR-1, *Scenic Resources within Analysis Area,* below, lists the designated Scenic Resources that were evaluated by the applicant in ASC Exhibit R, and are assessed by the Department in this order.

Table SR-1: Scenic Resources within Analysis Area

Scenic Resource	Distance to Proposed Route	Designating Plan
Blue Mountain Forest Wayside (SR U1)	Crossed	Union County Comprehensive Plan and Oregon Parks and Recreation Department
OR Highway 203 (SR B1)	3.3 miles	Baker County Comprehensive Plan
OR Highway 86 (SR B2)	Crossed	Baker County Comprehensive Plan
OR Highway 245 (SR B3)	7 miles	Baker County Comprehensive Plan
Interstate 84, Pleasant Valley Durkee area (SR B4)	Crossed	Baker County Comprehensive Plan
Interstate 84, Huntington to Baker/Malheur County line (SR B5)	0.2 mile	Baker County Comprehensive Plan
Hells Canyon Scenic Byway	Crossed	ODOT Hells Canyon Scenic Byway Management Plan
Grande Tour Route	0.2 miles	ODOT Grande Tour Route Management Plan
Powder River Canyon – Keating (VRM B2)	5.7 miles	BLM – Vale District, Baker Resource Area Management Plan

Table SR-1: Scenic Resources within Analysis Area

Scenic Resource	Distance to Proposed Route	Designating Plan
Burnt River Canyon (VRM B3)	Crossed	BLM – Vale District, Baker Resource Area Management Plan
Brownlee Reservoir West (VRM B7)	2.1 miles	BLM – Vale District, Baker Resource Area Management Plan
Oregon Trail ACEC – Blue Mountain Parcel (SR B6)	0.9 mile	BLM – Vale District, Baker Resource Area Management Plan
Oregon Trail ACEC – NHOTIC Parcel (SR B6)	0.02 mile	BLM – Vale District, Baker Resource Area Management Plan
Oregon Trail ACEC – White Swan Parcel (SR B6)	2.9 miles	BLM – Vale District, Baker Resource Area Management Plan
Oregon Trail ACEC – Straw Ranch 2 Parcel (SR B6)	1.1 mile	BLM – Vale District, Baker Resource Area Management Plan
Oregon Trail ACEC – Straw Ranch 1 Parcel (SR B6)	0.1 mile	BLM – Vale District, Baker Resource Area Management Plan
Oregon Trail ACEC – Powell Creek Parcel (SR B6)	1.2 mile	BLM – Vale District, Baker Resource Area Management Plan
Powder River Canyon ACEC and WSR (SR B7)	1.4 mile	BLM – Vale District, Baker Resource Area Management Plan
Oregon Trail ACEC – Birch Creek parcel (VRM M1)	0.2	BLM, Vale District, Malheur Resource Area Management Plan
Oregon Trail ACEC – Tub Mountain Parcel (VRM M2)	0.5 mile	BLM, Vale District, Malheur Resource Area Management Plan
Sugarloaf Butte (VRM M3)	1.6 mile	BLM, Vale District, Malheur Resource Area Management Plan
Five Points Creek (WSR1)	2.0 miles	BLM, Vale District, Malheur Resource Area Management Plan
Lower Owyhee River (VRM M5)	Crossed	BLM, Vale District, Malheur Resource Area Management Plan
Succor Creek (VRM M8)	3.9 miles	BLM, Vale District, Malheur Resource Area Management Plan
Jump Creek Canyon and Jump Creek ACEC (VRM O1)	4.9 mile (in State of Oregon)	BLM, Owyhee Resource Area Management Plan
Brownlee Reservoir Southeast (VRM C1)	0.6 mile	BLM, Boise District, Cascade Resource Area Management Plan

Table SR-1: Scenic Resources within Analysis Area

Scenic Resource	Distance to Proposed Route	Designating Plan
Brownlee Reservoir Northeast (VRM C2)	6.0 miles	BLM, Boise District, Cascade Resource Area Management Plan
VQO 1	Adjacent	USFW Wallowa Whitman National Forest Management Plan
VQO 2	Crossed	USFW Wallowa Whitman National Forest Management Plan
OR 244 Corridor – Red Bridge West (VQO 3)	4.4 miles	USFW Wallowa Whitman National Forest Management Plan
OR 244 Corridor – Red Bridge East (VQO 4)	1.4 miles	USFW Wallowa Whitman National Forest Management Plan
Mt Emily (VQO 6)	5.2 miles	USFW Wallowa Whitman National Forest Management Plan
OR 203 Corridor – Catherine Creek (VQO 8)	8.0 miles	USFW Wallowa Whitman National Forest Management Plan

County Plans

The comprehensive plans, transportation plans, and land use ordinances for each of the counties within the analysis area were reviewed, including counties outside Oregon but within the proposed facility's analysis area. The counties are: Morrow, Umatilla, Union, Baker, and Malheur counties in Oregon, Owyhee, Canyon, and Washington counties in Idaho, and Benton County, Washington. Based on its evaluation, only Union and Baker county plans identify significant or important scenic resources within the planning documents.[329]

Union County has identified the Blue Mountain Forest Wayside and the Minam River as important scenic resources in its comprehensive plan. The Blue Mountain Forest Wayside is within the analysis area and, therefore, is evaluated below. The Minam River is located more than 10 miles outside the analysis area, and therefore, is not evaluated.

Baker County has identified several highway segments as scenic routes, and specifically recognizes those routes as having particular significance for their scenic values. Those highway segments include two locations along I-84; and segments along US Highway 26, Oregon State Highway (OR) 245, OR 203, OR 96 and the Halfway-Cornucopia Highway. Each of these

[329] B2HAPPDoc3-35 ASC 18_Exhibit R_Scenic Resources_ASC 2018-09-28, Section 3.3.1.1.

segments is at least partially within the analysis area and all are evaluated by the applicant in Exhibit R and included in the Department's assessment below.

City Plans

The same review of land use management plans was conducted for each of the cities within the analysis area. These cities include: Boardman, Irrigon, Ione, Umatilla, Hermiston, Stanfield, Pilot Rock, Pendleton, La Grande, Island City, Union, North Powder, Haines, Baker City, Huntington, Vale, and Adrian. Only one city's planning documents identified important or significant scenic resource. Specifically, the City of Pendleton identified the Umatilla River and its tributaries as an important or significant scenic resource and, therefore, this was addressed in Exhibit R and is included in the Department's assessment.[330]

State Plans

The applicant reviewed the management plans for the Oregon State Parks system, State Wildlife Areas, State Scenic Waterways, and State Scenic Byways for significant or important scenic resources identified within those plans.

Oregon State Parks System

Seven state parks or other areas within the Oregon State Park system and administered by the Oregon Parks and Recreation Department (OPRD) are located within the analysis area, including Emigrant Springs State Heritage Area, Blue Mountain Forest State Scenic Corridor, Hilgard Junction State Recreation Area, Red Bridge State Wayside, Farewell Bend State Recreation Area, Lake Owyhee State Park, and Succor Creek State Natural Area. OPRD has not included any of those areas in a completed or draft land management plan. However, based on an OPRD comment, the Blue Mountain State Scenic Corridor (which encompasses both the Blue Mountain Forest State Scenic Corridor and the Blue Mountain Forest Wayside) are considered by OPRD to be significant or important scenic resources based on the aesthetic quality of contiguous old growth forest.[331] The applicant has evaluated the proposed facility's impact to these resources in Exhibit R. Additionally, the Blue Mountain Forest Wayside is identified in the Union County Comprehensive Plan as an important scenic resource. However, the Department notes that in order to be considered a "scenic resource" for purposes of evaluation under the EFSC Scenic Resources standard, a resources must be "identified as significant or important in local land use plans, tribal land management plans, and federal land management plans. Therefore, because the OPRD does not have a land management plan for the Blue Mountain State Scenic Corridor or Blue Mountain Forest Wayside, a statement by OPRD representatives that the areas are considered important scenic resources is not sufficient to qualify for evaluation in the EFSC review process. However, the Blue Mountain Forest wayside is

[330] Id, Section 3.3.1.2

[331] Id., Section 3.3.1.3

considered important by Union County Comprehensive Plan, and so is evaluated further in this section. The Blue Mountain Forest State Scenic Corridor is an EFSC Protected Area and is further evaluated in Section IV.F, *Protected Areas*.

State Wildlife Areas

Portions of five state wildlife areas managed by the Oregon Department of Fish and Wildlife (ODFW) are located within the Exhibit R analysis area, including Columbia Basin - Coyote Springs, Columbia Basin - Irrigon, Ladd Marsh, Elkhorn - Auburn, and Rogers. ODFW has prepared management plans addressing the Elkhorn, Coyote Springs, and Ladd Marsh wildlife areas. However, those plans do not discuss either scenic resources or the visual qualities of the environment, either as an existing resource value or as a management objective for these areas.

State Scenic Byways

The Oregon Department of Transportation (ODOT) administers the Oregon Scenic Byways Program, which includes 24 highway routes that have been designated as All-American Roads, National Scenic Byways, Oregon State Scenic Byways, or Oregon Tour Routes. Portions of five of those routes are located within the Exhibit R analysis area: the Grande Tour Route, the Hells Canyon Scenic Byway All-American Road, the Journey through Time Scenic Byway, Blue Mountain Scenic Byway, and Elkhorn Drive Scenic Byway.[332]

The Grande Tour Route: this route is an 80-mile route in Union and Baker counties and includes parts of OR 82, 203, and 237, and passes through the cities of La Grande, Cove, Medical Springs, and Union. The Grande Tour Route management plan identifies four areas of particular scenic quality along the route. One of these areas is Ladd Marsh wildlife area, which, as described in Section IV.F, *Protected Areas*, is crossed by the proposed facility and very close to the Morgan Lake alternative route.

Hells Canyon Scenic Byway All-American Road: This route includes portions of OR 82, 86, and 350, and Forest Road 39 in Union, Wallowa, and Baker counties, including areas within the analysis area. Exhibit R includes a detailed discussion of the corridor management plan for this byway, which includes visual resource management and recreation opportunities. A portion of the western part of the Hells Canyon Scenic Byway is within the analysis area, along highway

[332] The Oregon Department of Transportation (ODOT), a reviewing agency for the proposed facility, submitted a comment letter during the ASC review which stated that Exhibit R did not include accurate or complete information regarding state scenic byways that were near the proposed facility. B2HAPPDoc13-18 ASC Reviewing Agency Comment ODOT_Davis 2018-12-21. In response to the ODOT comment, the applicant submitted an errata document to Exhibit R, which specifically addresses the comments from ODOT. Additional information regarding the Oregon Scenic Byways Program, and the state scenic byways that were evaluated by the applicant under the EFSC Scenic Resources standard, is included in the Exhibit R Errata information at B2HAPPDoc3-53 ASC Exhibit R – Errata Info 2019-03-28.

OR-86 near Baker City. The byway was further evaluated by the applicant in ASC Exhibit R (errata) and is included in the Department's evaluation in this order.

Journey through Time Scenic Byway: This byway is a 286-mile route through north-central Oregon, extending from the Columbia River at Biggs to Baker City, and includes segments of U.S. Highways 97 and 26 and OR 218, 19, and 7. Approximately 10 miles of OR 7 approaching Baker City, at the eastern end of the byway, are within the analysis area. The "management plan" for the Journey through Time Tour Route is not a land management plan and does not grant or imply authority for land use management for any lands, including those within the highway right-of-way. The plan lists 23 "highlights" along the route and includes references to scenic views, but it does not identify any specific scenic resources or views within the Exhibit R analysis area. Additionally, the applicant conducted a viewshed analysis and determined that the proposed facility would not be visible from the Journey Through Time Scenic Byway, and as such, is not further evaluated in ASC Exhibit R or in the Scenic Resources section of this order.

Blue Mountain Scenic Byway: This 145-mile route through north-central Oregon extends from Arlington on the Columbia River to Baker City. The route includes part of OR 74 and segments of multiple county highways and United States Forest Service (USFS) roads. The eastern end of the byway overlaps with the Elkhorn Drive Scenic Byway. The proposed facility crosses the byway twice near Cecil in western Morrow County, and approximately 30 miles at the western end of the byway are within the analysis area but approximately 9.5 miles from the proposed facility. The applicant conducted a viewshed analysis and determined that the proposed facility would not be visible from the Blue Mountain Scenic Byway, and as such, it is not further evaluated in ASC Exhibit R or in Scenic Resources section of this order.

Elkhorn Drive Scenic Byway: This 106-mile loop route begins west of Baker City and extends through parts of Baker, Union, and Grant counties. The route includes parts of U.S. Highway 30, OR 7, multiple county highways, and Forest Road 73. The byway overlaps with parts of the Blue Mountain and Journey through Time Scenic Byways. The eastern part of the byway is within the analysis area; however, the applicant's viewshed analysis determined that the proposed facility would not be visible from the Elkhorn Drive Scenic Byway and as such, it is not further evaluated in ASC Exhibit R or in the Scenic Resources section of this order.

Tribal Plans

The Confederated Tribes of the Umatilla Indian Reservation (CTUIR) is located within the analysis area for ASC Exhibit R. The Tribe adopted a Comprehensive Plan for the Reservation in 2010. However, as described in Exhibit R, the Plan does not identify any features as significant or important scenic resources that appear within the analysis area.[333]

[333] B2HAPPDoc3-35 ASC 18_Exhibit R_Scenic Resources_ASC 2018-09-28, Section 3.3.1.4

Federal Plans

Federal lands within the analysis area include USFS and BLM owned and managed land. The Department of Defense, Bureau of Reclamation (BOR), and the US Fish and Wildlife Service (USFWS) have smaller areas of land within the Exhibit R analysis area.[334]

Bureau of Land Management (BLM)

Exhibit R explains that the Scenic Resources analysis area overlaps with the geographic boundaries of the BLM Vale (Baker and Malheur Resource Areas), Boise (the Owyhee and Cascade Resource Areas), and Spokane Districts. The BLM manages scenic resources on the federal lands under its jurisdiction through application of the Visual Resource Management (VRM) system. For its ASC Exhibit R analysis, the applicant considered federal lands in VRM Classes I and II as important scenic resources, based on the level of visual resource protection afforded to those lands.[335] As stated in ASC Exhibit R, the goal for a VRM Class I area is "to preserve the existing character of the landscape," and the goal for a VRM Class II area is "to retain the existing character of the landscape."

Vale District, Baker Resource Area; BLM Baker RMP

The Baker Resource Area Resource Management Plan (RMP) designates almost 152,000 acres of the Baker Resource Area as VRM Class II. The Baker RMP and South Fork Walla Walla River Area Plan Amendment designate 10 areas totaling 40,244.69 acres as Areas of Critical Environmental Concern (ACECs). The RMP indicates that scenic qualities or visual resources are among the primary reasons for designating two of those ACECs that are in the analysis area for the proposed facility: Powder River Canyon and Oregon Trail ACECs. The ACEC segments of the Oregon Trail are distributed among seven separate parcels in Umatilla, Union, and Baker counties, including Blue Mountain Parcel, the National Historic Oregon Trail Interpretive Center (NHOTIC) Parcel, White Swan Parcel, Straw Ranch Parcel 2, Straw Ranch Parcel 1, and Powell Creek Parcel within the analysis area.[336] Within the analysis area, the Baker RMP also designates the Grande Ronde and Powder Wild and Scenic Rivers (WSR) corridors and the Burnt, Powder, and Snake River canyons as Visual Resources Management (VRM) Class II areas with high scenic values.[337]

Vale District, Malheur Resource Area; BLM SEORMP

Lands administered by the BLM Vale District (Malheur and Jordan Resource Areas) are managed under the 2001 Southeastern Oregon Resource Management Plan (SEORMP) and Final

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[334] Id. Section 3.3.1.5
[335] Id.
[336] BLM ACEC's are also considered Protected Areas; see Section IV.F¸ *Protected Areas* of this order.
[337] Id.

Environmental Impact Statement (FEIS). The Exhibit R analysis area includes a substantial portion of the Malheur Resource Area.

The SEORMP also designates approximately 309,600 acres in the Malheur Resource Area (15 percent of the total acreage) to be managed as VRM Class I, and 144,400 acres (seven percent of the total) as VRM Class II. The SEORMP designates 20 areas totaling over 160,000 acres as ACECs. The RMP identifies scenic qualities or visual resources among the primary reasons for designating three ACECs within the analysis area for Exhibit R: Oregon National Historic Trail (three separate segments), Owyhee River below the Dam, and Owyhee Views.[338]

Boise District, Owyhee Resource Area (Owyhee Resource Management Plan)

BLM-administered lands in Owyhee County, Idaho, are located at the southeastern end of the analysis area for the Council's evaluation of scenic resources, within the Owyhee Resource Area of the Boise District.

Approximately 71,000 acres of lands subject to the Owyhee RMP (six percent of the total acreage) are to be managed as VRM Class I, and 242,000 acres (20 percent) are to be managed as VRM Class II. The Owyhee RMP also designates 12 areas totaling over 167,000 acres as ACECs. The RMP indicates that scenic qualities or visual resources are identified among the primary reasons for designating seven of the ACECs. One of those ACECs, the Jump Creek Canyon ACEC, is located within the Exhibit R analysis area.[339]

Boise District, Cascade Resource Area (Cascade RMP)

Some BLM-administered lands located in Idaho along the eastern side of Brownlee Reservoir are located within the Exhibit R analysis area. These lands are currently managed by the Four Rivers Field Office of the Boise District and are managed under the Cascade RMP.

Spokane District (Spokane RMP)

As the applicant explains in Exhibit R, the Badger Slope is the only scenic resource within the Spokane District RMP that has been specifically identified as an important or significant scenic resource, based on the VRM classification. This area is located south of the Yakima River between Prosser and Richland and is well beyond the Exhibit R 10-mile analysis area.[340]

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[338] Id.

[339] BLM ACEC's are also considered Protected Areas; see Section IV.F¸ *Protected Areas* of this order

[340] Id.

U.S. Forest Service (USFS)

The Exhibit R analysis area overlaps with the geographic boundaries of the USFS Wallowa-Whitman and Umatilla National Forests. The proposed facility crosses lands within the Wallowa-Whitman National Forest. Neither the proposed facility nor any alternate facility routes cross lands within the Umatilla National Forest, but some Umatilla National Forest lands are within the 10 mile analysis area for Scenic Resources. Therefore, review of area-specific USFS planning direction for scenic resources applies to both the Wallowa-Whitman and Umatilla National Forests.

The USFS uses a Visual Management System (VMS) to inventory, classify and manage lands for visual resource values. Based on an inventory and evaluation of visual resources associated with national forest lands, under that plan the USFS established Visual Quality Objectives (VQOs) to provide a measurable standard or objective form for management of visual resources. VQOs for areas of land are assigned by combining the variety class, distance zone, and sensitivity level. Each VQO indicates the acceptable degree of landscape alteration and classifies land in one of five categories: Preservation, Retention, Partial Retention, Modification, or Maximum Modification.

Each management area (MA) of the forests has a specific resource emphasis and management objective guidelines to provide protection and management of the resource. There are several overlapping MAs along the proposed route. As described in Exhibit R, where MAs overlap, the VQOs that provide the highest level of visual quality protection take precedence. For its Exhibit R analysis, lands managed as "Preservation" or "Retention" were considered to be important scenic resources, based on the level of visual resource protection afforded to those lands by the USFS.[341]

Wallowa-Whitman National Forest Land and Resource Management Plan

The Wallowa-Whitman Forest management plan indicates that "Management of the Forest's scenic resources is emphasized within the viewsheds of federal and state highways and major forest roads. The visible land areas adjacent to selected travel routes are managed for a variety of VQOs including retention, partial retention and modification." Lands within the Wallowa-Whitman Forest assigned a VQO of Preservation or Retention (VQO 1 or 2) are further assessed in Exhibit R and the Department's assessment is included below.

Umatilla National Forest Land and Resource Management Plan

As explained in Exhibit R, there are no Umatilla Forest lands within the analysis area that are assigned a VQO of Preservation or Retention and as such, no land in the Umatilla Forest is

[341] BLM ACEC's are also considered Protected Areas; see Section IV.F¸ *Protected Areas* of this order

identified as important scenic resources for purposes of the Council's evaluation of the proposed facility.

Department of Defense/US Navy

The U.S. Navy administers the Naval Weapons Systems Training Facility (NWSTF) Boardman. The facility includes more than 47,000 acres located south of Boardman in Morrow County and is used for training and testing by the Navy and Oregon National Guard.

The Navy has developed and implemented an Integrated Natural Resources Management Plan (INRMP) for the NWSTF Boardman that identifies management goals for the NWSTF. That plan does not include scenic resources as an applicable subject for management direction. A 2012 environmental impact statement (EIS) addressing military training activities at NWSTF that was issued by the Navy in September 2012 also does not address scenic or visual resources. Based on the specific content of these documents, there are no features associated with NWSTF Boardman identified as important or significant scenic resources or values for purposes of the EFSC Scenic Resources evaluation.[342]

Bureau of Reclamation (BOR)

The BOR has jurisdiction over and operates a small portion of the Owyhee River Canyon associated with Owyhee Dam and Reservoir. The current management direction for this area is included in the Owyhee Reservoir Resource Management Plan (RMP). A visual resources inventory within the RMP recognizes the entire study area as outstandingly remarkable, and notes that adjacent BLM-administered lands are managed as VRM Class II. The RMP references landscape features known as the Honeycombs, Leslie Gulch, Painted Canyon, Three Fingers Gulch, and Carlton Canyon as "outstanding visual features" along with several visually dominant peaks and buttes. However, the BOR-managed lands comprise a narrow band along the immediate margins of the Owyhee River and Reservoir, and the specified landscape features are entirely or predominantly located on the adjacent BLM-administered lands. The adjacent BLM-administered lands in this area are designated as VRM Class I or II, and as such, the scenic features referenced in the Owyhee Reservoir RMP are incorporated within the important scenic resources identified through the BLM Malheur Resource Area planning direction.[343]

U.S. Fish and Wildlife Service (USFWS)

The USFWS manages three national wildlife refuges that are partially or entirely located within the Exhibit R analysis area: the Umatilla National Wildlife Refuge (NWR) in Morrow County, the McKay Creek NWR in Umatilla County, and the Deer Flat NWR in multiple counties of southwestern Idaho and southeastern Oregon. The primary mission of the FWS as manager of

[342] Id.
[343] Id.

the national wildlife refuge system is to provide valuable habitat for fish and wildlife. Various types of recreation are allowed or provided on many refuges.

Umatilla National Wildlife Refuge

The Umatilla NWR, located to the north and northeast of Boardman, Oregon, encompasses approximately 25,000 acres with a mix of open water sloughs, shallow marsh, seasonal wetlands, cropland, islands, and shrub-steppe upland habitats. The Umatilla National Wildlife Refuge Comprehensive Conservation Plan identifies potential scenic resources on FWS-managed lands in the refuge. The plan identifies management direction relative to several categories of wildlife species, multiple types of habitat present within the refuge, recreational activities compatible with the refuge purposes, and cultural resources; however, the plan does not prescribe management for visual resources or address visual resource conditions, or identify significant or important scenic resources or values. As such, Umatilla NWR is not further considered in the EFSC Scenic Resources evaluation.

McKay Creek National Wildlife Refuge

The McKay Creek NWR includes 1,837 acres within and adjacent to McKay Creek Reservoir, a Bureau of Reclamation water storage facility located between Pilot Rock and Pendleton in Umatilla County. The refuge provides a variety of open water, riparian, and shrub-steppe habitat and supports considerable recreational use, primarily for fishing and upland bird hunting. The applicant states that the USFWS has started a process to develop a Comprehensive Conservation Plan for the refuge, but that there is no plan that currently manages the McKay Creek NWR. However, the first priority of each refuge is to conserve, manage, and if needed, restore fish and wildlife populations and habitats according to its purpose. Based on the limited documentation available to date and the lack of a plan specific to this refuge, as well as the general primary purpose of national wildlife refuges to preserve wildlife and habitat, McKay Creek NWR is not further considered in the Council's Scenic Resources evaluation.

Deer Flat National Wildlife Refuge

The Deer Flat NWR includes approximately 11,000 acres within two refuge units. The Lake Lowell Unit consists of approximately 9,000 acres surrounding Lake Lowell, a reservoir located west of Nampa in Canyon County, Idaho and outside the analysis area. The remaining acreage is within the Snake River Islands Unit and is distributed among more than 100 islands within a long reach of the Snake River from near Walter's Ferry in Idaho to Farewell Bend near Huntington, Oregon. Some islands within the Snake River Unit are within the ASC Exhibit R analysis area. The refuge provides a variety of habitat types for more than 200 species of birds and 30 species of mammals, and supports diverse, wildlife-oriented recreational opportunities. The Deer Flat NWR 2015 Final Comprehensive Conservation Plan indicates that the purposes of this NWR include enhancing, maintaining and protecting refuge habitats for the benefit of

migratory birds and other wildlife; gathering scientific information to guide management decisions; providing visitors with recreation opportunities, and initiating and nurturing relationships to promote the wildlife habitat and support refuge stewardship. As noted with the other wildlife refuges above, the management plan does not identify important or significant scenic resources or values and as such, Deer Flat NWR is not further considered in the EFSC Scenic Resources evaluation.

Methodology for Evaluation of Scenic Resources

In order to evaluate the impact of the proposed transmission line on each of the scenic resources identified above, the applicant developed a visual impact methodology based on the BLM and USFS visual impact assessment methods. It is noted that the Council's rules do not require, or provide, a specific methodology for evaluating visual impacts to Scenic Resources (or Protected Areas or Recreation resources). ASC Exhibit R, Attachment R-1 includes the complete visual impact assessment methodology developed for Exhibit R. The visual impact assessment methodology is further described in Section IV.F, *Protected Areas* of this order and is not repeated here; the applicant used the same methodology for assessing visual impacts from the proposed facility to EFSC-designated scenic resources, protected areas, and recreation resources (Section IV.L*, Recreation*).

Analysis of Scenic Resources and Values

ASC Exhibit B describes the components of the proposed facility, including the proposed transmission structures, conductors, Longhorn station, access roads, and other supporting facilities. The proposed facility would mainly use lattice towers constructed of galvanized steel to support the 500-kV conductors. The proposed facility would use deglared galvanized steel, a finish treatment that provides a duller appearance than is typically associated with galvanized steel, which would reduce the visible contrast of the structures with the surrounding environment. The applicant notes that the deglared steel is darker, less reflective, and better able to recede into the landscape when seen against a terrain backdrop. The conductors would have a "non-specular" finish that would reduce reflectivity and the potential for glare.[344] To reduce overall visual impacts related to transmission structure design, the applicant proposes and the Department recommends that the Council include the following condition in the site certificate:

> **Recommended Scenic Resources Condition 1:** The certificate holder shall use dull-galvanized steel for lattice towers and non-specular conductors.

[344] BLM ACEC's are also considered Protected Areas; see Section IV.F¸ *Protected Areas* of this order, See Section 3.3.3.

The applicant has also proposed landscape treatment measures that would attempt to reduce the visual impact of the proposed facility; a description of these measures is included in the draft Vegetation Management Plan (see Attachment P1-4 to this order).

The applicant analyzed each of the significant or important scenic resources identified as such in applicable management plans, as shown on Table SR-1, to determine compliance with the Council's Scenic Resources standard. The applicant's visual resources assessment of the proposed facility to EFSC Scenic Resources is included in summary form in ASC Exhibit R, Section 3.3.2, and a comprehensive visual resources impact assessment evaluation is included in ASC Exhibit R, Attachment R-3. The Department's evaluation is included below in this order.

It is important to note that many of the Scenic Resources considered by the EFSC standard and assessed in this section are owned and managed by agencies of the federal government, including the BLM and US Forest Service. The EFSC Scenic Resources standard is based on "scenic resources and values identified as significant or important in…federal land management plans…" As such, by issuing this route in its Records of Decision (ROD), the federal agencies (BLM and USFS) that administers the Management Plans for many of the EFSC Scenic Resources described in this section are authorizing the placement of the proposed facility in locations that are permissible within the scenic designations in the respective agency Management Plans. The language of the EFSC Scenic Resources standard relies upon scenic values identified in others' management plans, so the Council may rely on the decisions of the land-managers who administer their plans to inform its evaluation of the Scenic Resources standard. Considering that the agencies that manages many of these Scenic Resources have already authorized the proposed facility in the location proposed in the EFSC application, the Department considers this relevant information particularly to the EFSC Scenic Resources standard. The BLM and USFS have already issued records of decisions (RODs) authorizing the proposed facility.

Union County: Blue Mountain Forest Wayside and Blue Mountain Forest State Scenic Corridor

Union County identifies the Blue Mountain Forest Wayside as an important scenic resource.[345] The applicant notes that the wayside is coextensive with the larger Blue Mountain Forest State Scenic Corridor, which is administered by the OPRD. For analysis purposes, the applicant has evaluated both as the Blue Mountain Forest State Scenic Corridor ("Blue Mountain Corridor"). However, as noted above, the Blue Mountain Forest State Scenic Corridor is not independently considered an EFSC Scenic Resource because it is not identified as important or significant in a management plan. The Blue Mountain Forest State Scenic Corridor is considered an EFSC Protected Area and is evaluated in Section IV.F, *Protected Areas* of this order. The Morgan Lake alternative is located approximately 3.7 miles southeast of the Blue Mountain Scenic Corridor.

[345] Id. See Section 3.3.2.1 and Attachment R-3 Section 1.0 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.

However, because of topography and vegetative screening, the Morgan Lake route would not be visible from the Blue Mountain Scenic Corridor.

The Blue Mountain Corridor is located along segments of the Old Emigrant Hill Scenic Frontage Road in the Blue Mountains in Union County. It includes approximately 990 acres within five separate parcels, all of which are within the analysis area. As discussed in ASC Attachment R-3, Figure R-3-1, the proposed transmission line would cross the fifth parcel between MP 94.6 and 94.8 near KOP 4-5.[346] Two towers would be located outside the scenic corridor and support the line span across the resource. No towers would be placed within the corridor. Additional evaluation of the crossing of the corridor is included in Section IV.F, *Protected Areas*.

The Old Emigrant Hill Scenic Frontage Road is a narrow, two-lane road that winds along the upper portion of a steep valley wall. The roadway runs adjacent to a heavy-rail line to the south. Views to the southwest across the valley are primarily blocked by dense vegetation along the perimeter. Intermittent views across the valley are characterized by open meadows, forest patches, and a network of forest roads. Views to the north/northwest of the Frontage Road are dominated by the steep slope of the valley wall. With one exception in Parcel 4, this steep viewing angle precludes views to the ridgeline along the majority of the corridor. At the northern extent of Parcel 4, eastbound travelers experience temporary views of rock outcroppings along the ridgeline that extend briefly to the foreground-middleground distance zone. The eastern-most terminus of the Blue Mountain Corridor crosses I-84.

Because of the screening of forest vegetation, the visibility of the towers from the Old Emigrant Hill Scenic Frontage Road near the northern and southern ends of Parcel 4 are anticipated to be limited to the tops of some towers. The perimeter of the roadway within all five parcels would remain forested, which, coupled with steep viewing angles from many locations along the roadway, would limit the visibility of the towers.

The visual impact assessment conducted by the applicant indicates that short-term visual impacts would include constructed-related vehicles and personnel, with localized, medium intensity impacts. Long-term impacts would be primarily associated with the transmission towers and clearing of forest vegetation required in the ROW and pulling and tensioning sites. ASC Exhibit R includes a detailed evaluation of the magnitude of impact, viewer perception, and resource change, and an analysis of the impact intensity, context and degree to which the impacts would be caused by the proposed development. The proposed facility, particularly where it crosses the corridor, will cause an impact to visual resources. The forest would be cleared in an area where the transmission conductors would cross the corridor at Old Emigrant Hill Scenic Frontage Road. A photosimulation of the crossing is included in ASC Exhibit R, Attachment R-4, Figure R-4-2. Additionally, during construction, Old Emigrant Hill Scenic Frontage Road would be used as an access road to the proposed facility, which would bring construction traffic to the area. Construction traffic would be temporary.

[346] A photograph of the crossing location and simulation is included in Attachment R-4, Figure R-4-1b.

Car drivers are the primary user experiencing the resource, and is the primary reason the wayside is designated as a Scenic Resource to protected views for drivers. The crossing of the resource by the proposed facility would cause a visual impact to drivers along the byway. However, drivers would be expected to pass along the road and only experience the visual impact of the proposed facility for a short extent along the road. Additionally, the proposed facility would cross the wayside at a location in the southern portion of the corridor Parcel 6, as shown on ASC Exhibit R, Attachment R-3, Figure R-3-1, very close to I-84. Based on the analysis presented here, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the scenic resources and values of the Blue Mountain Forest Wayside.

Baker County: State Highway 203

Baker County Comprehensive Plan recognizes an eight-mile segment of OR 203, from MP 22.9 to MP 31.09 for its scenic value.[347] The proposed facility would not cross OR 203 and is located over three miles from the southern end of the Scenic Resource.

As described in ASC Exhibit R, Attachment R-3, Section 2.0, visibility of the proposed facility from the designated scenic portion of SR 203 will be low, with only intermittent views of some facility components visible at any time and no visibility of facility components for the majority of the route. The proposed facility would be, at its closest, approximately three miles from the resource. Finally, the user experience of the resource is drivers along the highway, which would presumably pass through at high speeds and only experience views of the facility, at distance, for brief periods of time. Based on this analysis, the Department recommends the Council find that the proposed facility would not cause a significant adverse impact to the scenic resources and values of the designated scenic portion of SR 203.

Baker County: Oregon Highway 86

The Baker County Comprehensive Plan designates an approximately 36-mile portion of OR 86 (from MP 4.81 to 40.64) as a scenic corridor.[348] The proposed route would cross OR 86 less than one mile east of the western end of the scenic segment, between highway MP 5 and 6, near the western terminus at the entrance to the Baker Valley.

As discussed above under the Protected Areas Standard and below as it relates to the National Historic Oregon Trail Interpretive Center (NHOTIC), the proposed route has been revised since the pASC was originally submitted in order to mitigate potentially significant visual impacts to

[347] Id. See Section 3.3.2.2 and Attachment R-3 Section 2.0 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.
[348] Id. See Section 3.3.2.2 and Attachment R-3 Section 3.0 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.

the NHOTIC ACEC. In order to reduce visual impacts to NHOTIC ACEC, but also reducing impacts to OR 86, the applicant proposed to use a shorter (100-129 feet), H-frame structure with a natina finish in this area. A natina finish reacts with galvanized metal and colors into a rustic, brown finish that is low maintenance in outdoor environments.

In response to BLM and local government comments, in addition to mitigation through the proposed finish, the proposed facility was relocated to the east from a prior considered route, to avoid impacts to agricultural areas. As discussed below, recommended Scenic Resources Condition 2 would require the site certificate holder to incorporate low stature (100-129 feet) H-Frame structures to mitigate impacts.

Construction-related activities would be visible to the north of OR 86, including pulling and tensioning sites, new primitive roads and a small segment of new, bladed road. A new bladed road and pulling and tensioning site would also be located to the south of OR 86. Construction-related actions would be considered "high magnitude," as described in Exhibit R, resulting from the strong visual contrast in line and texture of these features and close proximity in which they are viewed. Drivers along OR 86 would experience construction-related impacts episodically as they pass through the area. After construction, long term impacts would be associated with the transmission line itself, and would extend for the life of the facility. The proposed facility would cross overhead OR 86. However, it is important to note that an existing 230 kV transmission line currently crosses overhead OR 86, and the proposed facility would use this existing right of way corridor, and the existing 230 kV would be rebuilt adjacent to the proposed 500 kV transmission line.

The user experience of the resource is drivers along the highway, which would presumably pass through at high speeds and only experience views of the facility for brief periods of time. The applicant states that the proposed facility would be visible for approximately one mile of the OR 86 designated scenic area. The designated scenic area of OR 86 extends for approximately 36 miles. Considering that the visual impact of the proposed facility would be limited to a relatively short segment of visibility to drivers along the overall length of the 36-mile scenic highway, the Department recommends Council find that the proposed facility would not cause a significant adverse impact to the scenic resources and values of the designated scenic resource portion of OR 86.

Baker County: Oregon Highway 245

Baker County Comprehensive Plan designates portions of OR 245 as a designated scenic corridor. The designated scenic segment of OR 245 applicable to this analysis extends for approximately 37 miles, from the junction with OR 245 to the junction with U.S. Highway 26 near Unity. Approximately four miles of this segment are within the analysis area.[349] However,

[349] BLM ACEC's are also considered Protected Areas; see Section IV.F¸ *Protected Areas* of this order, See Section 3.3.2.2.

the applicant's modeling shows the proposed facility would not be visible from the designated scenic portions of OR 245, and the proposed facility is approximately seven miles away. As such, the Department recommends Council find that the proposed facility would not cause an adverse impact to the scenic resources and values of the designated scenic resource portion of OR 245.

Interstate 84, from Pleasant Valley to Durkee Area

Baker County Comprehensive Plan designates an approximately 12-mile section of Interstate 84 between Pleasant Valley and Durkee as a scenic corridor. The proposed facility would roughly parallel the scenic segment of I-84 approximately one mile from the freeway. A multi-use area would be located approximately 0.2 miles southwest of the I-84 overpass at Old Highway 30, which could be visible from I-84.[350]

Temporary impacts associated with construction related actions, including clearing of ROW and pulling and tensioning sites, would include construction-related vehicles and personnel. Short-term impacts may result from clearing of the ROW through grassland areas. Impacts from ROW clearing would persist until grassland areas are restored (estimated at approximately seven years following construction). Long term impacts would be associated with the transmission line itself, and would extend for the life of the line.

The applicant states that transmission towers would introduce high magnitude impacts for approximately one mile of the 12-mile scenic corridor. Within the one-mile segment near the crossing of I-84, the landscape character would appear more urban, and inconsistent with the remainder of the scenic highway segment due to the dominant appearance of the transmission towers. Outside of this segment, the applicant states that visual contrast would primarily be low due to screening from surrounding topography and the steep viewing angle and peripheral view of the towers experienced by roadway travelers.

In addition to the towers several segments of new, graded access road would be located between the proposed route and I-84 within this segment of scenic highway. While visible, these roads would appear consistent with existing roads in the area.

The user experience of the resource is drivers along the freeway, which would presumably pass through at very high speeds and only experience views of the facility for brief periods of time. The applicant states that the proposed facility would be visible for approximately one mile of the designated scenic area. The designated scenic area of I-84 in this area extends for approximately 12 miles. Considering that the visual impact of the proposed facility would be limited to a relatively short segment of visibility to drivers along the overall length of the 12 mile interstate freeway, the Department recommends Council find that the proposed facility

[350] Id. See Section 3.3.2.2 Attachment R-3 Section 4.0 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.

would not cause a significant adverse impact to the scenic resources and values of the designated scenic resource portion of I-84.

Interstate 84, Huntington to Baker/Malheur County Line

Baker County Comprehensive Plan designates an approximately six-mile section of Interstate 84 between Huntington and the Baker/Malheur County line as a scenic corridor.[351] The proposed facility would run adjacent to the southwest of this entire scenic segment of I-84, approximately 0.2 to 0.5 miles from the interstate freeway. A multi-use area (MUA) would be located near Huntington, but would likely not be visible from the designated scenic portion of I-84 in this area due to topographical screening.

Temporary construction-related activities, including clearing of ROW and pulling and tensioning sites, would include construction-related vehicles and personnel. Impacts from ROW clearing would persist until grassland areas are restored (estimated at approximately seven years following construction). Long-term impacts would result from the operation of the facility and new, bladed access roads located to the east, between I-84 and the facility. The transmission towers would introduce a high level of contrast due to their proximity, size and color, and would appear dominant in the landscape, according to the applicant. Access roads would be located as close as 0.1 mile from I-84. The proposed facility would also affect the adjacent scenery of the scenic corridor, with an overall change in scenic quality of the scenic highway.

The proposed facility would cause an impact to the scenic quality of the designated scenic portion of the interstate freeway. However, in this area, as shown on Figure R-3-37 in ASC Exhibit R Attachment R-3, the proposed facility passes in and out of a designated BLM utility corridor. Utility corridors are designated with the intention of siting utility infrastructure such as transmission lines, roads, pipelines, etc. Additionally, just south of the designated scenic I-84 corridor, the proposed facility would be located in an existing 138 kV utility line that would be rebuilt adjacent to the 500 kV line; and, in order to avoid crossing I-84, the proposed route stays to the west of the freeway, and thus stays mostly within the BLM designated utility corridor. In general, collocating with existing infrastructure, such as an interstate freeway, is supported as way of consolidating utility infrastructure and avoiding the impacts that would from locating facilities elsewhere, away from the existing corridors. Finally, the area around this region is Greater sage grouse habitat and so the proposed facility has been located near I-84 to minimize impacts to habitat.

Based on the assessment provided here, the Department recommends the Council find that the proposed facility would not cause a significant adverse impact to the scenic resources and values of the designated scenic resource segment of I-84 in Baker County.

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[351] Id. See Section 3.3.2.2 and Attachment R-3 Section 5.0 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.

BLM, Baker Resource Area: Powder River Canyon – Keating

The Powder River Canyon area includes approximately 5,500 acres of VRM Class II-managed parcels within the Powder River. [352] As described above, the VRM Class II designation means that in accordance with the applicant's proposed methods for establishing scenic resources that should be afforded review and protection under the EFSC Scenic Resources standard, VMR Class II managed areas should be considered under the EFSC Scenic Resources standard. The western end of this area is approximately 5.7 miles east of the proposed facility; the eastern end is more than 10 miles away.

As described in ASC Exhibit R, the Powder River Canyon scenic area covers the roadway corridor and adjacent terrain near the Powder River, but indicated by the applicant's viewshed model analysis, views of the proposed facility would be blocked from a large portion of the area due to topography and also due to distance from the proposed facility. Because of the combination of both the limited visibility, as indicated by the viewshed models, and the distance of the resource from the proposed facility, the Department recommends Council find that the proposed facility would not cause a significant adverse impact to the scenic resources and values of the BLM Powder River Canyon – Keating VRM Class II managed lands.

BLM, Baker Resource Area: Burnt River Canyon

Burnt River Canyon includes 10,700 acres of BLM-administered lands in the Burnt River Canyon area, approximately 2.6 miles west of the community of Durkee in Baker County. The VRM Class II management area includes the Burnt River, the surrounding canyon walls, and some of the upland areas that sit above the canyon.[353] The proposed facility would cross the Burnt River Canyon area in two locations between MP 170.1-171.5 (two towers) and 172.5-173.0 (one tower). However, in 2017, the BLM amended the Burnt River Canyon resource management plan via the Record of Decision on the B2H facility and changed the VRM from Class II to Class IV along the 250-foot wide right of way for the B2H facility. As such, the right of way should not be considered an EFSC Scenic Resource.

In the eastern portion of the area, V-shaped canyon encloses the narrow valley floor. The landscape is rugged with rough and varying textures of rock throughout the canyon. Further west, the topography becomes less steep and enclosed. Burnt River Canyon Road follows the Burnt River throughout the canyon; other human development within Burnt River Canyon includes scattered rural development and native surface and paved roads. Views of the proposed facility would be most visible where it crosses Burnt River Canyon Road, the primary viewing platform in the area. The towers would be visible on the ridgeline of the canyon.

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[352] BLM ACEC's are also considered Protected Areas; see Section IV.F¸ *Protected Areas* of this order, See Section 3.3.2.5

[353]Id. See Section 3.3.2.5 and Attachment R-3 Section 6.0 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.

Temporary work areas and access roads may be visible from high elevation areas throughout the area.

Finally, the Department notes that the BLM has authorized the proposed facility in this area, which is an important consideration because the BLM is the landowner and manager of the Burnt River area. The EFSC Scenic Resources standard is based on "scenic resources and values identified as significant or important in…federal land management plans…" As such, considering that the agency that manages the Burnt River land and has identified the area has having significant or important scenic value has authorized the proposed facility in the location proposed in the EFSC application, the Department considers this relevant information particularly to the EFSC Scenic Resources standard. The language of the Council's Scenic Resources standard relies upon scenic values identified in other agency's management plans, so the Council may rely on the decisions of the land-managers who administer their plans to inform its evaluation of the Scenic Resources standard.

Because the BLM has authorized the proposed facility to cross BLM-owned land in this area, and specifically changed its own management plan for visual resources from VRM Class II to VRM Class IV, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the scenic resources and values of the Burnt River Canyon Class II managed area.

BLM, Baker Resource Area: Brownlee Reservoir West

The Brownlee Reservoir West area includes over 4,200 acres in four parcels of BLM-VRM Class II managed land located west of and directly adjacent to Brownlee Reservoir, northeast of Huntington in southeastern Baker County. The reservoir is on the Snake River. The proposed facility would be located 2.1 miles from Brownlee Reservoir West at its closest point at the southern end of the resource, and would parallel an existing 138-kV transmission line in this area.[354]

The Snake River and Brownlee Reservoir and surrounding canyon are distinct natural features within the landscape. Views are primarily enclosed by the valley; however, on the highlands above the river, more expansive views of adjacent mountains are visible. Towers would likely be visible but more than two miles distant, at the closest point, and would be visible only from the higher elevations of Brownlee Reservoir West and not from the surface of the reservoir or along the shore, which is the primary use and focus point for most visitors.

[354] Id. See Section 3.3.2.5 and Attachment R-3 Section 7.0 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource. The BLM also manages land with VRM Class II at Brownlee Reservoir Northeast and Southeast, but these areas are in Idaho and located across the reservoir from the proposed facility in Oregon.

Because of the limited visibility of the proposed facility from Brownlee Reservoir West and particularly because the proposed facility would not be visible from the reservoir or shoreline the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the scenic resources and values of the Brownlee Reservoir West VRM Class II managed area.

Oregon Trail ACEC

The Oregon Trail ACEC includes approximately 1,500 acres among seven separate parcels located in Umatilla, Union, and Baker counties. Six of those parcels are within the analysis area with potential visibility of the proposed facility. Some of the ACEC parcels were also included in Section IV.F, *Protected Areas* and Section IV.L, *Recreation*. As described at the beginning of this section, the visual resources impact assessment methodology was the same for all three Council standards (Scenic Resources, Protected Areas, and Recreation) which include a visual resources impact assessment as a component of the standard. Additionally, the National Historic Oregon Trail is included in the assessment under the EFSC Cultural, Historic, and Archaeological Resources standard.

Each of the parcels in this ACEC is managed to preserve the historic resources and visual qualities of these areas and as such, the applicant considers the parcels to be considered under the EFSC Scenic Resources standard. The Department agrees. The Baker Resource Area RMP indicates that "[n]ew uses incompatible with maintaining visual qualities or providing public interpretation will be excluded in a mile corridor." The parcels within this ACEC also include historic sites identified in the National Historic Oregon Trail Management Plan, each with a high degree of visual sensitivity. Exhibit R further quotes from the Plan, stating that "locations on the Oregon Trail which have few contemporary intrusions are particularly notable examples of that landscape encountered by emigrants. These areas should be considered to have a high degree of visual sensitivity; and the foreground and middleground should be managed for protection of the historic landscape as a contributing feature of the Oregon Trail." It is important to note that in most instances, the ACEC is much larger than the Oregon Trail segments that can be found within the ACEC. [355]

Oregon Trail ACEC – Blue Mountain Parcel

The Blue Mountain parcel is approximately 80 acres located in the Blue Mountains, on the northeast side of I-84 about 12 miles northwest of La Grande in Umatilla County. The Blue Mountain Parcel is located on a forested ridge. Views are enclosed due to vegetation; the Oregon Trail runs through the parcel. The proposed facility would be less than a mile (0.9 mile) from the Blue Mountain Parcel, but the proposed facility would be on the west side of I-84. The proposed facility would not cross the parcel. Additionally, it is unlikely that the proposed facility

[355] Id. See Section 3.3.2.5 and Attachment R-3 Section 8.0-12.0 for the applicant's evaluation of the proposed facility's anticipated impacts to the Oregon Trail ACECs.

would be visible from the Blue Mountain Parcel as there is a ridge and existing conifer trees that would screen the view. Because of the limited or absent visibility of the proposed facility from Oregon Trail ACEC - Blue Mountain Parcel and because the proposed facility would be on the other side of I-84 from the parcel, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the scenic resources and values of the Oregon Trail ACEC – Blue Mountain Parcel.

Oregon Trail ACEC – NHOTIC Parcel

The National Historic Oregon Trail Information Center (NHOTIC) ACEC parcel is approximately 507 acres and is located on the north side of OR 86, approximately four miles northeast of Baker City. The NHOTIC Parcel contains the information center building and parking lot, as well as surrounding land. The proposed facility is located within a mile of the NHOTIC main building and within 0.02 mile of the western boundary of the NHOTIC parcel. The NHOTIC was discussed in Section IV.F, *Protected Areas*.

As described in more detail in Section IV.F, *Protected Areas* standard the NHOTIC is located on the 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. A trail network within the NHOTIC parcel provides visitor access to areas within the 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. The applicant has prepared visual photosimulations to demonstrate what the proposed facility may look like from certain vantage points at NHOTIC. See ASC Exhibit R, Attachment R-4, Figure R-4-4.

As the applicant explains, the NHOTIC parcel was designated to preserve the unique historic resource and visual qualities. The Oregon Trail ACEC specifically was 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.[356]

The number of towers visible would also vary depending on viewer position within the ACEC. As discussed in detail in Exhibit L and in the discussion of the Protected Areas standard, 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

[356] Id. See Section 3.3.2.5, page R-82.

H-frame 230 kV transmission line, though the proposed facility would have larger structures and would be made of steel, not wood.

To reduce potential visual impacts to the Oregon Trail ACEC – NHOTIC Parcel, NHOTIC recreation site, and VRM II area, and to incorporate the proposed mitigation measures, the applicant has proposed, and the Department recommends, that the Council include the following condition in the site certificate:

> **Recommended Scenic Resources Condition 2:** During construction, to avoid significant adverse impacts to the scenic resources at the National Historic Oregon Trail Interpretative Center, the certificate holder shall construct the facility using tower structures that meet the following criteria between approximately Milepost 145.1 and Milepost 146.6:
> 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).

It is also important to note that there were alternative route options previously proposed in the area around NHOTIC, including a route to the east of Flagstaff Hill and the NHOTIC center ("Virtue Flat alternative"), and other routes near the current proposed route. The route to the east of the center was eliminated from consideration due to impacts to sage grouse habitat and impacts to an important Off Highway Vehicle (OHV) recreation area. The alternatives near the current proposed route were eliminated to reduce impacts to irrigated agriculture. The proposed route follows very close to the existing 230 kV transmission line in this area, including using the existing 230 kV line right of way for the proposed facility and rebuilding the 230 kV line. Finally, the Department notes that 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 Scenic Resources standard is based on "scenic resources and values identified as significant or important in…federal land management plans…" As such, by authorizing the route in its Record of Decision (ROD), the federal agency (BLM) that administers the Management Plan for NHOTIC is authorizing the placement of the proposed facility in this location as permissible within the scenic designations in the Management Plan. The language of the Council's Scenic Resources standard relies upon scenic values identified in other agency's management plans, so the Council may rely on the decisions of the land-managers who administer their plans to inform its evaluation of the Scenic Resources standard. Considering that the agency that manages the NHOTIC land and has identified the NHOTIC has having significant or important scenic value has authorized the proposed facility in the location

proposed in the ASC, the Department considers this relevant information particularly to the EFSC Scenic Resources standard.

Based on the assessment presented here, and incorporating recommended mitigation, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the scenic resources and values of the Oregon Trail ACEC – NHOTIC.

Oregon Trail ACEC – White Swan Parcel

The White Swan parcel of the ACEC is approximately 2.9 miles northeast of the proposed facility, east of NHOTIC and south of "Virtue Flat" area. Based on the results of the applicant's viewshed modelling, the proposed facility would not be visible from the White Swan parcel of the ACEC. As such, there would be no impact to the scenic resources and values of the Oregon Trail ACEC – White Swan Parcel.

Oregon Trail ACEC – Straw Ranch 2 Parcel

The Straw Ranch 2 Parcel is an approximately 230- to 240-acre parcel located approximately 1.1 miles from the proposed facility. The Straw Ranch 2 Parcel is not accessible from existing roads, and there are no recreational facilities located within the parcel, and is mostly surrounded by private land. The proposed route does not cross the parcel.

Long term impacts would be primarily associated with the transmission line and towers. Where the proposed route would be visible, it would generally follow the alignment of existing 69- and 138-kV transmission lines. Potential views to the south toward the proposed facility would be primarily blocked by a ridgeline approximately 0.4 mile southwest of the ACEC. Views to the west and northwest toward the proposed facility would not be blocked; however, in this area, the proposed facility would be located four miles or more from the ACEC. Based on the assessment presented here, and particularly considering the distance from the proposed facility to the area, the lack of publically available access points and that the BLM has approved the proposed facility route in this area, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the scenic resources and values of the Oregon Trail ACEC – Straw Ranch 2.

Oregon Trail ACEC – Straw Ranch 1 Parcel (Hill Creek Road)

The Straw Ranch Parcel 1 is approximately 160 acres, and the proposed route would pass the Straw Ranch ACEC Parcel 1 approximately 0.1 mile to the north. New primitive and graded roads associated with the proposed route would be developed immediately north of and approximately 0.4 mile east of the ACEC. It has unimproved road access at the south end of the parcel, and no recreation facilities. The proposed facility was purposefully routed to avoid crossing the Straw Ranch 1 parcel. The route in this area passes close to the Straw Ranch 1

parcel in order to avoid sage grouse core habitat. Straw Ranch 1 parcel was also considered in Section IV.F, *Protected Areas*.

The applicant states that the proposed facility would create moderate visual contrast against the existing landscape and appear co-dominant with I-84 to the southwest and the existing transmission line crossing through the ACEC. The proposed towers would reduce the quality of the scenery immediately adjacent to the ACEC, but would be consistent with the existing landscape modification, including the existing 69-kV and 138-kV transmission lines that cross the ACEC. The existing transmission lines cross the National Historic Oregon trail in the Straw Ranch 1 ACEC, see ASC Exhibit R, Attachment R-3, Figure R-3-11. The BLM, which manages the Straw Ranch 1 ACEC as well as surrounding land, has approved the proposed facility in this area. Based on the assessment presented here, and particularly considering that the BLM has approved the proposed facility route in this area and that the route was sited close to the Straw Ranch 1 parcel in order to avoid sage grouse core habitat, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the scenic resources and values of the Oregon Trail ACEC – Straw Ranch 1.

Oregon Trail ACEC – Powell Creek Parcel

The Powell Creek Parcel includes approximately 70 acres and is located slightly east of I-84 and the Burnt River, about 0.6 miles southeast of Dixie and five miles north of Lime. The proposed facility would be located approximately 1.2 miles from the parcel; however, it is important to note that I-84 would be between the Powell Creek parcel and the proposed facility. The proposed facility does not cross Powell Creek parcel, and in this area, the National Historic Oregon Trail is east of I-84, while the proposed facility is west of I-84. There are no recreation facilities within the Powell Creek Parcel. Existing development includes I-84 and existing 69- and 138-kV transmission lines located approximately 0.3 miles to the west of the parcel, and existing gravel-surfaced roads that travel through the parcel and along the western boundary.

It is described by the applicant that views of the proposed facility would be equally head-on and peripheral, depending on the viewer's location and viewing direction from within the Powell Creek Parcel, and would be experienced from an inferior vantage point. Three sky-lined towers would support the span of the conductor across Rye Valley Lane and therefore would appear prominent on the ridgeline. Additionally, an approximately 735-acre work area would be located to the southwest along Rye Valley Road and would introduce strong visual contrast during the temporary construction period. However, impacts from ROW clearing and other construction-related activities are short-term and would be restored after completion of construction.

Considering that the proposed facility is over one mile from the Powell Creek parcel and that I-84 is between the parcel and the proposed facility, as well as the limited public access to Powell Creek, the Department recommends that the Council find that the proposed facility would not

cause a significant adverse impact to the scenic resources and values of the Oregon Trail ACEC – Powell Creek.

Powder River Canyon Wild and Scenic River and ACEC

The Powder River is designated as a Wild and Scenic River (WSR) for 11.7 miles, covering 2,385 acres, from the Thief Valley Dam to Oregon Highway 203 within the BLM Vale District. The WSR is part of Powder River Canyon ACEC. The proposed facility is located approximately 1.4 miles from the upland border of the Powder River Canyon ACEC. The Powder River ACEC and WSR is also considered in Section IV.F *Scenic Resources* and Section IV.L, *Recreation*.[357] In this area, the proposed facility would be parallel to an existing 230 kV transmission line.

The ACEC includes dirt roads and an existing 230-kV transmission line to the west. Wind turbines are visible in the distance outside the ACEC boundary. Although there is existing development within and visible from the ACEC, the landscape character is described by the applicant as naturally appearing.

The applicant's modeling concludes that the proposed facility would not be visible within the Powder River canyon or from the river; therefore, there would be no impacts to the scenery of the Powder River WSR. In the upland portion of the ACEC, the proposed facility would be visible approximately 1.4 miles away. In this area, the proposed facility would be located parallel to an existing 230-kV transmission line, though some towers would be sky-lined.

The purpose of the WSR is to protect the river and the user experience from the river. The proposed facility would not be visible from the WSR portion of the river. Views from the upland portion of the ACEC to the proposed facility would occur, but at a distance greater than one mile. Based on this assessment, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the scenic resources and values of the Powder River Canyon WSR and ACEC.

BLM Malheur Resource Area: Oregon Trail ACEC - *Birch Creek*

The Birch Creek ACEC includes segments of the Oregon National Historic Trail. It is located approximately two miles south of Farewell Bend, west of I-84. As shown in ASC Exhibit R, Attachment R-3, Figure R-3-14 the proposed facility would be located 0.2 miles northeast of the Birch Creek Parcel.[358] Birch Creek ACEC is also considered in Section IV.F., *Protected Areas*.

[357] Id. See Section 3.3.2.5 and Attachment R-3 Section 13.0 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.
[358] Id. See Section 3.3.2.6 and Attachment R-3 Section 14.0 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.

As described in Section IV.F., *Protected Areas,* the proposed facility in this area would include the rebuild of 1.1 miles of the existing Quarts to Weiser 138-kV transmission line to a new ROW, and the 500 kV proposed transmission line would be located in the existing 138-kV transmission line ROW, which is owned and operated by the applicant. In proposing to site the proposed transmission line at this location, and to reduce visibility from the ACEC parcel, the applicant has located the line as far north as feasible without encroaching on active agricultural areas. [359] To further reduce visibility, the applicant proposes to use shorter stature H-frame structures ranging in height from 65 to 100 feet for towers between MP 198 and MP 199. This structure type, combined with constructing towers at lower elevations than the ACEC, would minimize the proportion of the facility that could be viewed from the ACEC due to screening by topography.[360] To ensure compliance with this proposal, recommended Scenic Resources Condition 3, provided below, would require the applicant to incorporate these mitigation measures. The applicant has included visual photosimulations of the proposed facility in the area of Birch Creek ACEC, included in ASC Exhibit L, Attachment L-4, Figures L-4-7 and 8.

With its proposed mitigation measures, views of the towers would still primarily be head-on and experienced by both stationary and transient viewers. The structures would result in weak visual contrast and appear subordinate to the landscape. The applicant's analysis indicates that, though visible, the 500 kV transmission towers would not substantially lower the quality of the adjacent scenery outside the Birch Creek ACEC Parcel. The landscape character would remain "historic" due to the prominence of natural features in the viewshed; and the overall scenic quality of the landscape would remain low ("class C"). Because the proposed facility would be sited outside the Birch Creek ACEC Parcel, there would be no changes to the landscape within the boundary of the Birch Creek ACEC Parcel. The magnitude of impact to both resource change and viewer perception would be medium. The proposed facility would conform to VRM Class II objectives within the Birch Creek Parcel, and is therefore consistent with BLM's VRM direction to protect visual values within the Birch Creek Parcel.[361] Additionally, as shown on ASC Exhibit L, Attachment L-3, Figure L-3-13, the proposed facility in this area exits a BLM designed utility corridor just east of the ACEC; the proposed facility would then utilize the existing 138 kV corridor so as to not create a new ROW, and then the proposed facility trends northwest/southeast in order to reenter the BLM utility corridor along I-84. In this area, the Department concludes that the proposed facility has been sited to reduce impacts to the Birch

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[359] Upon review of a draft of the ASC, the Department requested that the applicant consider "potential mitigation measures such as alternative structure finishes (e.g., natina finish) and alternative structure types (e.g., H-frame) and then prepare visual simulation and re-conduct the impact assessment to scenic resources at Birch Creek ACEC." ASC Exhibit L, pages L-45 through L-46. As discussed in detail in ASC Exhibit L, pages L-46 through L-47, the applicant evaluated different types and locations of structures and, ultimately, determined that the proposed "Birch Creek North Route" would effectively mitigate impacts and ensure no adverse visual impacts on this protected area.

[360] B2HAPPDoc3-20 ASC 12_Exhibit L_Protected Areas_ASC 2018-09-28, Section 3.5.6.

[361] Id.

Creek ACEC parcel, while reducing impacts to other lands (including farming and sage grouse habitat in this area) as well as staying along the BLM utility corridor near I-84.[362] Finally, it is important to note that the BLM has approved the proposed facility route in this area. Based on this assessment, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the scenic resources and values of the Birch Creek ACEC.

To minimize potential adverse visual impacts to the Birch Creek ACEC, and to incorporate the applicant's proposed mitigation measures, the applicant proposes, and the Department recommends, that the Council include the following condition in the site certificate:

> **Recommended Scenic Resources Condition 3:** During construction, to avoid significant adverse impacts to the scenic resources at the Birch Creek Area of Critical Environmental Concern, the certificate holder shall construct the facility using tower structures that meet the following criteria between Milepost 199.1 and Milepost 197.9:
> a. H-frames; and
> b. Tower Height no greater than 100 feet.

BLM Malheur Resource Area: Oregon Trail ACEC – Tub Mountain

Tub Mountain Parcel ACEC includes approximately 5,900 acres of BLM-administered VRM Class II land, in a long, narrow geographic area in northeastern Malheur County. The Tub Mountain parcel is located between I-84 and U.S. Highway 26. The ACEC includes one interpretive site at Alkali Springs, which was the "nooning" spot for wagon trains leaving Vale. The ACEC is remote and accessible only by local gravel roads. The proposed facility would run along the eastern and southern boundary of the ACEC approximately 0.5 mile from the ACEC at its closest point and approximately 1.5 miles east of the Alkali Springs interpretive site.[363]

The applicant describes the view to the northwest from the Tub Mountain Parcel as gently rolling terrain in the foreground that subtly transitions to steeper terrain in the background. The Old Oregon Trail Road travels north-south through the majority of the Tub Mountain Parcel and is a native-surfaced, two-track maintained by Malheur County that is roughly parallel to the Oregon Trail route. The landscape character is natural appearing. Scenic quality of the existing landscape for the Oregon Trail ACEC – Tub Mountain Parcel is considered low (Class C). The parcel has no developed recreation facilities, and from lower elevation spots, the views are limited; however, views from higher elevations extend to the background distances throughout the parcel.

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[362] Id. ASC Exhibit L, Attachment L-3, Figure L-3-13.

[363] B2HAPPDoc3-35 ASC 18_Exhibit R_Scenic Resources_ASC 2018-09-28, Section 3.3.2.6 and Attachment R-3 Section 15.0 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.

The proposed facility would be the visible from certain portions from the ACEC. Viewers from Alkali Springs would have views of the proposed facility transmission towers to the east that would be partially blocked by vegetation, at approximately 1.5 miles distant. From the Old Oregon Trail Road or the Oregon Trail route, the proposed facility would be generally located to the east, and most towers would either not be visible or only the top portions would be visible. The applicant explains that some towers would be sky-lined and some backdropped depending on location within the Tub Mountain Parcel.

As assessed in Section IV.F., *Protected Areas,* the transmission line has been sited outside the Tub Mountain ACEC Parcel, and there would be no change to the landscape within the boundary of the lands managed under VRM Class II. Consequently, the applicant concludes that the proposed facility would conform to the BLM management standard and is consistent with BLM's management of the Tub Mountain Parcel's visual qualities.[364] As shown on ASC Exhibit R, Attachment R-3, Figure R-3-14, the proposed facility has been sited in this area to avoid other impacts, specifically sage grouse habitat, and is also located on BLM land to avoid private land. Additionally, the proposed route in this area connects to a BLM designated utility corridor northeast of the Tub Mountain ACEC near I-84 Highway, and the location of the route minimizes impacts to multiple resources, recognizing that there will be visual impacts to the Tub Mountain ACEC. The BLM, the manager of Tub Mountain ACEC and the land upon which the proposed route is located in this area (which is not Tub Mountain ACEC) has approved the proposed facility route via its ROD. Based on this assessment, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the scenic resources and values of the Birch Creek ACEC.

BLM Malheur Resource Area: Sugarloaf Butte

Sugarloaf Butte includes approximately 400 acres of BLM-administered VRM Class II lands north of Bully Creek Reservoir in Malheur County. The proposed facility would be located 1.6 miles south of Sugarloaf Butte.[365]

As explained in Exhibit R, Sugarloaf Butte terrain consists of flat-to-rolling foothills dissected by numerous small drainages that create sloping soft, horizontal, and undulating lines. Vegetation consists of low-growing grasses stippled with sagebrush. The landscape appears vast and open with panoramic views. Human development is limited and primarily includes native surface roads. The landscape lacks distinct features and variety and is naturally evolving, due to the very limited human intervention. Scenic quality of the existing landscape for considered low. Viewers are limited and may include individuals traveling along the roads or participating in dispersed recreation.

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[364] Id.

[365] Id. See Section 3.3.2.6 and Attachment R-3 Section 16.0 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.

The proposed facility transmission towers would be sky-lined in certain locations visible from Sugarloaf Butte. Viewers traveling along roads within Sugarloaf Butte would see towers both head-on and peripherally form a neutral vantage points; dispersed recreators could see towers either head-on or peripherally. However, because of the remoteness of this resource, actual viewer exposure would be limited.

There would be no changes to the landscape within the geographic area designated as VRM Class II. The proposed facility in this area is not located on the Sugarloaf Butte VRM II area, but is still located on BLM land. The proposed facility route in this area was specifically designed to avoid impacts to irrigated agriculture and private land near Vale, while also minimizing impacts to sage grouse core habitat. The BLM has approved the proposed route in this area, on BLM land, via its record of decision. Based on this assessment, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the scenic resources and values of the BLM Sugarloaf Butte VRM II area.

BLM Malheur Resource Area: Oregon Trail – Keeney Pass ACEC

The Keeney Pass area includes approximately 1,015 acres of BLM-administered VRM Class II lands southeast of Vale. This area forms a long, narrow corridor extending for more than six miles in a generally northwest-southeast direction. The southern boundary of this linear ACEC is approximately 6.3 miles from the proposed facility at its closest point. While the applicant's analysis has shown that the proposed facility may be visible from the Keeney Pass ACEC, at a distance of over 6 miles, visibility will be limited and will not dominate the viewshed. As such, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the scenic resources and values of the BLM Keeney Pass ACEC VRM II area.

BLM Malheur Resource Area: Lower Owyhee River

The Lower Owyhee River resource area includes 11,291.17 acres. The area crossed by the proposed facility was formerly designated as VCM Class II, but the BLM amended its plan as part of its ROD for the B2H project, and the area is now designated VRM Class IV. The resource is coincident with the Owyhee River below the Dam ACEC and SRMA, with the exception of the areas located to the north and west of the ACEC/SRMA. The proposed route crosses the northern portion of the Lower Owyhee River area and would be visible from the Lower Owyhee Canyon Watchable Wildlife Area and Owyhee Lake Road. A ridgeline at the northern portion of the Lower Owyhee River area provides a "gateway" to the resource. The proposed route would be located on the northern side of this ridgeline; consequently, visibility is limited to two towers located approximately 1.0 mile away. Additional assessment is included in Section IV.F, *Protected Areas*.

As described in Section IV.F., *Protected Areas*, views of the proposed facility from Owyhee Lake Road would be primarily intermittent due to screening by topography. When viewed from the

interpretive site, the transmission line features would be primarily behind or adjacent to the viewer, and therefore considered primarily peripheral. Viewer perception would be low. The application states that the proposed facility would result in long-term visual impacts to the Owyhee River below the Dam ACEC, which would be medium intensity as measured by medium resource change, and low viewer perception. However, the Owyhee River Below the Dam ACEC would continue to provide the scenic resource value and recreation opportunity identified as valued attributes of the Owyhee River Below the Dam ACEC, since the transmission line features would not be visible from the majority of the canyon where specific scenic features have been identified in the 2002 Southeastern Oregon Resource Management Plan. VRM Class II objectives would be achieved within the Owyhee River below the Dam ACEC, since the landscape character and quality of the resource would not change.

It is also important to note that the proposed facility was purposefully sited outside of the ACEC itself, and the Department understands that this decision was made by the BLM and finalized on the Record of Decision (ROD). It is also noted that this decision by the BLM moved the facility from public land (BLM land) onto a short crossing of private land. Also, as shown on Attachment L, Figure L-3-20, the proposed facility is within a BLM designated utility corridor until it must exit the corridor at the northern point of the ACEC, which is the location where the proposed facility would cross Owyhee Lake Road and be somewhat visible from the interpretive site; however, here, based on the BLM's decision, the facility leaves public (BLM) land in order to avoid impacting the BLM ACEC, but as a consequence, crosses private land. Finally, as described in ASC Exhibit R and here, the BLM has reclassified the area crossed by the proposed facility from VRM Class II to VRM Class IV. The EFSC Scenic Resources standard is based on "scenic resources and values identified as significant or important in…federal land management plans…" As such, by issuing this route in its ROD, the federal agency (BLM) that administers the Management Plan for Owyhee River is authorizing the placement of the proposed facility in this location is permissible within the scenic designations in the Management Plan. The language of the Scenic Resources standard relies upon scenic values identified in others' management plans, so the Council may rely on the decisions of the land-managers who administer their plans to inform its evaluation of the Scenic Resources standard. Considering that the agency that manages the Owyhee River land and has identified the Owyhee River as having significant or important scenic value has authorized the proposed facility in the location proposed in the EFSC application, the Department considers this relevant information particularly to the Scenic Resources standard.

Based on this analysis, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the scenic resources and values of the Owyhee River Below the Dam.

BLM Malheur Resource Area: Succor Creek

Succor Creek is a BLM VRM Class II area, with 10,800 acres that include the highlands surrounding the Succor Creek State Natural Area (SNA).[366] The area is approximately 4 miles southwest of the proposed facility. The proposed route would not be visible from a majority of the area. Where visible, at a distance of more than four miles, the views would be limited and the proposed facility would not dominate the landscape. Considering the limited visibility, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the scenic resources and values of the Succor Creek VRM Class II area.

BLM Owyhee Resource Area: Jump Creek Canyon and Jump Creek ACEC

The Jump Creek Canyon area includes two parcels of BLM-administered lands located in western Owyhee County, Idaho.[367] Most of the area is managed as VRM Class II; with a narrow band along Jump Creek managed as VRM Class I. This ACEC is located approximately seven miles southwest of Marsing, Idaho. While the proposed facility would run adjacent to the northern edge of the ACEC, this portion is entirely within the State of Idaho and therefore out of EFSC jurisdiction. The nearest Oregon-portion of the proposed facility to the Jump Creek Canyon ACEC is approximately five miles distant. At this distance, the proposed facility is unlikely to be visible and as such, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the scenic resources and values of the Jump Creek Canyon and Jump Creek ACEC VRM Class II and I areas.

USFS, Wallowa-Whitman National Forest: VQO 1

The VQO 1 area is an approximately 185-acre linear corridor managed by the USFS as "VQO Retention."[368] This area overlaps with a portion of the Blue Mountain Forest Wayside identified by Union County, and Blue Mountain State Scenic Corridor managed by OPRD; however, it includes some additional areas along the Old Emigrant Hill Scenic Frontage Road within the Wallowa-Whitman National Forest. The proposed facility would be located on the crest of the ridgeline to the northeast of the area. The proposed facility in this area would be located in the

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[366] Id. See Section 3.3.2.6 and Attachment R-3 Section 22.0 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.

[367] Id. See Section 3.3.2.7 and Attachment R-3 Section 22.0 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.

[368] As explained at ASC Exhibit R, page R-109, the Retention (R) VQO provides for management activities that are not visually evident. Activities may only repeat form, line, color and texture that are frequently found in the characteristic landscape. "Changes in qualities of size, amount, intensity, direction, pattern, etc., should not be evident." United States Forest Service, 1974 Agricultural Handbook Number 462 – National Forest Landscape Management, Volume 2, Chapter 1, The Visual Management System.

USFS Wallowa-Whitman National Forest, and the USFS has approved the proposed facility in tis ROD. Additionally, in this area, the proposed facility would be located in a USFS designated utility corridor, which was established to locate utility facilities such as transmission lines.[369]

The applicant explains that most viewers in this area are drivers along Old Emigrant Hill Scenic Frontage Road, which passes through the forest. From the road, due to the steep hillside and angle of crossing of the proposed facility, the applicant describes that most drivers would not see the proposed facility or would have fleeting and limited views of the proposed facility and cleared right of way.

Based on the analysis presented here, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the scenic resources and values of the USFS Wallowa-Whitman National Forest VQO 1 area.

USFS, Wallowa-Whitman National Forest: VQO 2, I-84 Travel Corridor

Wallowa-Whitman VQO 2 area includes approximately 4,800 acres of the Wallowa-Whitman National Forest in northwestern Union County. The area spans I-84 and is approximately eight miles long and typically one to two miles wide. The proposed facility would cross through VQO 2 in two locations between MP 94.4 and MP 95, in the first parcel of the Blue Mountain State Scenic Corridor. Two towers would be sited within the parcel. [370]

The proposed route would be most visible along the western boundary of the area, where both the towers and the cleared ROW would be visible. However, most viewing areas within the VQO 2 are almost entirely out of the viewshed due to topographic and vegetative screening; the landscape would retain its cultural character and the scenic attractiveness would remain Class B (Typical.)

As with the Wallowa-Whitman VQO1 area, the proposed facility in the VQO2 area would be located in the USFS Wallowa-Whitman National Forest, and the USFS has approved the proposed facility in tis ROD. Additionally, in this area, the proposed facility would be located in a USFS designated utility corridor, which was established to locate utility facilities such as transmission lines. Based on the analysis presented here, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the scenic resources and values of the USFS Wallowa-Whitman National Forest VQO 2 I-84 Travel Corridor area.

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[369] B2HAPPDoc3-35 ASC 18_Exhibit R_Scenic Resources_ASC 2018-09-28, Section 3.3.2.9 and Attachment R-3 Section 23.0 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.

[370] Id. VQO 2 overlaps with the first parcel of the Blue Mountain Forest State Scenic Corridor and is managed as VQO Retention. See Section 3.3.2.9 and Attachment R-3 Section 24.0 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource. The Applicant notes that the Morgan Lake Alternative is located approximately three miles southeast of VQO 2. However, vegetation and topography would screen the ROW associated with this alternative from this resource.

USFS, Wallowa-Whitman National Forest: Five Points Creek

Five Points Creek encompasses 3,763 acres and begins approximately one mile northeast of Hilgard, Oregon in Union County. The USFS has recommended its inclusion in the WSR system with a "Wild" classification; and is recognized for its scenery. Both the proposed facility and the Morgan Lake alternative would be located approximately two miles southwest of the Five Points Creek. The proposed and Morgan Lake alternative would be located west of I-84 in this area, while Five Points Creek is east of the freeway. Also, in this area the proposed route is mostly located in the USFW designated utility corridor, which was established for siting utility facilities such as transmission lines.[371]

As the applicant explains in ASC Exhibit R, The Five Points Canyon is 500 to 800 feet deep with steep, rugged walls with prominent vertical and diagonal lines. The area is primitive and undisturbed. Landscape character is naturally evolving and scenic integrity is considered Class A (Distinctive). There is a network of hiking trails within the canyon that is accessible from roads above the plateau. The creek receives light recreation use from hikers and hunters because of its high-quality scenery and remote experience.

As the applicant describes in ASC Exhibit R, Attachment R-6a, the entire river channel is outside of the modeled viewshed of both the proposed facility and Morgan Lake alternative; however, the towers and cleared ROW could be visible from the outer edges of the corridor in the southwestern portion of the corridor, at the top of the canyon. Five Points Creek has been recognized to protect the outstanding scenery within the enclosed creek canyon. Because the towers would not be visible from within the canyon of either the proposed facility or Morgan Lake alternative, the landscape character, scenic integrity, and scenic quality of the WSR corridor of Five Points Creek would not change and would have no or only minor contributions on visual impacts to the resource. As such, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the scenic resources and values of the Five Points Creek area.

USFS, Wallowa-Whitman National Forest: OR 244 Corridor – Red Bridge West and East

The OR 244 Corridor – Red Bridge West and East includes approximately multiple parcels of national forest lands along the corridor of OR 244 (the Union-Hilgard Highway.) OR 244 generally follows the Grande Ronde River in this area. Both the proposed route and the Morgan Lake alternative would be located approximately 4.4 miles east of OR 244 Corridor – Red Bridge

[371] Id. See Section 3.3.2.9 and Attachment R-3 Section 17.0 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.

West at its closest point and slightly more than 1 mile from OR 244 Corridor – Red Bridge East. Neither route would cross through OR 244 Corridor – Red Bridge West or East.[372]

The applicant states that both the proposed route and the Morgan Lake alternative would be visible from portions of OR 244 Corridor Red Bridge West and East, but at more than 4 miles from West and 1 mile from East. However, both are primarily outside of the viewshed due to shielding from vegetation and topography. As with the Wallowa-Whitman VQO1 and VQO2 areas described above, the proposed facility near OR 244 Corridor Red Bridge West and East is located in the USFS Wallowa-Whitman National Forest, and the USFS has approved the proposed facility in its ROD. Additionally, in this area, the proposed facility would be located in a USFS designated utility corridor, which was established to locate utility facilities such as transmission lines. Based on the analysis presented here, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the scenic resources and values of the USFS Wallowa-Whitman National Forest OR 244 Corridor Red Bridge West and East.

USFS, Wallowa-Whitman National Forest: Mt. Emily

The Mt. Emily scenic resource includes approximately 1,060 acres around Mt. Emily and includes the Grandview Picnic Area and Indian Trail Canyon that are managed by the USFW as VQO "retention." The proposed facility would be located 5.2 miles from Mt. Emily. The Morgan Lake alternative would be located 5.9 miles from the area. The proposed facility and the Morgan Lake alternative would not cross the Mt. Emily scenic area.[373] At over five miles, and considering the mature tree cover, it is unlikely that the proposed facility or Morgan Lake alternative would be visible from the Mt. Emily scenic resource. As such, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the scenic resources and values of the USFS Wallowa-Whitman National Forest Mt. Emily scenic area.

USFS, Wallowa-Whitman National Forest: OR 203 Corridor – Catherine Creek

OR 203 Corridor – Catherine Creek includes approximately 590 acres of National Forest land in two parcels along OR 203 near Catherine Creek State Park managed as VQO "retention." This area is located approximately eight miles east of the proposed facility and based on the applicant's viewshed analysis, would not be visible from the OR 203 Corridor – Catherine Creek. As such, the proposed facility would not impact OR 203 Corridor – Catherine Creek.

[372] Id. See Section 3.3.2.9 and Attachment R-3 Section 20.0 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.
[373] Id. See Section 3.3.2.9 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.

Conclusions of Law

Based on the foregoing findings of fact, and subject to compliance with the recommended conditions of approval, the Department recommends the Council conclude that, taking into account mitigation, the design, construction and operation of the proposed facility, including proposed and alternative routes, is not likely to result in significant adverse impacts to any scenic resource, in compliance with Council's Scenic Resources standard.

IV.K. Historic, Cultural, and Archaeological Resources: OAR 345-022-0090

(1) Except for facilities described in sections (2) and (3), to 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 ORS 358.905(1)(c); and

(c) For a facility on public land, archaeological sites, as defined in ORS 358.905(1)(c).

* * *[374]

Findings of Fact

Section (1) of the Historic, Cultural and Archaeological Resources standard requires the Council to find that the proposed facility is not likely to result in significant adverse impacts to identified historic, cultural, or archaeological resources. The applicant provided information regarding historic, cultural and archaeological resources in ASC Exhibit S and its attachments.[375] Pursuant

[374] Subsections (2) and (3) of the Historic, Cultural, and Archaeological Resources Standard apply to power generation facilities and special criteria facilities, respectively. Since the proposed facility does not include a power generation or special criteria facility, subsections (2) and (3) of OAR 345-022-0090 do not apply to the proposed facility.

[375] Pursuant to OAR 345-021-0010(1)(s), information concerning the location of archaeological sites or objects may be exempt from public disclosure under ORS 192.502(4) or 192.501(11). Therefore, the applicant submitted confidential resource reports as Attachment S-4 (High Probability Areas), Attachment S-6 (Cultural Resources Technical Report) Attachment S-7 (Reconnaissance Level Survey – Visual Assessment of Historic Properties Report), and Attachment S-10 (Intensive Level Survey – Visual Assessment of Historic Properties Report), Attachment S-11 (Analysis Area, Construction Footprint, and Resource Location Maps), and Attachment S-12. (CTUIR Traditional Use Study for the B2H Project) to ASC Exhibit S.

to OAR 345-015-0190(9), on March 6, 2019, the applicant submitted to the Department an additional information Errata for Exhibit S.[376] The Department requested the applicant provide descriptions of Oregon Trail segments, this information is provided in the Exhibit S Errata and pursuant to OAR 345-021-0010(1)(s), information concerning the location of archaeological sites or objects may be exempt from public disclosure under ORS 192.502(4) or 192.501(11), some portions of the text have been redacted in the version available to the public.[377]

As described in Section III., *Description of the Proposed Facility*, of this order a substantial portion of the proposed facility is located on private lands (approximately 69 percent) however, the proposed facility also crosses stretches of land managed by the Bureau of Land Management (BLM), the Bureau of Reclamation (BOR), the Department of Defense/United States Army Corps of Engineers (DOD/USACE), the State of Oregon, and the United States Forest Service (USFS) (24 percent BLM-managed land, 0.2 percent BOR-managed lands, 4 percent DOD/USACE managed lands, 3 percent National Forest System lands, and 0.4 percent State lands).

Aligning EFSC and Section 106 Review:[378] ORS 469.370(13)

Under ORS 469.370(13), for facilities that are subject to review by a federal agency under the National Environmental Policy Act (NEPA), 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. Such coordination shall include the elimination of duplicative application materials, study and reporting requirements; and the Council use of information generated and documents prepared for the federal agency review. Additionally, the Council, to the extent consistent with applicable standards, shall coordinate to establish site certificate conditions that are consistent with the conditions established by the federal agency.

The Bureau of Land Management (BLM) is the lead federal agency responsible for completing the National Environmental Policy Act (NEPA) environmental analysis. The BLM issued its Final Environmental Impact Statement (FEIS) in November, 2016. BLM then published its Record of Decision (ROD) on November 17, 2017. The FEIS and ROD included the results of the BLM's government-to-government tribal consultations and consultations with other parties. The NEPA review addresses, among other things, cultural, historic, and archaeological impacts from the proposed facility and compliance with Section 106 of the National Historic Preservation Act

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[376] OAR 345-015-0190(9) states, "After a determination that an application is complete, the applicant shall submit additional information to the Department if the Department identifies a need for that information during its review of the application. Submission of such information does not constitute an amendment of the application."
[377] B2HAPPDoc3-55 ASC Exhibit S_Errata Info_Redacted 2019-03-06.
[378] Section applicable to OAR 345-022-0090(1)(a): "(1) Except for facilities described in sections (2) and (3), to 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"***

(NHPA). Under 36 CFR 800.4(c)(1) and as part of the Section 106 process, the BLM is responsible for final eligibility determinations for listing on the National Register of Historic Places (NRHP). As part of the Section 106 compliance, the BLM issues determinations of eligibility for eligible resources or determines that a resource is not eligible for listing on the NRHP. Upon the BLM's final determinations, cultural resources may remain with the designation of "unevaluated" if there are no potential impacts from the proposed facility. A resource designation of unevaluated indicates that the resource may have been investigated, however, additional investigations or evaluations are recommended so the resource is assumed to be likely eligible for listing on the NRHP.

The executed Programmatic Agreement (PA) is the binding document to the signatory parties that outlines the process for identification and evaluation of historic and cultural properties, eligibility determinations of specific impacts on historic properties, and measures to avoid, minimize, or mitigate any adverse impacts for the proposed facility. The PA is included as Attachment S-5 of ASC Exhibit S. The Oregon Department of Energy is a concurring party to the PA and the provisions outlined in the PA may be used to assist the Council in its review of the Council's Historic, Cultural and Archaeological Standard; and while 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 has been drafted and 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 will be included in the HPMP required by the PA. The HPMP includes an Inadvertent Discovery Plan (IDP) which specifies what steps will 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. The HPMP, with IDP, is discussed in more detail later in this section.

As discussed in Section III.A., the Navy is leading a separate NEPA review from the BLM for the portion of the proposed facility located on lands owned and managed by the Navy in Morrow County, therefore, it is responsible for Section 106 of the NHPA compliance. Equivalent to the process described above, eligibility determinations for cultural, historical and archaeological resources identified on Navy lands will be determined as part of the Navy's Section 106 compliance, in consultation with SHPO and affected Tribes.

Studies and surveys conducted for Section 106 of the NHPA compliance are utilized in the ASC and EFSC review to support compliance with OAR 345-022-0090(1)(a), the Council's Historic, Cultural and Archaeological standard protecting resources that have been listed on, or would likely be listed on the NRHP. Conversely, studies, surveys, and revised information based on comments from the Department and the Oregon State Historic Preservation Office (SHPO) conducted during the EFSC review may be used by the BLM in its final evaluation of Section 106 compliance. During the review of the amended preliminary application for site certificate (discussed in Section II.E) and the application for site certificate (discussed in Section II.G), comment requests were sent to reviewing agencies, including SHPO. The Department enlisted assistance of its consultant, Golder Associates (Golder) and their sub-consultant, Historical Research Associates, Inc. (HRA) to support SHPO with the review for the proposed facility. During the review of the ApASC and ASC, HRA reviewed Exhibit S, technical and archaeological reports, and SHPO site forms for sufficient and complete information consistent with SHPO guidelines and EFSC standard. HRA then submitted requests for additional information (RAI's) to the Department and SHPO for its review and SHPO provided a letter concurring and adding any additional information to HRA's comments. All comment letters were provided to the applicant, who then provided responses to all RAI's including new data, studies, and updated information in the applicable format for SHPO to conduct its review. This process went through several iterations, resulting in the information in the ASC and associated Exhibit S errata.

The applicant included recommendations of eligibility and supporting documentation in ASC Exhibit S and materials submitted to SHPO and the Department for all identified resources. Applicant recommendations, in general, include recommendations of eligible for listing on the NRHP, and not eligible for listing, and unevaluated (presumed or treated as likely eligible for listing). Table S-2 in ASC Exhibit S represents all of the resources the applicant evaluated within the analysis area as well as the applicant's eligibility recommendations. The Department, in consultation with SHPO and the applicant, determined that recommendations of "not eligible" will be treated as "unevaluated" for purposes of the Council's review. A resource designation of "unevaluated" means that it is treated as likely eligible for listing on the NRHP and the impact analysis and mitigation (if any) is evaluated based on that designation. In its comment letters on the ASC, SHPO outlined and described this approach.[379] Applicant recommendations will be completed and the BLM and Navy will verify final eligibility determinations as part of Section 106 compliance. The final eligibility determinations will be provided to the Council, as discussed later in this section related to the HPMP. The primary reasons that the Department and SHPO agree to treat resources recommended as not eligible as unevaluated for the Council's review are:

1.) Treating resources as likely eligible for listing (unevaluated) is a conservative approach for evaluating potential impacts and mitigation of impacts from the proposed facility; and

[379] B2HAPPDoc13-28 ASC Reviewing Agency Comment SHPO Case No. 08-2232_Pouley 2019-04-29 and B2HAPPDoc13-29 ASC Reviewing Agency Comment SHPO Case No. 08-2232 Response to IPC_Schwartz 2019-05-13.

2.) Treating resources as likely eligible for listing (unevaluated) and then updating Council information based on lead federal agency Section 106 final determinations is consistent with Council's obligations under ORS 469.370(13).

However, it is important to point out that it is very likely that many, most, or even all the resources identified as "not eligible" by the applicant may ultimately be determined and agreed by SHPO and the lead federal agency as "not eligible." As such, the analysis presented in this section by the Department is in all likelihood an over-estimate of the proposed facility's potential impacts to historic, cultural, and archaeological resources.

Methodology and Surveys for Historic, Cultural, and Archaeological Resources

As stated in the second amended project order, for the Council's review, the analysis area includes the area within the site boundary. However, as discussed above, the applicant provided information in the ASC that was also used for the NEPA environmental analysis, including an evaluation of cultural, historic, and archaeological resources. As part of the Section 106 evaluation, the BLM established an Area of Potential Effects (APE) for an evaluation of indirect visual effects to be five miles or to the visual horizon, whichever is closer, on either side of the centerline of the proposed alignment and alternative routes. The applicant provided this evaluation in its Visual Assessment of Historic Properties (VAHP) Study Plan (Attachment S-2 to this order). Therefore, the area that the applicant evaluated in ASC Exhibit S includes all areas within the site boundary as well as the area that extends 5 miles or to the visual horizon. The applicant refers to the area within the site boundary as the direct analysis area which encompasses the proposed construction footprint. The construction footprint is the only portion of the analysis area that is anticipated to experience direct impacts and the final construction footprint will be smaller than the site boundary (direct analysis area) evaluated. The site boundary (direct analysis area) combined with the five-mile analysis area is referred to as the Visual Assessment analysis area. These areas were used to inventory resources and conduct an impacts analysis to inform the ASC whether or not the construction and operation of the proposed facility would cause direct or indirect impacts. An example of a direct impact is an impact to a resource by ground disturbing construction activities or permanent infrastructure placement. Examples of indirect impacts are visual impacts such as being able to see the proposed transmission line, towers, or proposed access road from a resource or trail location.

The historic, cultural, and archaeological resource studies were initiated by a record search and literature review to identify previous surveys and recorded resources within the analysis area. The searches gathered information on previously recorded historic, cultural, and archaeological resources, properties that are eligible or listed on the National Register of Historic Places (NRHP), 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. Research was conducted at the Oregon State historic Preservation Office (SHPO), CTUIR THPO (Confederated Tribes of the Umatilla Indian

Reservation Tribal Historic Preservation Office), USFS (United States Forest Service), and BLM offices. The Oregon SHPO databases consulted include Oregon Archaeological Records Remote Access and Oregon Historic Sites Database. Additional information was provided by the applicant, Bonneville Power Administration (BPA), U.S. Fish and Wildlife Service (UFWS), the Oregon Historic Trails website, 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.

Following completion of the background research, the Archaeological Survey Plan (ASP) and Visual Assessment of Historic Properties Study Plan (VAHP) were prepared to guide the field surveys and documentation of cultural resources. The record searches highlighted two unique study areas: a two-mile study area and five-mile study area. The two-mile study area focused on collecting information pertaining to archaeological and aboveground resources, as well as any traditional cultural properties (TCPs) or Historic Properties of Religious and Cultural Significance to Indian Tribes (HPRCSIT), within two miles of the proposed and alternative routes centerline. This study area was utilized for the cultural resources pedestrian field survey and is documented in the Cultural Resources Technical Report. The five-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 two-mile study area and up to five miles from the proposed and alternative routes centerline. The Visual Assessment utilized this study area as well as applicable results from the two-mile study area. The five-mile study area is documented in the Reconnaissance Level Survey – Visual Assessment of Historic Properties (RLS) and Intensive Level Survey – Visual Assessment of Historic Properties (ILS), except for a portion located on CTUIR tribal lands, these were conducted in compliance with the VAHP and focused on the Visual Assessment analysis area. ASC Exhibit S, Section 3.2 provides a description for the survey/study methodologies employed for each study. The applicable attachments also provide additional details about survey methodologies. However, 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. One exception is a more conservative definition of a historic archaeological site.[380] The SHPO guidelines define an historic archaeological site as a site that has been abandoned for at least 75 years. To maintain consistency with studies completed for federal regulatory compliance and for a more conservative evaluation of historic and archaeological resources, the applicant assumed an historic archaeological site must have been constructed or created 50 years ago or more.

[380] 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)).

Table HCA-1 below outlines the studies and surveys the applicant conducted, when they were conducted, a description of the survey and the attachment to the ASC or this order, if applicable.

Table HCA-1: Historic, Cultural, and Archaeological Resource Studies

Study	Description	Completed/ To Be Completed
Archaeological Survey Plan (ASP) – (Attachment S-1)	Survey plan for archaeological studies.	Completed (2012)
Visual Assessment of Historic Properties Study Plan (VAHP) – (Attachment S-2)	Survey plan for aboveground/built environment sites.	Completed (2013)
High Probability Areas Assessment – (Attachment S-4 Confidential)	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.
Cultural Resources Technical Report (Technical Report) – (Attachment S-6 Confidential)	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) / Update after site certificate issuance, prior to construction
Reconnaissance Level Survey – Visual Assessment of Historic Properties (RLS) – (Attachment S-7 Confidential)	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.)
National Historic Trails Study (NHT Study) – (Attachment S-8)	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).

Table HCA-1: Historic, Cultural, and Archaeological Resource Studies

Study	Description	Completed/ To Be Completed
Historic Properties Management Plan (HPMP with Inadvertent Discovery Plan) – (Attachment S-9)	Management and mitigation plan for avoiding, minimizing, and mitigating resources.	To be completed prior to facility construction.
Intensive Level Survey – Visual Assessment of Historic Properties (ILS) – (Attachment S-10 Confidential)	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.)
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
Source: B2HAPPDoc3-36 ASC 19_Exhibit S_Cultural_ASC_Public 2018-09-28. Table S-1. Reorganized by the Department.		

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 the applicant had right of entry to access for surveys. Any additional surveys required to complete an inventory of 100 percent of the final 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, when site access has been secured for all properties. See Section III.D., *Survey Data Based on Final Design and Site Access,* for additional discussion of survey data and site access in the Council's review process for linear facilities. 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 route modifications or alterations identified subsequent to the completed surveys.

Based on the information submitted to the Department and SHPO and provided in ASC Exhibit S, Table S-2, the Department estimates that a total of 501 cultural, archaeological, and historical resources in the analysis area were inventoried and evaluated as part of the Section

106 and EFSC review. All Oregon Trail or Oregon National Historic Trails are identified in the below section regardless of potential impacts to the trail or segment. Other than trail resources, of the 501 cultural, archaeological, and historical resources inventoried in the analysis area, only resources that may be impacted or affected directly or indirectly by the construction or operation of the proposed facility are discussed further in this order. In other words, resources inventoried in the analysis area that will not experience a direct or indirect impact, are not evaluated. The information in the tables below was taken from ASC Exhibit S, Table S-2 and modified by the Department. Consistent with the discussion in the above section, the Department and SHPO determined that resources recommended as not eligible will be termed as unevaluated (presumed or treated as likely eligible for listing) for the Council's review. This change is reflected in the tables presented below, for a representation of the applicant's recommendations, see Table S-2 in ASC Exhibit S. As described above, this decision to consider resources as "unevaluated" if the applicant described as "not eligible" will likely greatly increase the estimated impacts from the proposed facility, however, the actual impacts to resources will be finalized as discussed in the HPMP and are anticipated to be substantially less than presented below.

IV.K.1. Potential Impacts to Historic, Cultural, and Archaeological Resources Under OAR 345-022-0090(1)(a)

Under OAR 345-022-0090(1)(a), to issue a site certificate, the Council must find that the construction and operation of the proposed facility, taking into account mitigation, is not likely to result in significant adverse impacts to historic, cultural and archaeological resources that have been listed on, or would likely be listed on the National Register of Historic Places (NRHP). The resources discussed in the below section apply to protections under OAR 345-022-0090(1)(a). The Department points to the language of the EFSC standard, specifically, "…resources that have been listed on, or would likely be listed on…" the common term used by SHPO and throughout the profession, is eligible or likely eligible for listing on the NRHP. Therefore, the terms eligible or likely eligible meet the leaning of *likely to be listed on the NRHP* in the EFSC standard.

IV.K.1.1. Oregon Trail and National Historic Trails

Historic trails within the analysis area, as listed in ORS 358.057, include the Oregon National Historic Trail (NHT), Lewis and Clark NHT, Meek Cutoff, Nathaniel Wyeth Route, and Upper Columbia Route. Congress declared the 2,170-mile-long Oregon Trail a National Historic Trail in 1978. These trails are depicted in ASC Exhibit S, Figure S-11. The applicant states that the proposed facility site boundary will cross the Oregon NHT 17 times along the route.[381] Separate from the NHT, the site boundary crosses 12 segments of the Oregon Trail identified by the applicant and its consultants during the field evaluation for Exhibit S and the assessment of impacts to trails for the BLM's NEPA review. The Department notes that the proposed facility

[381] B2HAPPDoc3-36 ASC 19_Exhibit S_Cultural_ASC_Public 2018-09-28. Section 3.4.1.1.

crossing a trail portion or segment, does not equate to a direct impact to the trail, as the proposed facility can be spanned (stretched) across portions of trail segments to avoid direct impacts and may be sited to avoid visual impacts, discussed later in this section.

The applicant and its consultants conducted an evaluation of segments, sites, and side trails associated with the Oregon Trail consistent with the currently proposed Multiple Property Documentation Form (MPDF) for the Oregon Trail, Oregon, as well as Guidance for Recording and Evaluating Linear Cultural Resources.[382] Similar to the SHPO guidance document, the MPDF also considers the Oregon Trail a single linear historic district (cumulative impacts) that contains contributing and non-contributing resources located within its historic boundaries. Further, the Oregon Trail analysis consisted of a literature review, survey and field recordation through the Reconnaissance Level Survey - Visual Assessment of Historic Properties (RLS) and Intensive Level Survey - Visual Assessment of Historic Properties (ILS), which include photographs and maps, evaluation, integrity assessment, and an impacts assessment. Utilizing various Oregon Trail GIS data sets from the National Park Service, Oregon SHPO, and BLM, data were collected on a cumulative basis to provide a general indication of potential cumulative visual impacts from within the Visual Assessment analysis area based on a bare earth digital elevation model. The applicant compiled the data to illustrate the potential for cumulative indirect impacts but is not truly reflective of the magnitude of impacts. The applicant's overview of the cumulative impacts analysis found that 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 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 are located within the Visual Assessment analysis area (areas within 5 miles or to the visual horizon) and about 27.43 of those miles would have a potential view of the proposed facility. Table HCA-3, *Oregon Trail/NHT Inventory in Analysis Area with Potential Indirect Impacts*, represents the Oregon Trail as one linear resource for this evaluation, the Table also provides a discussion of the individual trail segments as well. As noted above, assessing the Oregon Trail as linear resource is consistent with SHPO, and federal guidelines, and the BLM in consultation with SHPO may determine appropriate mitigation for impacts based on a cumulative impact analysis from treating trails as a linear resource. The applicant highlights that impacts to individual Oregon Trail-related resources or segments vary by individual site due to a number of variables including distance, intervening topography, vegetation, overall condition of the site, atmospheric conditions, and the built environment. In addition, in many instances, the physical setting and/or landscape surrounding the Oregon Trail has been diminished through the introduction of roads, an interstate highway, pipeline rights-of-way, electrical distribution and transmission lines, fencelines, and other forms of development. As discussed further in Section IV.F.1., *Protected Areas*, of this order, the applicant provided a visual impact analysis with photo simulations to illustrate the potential visual impacts of the proposed facility. In many circumstances, existing energy infrastructure, anthropogenic structures, and agricultural activities accompany the viewshed where the proposed facility would be located.

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[382] Oregon SHPO 2013b.

To inform the Council and interested parties about the specific segments of the NHT and Oregon Trail resources that were discovered in the applicant's analysis and to also to evaluate any potential impacts to them, the Department agrees with the applicant's approach to provide a cumulative analysis (above) as well as an analysis of each segment for trail resources. In December, 2018, the Department requested that the applicant provide descriptions of the Oregon Trail segments evaluated and provided in the confidential attachments in the ASC. ORS 192.345 exempts certain documents from public disclosure, however, based on the Department's review of ORS 192.345(11), the Department requested that the applicant provide descriptions of the trail segments for the public's review, and redact location information as necessary.[383] The applicant provided additional descriptions as errata to ASC Exhibit S.[384]

Oregon Trail Resources: Impact Assessment[385]

As presented below, the proposed facility would not directly impact any Oregon Trail segments. The proposed facility will, however, indirectly (visibility) impact some Oregon Trail segments. The Department developed Table HCA-2: *Oregon Trail/NHT Inventory in Analysis Area with Avoided/No Impacts*, based off a compilation of information from Exhibit S, Table S-2, SHPO comment letters, and the updated Errata information. Table HCA-2 identifies 29 trail resources within the analysis area (includes site boundary/direct and visual impact areas). Table HCA-2 specifies the trail segment, general resource description, existing and proposed NRHP recommendations, and descriptions of the closest project component that was evaluated for impacts. Consistent with the discussion provided in the above section, *Aligning EFSC and Section 106 Review: ORS 469.370(13*), in this section, some of the aboveground (trail) resources are treated as unevaluated/likely eligible for the Council's review pending the outcome of the Section 106 determinations. In its comment letter on the ASC, SHPO states that "Regarding above ground resources, after reviewing the Intensive Level Surveys (ILS) provided to our office we concur with all determinations of eligibility for listing in the NRHP except the following."[386] SHPO then remarks in its letter that resources on federal lands that are recommended as not eligible by the applicant, shall be treated as unevaluated/likely eligible and avoided or mitigated, pending the determinations of the Section 106 review process. In a clarification letter to SHPO from the applicant, the applicant represents that that resource B2H-MA-003

[383] (11) Information concerning the location of archaeological sites or objects as those terms are defined in ORS 358.905 (Definitions for ORS 358.905 to 358.961), except if the governing body of an Indian tribe requests the information and the need for the information is related to that Indian tribe's cultural or religious activities. This exemption does not include information relating to a site that is all or part of an existing, commonly known and publicized tourist facility or attraction."

[384] B2HAPPDoc3-55 ASC Exhibit S_Errata Info_Redacted 2019-03-06 and B2HAPPDoc3-54 ASC Exhibit S_Att. S-9_HPMP Errata Info 2019-03-06.

[385] An example of a direct impact is an impact to a resource by ground disturbing construction activities or permanent infrastructure placement. Examples of indirect impacts are visual impacts such as being able to see the proposed transmission line, towers, or proposed access road from a resource or trail location.

[386] B2HAPPDoc13-28 ASC Reviewing Agency Comment SHPO Case No. 08-2232_Pouley 2019-04-29.

Meek Cutoff and resource B2H-UN-005 (Whiskey Creek Segment) will remain unevaluated (likely eligible) for the NRHP and avoided by facility activities until a federal agency makes a final determination of eligibility, in concurrence with the SHPO during the Section 106 process.

This approach and determinations are reflected in the tables below. If the lead federal agency determines that the resource is not eligible then the resource would not be protected under the EFSC standard or mitigated in the Section 106 process for potential impacts. If the lead federal agency determines that the resource is likely eligible or eligible, the resource will be avoided or mitigated for any impacts as designated in the Historic Properties Management Plan (HPMP). The far right column in Table HCA-2 provides additional descriptions and specifics about how the applicant will avoid direct and indirect impacts to each segment. To read site descriptions for these segments, and their relation to the Oregon or other trails, see the Redacted Exhibit S Errata. Resources identified in Table HCA-2 are assumed to be likely eligible therefore are protected under the EFSC standard OAR 345-022-0090(1)(a)), however impacts to these resources are not expected or are avoided entirely, consequently there are not any impacts to protected resources for Council to evaluate for avoidance, minimization or mitigation.

SHPO concurred that some aboveground resources in Table HCA-2 are not eligible, therefore the Department reiterates that they are not protected under OAR 345-022-0090(1)(a)), and do not need to be further evaluated. As discussed below in Section, IV.K.4., *Mitigation for Historic, Cultural, and Archaeological Resources: Historic Properties Management Plan (HPMP)*, the final resource eligibility determinations will be verified or established in the Section 106 compliance review and this information will be provided in the final HPMP and will be submitted to the Department for its review and approval, in consultation with SHPO, per Historic, Cultural, and Archaeological Resources Condition 2 discussed below. In the HPMP Errata, the applicant also reiterates that its proposed Scenic Resources Condition 1, recommended to Council, will require the applicant to construct the proposed facility using dull-galvanized steel for lattice towers and non-specular conductors to reduce the visual impacts of the transmission line and components.

Table HCA-2: Oregon Trail/NHT Inventory in Analysis Area with Avoided/No Impacts

Assigned Trinomial or Other ID	Pedestrian Survey or Visual Assessment Temporary Resource #	County	Resource Type and Generalized Resource Description	NRHP Recommendation	Project Route(s)	Project Component	Land Ownership	Avoided Impact	S-9 Errata Avoidance Measure or/and Management Recommendations (HPMP)
35MW00224 (Well Spring, Oregon Trail Site)	N/A	Morrow	Archaeological Site - Homestead & Trail	Listed (Criterion A - Draft MPDF)	Proposed Route, West of Bombing Range Road Alternative 1, West of Bombing Range Road Alternative 2	Visual Assessment analysis area	DOD	Yes	No further management
35MW00227	N/A	Morrow	Archaeological Site - Road	Unevaluated	Proposed Route	Direct Analysis Area (Construction Footprint); Visual Assessment analysis area Proposed Route: Structure work area; Pulling & tension site; Existing road needing 21-70% modification West of Bombing Range Road Alternatives 1 & 2: No impacts	DOD	Yes	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.

Table HCA-2: Oregon Trail/NHT Inventory in Analysis Area with Avoided/No Impacts

Assigned Trinomial or Other ID	Pedestrian Survey or Visual Assessment Temporary Resource #	County	Resource Type and Generalized Resource Description	NRHP Recommendation	Project Route(s)	Project Component	Land Ownership	Avoided Impact	S-9 Errata Avoidance Measure or/and Management Recommendations (HPMP)
35MW00230 (Emigrant Cemetery)	B2H-MO-004	Morrow	Archaeological Site - Cemetery	Listed (Criterion A - nomination and Draft MPDF)	Proposed Route, West of Bombing Range Road Alternative 1, West of Bombing Range Road Alternative 2	Visual Assessment analysis area	DOD	Yes	No further management
Oregon Trail - Unnamed Segment (Lindsey Feedlot Lane)	B2H-MO-008	Morrow	Historic Site/ Aboveground - Trail	Not Eligible	Proposed Route, West of Bombing Range Road Alternative 1, West of Bombing Range Road Alternative 2	Visual Assessment analysis area	PV	Yes	No further management
TBD	Segment 3B2H-SA-03	Morrow	Archaeological Site - Trail Segment	Eligible, Contributing (Criterion A); Unevaluated (Criterion D); Not Eligible (Criteria B and C)	Proposed Route, West of Bombing Range Road Alternative 1, West of Bombing Range Road Alternative 2	Visual Assessment analysis area	PV	Yes	Avoid. Archival research and documentation; Testing needed.

Table HCA-2: Oregon Trail/NHT Inventory in Analysis Area with Avoided/No Impacts

Assigned Trinomial or Other ID	Pedestrian Survey or Visual Assessment Temporary Resource #	County	Resource Type and Generalized Resource Description	NRHP Recommendation	Project Route(s)	Project Component	Land Ownership	Avoided Impact	S-9 Errata Avoidance Measure or/and Management Recommendations (HPMP)
TBD	Segment 3B2H-SA-04	Morrow	Archaeological Site - Trail Segment	Eligible, Contributing (Criterion A); Unevaluated (Criterion D); Not Eligible (Criteria B and C)	Proposed Route, West of Bombing Range Road Alternative 1, West of Bombing Range Road Alternative 2	Visual Assessment analysis area	PV	Yes	Avoid. Archival research and documentation; Testing needed.
Oregon Trail - Unnamed Segment (Sand Hollow)	Segment 3B2H-SA-05	Morrow	Archaeological Site - Trail	Eligible (Criterion A)	Proposed Route, West of Bombing Range Road Alternative 1, West of Bombing Range Road Alternative 2	Visual Assessment analysis area	PV	Yes	No further management
Oregon Trail - Well Spring Segment	B2H-MO-007 (4B2H-VIZ EK-01)	Morrow	Archaeological Site - Trail	Listed (Criterion A) (Boundary Increase - Draft MPDF)	Proposed Route, West of Bombing Range Road Alternative 1, West of Bombing Range Road Alternative 2	Visual Assessment analysis area	DOD	Yes	No further management

Table HCA-2: Oregon Trail/NHT Inventory in Analysis Area with Avoided/No Impacts

Assigned Trinomial or Other ID	Pedestrian Survey or Visual Assessment Temporary Resource #	County	Resource Type and Generalized Resource Description	NRHP Recommendation	Project Route(s)	Project Component	Land Ownership	Avoided Impact	S-9 Errata Avoidance Measure or/and Management Recommendations (HPMP)
Oregon Trail – Well Spring Segment	3B2H-CH-01	Morrow	Archaeological Site - Trail	Eligible, Contributing (Criterion A); Unevaluated (Criterion D); Not Eligible (Criteria B and C)	Proposed Route, West of Bombing Range Road Alternative 1, West of Bombing Range Road Alternative 2	Visual Assessment analysis area	DOD	Yes	No further management
TBD	Segment 4B2H-EK-02	Morrow	Archaeological Site - Trail Segment	Eligible, Contributing (Criterion A); Unevaluated (Criterion D); Not Eligible (Criteria B and C)	Proposed Route	Direct Analysis Area; Visual Assessment analysis area Proposed Route: Within 250 feet of structure work area West of Bombing Range Road Alternatives 1 & 2: No impacts	DOD	Yes	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
TBD	Segment 4B2H-EK-03	Morrow	Archaeological Site - Trail Segment	Eligible, Contributing (Criterion A); Unevaluated (Criterion D); Not Eligible (Criteria B and C)	Proposed Route	Visual Assessment analysis area	PV	Yes	Avoid. Archival research and documentation; Testing needed.

Table HCA-2: Oregon Trail/NHT Inventory in Analysis Area with Avoided/No Impacts

Assigned Trinomial or Other ID	Pedestrian Survey or Visual Assessment Temporary Resource #	County	Resource Type and Generalized Resource Description	NRHP Recommendation	Project Route(s)	Project Component	Land Ownership	Avoided Impact	S-9 Errata Avoidance Measure or/and Management Recommendations (HPMP)
TBD	Segment 5B2H-SA-01	Morrow	Archaeological Site - Trail Segment	Eligible, Contributing (Criterion A); Unevaluated (Criterion D); Not Eligible (Criteria B and C)	Proposed Route	Direct Analysis Area; Visual Assessment analysis area Proposed Route: Structure work area West of Bombing Range Road Alternatives 1 & 2: No impacts	DOD	Yes	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
35UM00365 (Meacham Pioneer Memorial Cemetery Site)	N/A	Umatilla	Archaeological Site - Cemetery	Not Eligible	Proposed Route	Visual Assessment analysis area	ODOT	Yes	No further management
35UM00472	N/A	Umatilla	Archaeological Site - Burial	Unevaluated	Proposed Route	Visual Assessment analysis area	PV	Yes	No further management
35UN00435 (Oregon Trail/Ladd Canyon)	N/A	Union	Archaeological Site - Trail	Unevaluated	Proposed Route	Visual Assessment analysis area	PV	Yes	No further management (not in viewshed)
35UN00517 (Oregon Trail)	N/A	Union	Archaeological Site - Trail	Eligible, Contributing	Proposed Route	Visual Assessment analysis area	PV, USFS	Yes	No further management

Table HCA-2: Oregon Trail/NHT Inventory in Analysis Area with Avoided/No Impacts

Assigned Trinomial or Other ID	Pedestrian Survey or Visual Assessment Temporary Resource #	County	Resource Type and Generalized Resource Description	NRHP Recommendation	Project Route(s)	Project Component	Land Ownership	Avoided Impact	S-9 Errata Avoidance Measure or/and Management Recommendations (HPMP)
35UN0074	N/A	Union	Archaeological Site - Lithic Scatter, Homestead, Grave, Campground, & Trail	Not in accessible survey area. Previous recommendation: Eligible.	Proposed Route, Morgan Lake Alternative	Direct Analysis Area (Construction Footprint); Visual Assessment analysis area Multi Use Area UN- 02 Existing road needing 21-70% modification	PV, ODOT	Yes	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.
Oregon Trail - Whiskey Creek Segment (O-BK-UN-1)	B2H-UN-005	Union	Archaeological Site - Trail	Eligible	Proposed Route, Morgan Lake Alternative	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	BLM, PV	Yes	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.

Table HCA-2: Oregon Trail/NHT Inventory in Analysis Area with Avoided/No Impacts

Assigned Trinomial or Other ID	Pedestrian Survey or Visual Assessment Temporary Resource #	County	Resource Type and Generalized Resource Description	NRHP Recommendation	Project Route(s)	Project Component	Land Ownership	Avoided Impact	S-9 Errata Avoidance Measure or/and Management Recommendations (HPMP)
TBD (Oregon Trail, California Gulch/Blue Mountain Segment)	B2H-UN-001	Union	Archaeological Site - Trail	Eligible (Criterion A)	Proposed Route	Visual Assessment analysis area	BLM, PV, USFS	Yes	No further management
35BA01366 (Oregon Trail)	Segment 3B2H-CH-06	Baker	Archaeological Site - Trail	Eligible (Criterion A)	Proposed Route	Visual Assessment analysis area	PV	Yes	No further management
Oregon Trail ACEC - Swayze Creek Segment	B2H-BA-291	Baker	Archaeological Site - Trail	Eligible (Criterion A)	Proposed Route	Visual Assessment analysis area	BLM, PV	Yes	No further management
Signature Rock	B2H-BA-286	Baker	Historic Site/ Aboveground - Historic Rock Markings	Unevaluated	Proposed Route	Visual Assessment analysis area	BLM	Yes	No further management.
TBD (Oregon Trail, Powell Creek Segment)	B2H-BA-337	Baker	Archaeological Site - Trail	Eligible (Criterion A)	Proposed Route	Visual Assessment analysis area	BLM, PV	Yes	No further management
TBD (Oregon Trail, White Swan)	B2H-BA-281	Baker	Archaeological Site - Trail	Eligible (Criterion A)	Proposed Route	Visual Assessment analysis area	BLM, PV	Yes	No further management (not in viewshed)
35ML00747 (Oregon Trail, Tub Mountain Segment)	B2H-MA-010	Malheur	Archaeological Site - Trail	Eligible (Criterion A)	Proposed Route	Visual Assessment analysis area	BLM, PV, STL	Yes	No further management (not in viewshed)

Table HCA-2: Oregon Trail/NHT Inventory in Analysis Area with Avoided/No Impacts

Assigned Trinomial or Other ID	Pedestrian Survey or Visual Assessment Temporary Resource #	County	Resource Type and Generalized Resource Description	NRHP Recommendation	Project Route(s)	Project Component	Land Ownership	Avoided Impact	S-9 Errata Avoidance Measure or/and Management Recommendations (HPMP)
0503040048SI	Segment 0503040048SI	Malheur	Archaeological Site - Trail Segment	Not Eligible / Not contributing	Proposed Route	Visual Assessment analysis area	BLM	Yes	No further management
Meek Cutoff / Meek Study Route Hambleton Line	B2H-MA-003	Malheur	Archaeological Site - Trail	Likely Eligible/ Unevaluated (segment)	Proposed Route	Direct Analysis Area; Visual Assessment analysis area	BLM, BR, FWS, PV, STL, STL, STP, USDA, USFS	Yes	No further management
The Dalles Military Road	B2H-MA-007	Malheur	Archaeological Site - Road	Unevaluated No historic or archaeological evidence identified during survey. Identified through historic map review.	Proposed Route	Direct Analysis Area (Construction Footprint); Visual Assessment analysis area	PV	Yes	No further management
The Dalles Military Road	B2H-MA-007	Malheur	Archaeological Site - Road	Unevaluated No historic or archaeological evidence identified during survey. Identified through historic map review.	Proposed Route	Direct Analysis Area (Construction Footprint); Visual Assessment analysis area	PV	Yes	No further management

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Oregon Trail Resources: Potential Indirect Impacts

As discussed in the above section, *Oregon Trail Resources: Impact Assessment*, the applicant conducted an inventory of all NHT, Oregon Trail and linear resources within the site boundary/direct analysis area and the visual impact assessment area.[387] Table HCA-2 above lists the inventoried trail resources that are within the analysis areas that will not experience indirect (visual) and direct (permanent/ground disturbing) impacts. After the ASC was deemed complete and under OAR 345-015-0190(9), the Department requested that the applicant provide additional information to the Department.[388] In December 2018, the Department issued a requests for additional information (RAIs), requesting that the applicant re-visit the information provided in ASC Exhibit S, Table S-2 and re-evaluate whether or not there will indeed be any direct impacts to eligible resources, including Oregon Trail segments.[389] The applicant responses to the Department's RAI's came in the Exhibit S Errata and Errata to the HPMP. For instance, the applicant provided site-specific measures to avoid direct impacts to Oregon Trail resources located within the site boundary. Table 6-1 of the HPMP Errata includes avoidance measures to be employed for 10 Oregon Trail-related resources. These measures include reducing or relocating facility components and/or activities, avoiding construction activities within 100 feet of the identified resource characteristics, flagging resource boundaries, and staying within existing areas of disturbance. Table HCA-3: *Oregon Trail/NHT Inventory in Analysis Area with Potential Indirect Impacts*, below reflects these applicant representations to avoid direct impacts to Oregon Trail resources. Therefore, and compared to the information presented in ASC Exhibit S, Table HCA-2 and Table HCA-3 represent updated applicant representations about avoidance measures for impacts to Oregon Trail resources.

Table HCA-3 includes resource identification numbers, general resource description, facility location and components associated with the impact, and the expected visual impact from the proposed facility. The far right column includes a compilation of mitigation information from the framework HPMP included as Attachment S-9 to this order and the ASC, as well as information from Exhibit S and the HPMP Errata, Attachment S-9-1 to this order. The mitigation proposals are discussed further in the below section detailing the recommended site certificate condition for the submission, review and approval of the final Historic Properties Management Plan (HPMP). Mitigation measures to reduce indirect visual impacts to resources associated with the Oregon Trail listed in Table HCA-3 are proposed by the applicant and recommended in Section IV.J., *Scenic Resources*, of this order. Recommended Scenic Resources Conditions 2 and 3, provide mitigation measures to minimize visual impacts to the Flagstaff Hill National Historic Oregon Trail Interpretive Center (NHOTIC) and the Birch Creek Area of Critical Environmental

[387] An example of a direct impact is an impact to a resource by ground disturbing construction activities or permanent infrastructure placement. Examples of indirect impacts are visual impacts such as being able to see the proposed transmission line, towers, or proposed access road from a resource or trail location.
[388] OAR 345-015-0190(9) states, "After a determination that an application is complete, the applicant shall submit additional information to the Department if the Department identifies a need for that information during its review of the application. Submission of such information does not constitute an amendment of the application."
[389] B2HAPPDoc18 ASC ODOE RAIs_Exhibit S_AA_U_W 2018-12-08 to 2019-04-06.

Concern (ACEC). Recommended Scenic Resources Conditions 2 and 3 stipulate site-specific transmission tower heights, frame types, and materials that would collectively reduce the visual intrusions at these locations from the proposed facility.

As discussed in the below Section IV.K.4., *Mitigation for Historic, Cultural, and Archaeological Resources: Historic Properties Management Plan (HPMP),* the final resource eligibility determinations will be verified or established in the Section 106 compliance review and this information will be provided in the final HPMP and will be submitted to the Department for its review and approval, in consultation with SHPO, per Recommended Historic, Cultural, and Archaeological Resources Condition 2 discussed below. The information contained in Table HCA-3, includes how the sensitive Oregon Trail resources will 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.

Table HCA-3: Oregon Trail/NHT Inventory in Analysis Area with Potential Indirect Impacts

Assigned Trinomial or Other ID	Pedestrian Survey or Visual Assessment Temporary Resource #	County	Resource Type and Generalized Resource Description	NRHP Recommendation	Project Route(s)	Project Component	Land Ownership	Avoided Impact	S-9 Errata Avoidance Measure or/and Management Recommendations (HPMP)
Oregon Trail/ Oregon NHT	N/A	Morrow, Umatilla, Union, Baker, Malheur	Archaeological Site - Trail	Listed (Criterion A)	Proposed Route, Morgan Lake Alternative, West of Bombing Range Road Alternative 1, West of Bombing Range Road Alternative 2	Avoidance measures for Direct Analysis Area (Construction Footprint); Visual Assessment analysis area	BLM, BOR, DOD, FWS, ODOT, PV, STL, STL, STP, USDA, USFS	No - Potential visual impact. Avoidance measures to prevent direct impacts.	Note - Oregon Trail presented in this row as one linear resource, see other rows in table for evaluation of individual segments. Avoid. 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--- • 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
Sand Hollow Battleground	SL-MO-001, SL-MO-005	Morrow	HPRCSIT/TCP/Trail	Eligible (Criteria A and B)	Proposed Route, West of Bombing Range Road Alternative 1, West of Bombing Range Road Alternative 2, Proposed Route	Avoidance measures for Direct Analysis Area (Construction Footprint); Visual Assessment analysis area	BLM, DOD, PV	No - Potential visual impact	Note-Sand Hollow Battleground is considered both a TCP/HPRCSIT and an Oregon Trail-related resource. See also discussion in Tribal Resources Section. Public Archaeology Funding, Public Interpretation Funding, Consultation.--Update recordation (if necessary. Off-Site: publish research focus article or professional society presentation, or public education and outreach (e.g.,

Table HCA-3: Oregon Trail/NHT Inventory in Analysis Area with Potential Indirect Impacts

Assigned Trinomial or Other ID	Pedestrian Survey or Visual Assessment Temporary Resource #	County	Resource Type and Generalized Resource Description	NRHP Recommendation	Project Route(s)	Project Component	Land Ownership	Avoided Impact	S-9 Errata Avoidance Measure or/and Management Recommendations (HPMP)
									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
TBD	Segment 6B2H-RP-09	Union	Archaeological Site - Cairn(s) & Trail Segment	Eligible, Contributing (Criterion A); Unevaluated (Criterion D); Not Eligible (Criteria B and C)	Proposed Route	Avoidance measures for Direct Analysis Area (Construction Footprint); Visual Assessment analysis area Proposed Route: Structure work area; Within 250 feet of existing road	PV	No - Potential visual impact	Avoid. 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. Morgan Lake Alternative: No avoidance measures are necessary as there are no direct impacts proposed for this alternative. 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---• Recording—including

Table HCA-3: Oregon Trail/NHT Inventory in Analysis Area with Potential Indirect Impacts

Assigned Trinomial or Other ID	Pedestrian Survey or Visual Assessment Temporary Resource #	County	Resource Type and Generalized Resource Description	NRHP Recommendation	Project Route(s)	Project Component	Land Ownership	Avoided Impact	S-9 Errata Avoidance Measure or/and Management Recommendations (HPMP)
						needing 21-70% improvement Morgan Lake Alternative: No impact			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
Goodale's/ Sparta Trail	B2H-BA-327	Baker	Archaeological Site - Trail	Eligible (Criterion A)	Proposed Route	Visual Assessment analysis area	BLM, PV	No - Potential visual impact	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--- • 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-3: Oregon Trail/NHT Inventory in Analysis Area with Potential Indirect Impacts

Assigned Trinomial or Other ID	Pedestrian Survey or Visual Assessment Temporary Resource #	County	Resource Type and Generalized Resource Description	NRHP Recommendation	Project Route(s)	Project Component	Land Ownership	Avoided Impact	S-9 Errata Avoidance Measure or/and Management Recommendations (HPMP)
TBD	Segment 3B2H-CH-05	Baker	Archaeological Site - Trail Segment & Utility Line	Trail Segment: Eligible, Contributing (Criterion A); Unevaluated (Criterion D); Not Eligible (Criteria B and C); Utility Line: Not Eligible	Proposed Route	Avoidance measures for Direct Analysis Area (Construction Footprint); Visual Assessment analysis area	PV	No-Potential visual impact	S-6: Trail Segment: Avoid. IPC will either: Relocate the road out of Site # 3B2H-CH-05 entirely; Or, 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. 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--- • 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-3: Oregon Trail/NHT Inventory in Analysis Area with Potential Indirect Impacts

Assigned Trinomial or Other ID	Pedestrian Survey or Visual Assessment Temporary Resource #	County	Resource Type and Generalized Resource Description	NRHP Recommendation	Project Route(s)	Project Component	Land Ownership	Avoided Impact	S-9 Errata Avoidance Measure or/and Management Recommendations (HPMP)
TBD (Oregon Trail, Straw Ranch 1 & 2 Segments)	B2H-BA-285	Baker	Archaeological Site - Trail	Eligible (Criterion A)	Proposed Route	Visual Assessment analysis area BLM Straw Ranch ACEC within 125 feet of New Road, Primitive	BLM, PV	No - Potential visual impact	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.--- • 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-3: Oregon Trail/NHT Inventory in Analysis Area with Potential Indirect Impacts

Assigned Trinomial or Other ID	Pedestrian Survey or Visual Assessment Temporary Resource #	County	Resource Type and Generalized Resource Description	NRHP Recommendation	Project Route(s)	Project Component	Land Ownership	Avoided Impact	S-9 Errata Avoidance Measure or/and Management Recommendations (HPMP)
TBD (Oregon Trail, Virtue Flat)	B2H-BA-282	Baker	Archaeological Site - Trail	Eligible (Criterion A)	Proposed Route	Avoidance measures for Direct Analysis Area (Construction Footprint); Visual Assessment analysis area Structure work area; Existing road needing 71-100% modification	BLM, PV	No - Potential visual impact	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 • 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
Oregon Trail ACEC - Alkali Springs Segment	B2H-MA-041	Malheur	Historic Site/ Aboveground - Trail	Eligible (Criterion A)	Proposed Route	Visual Assessment analysis area	BLM	No - Potential visual impact	Design Modification, Public Interpretation Funding, and/or Print/Media Publication The commemorative sign at the site has

Table HCA-3: Oregon Trail/NHT Inventory in Analysis Area with Potential Indirect Impacts

Assigned Trinomial or Other ID	Pedestrian Survey or Visual Assessment Temporary Resource #	County	Resource Type and Generalized Resource Description	NRHP Recommendation	Project Route(s)	Project Component	Land Ownership	Avoided Impact	S-9 Errata Avoidance Measure or/and Management Recommendations (HPMP)
									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.
TBD	Segment 4B2H-EK-41	Malheur	Archaeological Site - Trail Segment	Eligible, Contributing (Criterion A); Unevaluated (Criterion D); Not Eligible (Criteria B and C)	Proposed Route	Avoidance measures for Direct Analysis Area; Visual Assessment analysis area BLM Within 125 feet of New Road, Primitive and structure work area	PV	No - Potential visual impact	Avoid. 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. 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--- • 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-3: Oregon Trail/NHT Inventory in Analysis Area with Potential Indirect Impacts

Assigned Trinomial or Other ID	Pedestrian Survey or Visual Assessment Temporary Resource #	County	Resource Type and Generalized Resource Description	NRHP Recommendation	Project Route(s)	Project Component	Land Ownership	Avoided Impact	S-9 Errata Avoidance Measure or/and Management Recommendations (HPMP)
TBD (Oregon Trail, Birch Creek Segment)	B2H-MA-042	Malheur	Archaeological Site - Trail	Eligible (Criterion A)	Proposed Route	Visual Assessment analysis area	BLM, PV	No - Potential visual impact	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--- • 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

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As noted in the beginning of this section, Table HCA-3 reflects information from ASC Exhibit S, HPMP Attachment S-9, and the Errata for the HPMP Attachment S-9. This information includes applicant proposed avoidance measures that would avoid direct impacts to Oregon Trail/NHT resources. To verify that these direct impact avoidance measures are observed by the applicant, the Department recommends the Council adopt the following site certificate condition:

> **Recommended Historic, Cultural, and Archaeological Resources Condition 1:** During final design and construction of the facility, the certificate holder shall design and locate facility components to avoid direct impacts to Oregon Trail/National Historic Trail resources consistent with ASC Exhibit S HPMP Errata and Table HCA-3 of the Final Order on the ASC.

Based on the foregoing analysis of Oregon Trail resources and subject to Recommended Historic, Cultural, and Archaeological Resources Condition 1 imposing avoidance measures for direct impacts to the Oregon Trail, and Recommended Historic, Cultural, and Archaeological Resources Condition 2 which accounts for mitigation for indirect impacts to these resources, the Department recommends the Council find that the construction and operation of the proposed facility is not likely to result in significant adverse impacts to Oregon Trail/NHT resources protected under OAR 345-022-0090(1)(a).

IV.K.1.2. Tribal Resources

Under OAR 345-001-0010(52) any tribe identified by the Legislative Commission on Indian Services (LCIS) that may be affected by the proposed facility is identified as a reviewing agency and the Department requests the Tribal government to provide comments on the proposed facility at the notice of intent (NOI), preliminary application for site certificate (pASC) and at the complete application for site certificate (ASC).[390] As discussed in Section II., *Procedural History*, in this order the applicant submitted a pASC and an amended pASC (ApASC) to reflect route changes resulting from the federal NEPA review and issuance of its ROD. Therefore, the Department also requested reviewing agencies and Tribal Governments provide comments on the ApASC as well. The following Tribes were identified by LCIS as being potentially affected by the proposed facility:

- Confederated Tribes of the Umatilla Indian Reservation
- Confederated Tribes of the Warm Springs Indian Reservation of Oregon
- Burns Paiute Tribe

The federal government's consultation process was initiated by the BLM and the BLM will continue its government-to-government consultation with these Tribes as well as other tribes as designated in the Programmatic Agreement, discussed in this section and in Section III.D., of

[390] ORS 469.360(4), "Pursuant to a written agreement, the council may compensate a tribe identified by the Commission on Indian Services as affected by the application for expenses directly related to the tribe's review of a notice of intent, site certificate application or request for expedited review."

this order. The Navy is engaging in a separate government-to-government consultation process for its NEPA and Section 106 compliance review. For the EFSC review process for large energy facilities, the State's consultation requirements are fulfilled by the Council's designation of Tribal Government's as reviewing agencies and requests for comments and ongoing outreach conducted by the Departments during the phases of review of a proposed facility, as discussed above.

The Department sent requests for comments to the above listed Tribes when the applicant submitted the ApASC in July 2017. The Department requested comments on the content of the ApASC and if there is any missing or deficient information within the Tribes documentation and consistent Division 21. The Confederated Tribes of the Warm Springs Indian Reservation of Oregon (CTWSRO) and Burns Paiute Tribe did not submit comments on the ApASC. The Confederated Tribes of the Umatilla Indian Reservation (CTUIR) provided a comment letter on the ApASC to the Department expressing its concern about the information gathered and the level of engagement in the Section 106 consultation process, which is outside the scope of Council's jurisdiction. However, one of the concerns of the CTUIR is that the applicant did not accurately represent tribal resources within the materials in the ApASC, and they were unable to determine whether the numbers of sites and eligibility are correct. They expressed further concerns that Exhibit S did not addresses historic properties of religious and cultural significance to Indian tribes (HPRCSITs), and only discussed HPRCSITs that were available in SHPO's database.[391] The CTUIR suggested that the applicant represent HPRCSITs that may be protected under the Council's Historic, Cultural, and Archaeological standard in the application based on coordination and information exchange with the Tribe.[392] The applicant provided responses to all of the Tribes comments and requests for additional information (RAIs), in the form of response tables and revised draft Exhibit S, that the Tribe then reviewed and provided additional comments on the revisions. Table HCA-4 below provides information that the applicant provided on three HPRCSITs identified in ASC Exhibit S, Table S-2. The CTUIR explained in its comment letters the existence of additional HPRCSITs within the analysis area, the resolution for evaluating these resources is discussed below. Table HCA-4 only represents the HPRCSITs described by the applicant in Exhibit S and that are available for public disclosure in this order and associated application materials. [393]

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[391] ASC Exhibit S addresses HPRCSITs as Traditional Cultural Properties (TCP's). Traditional Cultural Properties (TCPs) are a class of National Register-eligible properties that possess 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. (See National Register Bulletin 38: Guidelines for Evaluating and Documenting Traditional Cultural Properties). B2HAPPDoc3-36 ASC 19_Exhibit S_Cultural_ASC_Public 2018-09-28. Attachment S-1.

[392] B2HAPPDoc ApASC Reviewing Agency Comment Tribal Govt CTUIR_Quaempts 2017-09-01.

[393] As stated in the second amended project order, the analysis area includes the area within the site boundary. As part of the Section 106 evaluation, the BLM established an Area of Potential Effects (APE) for an evaluation of indirect visual effects to be five miles or to the visual horizon, whichever is closer, on either side of the centerline of the proposed alignment and alternative routes.

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Table HCA-4: Exhibit S Historic Properties of Religious and Cultural Significance to Indian Tribes

Assigned Trinomial or Other ID	Visual Assessment Temporary Resource #	County	Generalized Resource Description	NRHP Recommendation	Project Route(s)	Project Component	Land ownership	Impact Avoided?/ Project Effect	Management Recommendation
Nisxt	SL-MO-003	Morrow	TCP/ HPRCSIT	Unevaluated	Proposed Route	Visual Assessment analysis area	PV	No - Potential visual impact	Consultation with Confederated Tribes of the Yakama Nation
Sisupa	SL-MO-004	Morrow	TCP/ HPRCSIT	Eligible (Criteria A and D)	Proposed Route, West of Bombing Range Road Alternative 1, West of Bombing Range Road Alternative 2, Proposed Route	Direct Analysis Area (Construction Footprint); Visual Assessment analysis area	DOD, PV	No - Potential visual impact	Public Archaeology Funding, Consultation.
Sand Hollow Battle-ground	SL-MO-001, SL-MO-005	Morrow	TCP/ HPRCSIT	Eligible (Criteria A and B)	Proposed Route, West of Bombing Range Road Alternative 1, West of Bombing Range Road Alternative 2, Proposed Route	Direct Analysis Area (Construction Footprint); Visual Assessment analysis area	BLM, DOD, PV	No - Potential visual impact	Public Archaeology Funding, Public Interpretation Funding, Consultation.

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The applicant and CTUIR provided ongoing comments and Exhibit revisions and the two parties agreed to meet in-person to facilitate information exchange, with the request for the Department and SHPO to attend. A meeting between the CTUIR, the applicant, the Department, and SHPO was held on May 3, 2018 at the CTUIR's Nixyáawii Governance Center. After the meeting the applicant and the CTUIR exchanged information and, with the facilitation of the Department, agreed to continue working to address the Tribes concerns after the ApASC was deemed complete. The two parties continued working directly with each other to address the Tribes concerns about the potential impacts from the proposed facility. On February 12, 2019, the Department sent a guidance document to the CTUIR and to the applicant outlining how Council may address HPRCSITs in its process.[394] Specifically, the guidance document is intended to outline how Council may evaluate whether HPRCSITs are protected under OAR 345-022-0090 based on a spectrum of information on the record for a facility, while respecting a Tribal Government's desire to maintain confidentiality concerning such resources. Alternatively, an applicant and Tribe may coordinate independently about Tribal resources (HPRCSITs and other resources under OAR 345-022-0090(1)(a) where SHPO and the lead federal agency would defer to a Tribe for eligibility determinations) potentially impacted by the proposed facility and come to an agreement about impacts and any mitigation for impacts to resources. If the applicant and Tribe come to such agreement they may submit a letter to Council identifying that the construction and operation of the proposed facility, taking into account mitigation, are not likely to result in significant adverse impacts to historic, cultural or archaeological resources that have been listed on, or would likely be listed on the NRHP. And Council may rely upon the Tribe's letter indicating its concerns have been satisfied and therefore, OAR 345-022-0090(1)(a) has been met. On April 19, 2019 the CTUIR submitted a letter to the Department stating:

> *"The CTUIR is pleased to inform the ODOE and the federal agencies that the CTUIR's concerns have been addressed and will be mitigated by Idaho Power pursuant to a confidential mitigation agreement between the CTUIR and Idaho Power. Therefore, the construction and operation of the proposed B2H project, taking into account mitigation, are not likely to result in significant adverse impacts to eligible or likely eligible historic properties of religious and cultural significance or resources identified by the CTUIR."*[395, 396]

The Confederated Tribes of the Warm Springs of Oregon, Tribal Historic Preservation Office (THPO) provided a comment letter on the ASC explaining that the area of potential effects is within the areas of concern for the CTWSRO, however they are aware of the conversations

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[394] B2HAPPDoc20 ASC ODOE Guidance Doc for HPRCSITs in the EFSC Process 2019-02-12.
[395] B2HAPPDoc13-27 ASC Reviewing Agency Comment CTUIR_Burke 2019-04-19.
[396] The confidential mitigation agreement occurred outside of the site certificate process, and is directly between the CTUIR and the applicant. As such, neither the Department nor Council will have any ongoing involvement in the implementation of the agreement, as it is outside the site certificate process. However, Council may rely on the Tribe's satisfaction that the Council's standard has been met specific to HPRCSITs that would otherwise be evaluated as part of the ASC and potentially protected under OAR 345-022-0090(1)(a).

between the CTUIR and the applicant and, "defer to them with regard to cultural resource issues associated with B2H."[397]

In its April 19, 2019 letter, the CTUIR indicated they and the applicant also agreed upon revisions to an applicant-proposed condition in the site certificate regarding the information included, submission, and review process for the Historic Property Management Plan (HPMP). The CTUIR's condition language specified that they and the applicant agree that the HPMP and the High Probability Areas Assessment will be shared with the CTUIR prior to the Department receipt of the final HPMP for Department review and approval, in coordination with the Tribe and SHPO. The suggested condition language also includes review timelines for the CTUIR and applicant to review and respond to the HPMP and High Probability Areas Assessment. The confidential mitigation agreement between the CTUIR and the applicant is outside of the site certificate process. As such, neither the Department nor Council will have any ongoing involvement in the implementation of the agreement, including enforcement authority over the measures within the agreement. Council may rely on the Tribe's satisfaction that the EFSC standard has been met specific to HPRCSITs and tribal resources that may otherwise be evaluated as part of the ASC and potentially protected under OAR 345-022-0090(1)(a). The Tribe's request to include the High Probability Areas Assessment with the submission of the final HPMP has been included in Recommended Historic, Cultural, and Archaeological Resources Condition 2 discussed below in Section IV.K.4., *Mitigation for Historic, Cultural, and Archaeological Resources: Historic Properties Management Plan (HPMP).* Recommended Historic, Cultural, and Archaeological Resources Condition 2 also requires the applicant to submit the HPMP (with Inadvertent Discovery Plan and High Probability Areas Assessment, subject to confidential procedure submission) to the Tribe, SHPO and the Department for review and final approval by the Department. At the time of submission the Department will coordinate with the CTUIR to ensure that its concerns has been addressed. The Department encourages the applicant to submit the draft final HPMP and High Probability Areas Assessment to the CTUIR in advance of the submission to the Department subject to the CTUIR and applicant agreed review timelines, as consistent with any other agreements outside the EFSC and site certificate process, however the Department is not making this a site certificate condition for the reasons outlined here.

Based on the foregoing discussion of the procedural history of Department coordination with affected Tribal Governments, the evaluation of Tribal Resources in the ASC, the letter to EFSC from the Confederated Tribes of the Umatilla Indian Reservation, and subject to Recommended Historic, Cultural, and Archaeological Resources Condition 2 discussed below, the Department recommends the Council find that the construction and operation of the proposed facility is not likely to result in significant adverse impacts to Tribal resources, including HPRCSITs, protected under OAR 345-022-0090(1)(a).

[397] B2HAPPDoc13-6 ASC Reviewing Agency Comment CTWS_Nauer 2018-11-16.

IV.K.1.3. Other Resources Potentially Impacted under OAR 345-022-0090(1)(a)

Table HCA-5, *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-5 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. As discussed in the below Section IV.K.2., *Potential Impacts to Historic, Cultural, and Archaeological Resources Under OAR 345-022-0090(1)(b)*, 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 sub (b) of the EFSC standard. Table HCA-5 does not include resources that the applicant proposes would only be potentially protected under sub (b) of the standard. These are discussed in the next section. Table HCA-5 also excludes Oregon Trail/NHT and historic properties of religious and cultural significance to Indian tribes (HPRCSITs), because these are discussed in the previous sections. 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.

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Table HCA-5: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial	County	Generalized Resource Description/ Resource Type	NRHP Recommendation	Project Route(s)	Project Component	Land ownership	Applicable EFSC Standard	Project Impacts and Management Comments
Segment 4B2H-EK-26/ OWR&N Roundhouse and OWR&N/OSL Joint Railyard	Baker	Railroad Segment & Structure/ Historic Archaeological Site	Unevaluated (Criterion D); Not Eligible (Criteria A, B, and C)	Proposed Route	Direct Analysis Area (Construction Footprint); Visual Assessment analysis area	PV	a) Potential Historic Property; b) Archaeological site on private land	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.
6B2H-SA-12	Baker	Homestead / Historic Archaeological Site	Unevaluated (Criteria A, B, and D); Not Eligible (Criterion C)	Proposed Route	Direct Analysis Area (Construction Footprint)	PV	a) Potential Historic Property; b) Archaeological site on private land	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.
6B2H-SA-16	Baker	Ranching / Historic Archaeological Site	Unevaluated (Criteria A, B, and D); Not Eligible (Criterion C)	Proposed Route	Direct Analysis Area (Construction Footprint)	PV	a) Potential Historic Property; b) Archaeological site on private land	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.
0503050334SI	Baker	Cairn(s)/ Undetermined Archaeological Site	Unevaluated	Proposed Route	Visual Assessment analysis area	BLM	a) Potential Historic Property	Potential cumulative visual impact
14S44E14-2	Baker	Cairn(s), Lithic Scatter, & Rock Alignment(s)/ Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Visual Assessment analysis area	BLM	a) Potential Historic Property	Potential cumulative visual impact

Table HCA-5: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial	County	Generalized Resource Description/ Resource Type	NRHP Recommendation	Project Route(s)	Project Component	Land ownership	Applicable EFSC Standard	Project Impacts and Management Comments
35BA00372	Baker	Rock Alignment(s)/ Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Visual Assessment analysis area	BLM	a) Potential Historic Property	Potential cumulative visual impact
35BA00388	Baker	Rock Alignment(s)/ Undetermined Archaeological Site	Unevaluated	Proposed Route	Visual Assessment analysis area	BLM	a) Potential Historic Property	Potential cumulative visual impact
35BA01423	Baker	Cairn(s) & Hunting Blind/ Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Visual Assessment analysis area	PV	a) Potential Historic Property; b) Archaeological site on private land	Potential cumulative visual impact
4B2H-EK-08	Baker	Mining / Historic Archaeological Site	Unevaluated	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM, PV	a) Potential Historic Property; b) Archaeological site on private land	Potential direct/ indirect impact. Avoid direct impact until eligibility determined. Research Needed.
4B2H-EK-10	Baker	Lithic/Tool Scatter/ Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Direct Analysis Area (Construction Footprint)	PV	a) Potential Historic Property; b) Archaeological site on private land	Potential direct/ indirect impact. Avoid direct impact until eligibility determined. Research Needed.

Table HCA-5: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial	County	Generalized Resource Description/ Resource Type	NRHP Recommendation	Project Route(s)	Project Component	Land ownership	Applicable EFSC Standard	Project Impacts and Management Comments
4B2H-EK-32	Baker	Lithic/Tool Scatter, Ranching, Water Conveyance/Multicomponent Archaeological Site	Unevaluated	Proposed Route	Direct Analysis Area (Construction Footprint)	PV	a) Potential Historic Property; b) Archaeological site on private land	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.
6B2H-MC-02	Baker	Cairn(s) / Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Direct Analysis Area (Construction Footprint)	PV	a) Potential Historic Property; b) Archaeological site on private land	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Consultation Needed.
6B2H-MC-05	Baker	Cairn(s) /Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Direct Analysis Area (Construction Footprint)	PV	a) Potential Historic Property; b) Archaeological site on private land	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Consultation Needed.
6B2H-SA-14	Baker	Lithic Scatter / Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Direct Analysis Area (Construction Footprint)	PV	a) Potential Historic Property; b) Archaeological site on private land	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed
N/A	Baker	Lithic/Tool Scatter / Pre-Contact Archaeological Site	Unevaluated/Likely Eligible (from Table S-2:Not Eligible)	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	None - Archaeological site not eligible for NRHP. Federal land.	Potential direct/indirect impact. Avoid direct impact until eligibility determined.

Table HCA-5: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial	County	Generalized Resource Description/ Resource Type	NRHP Recommendation	Project Route(s)	Project Component	Land ownership	Applicable EFSC Standard	Project Impacts and Management Comments
4B2H-EK-30	Baker	Water Conveyance / Archaeological Site	Unevaluated/Likely Eligible (from Table S-2:Not Eligible)	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	None - Archaeological site not eligible for NRHP. Federal land.	Potential direct/indirect impact. Avoid direct impact until eligibility determined.
6B2H-RP-02	Baker	Mining / Historic Archaeological Site	Unevaluated/Likely Eligible (from Table S-2:Not Eligible)	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	None - Archaeological site not eligible for NRHP. Federal land.	Potential direct/indirect impact. Avoid direct impact until eligibility determined.
6B2H-SA-07	Baker	Homestead / Historic Archaeological Site	Eligible (Criterion C); Unevaluated (Criteria A, B, and D)	Proposed Route	Direct Analysis Area (Construction Footprint)	PV	a) Historic Property; b) Archaeological site on private land	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.
B2H-DM-07	Baker	Homestead / Historic Archaeological Site	Eligible (Criterion A), Unevaluated (Criterion D); Not Eligible (Criteria B and C)	Proposed Route	Direct Analysis Area (Construction Footprint)	PV	a) Historic Property; b) Archaeological site on private land	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.
Benson Reservoir	Baker	Water Conveyance / Historic Site Aboveground	Eligible (Criteria A and B); Not Eligible (Criteria C and D)	Proposed Route	Direct Analysis Area; Visual Assessment analysis area	BLM, PV	a) Historic Property	Potential visual impact. Avoid Direct Impacts
N/A	Malheur	Rockshelter / Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Visual Assessment analysis area	PV	a) Potential Historic Property; b) Archaeological site on private land	Potential visual impact

Table HCA-5: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial	County	Generalized Resource Description/ Resource Type	NRHP Recommendation	Project Route(s)	Project Component	Land ownership	Applicable EFSC Standard	Project Impacts and Management Comments
35ML01549	Malheur	Cairn(s) /Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Visual Assessment analysis area	BLM	a) Potential Historic Property	Potential cumulative visual impact
35ML01550	Malheur	Rock Alignment(s)/ Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Visual Assessment analysis area	BLM	a) Potential Historic Property	Potential cumulative visual impact
35ML01552	Malheur	Rock Alignment(s)/ Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Visual Assessment analysis area	BLM	a) Potential Historic Property	Potential cumulative visual impact
35ML01553	Malheur	Cairn(s)/ Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Visual Assessment analysis area	BLM	a) Potential Historic Property	Potential cumulative visual impact
35ML01959	Malheur	Cairn(s) / Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Visual Assessment analysis area	BLM	a) Potential Historic Property	Potential cumulative visual impact
35ML01960	Malheur	Cairn(s) / Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Visual Assessment analysis area	BLM	a) Potential Historic Property	Potential cumulative visual impact
B2H-EE-37	Malheur	Lithic/Tool Scatter / Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	a) Potential Historic Property	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.

Table HCA-5: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial	County	Generalized Resource Description/ Resource Type	NRHP Recommendation	Project Route(s)	Project Component	Land ownership	Applicable EFSC Standard	Project Impacts and Management Comments
B2H-EE-38	Malheur	Lithic/Tool Scatter / Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	a) Potential Historic Property	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.
B2H-SA-29	Malheur	Lithic Scatter / Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	a) Potential Historic Property	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.
B2H-SA-42	Malheur	Quarry / Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	a) Potential Historic Property	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.
B2H-SA-44	Malheur	Lithic/Tool Scatter / Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	a) Potential Historic Property	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.
N/A	Malheur	Quarry, Refuse Scatter, & Water Conveyance /Multicomponent Archaeological Site	Pre-Contact Component: Eligible (Criterion D), Not Eligible (Criteria A – C); Historic Component: Not Eligible	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	a) Historic Property	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Data Recovery.

Table HCA-5: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial	County	Generalized Resource Description/ Resource Type	NRHP Recommendation	Project Route(s)	Project Component	Land ownership	Applicable EFSC Standard	Project Impacts and Management Comments
3B2H-SA-27	Malheur	Lithic Scatter & Refuse Scatter /Multicomponent Archaeological Site	Pre-Contact Component: Eligible (Criterion D), Not Eligible (Criteria A – C); Historic Component: Not Eligible	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	a) Historic Property	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Data Recovery.
4B2H-EK-48	Malheur	Quarry & Refuse Scatter / Multicomponent Archaeologic al Site	Pre-Contact Component: Eligible (Criterion D), Not Eligible (Criteria A – C); Historic Component: Not Eligible	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	a) Historic Property	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Data Recovery.
4B2H-EK-50	Malheur	Lithic Scatter & Refuse Scatter /Multicomponent Archaeological Site	Pre-Contact Component: Eligible (Criterion D), Not Eligible (Criteria A – C); Historic Component: Not Eligible	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	a) Historic Property	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Data Recovery.
35ML1522	Malheur	Open Camp / Pre-Contact Archaeologic al Site	Unevaluated/Likely Eligible (from Table S-2: Not in accessible survey area.)	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	Unknown - Not identified during pedestrian survey. Requires additional survey to determine if subject to a) Historic Property.	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Data Recovery.

Table HCA-5: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial	County	Generalized Resource Description/ Resource Type	NRHP Recommendation	Project Route(s)	Project Component	Land ownership	Applicable EFSC Standard	Project Impacts and Management Comments
VM-11-01	Malheur	Groundstone / Pre-Contact IF/ Archaeological Object	Unevaluated/Likely Eligible (from Table S-2:Not identified.)	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	Unknown - Not identified during pedestrian survey. Requires additional survey to determine if subject to a) Historic Property.	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.
2B2H-SA ISO-14	Malheur	Refuse / Historic IF/ Archaeological Object	Unevaluated/Likely Eligible (from Table S-2:Not Eligible)	Double Mountain Alternative	Direct Analysis Area (Construction Footprint)	BLM	None - Archaeological object not eligible for NRHP. Federal land.	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed (IF).
3B2H-SA ISO-35	Malheur	Debitage / Pre-Contact IF/ Archaeological Object	Unevaluated/Likely Eligible (from Table S-2:Not Eligible)	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	None - Archaeological object not eligible for NRHP. Federal land.	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed (IF).
6B2H-SA ISO-01	Malheur	Debitage / Pre-Contact IF/ Archaeological Object	Unevaluated/Likely Eligible (from Table S-2:Not Eligible)	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	None - Archaeological object not eligible for NRHP. Federal land.	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed (IF).
B2H-EE-ISO-23	Malheur	Debitage / Pre-Contact IF/ Archaeological Object	Unevaluated/Likely Eligible (from Table S-2:Not Eligible)	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	None - Archaeological object not eligible for NRHP. Federal land.	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed (IF).

Table HCA-5: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial	County	Generalized Resource Description/ Resource Type	NRHP Recommendation	Project Route(s)	Project Component	Land ownership	Applicable EFSC Standard	Project Impacts and Management Comments
B2H-SA-ISO-39	Malheur	Debitage / Pre-Contact IF/ Archaeological Object	Unevaluated/Likely Eligible (from Table S-2:Not Eligible)	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	None - Archaeological object not eligible for NRHP. Federal land.	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed (IF).
B2H-SA-ISO-52	Malheur	Debitage / Pre-Contact IF/ Archaeological Object	Unevaluated/Likely Eligible (from Table S-2:Not Eligible)	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	None - Archaeological object not eligible for NRHP. Federal land.	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed (IF).
B2H-SA-ISO-54	Malheur	Debitage / Pre-Contact IF/ Archaeological Object	Unevaluated/Likely Eligible (from Table S-2:Not Eligible)	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	None - Archaeological object not eligible for NRHP. Federal land.	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed (IF).
6B2H-SA-01	Malheur	Mining / Historic Archaeological Site	Unevaluated/Likely Eligible (from Table S-2:Not Eligible)	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	None - Archaeological site not eligible for NRHP. Federal land.	Potential direct/indirect impact. Avoid direct impact until eligibility determined.
6B2H-SA-02	Malheur	Refuse Scatter / Historic Archaeological Site	Unevaluated/Likely Eligible (from Table S-2:Not Eligible)	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	None - Archaeological site not eligible for NRHP. Federal land.	Potential direct/indirect impact. Avoid direct impact until eligibility determined.
B2H-SA-31	Malheur	Refuse Scatter / Historic Archaeological Site	Unevaluated/Likely Eligible (from Table S-2:Not Eligible)	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	None - Archaeological site not eligible for NRHP. Federal land.	Potential direct/indirect impact. Avoid direct impact until eligibility determined.

Table HCA-5: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial	County	Generalized Resource Description/ Resource Type	NRHP Recommendation	Project Route(s)	Project Component	Land ownership	Applicable EFSC Standard	Project Impacts and Management Comments
Kingman Lateral	Malheur	Water Conveyance /Historic Site/Aboveground	No historic or archaeological evidence identified during survey. Identified through historic map review.	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM, BLM, BLM, BR, BR, BR, BR, PV	None - Identified through historic map review. No physical evidence.	Potential direct/indirect impact. Avoid direct impact until eligibility determined.
Ontario to Burns Freight Road	Malheur	Road / Historic Archaeological Site	No historic or archaeological evidence identified during survey. Identified through historic map review.	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM, PV	None - Identified through historic map review. No physical evidence.	Potential direct/indirect impact. Avoid direct impact until eligibility determined.
3B2H-SA-26	Malheur	Lithic/Tool Scatter / Pre-Contact Archaeological Site	Eligible (Criterion D); Not Eligible (Criteria A – C)	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	a) Historic Property	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Data Recovery.
3B2H-SA-28	Malheur	Quarry / Pre-Contact Archaeological Site	Eligible (Criterion D); Not Eligible (Criteria A – C)	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	a) Historic Property	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Data Recovery.
3B2H-SA-30	Malheur	Quarry / Pre-Contact Archaeological Site	Eligible (Criterion D); Not Eligible (Criteria A – C)	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	a) Historic Property	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Data Recovery.
3B2H-SA-31	Malheur	Quarry / Pre-Contact Archaeological Site	Eligible (Criterion D); Not Eligible (Criteria A – C)	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	a) Historic Property	Potential direct/indirect impact. Avoid direct impact until eligibility

Table HCA-5: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial	County	Generalized Resource Description/ Resource Type	NRHP Recommendation	Project Route(s)	Project Component	Land ownership	Applicable EFSC Standard	Project Impacts and Management Comments
								determined. Data Recovery.
4B2H-EK-42	Malheur	Lithic/Tool Scatter / Pre-Contact Archaeological Site	Eligible (Criterion D); Not Eligible (Criteria A – C)	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	a) Historic Property	Data Recovery. Potential direct/indirect impact. Avoid direct impact until eligibility determined.
4B2H-EK-49	Malheur	Lithic Scatter / Pre-Contact Archaeological Site	Eligible (Criterion D); Not Eligible (Criteria A – C)	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	a) Historic Property	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Data Recovery.
4B2H-EK-51	Malheur	Lithic Scatter / Pre-Contact Archaeological Site	Eligible (Criterion D); Not Eligible (Criteria A – C)	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	a) Historic Property	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Data Recovery.
4B2H-EK-52	Malheur	Lithic Scatter / Pre-Contact Archaeological Site	Eligible (Criterion D); Not Eligible (Criteria A – C)	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	a) Historic Property	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Data Recovery.
4B2H-EK-53	Malheur	Lithic Scatter / Pre-Contact Archaeological Site	Eligible (Criterion D); Not Eligible (Criteria A – C)	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	a) Historic Property	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Data Recovery.

Table HCA-5: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial	County	Generalized Resource Description/ Resource Type	NRHP Recommendation	Project Route(s)	Project Component	Land ownership	Applicable EFSC Standard	Project Impacts and Management Comments
6B2H-SA-04	Malheur	Quarry / Pre-Contact Archaeological Site	Eligible (Criterion D); Not Eligible (Criteria A – C)	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM	a) Historic Property	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Data Recovery.
35ML00552 (Ali-Alk Stacked Stone Rings)	Malheur	Stone rings / Pre-Contact Archaeological Site	Eligible	Proposed Route	Visual Assessment analysis area	PV	a) Historic Property; b) Archaeological site on private land	Potential visual impact
N/A	Malheur/ O wyhee	Quarry / Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM, PV	a) Potential Historic Property; b) Archaeological site on private land	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.
N/A	Morrow	Midden / Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Visual Assessment analysis area	FWS	a) Potential Historic Property	Potential visual impact
N/A	Morrow	Shell Midden & Temporary Camp/Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Visual Assessment analysis area	FWS	a) Potential Historic Property	Potential visual impact
35MW00011	Morrow	Midden /Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Visual Assessment analysis area	FWS	a) Potential Historic Property	Potential visual impact
35MW00248	Morrow	Cairn(s) /Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Visual Assessment analysis area	PV	a) Potential Historic Property; b) Archaeological site on private land	Potential visual impact

Table HCA-5: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial	County	Generalized Resource Description/ Resource Type	NRHP Recommendation	Project Route(s)	Project Component	Land ownership	Applicable EFSC Standard	Project Impacts and Management Comments
126CSF-Resource 11	Morrow	Survey Marker / Historic Archaeological Site	Unevaluated/Likely Eligible (from Table S-2:Not identified.)	West of Bombing Range Road Alternative 1	Direct Analysis Area (Construction Footprint)	PV	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	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.
126CSF-Resource 4	Morrow	Road / Historic Archaeological Site	Unevaluated/Likely Eligible (from Table S-2:Not identified.)	Proposed Route	Direct Analysis Area (Construction Footprint)	DOD	Unknown - Not identified during pedestrian survey. Requires additional survey to determine if subject to a) Historic Property.	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.

Table HCA-5: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial	County	Generalized Resource Description/ Resource Type	NRHP Recommendation	Project Route(s)	Project Component	Land ownership	Applicable EFSC Standard	Project Impacts and Management Comments
4-2-IF	Morrow	Refuse / Historic IF/Archaeologic al Object	Unevaluated/Likely Eligible (from Table S-2:Not identified.)	Proposed Route	Direct Analysis Area (Construction Footprint)	PV	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.	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.
CFR 1064 (Vey Ranch)	Morrow	Ranch / Historic Site/ Aboveground	Eligible (Criterion A)	Proposed Route	Visual Assessment analysis area	PV	a) Historic Property	Potential visual impact. NRHP nomination and/or public interpretation/fundi ng
UPRR	Morrow, Umatilla, Union, Baker, Malheur	Railroad / Archaeological Site & Historic Site/ Aboveground	Multiple Segments, varying eligibility recommendations)	Proposed Route	Direct Analysis Area (Construction Footprint)	PV	a) Potential Historic Property; b) Archaeological site on private land	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.
SL-UM-010 (Lookout T2S, R34E, S 18)/ Historic Lookout Tower	Umatilla	Forestry / Historic Archaeological Site	Unevaluated	Proposed Route	Visual Assessment analysis area	BIA	a) Potential Historic Property	Potential visual impact
6B2H-MC-13	Umatilla	Cairn(s) /Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Direct Analysis Area (Construction Footprint)	PV	a) Potential Historic Property; b) Archaeological	Potential direct/indirect impact. Avoid direct impact until eligibility

Table HCA-5: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial	County	Generalized Resource Description/ Resource Type	NRHP Recommendation	Project Route(s)	Project Component	Land ownership	Applicable EFSC Standard	Project Impacts and Management Comments
							site on private land	determined. Consultation Needed.
6B2H-MC-14	Umatilla	Refuse Scatter & Structure/ Historic Archaeological Site	Unevaluated	Proposed Route	Direct Analysis Area (Construction Footprint)	PV	a) Potential Historic Property; b) Archaeological site on private land	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.
6B2H-MC-15	Umatilla	Cairn(s) /Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Direct Analysis Area (Construction Footprint)	PV	a) Potential Historic Property; b) Archaeological site on private land	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Consultation Needed.
6B2H-MC-18	Umatilla	Cairn(s) / Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Direct Analysis Area (Construction Footprint)	PV	a) Potential Historic Property; b) Archaeological site on private land	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.
6B2H-MC-19	Umatilla	Cairn(s) / Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Direct Analysis Area (Construction Footprint)	PV	a) Potential Historic Property; b) Archaeological site on private land	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.
6B2H-MC-23	Umatilla	Hunting Blind / Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Direct Analysis Area (Construction Footprint)	PV	a) Potential Historic Property; b) Archaeological site on private land	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.

Table HCA-5: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial	County	Generalized Resource Description/ Resource Type	NRHP Recommendation	Project Route(s)	Project Component	Land ownership	Applicable EFSC Standard	Project Impacts and Management Comments
6B2H-MC-30	Umatilla	Cairn(s) / Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Direct Analysis Area (Construction Footprint)	PV	a) Potential Historic Property; b) Archaeological site on private land	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.
6B2H-MC-31	Umatilla	Cairn(s) /Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Direct Analysis Area (Construction Footprint)	PV	a) Potential Historic Property; b) Archaeological site on private land	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.
6B2H-TH-01	Umatilla	Cairn(s) / Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Direct Analysis Area (Construction Footprint)	PV	a) Potential Historic Property; b) Archaeological site on private land	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.
6B2H-TH-04	Umatilla	Cairn(s) / Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Direct Analysis Area (Construction Footprint)	PV	a) Potential Historic Property; b) Archaeological site on private land	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.
N/A	Umatilla	Cabin / Multicomponent Archaeological Site	Unevaluated	Proposed Route	Visual Assessment analysis area	CTUIR	a) Potential Historic Property	Potential visual impact
UP-106	Umatilla	Cabin /Historic Archaeological Site	Unevaluated	Proposed Route	Visual Assessment analysis area	CTUIR	a) Potential Historic Property	Potential visual impact

Table HCA-5: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial	County	Generalized Resource Description/ Resource Type	NRHP Recommendation	Project Route(s)	Project Component	Land ownership	Applicable EFSC Standard	Project Impacts and Management Comments
N/A	Umatilla	Cairn(s) /Pre-Contact Archaeological Site	Eligible (Criteria TBD)	Proposed Route	Visual Assessment analysis area	BIA	a) Historic Property	Potential visual impact
Range Unit 12 Site 2	Umatilla	Cairn(s) / Pre-Contact Archaeological Site	Eligible (Criteria TBD)	Proposed Route	Visual Assessment analysis area	BIA	a) Historic Property	Potential visual impact
UP-102	Umatilla	Structure(s) Historic Site/ Aboveground	Eligible (Criteria TBD)	Proposed Route	Visual Assessment analysis area	BIA	a) Historic Property	Potential visual impact
B2H-UM-006 /Daly Wagon Road	Umatilla	Wagon Road / Historic Site/ Aboveground	Eligible (Criteria A and C)	Proposed Route	Direct Analysis Area (Construction Footprint); Visual Assessment analysis area	BIA, BLM, BLM, BLM, BLM, BLM, PV	a) Historic Property	Potential visual impact. Public Interpretation, Funding, Print/Media Publication
35UN00459	Union	Rock Cairn / Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Visual Assessment analysis area	PV	a) Potential Historic Property; b) Archaeological site on private land	Potential cumulative visual impact
35UN00493	Union	Rock Alignment Undetermined Archaeological Site	Unevaluated	Proposed Route	Visual Assessment analysis area	PV	a) Potential Historic Property; b) Archaeological site on private land	Potential cumulative visual impact

Table HCA-5: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial	County	Generalized Resource Description/ Resource Type	NRHP Recommendation	Project Route(s)	Project Component	Land ownership	Applicable EFSC Standard	Project Impacts and Management Comments
6B2H-MC-07/6B2H-MC-07 / Clover Creek Valley Homestead	Union	Homestead /Historic/Abovegound	Unevaluated	Proposed Route	Visual Assessment analysis area	PV	a) Potential Historic Property	Potential visual impact. Additional Research; Design Modification; Public Interpretation Funding, and/or Print/Media Publication
N/A	Union	Lithic/Tool Scatter, Homestead, & Refuse Scatter/ Multicomponent Archaeological Site	Unevaluated	Proposed Route	Direct Analysis Area (Construction Footprint)	PV	a) Potential Historic Property; b) Archaeological site on private land	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.
6B2H-MC-06	Union	Cairn(s) & Lithic/Tool Scatter/ Pre-Contact Archaeological Site	Unevaluated	Proposed Route	Direct Analysis Area (Construction Footprint)	PV	a) Potential Historic Property; b) Archaeological site on private land	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.
6B2H-RP-08	Union	Cairn(s) /Pre-Contact Archaeological Site	Unevaluated	Morgan Lake Alternative	Direct Analysis Area (Construction Footprint)	PV	a) Potential Historic Property; b) Archaeological site on private land	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Consultation Needed.
6B2H-RP-10	Union	Cairn(s) / Historic Archaeological Site	Unevaluated	Morgan Lake Alternative	Direct Analysis Area (Construction Footprint)	PV	a) Potential Historic Property; b) Archaeological site on private land	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Consultation Needed.

Table HCA-5: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial	County	Generalized Resource Description/ Resource Type	NRHP Recommendation	Project Route(s)	Project Component	Land ownership	Applicable EFSC Standard	Project Impacts and Management Comments
B2H-SA-24	Union	Rock Alignment /Undetermined Archaeological Site	Unevaluated	Morgan Lake Alternative	Direct Analysis Area (Construction Footprint)	PV	a) Potential Historic Property; b) Archaeological site on private land	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Consultation Needed.
35UN0097	Union	Temporary Camp & Ranching / Multicomponent Archaeological Site	Pre-Contact Component: Eligible (Criterion D). Historic Component: Not Eligible	Morgan Lake Alternative	Direct Analysis Area (Construction Footprint)	PV	a) Historic Property; b) Archaeological site on private land	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Data Recovery.
N/A	Union	Lithic Scatter / Pre-Contact Archaeological Site	Unevaluated/Likely Eligible (from Table S-2: Not in accessible survey area.)	Proposed Route	Direct Analysis Area (Construction Footprint)	PV	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	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.

Table HCA-5: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial	County	Generalized Resource Description/ Resource Type	NRHP Recommendation	Project Route(s)	Project Component	Land ownership	Applicable EFSC Standard	Project Impacts and Management Comments
ISO-001	Union	Logging / Historic IF/ Archaeologic al Object	Unevaluated/Likely Eligible (from Table S-2: Not in accessible survey area.)	Proposed Route	Direct Analysis Area (Construction Footprint)	PV	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.	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.
35UN0280	Union	Lithic Scatter / Pre-Contact Archaeological Site	Unevaluated/Likely Eligible (from Table S-2:Not identified.)	Proposed Route	Direct Analysis Area (Construction Footprint)	USFS	Unknown - Not identified during pedestrian survey. Requires additional survey to determine if subject to a) Historic Property.	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.
B2H-BS-102	Union	Utility Line / Historic Site	Unevaluated/Likely Eligible (from Table S-2:Not Eligible)	Proposed Route	Direct Analysis Area (Construction Footprint)	USFS	None - Archaeological site not eligible for NRHP. Federal land.	Potential direct/indirect impact. Avoid direct impact until eligibility determined.

Table HCA-5: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial	County	Generalized Resource Description/ Resource Type	NRHP Recommendation	Project Route(s)	Project Component	Land ownership	Applicable EFSC Standard	Project Impacts and Management Comments
Segment 6B2H-RP-09	Union	Cairn(s) & Trail Segment / Historic Archaeological Site	Eligible, Contributing (Criterion A); Unevaluated (Criterion D); Not Eligible (Criteria B and C)	Proposed Route	Direct Analysis Area (Construction Footprint); Visual Assessment analysis area	PV	a) Historic Property; b) Archaeological site on private land	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.
35UN0052 (Stockhoff Basalt Quarry Site)	Union	Cairn(s), Quarry, & Homestead /Multicomponent Archaeological Site	Eligible (Criterion D)	Proposed Route	Direct Analysis Area (Construction Footprint)	BLM, PV	a) Historic Property; b) Archaeological site on private land	Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.

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Based on the above presentation of other resources inventoried and potentially impacted and protected under OAR 345-022-0090(1)(a), and subject to Recommended Historic, Cultural, and Archaeological Resources Condition 2 which accounts for mitigation for impacts to these resources, the Department recommends the Council find that the construction and operation of the proposed facility is not likely to result in significant adverse impacts to resources protected under OAR 345-022-0090(1)(a).

IV.K.2. Potential Impacts to Historic, Cultural, and Archaeological Resources Under OAR 345-022-0090(1)(b)

Under OAR 345-022-0090(1)(b), for a proposed facility located on private land, 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 archaeological objects, as defined in ORS 358.905(1)(a)[398], or archaeological sites, as defined in 358.905(1)(c).[399] The applicant explains that to maintain consistency with studies completed for the ASC Exhibit S for Council's evaluation and for the federal regulatory compliance, it assumed historic archaeological objects and sites must have been constructed or created 50 years ago or more, compared to 75 years as identified in 358.905(1)(a).[400] The Department notes that this approach is conservative and may over-estimate the amount of resources identified and potentially evaluated under the EFSC standard in this section.

This section evaluates resources identified in ASC Exhibit S, Table S-2 that only have a designation of protection under OAR 345-022-0090(1)(b). Several resources in Table S-2 state that they may be protected under (a) and (b) of the standard. As discussed in the beginning of this section, 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 Department anticipates that several resources will result in a final determination of "not eligible", therefore not protected under OAR 345-022-0090(1)(a), however, the resources may qualify for protections under OAR 345-022-0090(1)(b) because they may meet the definition of archaeological objects or archaeological sites as defined in statute. This information will be submitted to the Department of as outlined in Recommended Historic, Cultural, and Archaeological Resources 2, discussed below. The measures for impact

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[398] 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."

[399] (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.

[400] B2HAPPDoc3-36 ASC 19_Exhibit S_Cultural_ASC_Public 2018-09-28. Section 3.4.2.

avoidance, minimization and mitigation for these resources as outlined in this section and in the framework HPMP, would extend to any resources not covered under OAR 345-022-0090(1)(a) but protected under OAR 345-022-0090(1)(b).

Table HCA-6, *Inventoried Resources under OAR 345-022-0090(1)(b)*, includes resources that the applicant recommends as not eligible for listing on the NRHP, but that may be evaluated and protected under OAR 345-022-0090(1)(b). If the lead federal agency disagrees with the not eligible determination, the resource would be considered eligible for listing on the NRHP and therefore protected under OAR 345-022-0090(1)(a), and addressed as such in the framework HPMP. However, the Department is presenting an evaluation of the resources that may qualify under OAR 345-022-0090(1)(b) in Table HCA-6. Specific resource and site descriptions are provided in ASC Exhibit S Attachment S-6, Cultural Resources Technical Report. Pursuant to ORS 192.501(11) Information concerning the location of archaeological sites or objects are exempt from public disclosure, the applicant therefore submits this information under a confidential cover and the Department maintains the information confidential to the fullest extent of the law.

The types of resources listed in the below table will not likely be eligible for listing on the NRHP because they do not have or lack contributing attributes under the four criteria that must be evaluated by SHPO and the lead feral agency for listing on the NRHP. The Department provides a summary of the type of resource and a brief description that is provided in the confidential ASC Exhibit S Attachment S-6. The Department provides this information for Council to evaluate the merits of the protection under its standard. Location information these resources is not provide consistent with ORS 192.501(11).

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Table HCA-6: Inventoried Resources under OAR 345-022-0090(1)(b)

Cultural Resources Pedestrian Survey Temporary Resource #	County	Resource Type	Generalized Resource Description (Attachment S-6)	Project Route(s)	Project Component	Protected Under OAR 345-022-0090(1)(b)	Potential Impact	Management Recommendation
35BA1351 / B2H-JF-13	Baker	Archaeological Site	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.	Proposed Route	Direct Analysis Area (Construction Footprint)	No	May be directly impacted	No further management.
6B2H-RP ISO-01	Baker	IF/ Archaeological Object	Pre-Contact /Utilized Flake(s): Isolated Find consists of single piece of pre-contact debitage, a secondary obsidian flak	Proposed Route	Direct Analysis Area (Construction Footprint)	No	May be directly impacted	Shovel probe to confirm isolated nature.
6B2H-RP ISO-02	Baker	IF/ Archaeological Object	Pre-Contact /Debitage: Isolated Find consists of three pieces of pre-contact debitage, all tertiary chert flakes	Proposed Route	Direct Analysis Area (Construction Footprint)	No	Will be directly impacted	Shovel probe to confirm isolated nature.
6B2H-RP ISO-03	Baker	IF/ Archaeological Object	Pre-Contact /Debitage: Isolated Find consists of a pre-contact obsidian bifacial thinning flake. The flake appears medially fractured.	Proposed Route	Direct Analysis Area (Construction Footprint)	No	May be directly impacted	Shovel probe to confirm isolated nature.
6B2H-SA ISO-05	Baker	IF/ Archaeological Object	Historic/ Refuse: Isolated Find includes aqua glass insulator fragment, sanitary can (meat type), and	Proposed Route	Direct Analysis Area (Construction Footprint)	No	May be directly impacted	Shovel probe to confirm isolated nature.

Table HCA-6: Inventoried Resources under OAR 345-022-0090(1)(b)

Cultural Resources Pedestrian Survey Temporary Resource #	County	Resource Type	Generalized Resource Description (Attachment S-6)	Project Route(s)	Project Component	Protected Under OAR 345-022-0090(1)(b)	Potential Impact	Management Recommendation
			several brown, glazed ceramic sherds.					
6B2H-SA ISO-06	Baker	IF/ Archaeological Object	Pre-Contact /Debitage: Isolated Find consists of a single piece of pre-contact debitage, an obsidian tertiary flake	Proposed Route	Direct Analysis Area (Construction Footprint)	No	May be directly impacted	Shovel probe to confirm isolated nature.
3B2H-CH-03	Baker	Archaeological Site	Historic/Mining: historic mining area with three prospect pits and one tailings pile.	Proposed Route	Direct Analysis Area (Construction Footprint)	No	May be directly impacted	No further management.
6B2H-MC-03	Baker	Archaeological Site	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	Proposed Route	Direct Analysis Area (Construction Footprint)	Potentially	Avoid. May be directly impacted pending determination and mitigation	Avoid, SHPO determination, See HPMP.
6B2H-RP-05	Baker	Archaeological Site	Historic/Ranching: corral (appears to be in use), windmill (collapsed), and refuse scatter of concrete blocks	Proposed Route	Direct Analysis Area (Construction Footprint)	No	May be directly impacted	No further management.
6B2H-SA-06	Baker	Archaeological Site	Historic/Farmstead: standing and collapsed buildings, two refuse concentrations, a hay storage/feed structure, two caches of farming equipment, and an auto body.	Proposed Route	Direct Analysis Area (Construction Footprint)	Potentially	Avoid. May be directly impacted pending determination and mitigation	Avoid, SHPO determination, See HPMP.

Table HCA-6: Inventoried Resources under OAR 345-022-0090(1)(b)

Cultural Resources Pedestrian Survey Temporary Resource #	County	Resource Type	Generalized Resource Description (Attachment S-6)	Project Route(s)	Project Component	Protected Under OAR 345-022-0090(1)(b)	Potential Impact	Management Recommendation
B2H-SA-30	Malheur	Archaeological Site	Historic/Refuse Scatter: varied historic refuse scatter of cans, glass bottles and shards, crockery, miscellaneous items, and farm machinery.	Proposed Route	Direct Analysis Area (Construction Footprint)	No	May be directly impacted	No further management.
6B2H-RP ISO-10	Umatilla	IF/ Archaeological Object	Historic/Refuse: Isolated Find consists of single piece of historic refuse: an aqua glass insulator fragment.	Proposed Route	Direct Analysis Area (Construction Footprint)	No	May be directly impacted	Shovel probe to confirm isolated nature.
6B2H-RP ISO-11	Umatilla	IF/ Archaeological Object	Historic/Refuse: Isolated Find consists of several clear glass bottle fragments.	Proposed Route	Direct Analysis Area (Construction Footprint)	No	May be directly impacted	Shovel probe to confirm isolated nature.
B2H-BS-ISO-25	Umatilla	IF/ Archaeological Object	Pre-Contact /Utilized Flake(s): Isolated Find consists of utilized basalt secondary flake with 10 percent cortex on the dorsal surface.	Proposed Route	Direct Analysis Area (Construction Footprint)	No	May be directly impacted	Shovel probe to confirm isolated nature.
6B2H-MC-16	Umatilla	Archaeological Site	Historic/Utility Line: Consists of five single utility poles (telephone), some with rock jacks	Proposed Route	Direct Analysis Area (Construction Footprint)	No	May be directly impacted	No further management.
6B2H-MC-26	Umatilla	Archaeological Site	Historic/Agriculture: Consists of 20 historic agricultural field clearing rock piles and a potential basalt quarry. Former agricultural field. Sanitary cans and lumber scatter.	Proposed Route	Direct Analysis Area (Construction Footprint)	No	May be directly impacted	No further management.

Table HCA-6: Inventoried Resources under OAR 345-022-0090(1)(b)

Cultural Resources Pedestrian Survey Temporary Resource #	County	Resource Type	Generalized Resource Description (Attachment S-6)	Project Route(s)	Project Component	Protected Under OAR 345-022-0090(1)(b)	Potential Impact	Management Recommendation
6B2H-RP ISO-08	Umatilla	IF/ Archaeological Object	Historic/Agriculture: Isolated Find consists of a small agricultural cache of farming equipment. The cache includes three nearly identical metal discers with grain drills.	Proposed Route	Direct Analysis Area (Construction Footprint)	No	May be directly impacted	Shovel probe to confirm isolated nature.
6B2H-TH-05	Umatilla	Archaeological Site	Historic/Agriculture: consists of eight rock piles from historic agricultural field-clearing	Proposed Route	Direct Analysis Area (Construction Footprint)	No	May be directly impacted	No further management.
6B2H-TH-08	Umatilla	Archaeological Site	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.	Proposed Route	Direct Analysis Area (Construction Footprint)	No	May be directly impacted	No further management.
6B2H-TH-09	Umatilla	Archaeological Site	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.	Proposed Route	Direct Analysis Area (Construction Footprint)	No	May be directly impacted	No further management.

Table HCA-6: Inventoried Resources under OAR 345-022-0090(1)(b)

Cultural Resources Pedestrian Survey Temporary Resource #	County	Resource Type	Generalized Resource Description (Attachment S-6)	Project Route(s)	Project Component	Protected Under OAR 345-022-0090(1)(b)	Potential Impact	Management Recommendation
6B2H-MC-09	Union	Archaeological Site	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.	Morgan Lake Alternative	Direct Analysis Area (Construction Footprint)	No	May be directly impacted	No further management.
6B2H-MC-11	Union	Archaeological Site	Historic/Mining: Consists of a historic prospecting pit, with small tailing pile nearby.	Morgan Lake Alternative	Direct Analysis Area (Construction Footprint)	No	May be directly impacted	No further management.
B2H-BS-49	Union	Archaeological Site	Historic/Ranching: Consists of a historic wooden corral. The corral is rectangular in shape and constructed of natural timbers and milled lumber.	Morgan Lake Alternative	Direct Analysis Area (Construction Footprint)	No	May be directly impacted	No further management.

Based on the above presentation of resources inventoried that may qualify for protection under OAR 345-022-0090(1)(b), applicant proposed archaeological sites 6B2H-MC-03 and 6B2H-SA-06 may qualify as an "archaeological site" under ORS 358.905(1)(c) because they may contain archaeological objects and the contextual associations of the archaeological objects with each other. The Department notes that these sites may be evaluated in the federal Section 106 review and determined eligible for listing on the NRHP, and therefore also protected under OAR 345-022-0090(1)(a). If the lead federal agency concurs with the applicant's recommendation that these sites are not eligible, they may otherwise be protected under OAR 345-022-0090(1)(b). However, the Department recommends the sites either be avoided pending SHPO concurrence with this designation based on final design and any other necessary measures to determine the sites significance. The Department recommends the Council find that sites 6B2H-MC-03 and 6B2H-SA-06 may qualify as an archaeological site and under OAR 345-022-0090(1)(b), therefore impacts shall be avoided or mitigated pending the concurrence from SHPO as specifically designated in Recommended Historic, Cultural, and Archaeological Resources Condition 2, discussed below.

The Department also recommends Council find that all other resources listed in HCA-6 do not qualify as an archaeological object or site under ORS 358.905(1)(a) and 358.905(1)(c), therefore OAR 345-022-0090(1)(b) does not apply to these resources.

The Department recommends Council find that, subject to Recommended Historic, Cultural, and Archaeological Resources Condition 2, the construction and operation of the proposed facility is not likely to result in significant adverse impacts to resources protected under OAR 345-022-0090(1)(b).

IV.K.3. 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).[401] 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*, in Section IV.K.2 above. There will not be direct or indirect impacts to this resource, therefore, OAR 345-022-0090(1)(c) does not apply.

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[401] 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.

IV.K.4. Mitigation for Historic, Cultural, and Archaeological Resources: Historic Properties Management Plan (HPMP)

As discussed in this section and in Section III.D., the applicant prepared an EFSC-specific Historic Properties Management Plan (HPMP) in addition to the HPMP developed for the federal Section 106 compliance review, as designated in the Programmatic Agreement (PA). The HPMP is included as Attachment S-9 to the ASC and to this order and serves as a framework for how to address resource surveys, evaluate impacts to resources, avoid, minimize and mitigate impacts to resources protected under OAR 345-022-0090. After the application was deemed complete and pursuant to OAR 345-015-0190(9), the applicant provided two Errata for Exhibit S, one provided additional descriptions of Oregon Trail segments inventoried and the other Errata was to the HPMP, clarifying specific avoidance and mitigation measures included.[402]

Section 1.1 of the HPMP outlines the framework and purposes of the Historic Properties Management Plan including but not limited to:

- Summarize methods for determination and documentation of impacts/effects that have been used to inventory and evaluate resources and will be used in the event of inadvertent discoveries;
- Document the measures the applicant has taken and will take to avoid and minimize impacts to resources protected by EFSC's standards;
- Document the applicant's goals for managing and protecting resources subject to EFSC standards within the analysis area;
- Provide management guidelines for categories of impacts to cultural resources protected by EFSC's standards;
- Present a Monitoring Plan 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), which specifies the procedures to follow in the event that resources are found during construction, reclamation, and O&M, which were not detected during surveys conducted prior to ground-disturbing activities

In the HPMP Attachment S-9 Errata and in Table HCA-3 of this order, the applicant proposes avoidance measures to avoid direct impacts to Oregon Trail/NHT resources. To also address resource evaluation, impact minimization and mitigation the HPMP serves as a framework to guide how this will be applied based on the resource type and whether a direct or indirect impact is expected. Table HCA-7 through Table HCA-9 outline these items.

[402] Attachment S-9, HPMP, to this order includes the Errata to the HPMP.

Table HCA-7: Potential Minimization and Mitigation of Direct Impacts to Resource Site Types Identified within the Direct Analysis Area*

Site Type	Potential Minimization/Mitigation Measure
Pre-Contact Sites	
Lithic Scatter, Lithic/Tool Scatter, Quarry, 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,
Multicomponent Sites	
Lithic Scatter/Tool & Refuse Scatter, Ranching Complex, Water Conveyance, Possible Rock Art, Utility Line, Quarry & Refuse Scatter, 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.).
Historic-Era Sites	
Agriculture, Bridge, Homestead, Ranching, Logging Railroad, Mining, Railroad and Utility Line, Refuse Scatter, Road, Structure, Survey Marker, Trail Segment, Water Conveyance	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.).
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.).

* 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.

Table HCA-8 Potential Minimization and Mitigation Methods for Indirect Impacts*

Resource Category	Example Resource Types	Potential Management Methods for Indirect Impacts
Trails (NHT, stage trails, freight roads, etc.)	• Trail remnants/ segments • Associated trail sites or features (stations, burials, inscriptions)	• 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
Historic Buildings and Structures	• Farm and ranch sites/homesteads • Historic districts • Utility lines • Water conveyance systems • Mining sites • Bridges, etc.	• 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)	• Ceremonial areas • Vision quest sites • Hunting and gathering areas	• Additional literature/archival review • Ethnographic documentation • Oral histories • Public archaeology funding • As recommended by impacted tribes

* 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.

Table HCA-9 Potential Minimization and Mitigation Methods for Indirect and Direct Impacts to Aboveground Resources*

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
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.

* 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.

Attachment S-9 and the HPMP Errata compile the applicant's framework for historic, cultural, and archaeological resources. However, the Department refers to the discussion titled, *Aligning EFSC and Section 106 Review: ORS 469.370(13)*, in this order and points out that this concept and process was not contemplated in the applicant's versions of the HPMP. 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, and as such, this is not reflected in

the applicant's proposal. Further, the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) and the applicant finalized their agreement and submitted a letter to the Department after the ASC was deemed complete and after the ASC Errata was received from the applicant, therefore many of the consultation efforts referenced in the ASC have been resolved pursuant to the confidential mitigation agreement between the Tribe and applicant. To reflect the aforementioned process updates and to better account for the information that will be required to be submitted in the final HPMP, the Department recommends the Council adopt Recommended Historic, Cultural, and Archaeological Resources Condition 2, outlined 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 also recommends that the final HPMP follow the guidance and framework for resource management outlined in the Attachment S-9 and in the tables in this section. Finally, the Department recommends Historic, Cultural, and Archaeological Resources Condition 3, which would obligate the certificate holder to submit to the Department within one year of facility operation a final Cultural Resources Technical Report, which would include, in a single consolidated document, the results of all construction monitoring, unanticipated discovery testing results, and other relevant information as described in the condition.

Based on the analysis above, the Department recommends the Council adopt the following conditions:

Recommended Historic, Cultural, and Archaeological Resources Condition 2: Prior to construction of a phase or segment of the facility, subject to confidential material submission procedures, and based on 1) new survey data from previously unsurveyed areas and 2) the final design of the proposed facility, the certificate holder shall submit to the Department, the State Historic Preservation Office (SHPO), and applicable Tribal Governments, for review and Department approval a final Historic Properties Management Plan (HPMP).

1. The final HPMP shall include:
    a. The provisions outlined in the Attachment S-9 to the Final Order on the ASC, updated as applicable;
    b. A revised High Probability Areas Assessment and revised Inadvertent Discovery Plan;
    c. Updated information to reflect process updates described in the Final Order on the ASC with respect to EFSC historic, cultural, and archaeological resource information to align with the Section 106 federal review;

d. Final eligibility determinations for newly identified resources and previously inventoried resources, with supporting documentation (final Cultural Resources Technical Report, ILS, RLS), from the lead federal agencies;
    i. Based on the final eligibility determinations, identify which resources qualify for protections under OAR 345-022-0090(1)(a) through (c);
    ii. Submit a revised table of resources inventoried including, at a minimum, the resource information included in ASC Exhibit S, Table S-2 or Table HCA-3 of the Final Order on the ASC;
e. Identification of resources not protected under OAR 345-022-0090(1)(a) due to a final eligibility determination of "not eligible for listing on the National Register of Historic Properties (NRHP)," yet may qualify for protections under OAR 345-022-0090(1)(b) or (c). The HPMP shall also include the following information for resources under OAR 345-022-0090(1)(b) for Department approval, in consultation with SHPO:
    i. Applicant recommendations and supporting documentation to demonstrate if the resource qualifies as an archaeological object or site under ORS 358.905(1)(a) and ORS 358.905(1)(c).
    ii. A proposed site-specific impact assessment including avoidance, minimization and/or mitigation measures for the resource.
f. Final site-specific impact (direct and indirect) avoidance measures and an impact assessment for a phase or segment of the facility, or specific facility component, including avoidance measures in Historic, Cultural, and Archaeological Resources Condition 1;
g. Final site-specific impact (direct and indirect) minimization measures based on final design of a phase or segment of the facility, or specific facility component;
h. Final site-specific impact (direct and indirect) mitigation measures based on final design of a phase or segment of the facility, or specific facility component;

2. The certificate holder shall conduct all construction activities in compliance with the final Department-approved HPMP.

In ASC Exhibit S, the applicant provides a description of the activities it will conduct prior to, during and after construction of the proposed facility. The applicant also proposes site certificate conditions that reflect the submission, review and approval of survey information, and the HPMP. The Department notes that, as discussed above and captured in Recommended Historic, Cultural, and Archaeological Resources Condition 2, the submission of the final HPMP will include the information outlined in the applicant-proposed conditions found in ASC Exhibit S, including the final High Probability Areas Assessment, Cultural Resources Technical Report, Intensive Level Survey (ILS), Reconnaissance Level Survey (RLS), and Inadvertent Discovery Plan. However, the applicant proposes and the Department recommends, with edits, Council adopt Historic, Cultural, and Archaeological Resources Condition 3 which stipulates the submission of implementation, monitoring efforts, and outcomes based in the final HPMP and Inadvertent Discovery Plan.

Recommended Historic, Cultural, and Archaeological Resources Condition 3: Within one year after construction is completed, the certificate holder shall finalize, and submit to the Department for its approval, a final Cultural Resources Technical Report.

a. The results of all cultural resource monitoring required by the Historic Properties Management Plan (HPMP) referenced in Historic, Cultural, and Archaeological Resources Condition 2; and
b. The results of all cultural resources testing or data recovery conducted as a result of unanticipated discoveries as required by the Historic Properties Management Plan and Inadvertent Discovery Plan referenced in Historic, Cultural, and Archaeological Resources.

Conclusions of Law

Based on the foregoing findings of fact, and subject to compliance with the recommended conditions of approval, the Department recommends the Council conclude 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.

IV.L. Recreation: OAR 345-022-0100

(1) Except for facilities described in section (2), to 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.

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Findings of Fact

The Recreation standard requires the Council to find that the design, construction and operation of a facility are not likely to result in significant adverse impacts to 'important' recreational opportunities. Therefore, the Recreation standard applies to only those recreation

areas that the Council finds "important" using the factors listed in the sub-paragraphs of section (1) of the standard. The second amended project order identified the analysis area for the Recreation standard as the area within and extending two miles from the site boundary. The applicant provides evidence about potential impacts to recreation opportunities determined by the applicant to be important in Exhibit T of the ASC. The site boundary is defined as "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 micrositing corridors proposed by the applicant."

OAR 345-022-0100 requires the Council to determine that the design, construction and operation of the proposed facility will not have a significant adverse impact to any recreational opportunities in the analysis area. OAR 345-001-0010(53) defines "significant" as:

> "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 resources 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."

To analyze the proposed facility against this standard, the Department must first evaluate whether the identified recreational opportunity is important. The Department must then evaluate whether the design, construction or operation of the proposed facility could adversely impact the identified important recreational opportunity. If the proposed facility could adversely impact the resource, then the Department must consider the significance of the possible impact using the definition of significance above.

<u>Recreational Opportunities within the Analysis Area</u>

In order to identify "important" recreational opportunities, the applicant first identified recreational opportunities occurring within the two-mile analysis area. This was conducted using data, maps, reports, guide books, websites, and similar sources likely to provide site-specific information about recreational opportunities in the analysis area. The search focused primarily on information sources maintained by likely or potential recreation providers, including federal land management agencies, ODFW and OPRD, county and municipal governments, non-governmental organizations, and private-sector associations with a recreation focus, and included recreational opportunities provided by both public and private-sector entities. The applicant then evaluated each of the identified recreational opportunities against the importance criteria listed in OAR 345-022-0100(1)(a)–(e), which are: 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.

The applicant identified 26 recreation opportunities located within the analysis area. Three recreational opportunities are within the site boundary and are crossed by the proposed facility: The Blue Mountain Forest State Scenic Corridor (Blue Mountain Corridor), Burnt River Extensive Recreation Management Area (ERMA), and the Ladd Marsh Wildlife Area.

The remaining recreation areas are outside the site boundary, but within the two-mile analysis area. ASC Exhibit T, Attachment T-1 includes a set of maps depicting the locations of recreational opportunities within the analysis area. ASC Exhibit T, Attachment T-2 includes a list of the recreational opportunities identified within the analysis area and their distance from and direction to the proposed facility, as well as the alternative routes.

As discussed below, and in accordance with the importance criteria outlined in OAR 345-022-0100(1), the applicant concluded that 21 of the 26 recreational opportunities inventoried are considered important recreational opportunities. The importance assessment for each opportunity considered was based on the combined contribution of all five importance factors, weighed equally. All of the opportunities determined to be important have clear indications of importance for at least two of the five importance factors. The five resources the applicant determined not to be important are considered replaceable, provide relatively common recreation opportunities within the surrounding area, and have relatively limited use and/or capacity; the Department agrees with this assessment and has not carried forward these five recreation opportunities for additional assessment in this section of the order.[403]

Many of the identified important recreation opportunities are also considered EFSC protected areas and/or scenic resources. To reduce repetition, the Department has incorporated the analysis from Section IV.F*, Protected Areas* and Section IV.J*, Scenic Resources*, as appropriate, in the impact assessment section below.

Table R-1 below, recreated from ASC Exhibit T, Table T-1, lists the name of the important recreation opportunities in the analysis area and a summary of the applicant's impact assessment.

Table R-1: Important Recreation Opportunities

Important Recreational Opportunity	Distance to Route Centerline	County
Blue Mountain Forest State Scenic Corridor	Crossed (proposed route)	Union
Ladd Marsh Wildlife Area	Crossed (proposed route)	Union

[403] The assessment of importance for these opportunities, including qualitative ratings for the five importance criteria for each opportunity and the Applicant's conclusions as to whether it determined the opportunity to be important, is documented in Attachment T-3, Table T-3-1. The areas determined to not be "important" in accordance with the EFSC Recreation standard are: Coyote Springs Wildlife Area, Lindsay Prairie Preserve, Blue Mountain Crossing Day-Use Area and Sno-Park, Spring Creek campground, and Blue Bucket Lost Dutchman's mining association camp.

Table R-1: Important Recreation Opportunities

Important Recreational Opportunity	Distance to Route Centerline	County
Burnt River Extensive Recreation Management Area	Crossed (proposed route)	Baker
Grand Tour Scenic Bikeway	Crossed (proposed route)	Morrow and Umatilla
Blue Mountain Scenic Bikeway	Crossed (proposed route)	Union and Baker
Oregon Trail Area of Critical Environmental Concern – National Historic Oregon Trail Interpretive Center Parcel	106 feet (proposed route)	Baker
Ladd Marsh Wildlife Area	208 feet (Morgan Lake alternative)	Union
Owyhee River Below Dam Special Recreation Management Area	250 feet (proposed route)	Malheur
Morgan Lake Park	0.2 mile (Morgan Lake alternative)	Union
Oregon Trail Birch Creek Special Recreation Management Area	0.2 mile (proposed route)	Malheur
Hilgard Junction State Park	0.3 mile (proposed route)	Union
Hilgard Junction State Park	0.4 mile (Morgan Lake alternative)	Union
Deer Flat National Wildlife Refuge – Snake Island Unit	0.4 mile (proposed route)	Malheur
Weiser Dunes Off-highway Vehicle Play Area	0.5 mile (proposed route)	Washington County (Idaho)
Oregon Trail Tub Mountain Special Recreation Management Area	0.5 mile (proposed route)	Malheur
Morgan Lake Park	0.6 mile (proposed route)	Union
Bully Creek Reservoir	0.7 mile (proposed route)	Malheur
Farewell Bend State Recreation Area	0.7 miles (proposed route)	Baker
Snake River Breaks Extensive Recreation Management Area	0.8 mile (proposed route)	Baker
Snake River Islands (Huffman Island) Wildlife Area	0.9 mile (proposed route)	Malheur
Oregon Trail Interpretive Park at Blue Mountain Crossing	1.0 mile (Proposed Route)	Union
Umatilla National Wildlife Refuge	1.3 miles (Proposed Route)	Morrow
Powder River WSR, Area of Critical Environmental Concern	1.4 miles (proposed route)	Union and Baker
Virtue Flat Off-highway Vehicle Area	1.5 miles (proposed route)	Baker

Impact Analysis Methodology

For each recreation opportunity deemed "important," the EFSC standard requires an evaluation of whether there were any significant potential adverse impacts based on, but not limited to, the following:

(i) Direct or indirect loss of a recreational opportunity as a result of facility construction or operation.
(ii) Noise resulting from facility construction or operation.
(iii) Increased traffic resulting from facility construction or operation.
(iv) Visual impacts of facility structures or plumes.[404]

As with the EFSC Protected Areas standard and Scenic Resources standard, the EFSC rules do not prescribe a specific methodology for assessing potentially significant adverse impacts to recreation opportunities, beyond the four impact categories listed above. As such, the applicant has developed a methodology to conduct the impact assessment, as described below. The Department agrees with these methods. The visual impact assessment methodology is the same as has been used in Section IV.F., *Protected Areas* and Section IV.J., *Scenic Resources*.

Direct or Indirect Loss of Recreational Opportunities

The applicant evaluates impacts from the proposed facility that may result in potential loss of an important recreational opportunity based on review of the proposed route relative to the locations of the important recreational opportunities. A direct loss of opportunity could occur where the proposed facility or alternative routes result in permanent alteration such that the resource no longer exists in its current state. Similar to the assessment of direct loss, indirect loss would result if construction or operation of a proposed facility would impact a recreational opportunity by indirectly altering the resource or some component of it. The methodology assumed losses to be significant potential adverse impacts if permanent displacement of (total or partial) or change in access to an important recreation opportunity resulted in changes to any of the five factors used to judge importance of the recreation opportunity per OAR 345-022-0100 such that the recreation opportunity was no longer considered important.

Noise Impact Assessment

The applicant analyzes the potential noise impacts on recreational opportunities by discussing predicted noise levels resulting from the construction and operation of the proposed facility and by analyzing the potential noise impacts under the ODEQ noise regulations at OAR Chapter 340, Division 35. Evidence of complying with the DEQ regulations is not necessarily definitive of

[404] OAR 345-021-0010(1)(t)(B).

compliance with the Recreation standard; however, it is relevant to that analysis, along with other factors (e.g., frequency and duration), as discussed below.

Traffic Impact Assessment

The applicant evaluated each recreational opportunity for traffic impacts based on the proximity to multi-use areas, access roads, proposed haul roads, and the proposed facility and alternative routes where construction will occur.

Visual Impact Assessment

The applicant evaluated visual impacts to important recreational opportunities using the methodology described in Exhibit L (Protected Areas) and Exhibit R (Scenic Resources), which considered the combined outcome of context of the impact, impact intensity and the degree to which the possible impacts are caused by the proposed action. Exhibit T, Attachment T-4 includes the complete visual impact assessment methodology used for Exhibit R (and also applied to the visual impact analysis for protected areas in Exhibit L and recreation sites in Exhibit T). As discussed above in the findings of compliance with Section IV.F., *Protected Areas* and Section IV.J., *Scenic Resources*, the applicant implemented the visual impact methodology in a series of three parts, including (1) consideration of baseline conditions; (2) assessment of impact likelihood and magnitude; and (3) consideration of intensity, causation and context. Important recreational opportunities outside the modeled viewshed were screened from the analysis and not evaluated in detail. The applicant's methods concluded that an impact would be "less than significant" if the valued scenic attributes of the resource could persist.

IV.L.1. Potential Direct and Indirect Loss

Four recreational opportunities would be crossed by the proposed facility: The Blue Mountain Corridor, Grande Tour Scenic Bikeway, Burnt River Extensive Recreation Management Area (ERMA), and the Ladd Marsh Wildlife Area. While the proposed facility would cross four important recreational opportunities and would result in a direct loss of a small portion of the area included within the boundaries of the important recreational opportunities, the extent of the loss would not result in a change to the overall use or importance of the resource. Therefore, the Department recommends Council find that the proposed facility would not be likely to result in significant adverse impacts from potential direct losses to these important recreational opportunities.

Indirect loss could result from temporary traffic and noise impacts, and permanent visual impacts of proposed facility structures. Indirect loss from traffic and noise impacts would be reduced by measures outlined in the Traffic Management and Control Plan, imposed in Public Services Condition 1, and from noise attenuation due to the linear nature of construction activities. As described in the evaluation of the applicant's visual impact assessment for each of the four recreational opportunities crossed by proposed facility components, permanent visual impacts of the facility would not result in alternation of the recreational opportunity such that

the resources would no longer be considered important. Therefore, while the proposed facility would result in an indirect loss to these recreational opportunities, the Department recommends that Council find that the proposed facility would not be likely to result in significant adverse indirect loss impacts.

IV.L.2. Potential Noise Impacts

Construction

The Department reiterates the noise impact assessment from Section IV.F., *Protected* Areas. The noise impact assessment to recreation opportunities would be the same. In general, construction of the proposed facility would cause some noise impact at recreation opportunity sites that are close to the proposed facility, but construction would be short-term and temporary. The applicant's noise impact assessment to recreation opportunities is found in ASC Exhibit T, Section 3.4.2.

Potential noise impacts during construction would predominately result from operation of construction vehicles and equipment (i.e. auger drill rig, backhoe, crane, dump truck, grader, pickup truck, and tractor) at a construction site. As described in Section IV.Q.1., *Noise Control Regulations*, the applicant evaluates potential noise levels from general construction activities based on an assumed operation of five construction vehicles, at 40 percent hourly usage. As presented in Table R-2, *Predicted Noise Levels from General Construction* Activities, the one-hr average predicted noise level from the combined operation of five pieces of equipment is 83 dBA at 50 feet, 79 dBA at 100 feet, and attenuates to 46 dBA at 6,400 feet. Representative noise levels for general construction equipment was obtained from the Federal Highway Administration (FHWA) Roadway Construction Noise Model User's Guide (FHWA 2006).

Table R-2: Predicted Noise Levels from General Construction Activities

Noise Source and Assumptions	Distance from Construction Activity (feet)	Leq Noise Level (dBA)
5 construction vehicles at 40% usage factor: 1 at 50 ft 2 at 100 ft 2 at 200 ft	50	83
	100	79
	200	74
	400	69
	800	63
	1,600	58
	3,200	52
	6,400	46
Leq = Equivalent sound pressure level Usage factor = Percent of time equipment is in use over time period (1 hr)		

Noise generating construction activities would also include blasting and rock breaking (140 dBA at the blast location or over 90 dBA within 500 feet), implosive devices used during conductor stringing, helicopter operations (62 to 84 dBA at 1,000 feet), and vehicular traffic.

Construction of the proposed facility, including proposed and alternative routes, would cause short-term noise impacts to nearby recreational opportunities, and particularly at those areas crossed by the proposed facility. Construction activities that would cause noise impacts at most recreation opportunities include blasting and rock breaking, implosive devices used during conductor stringing, helicopter operations, and vehicular traffic. The construction activities would progress along the corridor of the proposed transmission line, and no area would be exposed to construction noise for the entire construction period.

At a distance of half-mile or less, these areas would experience noise impacts during facility construction. However, noise would attenuate with distance, topography, and vegetative screening so it is possible that the decibel volume represented in Table PA-2 may be lower during actual facility construction. Helicopter use during construction would be audible at nearby recreation opportunity sites and would cause a short-term impact to users of those areas at those areas near the helicopter fly-yards and MUAs, and during facility transmission line construction at times of helicopter use. However, construction noise including helicopter use would only occur during facility construction, which is a short-term impact likely only over a period of months at any one location.

Operation

Potential noise impacts during facility operation would include vegetation maintenance (including chain saws or other power equipment), inspections, corona noise from the transmission line, and potential noise from operation of Longhorn Station. Inspections typically occur once per year, but could be more frequent during weather or emergency events, and while usually would consist of vehicle inspection, helicopters could be used. As during construction, vegetative maintenance and inspection-related noise would only be short term.

During typical operating conditions, corona noise is estimated at 27 dBA at the edge of the facility right of way. Twenty-seven dBA is barely audible and would not cause a significant noise impact at any recreation opportunity. As described further in Section IV.Q.1*., Noise Control Regulations*, during certain foul weather conditions and low wind, corona noise would be greater than 27 dBA at certain noise-sensitive receptors. It is also possible that corona noise would be audible at certain locations in recreation opportunity sites very near the proposed facility or crossed by the proposed facility. However, corona noise is never anticipated to be above 50 dBA during foul weather at any noise sensitive receptor. At any nearby recreation opportunity, the conditions that give rise to a louder corona noise (namely, rainy weather) likely also limits the users at a recreation area.

IV.L.3. Potential Traffic Impacts

Construction

Facility construction could cause short-term impacts to those recreation opportunity sites that are near or crossed by the proposed facility, or where construction traffic routes pass near those areas. The impacts would be short-term and limited in duration to construction related traffic. Construction traffic would include multiple vehicle types, but the majority of traffic trips would be for construction workers daily commuting to work sites. General traffic impacts from the proposed facility is also discussed in Section IV.M.*, Public Services*, which also includes a number of recommended site certificate conditions that would manage and reduce potential impacts from facility construction traffic, including finalizing county-specific traffic management plans. Implementation of these measures will reduce facility traffic impacts. The applicant's traffic impact assessment to recreation opportunities is found in ASC Exhibit T, Section 3.4.3.

Construction-related traffic impacts are expected to vary at each recreation opportunity. Some areas would have no impacts from facility construction due to the distance from the proposed facility as well as planned haul and commuting routes. Some would have minor construction-related traffic impacts due to proximity of the facility, or haul/commute routes. However, in all circumstances, construction traffic would be short term and limited. Additionally, recommended conditions in Section IV.M.*, Public Services*, specifically including the requirement to finalize a county-specific traffic management plan prior to facility construction, would be expected to mitigate potential construction traffic impacts at any particular recreation opportunity. See Section IV.M.6., *Public Services – Traffic Safety*, and Recommended Public Services Condition 1 which requires the applicant to generate and submit for approve a county-specific Transportation and Traffic Plan, which would identify final construction routes and include traffic controls.

Operation

No traffic impacts to protected areas are anticipated during facility operation. Facility operation would involve very infrequent maintenance and inspections by the certificate holder, expected at one or two inspections per year.

IV.L.4. Potential Visual Impacts

As described in the Section III, *Description of the Proposed Facility,* the applicant conducted a comprehensive study to assess potential route locations for the facility which attempted to balance multiple constraints and opportunities (such as existing utility corridors) in determining the proposed location of the facility. As explained in ASC Exhibit B (Table B-1, Attachment B-1) in determining the proposed route, the applicant identified more than 35 location-specific constraints related to sensitive viewers and scenic resources. Sensitive viewers and viewing locations addressed in the siting study included scenic byways, intact segments of the Oregon

National Historic Trail, BLM ACECs, community parks, and local communities. Sensitive resources included Wild and Scenic Rivers, Oregon State Scenic Waterways, wilderness lands, BLM VRM Class I and II lands, and USFS VQO Preservation and Retention areas. Existing utility and transportation corridors were identified as potential siting opportunities in order to minimize proliferation of potential visual impacts across the landscape. The proposed and alternative routes were informed by the siting study.

As shown above on Table R-1, the applicant provided a summary of potential impacts to important recreational opportunities. Additionally, for each of the 21 recreational opportunities that are identified as important recreational opportunities, the applicant conducted a site-specific assessment of the nature and degree of potential visual impacts and the significance of those visual impacts. ASC Exhibit T, Attachment T-4 includes the complete visual impact methodology and analysis sheets for all important recreation opportunities. Anticipated impacts are evaluated below for important opportunities.[405]

Umatilla National Wildlife Refuge

The recreational use area of the McCormack Unit of the Umatilla National Wildlife Refuge (NWR) is located approximately 1.3 miles from proposed facility, in Morrow County.[406] There are no proposed temporary haul routes in the vicinity of the NWR and there would be no temporary or permanent disruption of access to the NWR from local roads. The Umatilla NWR is also discussed in Section IV.F., *Protected Areas*.

As further described under the Protected Areas standard, towers from the proposed route would be sky-lined (sited on or near a ridgeline so they are silhouetted against the sky) but partially obstructed by two existing transmission lines currently located between the NWR and the proposed facility. Although scenery of and from the McCormack unit is considered an important aspect of the overall recreation experience at the Umatilla NWR, the proposed route would not cause a noticeable change in the landscape to visitors of the McCormack Unit and would not preclude the McCormack Unit from continuing to function as a focal point for Umatilla Refuge wildlife viewing activities. Additionally, the proposed facility's closest location would be Longhorn Station, located in the Port of Morrow. While it may be possible to see the proposed facility from the Umatilla NWR, a viewer would have to look through the existing port facilities, which includes industrial manufacturing and other existing development.

[405] No important recreation opportunities were identified within two miles of the Double Mountain Alternative. Potential impacts from the West of Bombing Range Road Alternative 1 and Alternative 2 are considered the same as the Proposed Route due to the proximity of these segments to each other.

[406] B2HAPPDoc3-37 ASC 2_Exhibit T_Recreation_ASC 2018-09-28, Section 3.4.4.1 and Attachment T-3 Section 3.1 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.

Based on the analysis presented here, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the recreational opportunities at the Umatilla National Wildlife Refuge.

Oregon Trail Interpretive Park at Blue Mountain Crossing

As noted above, the Oregon Trail Interpretive Park is located approximately one mile from the proposed facility, in Union County.[407] General construction traffic may cause a temporary, noticeable increase in traffic in this area; however, these impacts would be temporary, would not impact access to the park. The applicant's analysis shows that the top portions of several towers would be visible from the picnic area at the park, but the cleared ROW would be shielded from view by the forested ridgeline. The interpretive park is located on the east side of I-84, while the proposed facility in this location would be west of I-84. An existing 230 kV transmission line is also in between the park and the proposed facility. Considering these intervening features, and the distance from the park to the proposed facility (approximately one mile), the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the recreational opportunities at the Oregon Trail Interpretive Park at Blue Mountain Crossing.

Blue Mountain Forest State Scenic Corridor

As discussed at length in Section IV.F., *Protected Areas*, the proposed facility would cross the Blue Mountain Corridor, in Union County.[408] As more fully described in Exhibit T and under the Protected Areas and Scenic Resources standards, the proposed transmission line would span the Blue Mountain Corridor and Old Emigrant Hill Scenic Frontage Road and no facility components would be located within the Blue Mountain Corridor. The applicant explains that construction activity in the vicinity of the Blue Mountain Corridor would result in temporary, intermittent traffic delays along the frontage road at the crossing location and near both ends of the parcel as a result of a preliminary haul road proposed to be located nearby. The analysis presented in Section IV.F., *Protected Areas* provide rationale as to why the proposed facility route is more impactful than alternatives in the area and as such, should be allowed by EFSC to pass through the Blue Mountain Forest State Scenic Corridor in compliance with the EFSC Protected Areas standard. The same analysis holds for recreation opportunities under the EFSC Recreation standard, and is incorporated here by reference. The presence of the proposed facility would cause a visual impact to drivers along the Corridor, but views would be fleeting and limited, and would occur at a location very close to the junction with I-84.

[407] Id. See Section 3.4.4.2 and Attachment T-3 Section 3.2 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.
[408] Id. See Section 3.4.4.3 and Attachment T-3 Section 3.3 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.

Based on the analysis presented here, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the recreational opportunities at the Blue Mountain Forest State Scenic Corridor.

Hilgard Junction State Park

The proposed facility would be located approximately 0.8 miles west of the Hilgard Junction State Park and approximately 0.34 miles from the Morgan Lake alternative, in Union County.[409] Both routes would be sufficiently separated from the developed part of the park that neither would cause a direct loss of recreation opportunity. Construction traffic may use the same highway exit as park users, resulting in possible delays at the park entrance. However, the park would remain accessible, and these impacts to access and traffic would be temporary and less than significant.

The proposed facility would be both partially sky-lined and partially obstructed by existing topography. However, the majority of the campsites and areas of the park near the Grande Ronde River would not have views of the proposed facility due to the steep topography that limits views to the foreground. Towers would be visible only from the highlands along the southern boundary of the park, south of the camping area. Visual impacts from the Morgan Lake alternative would be similar to the proposed facility. However, due to the steep topography and forest vegetation adjacent to the Hilgard Junction State Park, views would be very limited. The proposed facility in this area parallels an existing 230 kV transmission line. Additionally, Hilgard Junction State Park runs along I-84, and so there is likely existing disturbance from the freeway. Finally, the proposed facility and Morgan Lake alternative enter/exit a USFS Wallowa-Whitman NF designated utility corridor very near the park, and as such, the facility must transit close to the park in order to utilize the utility corridor.

Based on the analysis presented here, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the recreational opportunities at Hilgard Junction State Park.

Morgan Lake Park

Proposed Route

The proposed facility would be located 0.6 miles north of the Morgan Lake Park at its closest point. Morgan Lake Park is managed by the City of La Grande Parks and Recreation Department,

[409] Id. See Section 3.4.4.4 and Attachment T-3 Section 3.4 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource. As also noted above, the Proposed Route is located approximately 0.3 miles from the closest point of Hilgard Junction State Park; however, that parcel is used for administrative purposes and does not have any recreational uses.

though the park is outside of the city limits by about three miles. The park has campsites, fishing piers, and a boat launch. No motorized boats are allowed on the lake. Fishing is popular at the lake.[410]

New, bladed roads and pulling and tensioning sites would be located approximately one-mile northeast of the park. Construction-related traffic may cause a temporary, noticeable increase in traffic along roads leading to the park. However, these impacts would be temporary and would not be anticipated to affect access to the park and interrupt recreational activities. See Section IV.M.6., *Public Services – Traffic Safety*, and Recommended Public Services Condition 1 which requires the applicant to generate and submit for approve a county-specific Transportation and Traffic Plan, which would identify final construction routes and include traffic controls; adoption and compliance of these plans will manage and reduce potential facility construction traffic impacts.

Vegetation north of the park would largely screen views of proposed facility structures. Views of the bladed roads and pulling and tensioning sites would all be blocked by vegetation, and vegetation would block views of the towers from most locations in the park. Additionally, the proposed facility route in this area would mostly parallel an existing 230 kV transmission line.

Based on the analysis presented here, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the recreational opportunities at Morgan Lake Park.

Morgan Lake Alternative

The Morgan Lake alternative would be located 0.2 mile southwest of the park at its closest point. Improvements would be made to existing roads located to the southwest of the park. New, bladed roads and pulling and tensioning sites would be located approximately 0.3 mile south of the park. Construction-related traffic may cause a temporary, noticeable increase in traffic in the area and along roads leading to the park. However, these impacts would be temporary and access to the park would not be affected. See Section IV.M.6., *Public Services – Traffic Safety*, and Recommended Public Services Condition 1 which requires the applicant to generate and submit for approve a county-specific Transportation and Traffic Plan, which would identify final construction routes and include traffic controls.

The applicant's assessment shows that the facility components of the Morgan Lake alternative would be visible from portions of the park, primarily the access road and parking areas located to the south of the lake. Vegetation located along the southern perimeter of the lake would screen views from campsites and locations on the water. However, at 0.2 miles distance the

[410] Id. See Section 3.4.4.5 and Attachment T-3 Section 3.5 and 3.6 for the applicant's evaluation of the proposed facility and Morgan Lake Alternative's anticipated impacts to the resource.

Department is uncertain if vegetation screen will completely block all views to the Morgan Lake alternative, such as during winter when deciduous vegetation falls from trees.

In a letter on the record of the ASC, the City of La Grande objected to the proposed Morgan Lake alternative's impacts, particularly visual impacts, to the recreational opportunities at Morgan Lake Park.[411] The city asked that a condition of approval be included in the site certificate requiring that, if approved by Council and choses to be built by the applicant, that the Morgan Lake alternative use H-frame structures with natina finish (which mimics a wood-like look).[412] The Department agrees with the City of La Grande's assessment and request, and in order to reduce potential visual impacts of the Morgan Lake alternative to the recreational opportunities at Morgan Lake Park, 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 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.

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[411] B2HAPPDoc ApASC Reviewing Agency Comment City of La Grande_Strope 2018-04-27.

[412] The City of La Grande, in the same comment letter, also asked for the applicant to provide mitigation to enhance the recreational experience at Morgan Lake Park. The City did not identify specific enhancements, but the Department does not believe enhancements to the Park are warranted considering that the Morgan Lake alternative route would not directly impact Morgan Lake Park, only indirectly impact via visibility impacts. Recommended Recreation Condition 1 would provide mitigation for the visibility impacts. The City of La Grande has also asked for the H-frame structure mitigation design feature to be used if the applicant selects the proposed facility route in areas that are visible from the City of La Grande. However, the Department points to the specific Council rule and standard that would require such mitigation for viewshed impacts to the City itself based on requirements stipulated in the rule or standard. The Council has three standards that consider visual impacts: Recreation, Scenic Resources, and Protected Areas. The City of La Grande is not a recreation resource, scenic resource, or protected area, and the Department does not find that visual impact mitigation in the form of H-frame towers or other mitigated structure types in the viewshed of La Grande are warranted. B2HAPPDoc ApASC Reviewing Agency Comment City of La Grande_Strope 2018-04-27.

Ladd Marsh Wildlife Area/State Natural Heritage Area

Proposed Route

The proposed facility would cross the Ladd Marsh WA/SNHA in Union County. This is discussed extensively in Section IV.F*., Protected Areas*. The proposed facility would be located within 500 feet of an existing 230-kV transmission line and as such, is allowed by EFSC rules in the Protected Areas standard to cross the WA/SNHA. Two multi-use areas are proposed to be located approximately one mile north and one mile south of the Ladd Marsh WA/SNHA boundaries. Temporary traffic impacts may occur during construction; construction activity would occur near the multi-use areas and increased construction traffic on I-84 would temporarily affect travel to and from the wildlife area. Access to the Wildlife Area from Foothill Road would not be expected to be disrupted.[413]

The proposed facility would be visible from the majority of the WA/SNHA; however, the proposed facility would be parallel to an existing 230 kV transmission line. The Ladd Marsh Wildlife Area is a recreation opportunity for multiple reasons, but particularly wildlife viewing in the marsh and wetlands on the valley floor, as well as hunting and fishing, which again are primarily focused on the wetlands and marsh along the valley floor. The proposed facility would cross the WA/SNHA on the upland hill portion, to the west of the area, away from the main recreational opportunities. While the proposed facility would likely be visible from the wetlands and marshes along the valley floor, the visibility would not detract from the main recreational purposes of Ladd Marsh.

Morgan Lake Alternative Route

The proposed Morgan Lake alternative would be located approximately 208 feet southwest of the Ladd Marsh WA/SNHA, where it traverses a higher elevation plateau just outside the WA/SNHA boundary. No facility components of the Morgan Lake alternative would be located in the WA/SNHA. Moderate improvements are proposed for existing roads, and temporary traffic and access impacts may occur during construction. A proposed multi-use area would be located approximately 2.2 miles northeast of the Morgan Lake alternate, in the lower elevation agricultural areas near Highway 30. Construction-related traffic would primarily be routed south of the Ladd Marsh WA/SNHA and would not disrupt recreation opportunities.

As with the proposed facility route, while it is possible that some facility components of the Morgan Lake alternative would be visible from the marshes and wetlands on the valley floor, the primary recreational opportunity sites, visibility would be limited by trees and topography and would not detract from the primary recreational opportunities at Ladd Marsh.

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[413] B2HAPPDoc3-37 ASC 2_Exhibit T_Recreation_ASC 2018-09-28, Section 3.4.4.6 and Attachment T-3 Section 3.7 and 3.8 for the applicant's evaluation of the proposed facility and Morgan Lake alternative's anticipated impacts to the resource.

Based on the analysis presented here, the Department recommends that the Council find that the proposed facility and Morgan Lake alternative would not cause a significant adverse impact to the recreational opportunities at Ladd Marsh WA/SNHA.

Powder River ACEC and Wild and Scenic River (WSR)

The proposed facility would run west of the Powder River and at its closest point would be within 1.4 miles of the Powder River designated Wild and Scenic River (WSR) scenic corridor, in Baker County and Union County. The Powder River ACEC and WSR are BLM owned and managed. Temporary construction activity in the vicinity could result in intermittent delay of traffic accessing the area on OR 203 via I-84, with no significant impact. The Powder River ACEC and WSR were also considered under Section IV.F., *Protected Areas* and Section IV.J., *Scenic Resources*.[414]

The Powder River designated scenic corridor is discussed in detail under the Protected Areas and Scenic Resources standards. The applicant's analysis shows that the proposed facility would not be visible at the WSR, and since recreation activities would be focused along the river where the facility would not be visible, visual impacts would not disrupt recreation activities occurring within the Powder River WSR.

Based on the analysis presented here, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the recreational opportunities at the Powder River.

Oregon Trail ACEC – NHOTIC Parcel

The proposed facility would be located within one mile of the NHOTIC main building, and within 0.02 miles of the western boundary of the NHOTIC Parcel. Temporary traffic and access impacts may occur during construction, but would be temporary and less than significant. Construction activities would include improvements to existing roads located approximately 0.02 miles directly north and west of the western boundary of the NHOTIC Parcel.[415]

The applicant has conducted a detailed evaluation of potential impact to the NHOTIC, and has made adjustments to both the route and the proposed towers in order minimize any visual impact. Additional analysis is provided in Section IV.F., *Protected Areas* and Section IV.J., *Scenic Resources.* In order to minimize and mitigate the potential visual impact from the proposed facility to NHOTIC, and as discussed under the Protected Areas and Scenic Resources standards,

[414] Id. See Section 3.4.4.7 and Attachment T-3 Section 3.9 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.
[415] Id. See Section 3.4.4.8 and Attachment T-3 Section 3.10 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.

the applicant proposes to use modified tower structures in the NHOTIC vicinity in order to minimize and mitigate the visual impact of those towers. Recommended Scenic Resources Condition 2 would require H-frame towers, weathered steel, and reduced tower heights in specified locations within view of the NHOTIC information center. Additionally, Baker County, in a comment on the ASC to the Department, requested a study of the option to locate the 500 kV transmission line underground in the area directly in the viewshed of NHOTIC. This study was commissioned by the applicant, and is included in the Exhibit L errata and further discussed in Section IV.F., *Protected Areas*.

As described in Section IV.F., *Protected Areas*, It is also important to note that there were alternative route options previously proposed in the area around NHOTIC, including a route to the east of Flagstaff Hill and the NHOTIC center ("Virtue Flat alternative"), and other routes near the current proposed route. The route to the east of the center was eliminated from consideration due to impacts to sage grouse habitat and potential impacts to an important OHV recreation area. Alternative routes near the current proposed route were eliminated to reduce impacts to irrigated agriculture. The proposed route follows very close to the existing 230 kV transmission line in this area, including using the existing 230 kV line right of way for the proposed facility and rebuilding the 230 kV line. Finally, the Department notes that 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. By authorizing the route in its Record of Decision (ROD), the federal agency (BLM) that administers the Management Plan for NHOTIC is authorizing the placement of the proposed facility in this location 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 Recreation standard.

Based on the analysis presented here, the Department recommends that the Council find that the proposed facility, with mitigation, would not cause a significant adverse impact to the recreational opportunities at the Oregon Trail ACEC – NHOTIC Parcel.

<u>Virtue Flat Off-Highway Vehicle (OHV) Area</u>

The proposed facility would be located approximately 1.5 miles west of the western boundary of the Virtue Flat OHV Area, in Baker County. Temporary construction activity could cause minor and intermittent delays for those traveling to Virtue Flat from OR 86. The OHV area is completely outside the viewshed of the proposed facility and would have no visual impact.[416]

[416] Id. See Section 3.4.4.9 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.

Based on the analysis presented here, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the recreational opportunities at the Virtue Flat OHV area.

Burnt River Extensive Recreation Management Area (ERMA)

The proposed facility would cross the Burnt River ERMA in two locations between MP 170.7 and MP 171.5 (two towers) and between MP 172.5 and MP 173.0 (one tower). The ERMA is located in Baker County and is owned and managed by the BLM. A new access road and an improved existing road would be used to access work areas along the ridgeline during construction. Temporary construction activity could cause minor, intermittent delays for travelers along Burnt River Road.[417]

The Burnt River Canyon BLM area is described in further detail in Section IV.J., *Scenic Resources* standard. As summarized in Exhibit T, due to the steep, enclosed nature of the canyon and rugged terrain of the Burnt River Canyon area, visibility of the towers would primarily be limited to the eastern area of the resource. The proposed facility would be most visible where it crosses Burnt River Canyon Road, the primary access point for visitors in the ERMA. New and improved access roads would be located along and near the proposed facility in this area; however, they would not be expected to be visible from the Burnt River Canyon Road.

As was described in Section IV.J., *Scenic Resources*, the Department notes that the BLM has authorized the proposed facility in this area where the facility crosses the ERMA, which is an important consideration because the BLM is the landowner and manager of the Burnt River ERMA. Considering that the agency that manages the Burnt River ERMA has already authorized the proposed facility in the location proposed in the EFSC application, through the ERMA, the Department considers this relevant information particularly to the EFSC Recreation standard. Additionally, the BLM has specifically changed its own management plan for visual resources from VRM Class II to VRM Class IV.

Based on the analysis presented here, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the recreational opportunities at the BLM Burnt River ERMA.

Snake River Breaks Extensive Recreation Management Area (ERMA)

The proposed facility would be located approximately 0.2 mile from one of the Snake River Breaks ERMA parcels, at the southern end of the area at Brownlee Reservoir, in Baker County.

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[417] Id. See Section 3.4.4.10 and Attachment T-3 Section 3.11 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.

The proposed facility would parallel an existing 138-kV transmission line in this area. Access roads and work areas associated with the proposed facility would be located on the west side of I-84, and therefore would not impact recreation opportunities within the ERMA. The ERMA is BLM land.[418]

The proposed facility would be visible only from the higher elevations of the ERMA and would not be visible from the surface of the reservoir or along the shore, which is the primary recreational area. Visual impacts would not preclude the ability of the resource to provide recreational value for which it is recognized. There would be no visual impacts to the Oxbow and Hells Canyon reservoirs. Additionally, the proposed facility would be located west of I-84, and the Snake River Breaks ERMA is east of I-84.

Based on the analysis presented here, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the recreational opportunities at the Snake River Breaks ERMA.

Farewell Bend State Recreation Area (SRA)

The proposed facility would be located about 0.7 mile southwest of the public use areas at Farewell Bend SRA, in Baker County. Construction activity may cause temporary intermittent traffic and access delays for those traveling to Farewell Bend SRA. Farewell Bend SRA is also considered in Section IV.F., *Protected Areas* and Section IV.J., *Scenic Resources*.[419]

The proposed facility could potentially be visible from anywhere within the Farewell Bend SRA. However, as described above with respect to the Protected Areas and Scenic Resources standards to mitigate the visual impact, the applicant has proposed to use H-frame structures as mitigation for the Birch Creek ACEC (recommended Scenic Resources Condition 3), which would result in a reduced visual impact. I-84 and a band of mature trees at the western boundary of the SRA are situated between the SRA and the proposed facility where they are in closest proximity to one another, would further mitigate the impact. Additionally, the proposed facility would likely be visible only when looking west from the parking area, and not towards the river/reservoir. Finally, it is important to note that in this area the proposed facility is located partially in a BLM designated utility corridor, which was established to locate utility facilities such as transmission lines.

Based on the analysis presented here, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the recreational opportunities at the Farwell Bend SRA.

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[418] Id. See Section 3.4.4.11 and Attachment T-3 Section 3.12 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.

[419] Id. See Section 3.4.4.12 and Attachment T-3 Section 3.13 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.

Weiser Dunes Off-Highway Vehicle (OHV) Play Area

The Weiser Dunes OHV Play Area would be located about 0.5 miles from the proposed facility. The OHV area is on BLM land, in Idaho, across the Snake River from Oregon. Because the OHV play area is in Idaho, across the river, construction activity would not be expected to cause delays for visitors accessing the play area.[420]

While it is possible that users of the OHV play area could see the proposed facility, once built, the views would be across the Snake River and also across I-84. The proposed facility in this area would follow the right of way of an existing transmission line. The presence of the proposed facility would not diminish the user experience of the OHV play area. Based on the analysis presented here, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the recreational opportunities at the Weiser Dunes OHV Play Area.

Oregon Trail Birch Creek ACEC/Special Recreation Management Area (SRMA)

The proposed facility would be located approximately 0.2 miles northeast of the Birch Creek SRMA, in Malheur County. The SRMA is the same parcel as the Birch Creek ACEC, discussed at length in Section IV.F., *Protected Areas* and Section IV.J., *Scenic Resources*. In this area, the facility would be located in the right of way of an existing 138 kV transmission line, and a rebuild of 1.1 miles of the existing Quarts to Weiser 138-kV transmission line. During construction, access to the site would be maintained, but travelers may experience temporary delays accessing the interpretive site.[421]

As discussed under the Protected Areas and Scenic Resources standards, in order to reduce visibility from this ACEC parcel, the applicant has proposed to locate the proposed facility as far north as feasible, without encroaching on active agricultural areas. In addition, to further mitigate the visual impact, and as described above, the applicant proposes to use shorter stature H-farm structures to maximize the proportion of the transmission line screened from view by existing topography. The mitigation measures included in recommended Scenic Resources Condition 3 would reduce visibility of the proposed facility from this ACEC parcel as well as utilize a shorter, H-frame structure with natina finish. With the proposed mitigation, though somewhat visible from the Birch Creek ACEC/SRMA, the proposed facility would not substantially lower the quality of the adjacent scenery outside the Birch Creek ACEC/SRMA. The proposed facility with mitigation would also preserve the scenic value of views to the north toward Farewell Bend and the Snake River. Features at the site include a parking turnout, a

[420] Id. See Section 3.4.4.13 and Attachment T-3 Section 3.14 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.
[421] Id. See Section 3.4.4.14 and Attachment T-3 Section 3.15 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.

wagon rut swale, a short trail adjacent to the ruts, and interpretive panels marking the site. Visual photosimulations of the Birch Creek ACEC/SRMA were produced by the applicant and included in ASC Exhibit L, Attachment L-4, Figures L-4-7 and L-4-8. The simulations were produced from the interpretive panel looking north towards the proposed facility. With the mitigation, very little of the proposed facility is anticipated to be visible from this location. Additional assessment is included in Section IV.F., *Protected Areas* and Section IV.J., *Scenic Resources*.

Based on the analysis presented here, the Department recommends that the Council find that the proposed facility, with recommended mitigation, would not cause a significant adverse impact to the recreational opportunities at the Oregon Trail Birch Creek ACEC/SRMA.

<u>Snake River Islands (Huffman Island) Wildlife Area</u>

The Snake River Islands Wildlife Area consists of three main islands, one of which (Huffman Island) would be located within the proposed facility analysis area. The Wildlife Area is near Farewell Bend State Park, in Malheur County. The proposed facility would be located approximately 0.9 miles west and south of Huffman Island. The Wildlife Area is managed by ODFW to preserve wildlife, primarily, as well as hunting, fishing, and wildlife viewing. I-84 is located between Huffman Island and the proposed facility. Construction activities would involve use of existing roads, which would require no substantial improvements and no access constraints.[422]

The applicant's visual analysis shows that while the base of some towers would be shielded by topography, views from the island of the proposed facility structures would appear sky-lined. However, the overall landscape character of the Snake River islands wildlife area would remain naturally appearing, and the proposed facility would not detract from the recreational opportunities at the Wildlife Area. And again, as noted, the proposed facility would be west of I-84 in this area, while the Wildlife Area is east of I-84.

Based on the analysis presented here, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the recreational opportunities at the Snake River Islands (Huffman Islands) Wildlife Area.

<u>Oregon Trail Tub Mountain ACEC and Special Recreation Management Area (SRMA)</u>

The proposed facility would be located 0.5 miles from the closest point of the Oregon Trail Tub Mountain ACEC/SRMA, along the SRMA's eastern and southern boundary, and approximately 1.5 miles east of the Alkali Springs interpretive site. The ACEC and SRMA are the same parcel. Tub Mountain ACEC/SRMA was also discussed in Section IV.F., *Protected Areas* and Section IV.J.,

[422] Id. See Section 3.4.4.15 and Attachment T-3 Section 3.16 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.

Scenic Resources. The primary recreation users of the SRMA are visitors to the Oregon Trail segments and the interpretive site at Alkali Springs, OHV users, and local residents traveling through the area. Construction activity would occur to the east and south, resulting in intermittent access and traffic delays to this site.[423]

The proposed facility would be partially screened from view of the Tub Mountain SRMA by topography. Views of the proposed facility from Alkali Springs interpretive site in the SRMA would be partially blocked by vegetation. While traveling along Old Oregon Trail Road or the Oregon Trail route, the proposed facility would be generally located to the east and most towers would either not be visible or only the top portions would be visible. Some towers would be sky-lined and some backdropped, depending on location within the SRMA.

As assessed in Section IV.F., *Protected Areas,* and Section IV.J., *Scenic Resources*, the proposed facility has been sited outside the Tub Mountain ACEC/SRMA Parcel, and there would be no change to the landscape within the boundary of the lands managed under VRM Class II. Consequently, the applicant concludes that the proposed facility would conform to the BLM management standard and is consistent with BLM's management of the Tub Mountain Parcel's visual qualities. As shown on ASC Exhibit R, Attachment R-3, Figure R-3-14, the proposed facility has been sited in this area to avoid other impacts, specifically sage grouse habitat, and is also located on BLM land to avoid private land. Additionally, the proposed route in this area connects to a BLM designated utility corridor northeast of the Tub Mountain ACEC near I-84 Highway, and the location of the route minimizes impacts to multiple resources, recognizing that there will be visual impacts to the Tub Mountain ACEC. The BLM, the manager of Tub Mountain ACEC and the land upon which the proposed route is located in this area (which is not Tub Mountain ACEC) has approved the proposed facility route via its ROD.

Based on the analysis presented here, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the recreational opportunities at the Oregon Trail Tub Mountain ACEC/SRMA.

<u>Deer Flat National Wildlife Refuge (NWR) – Snake Island Unit</u>

One island within the Snake Island Unit of the Deer Flat NWR is located less than one mile from the proposed facility, in Malheur County. One tower of the proposed facility would be located approximately 0.4 mile from this island near Farewell Bend, and a multi-use area is proposed to be located within 0.2 mile to the southwest of this island. Recreation at the NWR includes wildlife viewing, hunting, and fishing, primarily, and access is only available via boat, which limits visitors. Construction activity in the vicinity could result in intermittent delay of traffic

[423] Id. See Section 3.4.4.16 and Attachment T-3 Section 3.17 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.

heading to and from the boat ramps that provide access to the Snake Island Unit, but construction is temporary and intermittent.[424]

The proposed facility, once constructed, would be visible at some limited areas in the NWR. In the northern portion, near Farewell Bend, views to the proposed facility from the NWR would be limited and would be crossing I-84. At the southern portion of the NWR, near the town of Adrian, the proposed facility would be mostly located in a BLM-designated utility corridor, which is intended to site utility facilities such as transmission lines.

Based on the analysis presented here, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the recreational opportunities at the Deer Flat NWR – Snake Islands Unit.

Bully Creek Reservoir

The proposed facility would be located approximately 0.7 mile west of the Bully Creek Reservoir and approximately 1.75 mile from the park campground. The reservoir is in Malheur County and serves as a water storage reservoir as well as county park. There are campsites, a boat launch, and fishing. Construction activity in the vicinity could result in minor traffic delays and congestion on Bully Creek Road, which surrounds the northern side of the reservoir.[425]

The applicant states that the tops of some transmission towers would be visible from certain locations in the park, but it is unlikely that the campground would have visibility to the proposed facility. Topography will also screen views of some portions of the facility. Visibility of some number of transmission towners would not detract from the recreational opportunities at Bully Creek Reservoir. It is important to note that in this area, the proposed facility route has been sited to avoid irrigated agriculture and private farmland in the area around Vale, and also sited to minimize impacts to sage grouse habitat. The proposed facility at the points closest to Bully Creek reservoir are on BLM land, and the BLM has already approved the facility route via its ROD.

Based on the analysis presented here, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the recreational opportunities at the Bully Creek Reservoir.

[424] Id. See Section 3.4.4.17 and Attachment T-3 Section 3.18 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.
[425] Id. See Section 3.4.4.18 and Attachment T-3 Section 3.19 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.

Owyhee River Below the Dam ACEC and Special Recreation Management Area (SRMA)

The proposed facility would be located to the north of the ACEC/SRMA, aligned with the existing utility corridor administered by the BLM. The ACEC/SRMA is in Malheur County. Two structures would be visible from the Lower Owyhee Canyon Watchable Wildlife Area interpretive site, and would be sited approximately 0.75 -1.0 miles from an interpretive site at a parking lot/turn-out area along the main road. The ACEC and SRMA are the same. The Owyhee River Below the Dam is discussed extensively in Section IV.F., *Protected Areas* and Section IV.J., *Scenic Resources* and is incorporated here by reference. The ACEC/SRMA is owned and managed by the BLM, and the BLM has already approved the facility in this area via its ROD. Temporary impacts to traffic and access to Lake Owyhee may occur during construction.[426]

The proposed facility would be visible as it crosses the access road to the ACEC/SRMA, but would not be visible or have very limited visibility from the Owyhee River itself, as well as most areas within the canyon. The proposed facility would be located outside the ACEC/SRMA, but mostly on BLM land within an existing BLM-designated utility corridor. Visibility of the proposed facility as it crosses the access road to the ACEC/SRMA would not detract from the recreational opportunities.

Based on the analysis presented here, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the recreational opportunities at the Owyhee River Below the Dam ACEC/SRMA.

Blue Mountain Century Scenic Bikeway

The proposed facility would cross the Blue Mountain Century Scenic Bikeway at two locations, at approximately milepost 48.0 and milepost 55 in Morrow County and Umatilla County. Scenic Bikeways are designated routes, established by Cycle Oregon, ODOT, Oregon State Parks, and Travel Oregon. There are 15 bikeways in the state. The bikeways are designated routes along existing state highways and other roads, in this case, mostly along highway 74 and 395. The proposed facility would be visible on approach to each crossing and riders would pass under each crossing. The bikeway would also pass two multi-use sites and one communication site. Visibility of the proposed facility would be brief, at two locations, out of the 108 mile overall bikeway route. Such brief, limited, and fleeting visibility of the proposed facility would not detract from the recreational opportunity of the scenic bikeway. It is possible that during facility construction, particularly the construction of crossings of highways 74 and 395, bike riders would experience delays, as well as noise and other construction-related issues such as dust. However, construction of the specific crossings would be temporary and likely only lasting

[426]Id. See Section 3.4.4.19 and Attachment T-3 Section 3.20 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.

a few days, and would be coordinated with ODOT to reduce impacts to drivers on the state highways as well as bikers along the scenic bikeway.[427]

Based on the analysis presented here, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the recreational opportunities at the Blue Mountain Century Scenic Bikeway.

Grand Tour Scenic Bikeway

The proposed facility would cross the Grand Tour Scenic Bikeway at approximately milepost 126, near the City of North Powder in Union County. Transmission towers and conductors would be visible on approach to the crossing, and riders would pass under the crossing. The Morgan Lake alternative would be located within five miles of portions of the bikeway.[428]

Scenic Bikeways are designated routes, established by Cycle Oregon, ODOT, Oregon State Parks, and Travel Oregon. There are 15 bikeways in the state. The bikeways are designated routes along existing state highways and other roads, in this case, mostly along highways 203 and 237 in Union and Baker counties. The proposed facility would be visible on approach to the crossing and riders would pass under the crossing, along highway 237. Visibility of the proposed facility would be brief, at one location, out of the 134 mile overall bikeway route. Such brief, limited, and fleeting visibility of the proposed facility would not detract from the recreational opportunity of the scenic bikeway. It is possible that during facility construction, particularly the construction of the crossing of highway 237, bike riders would experience delays, as well as noise and other construction-related issues such as dust. However, construction of the specific crossings would be temporary and likely only lasting a few days, and would be coordinated with ODOT to reduce impacts to drivers on the state highway as well as bikers along the scenic bikeway.

Based on the analysis presented here, the Department recommends that the Council find that the proposed facility would not cause a significant adverse impact to the recreational opportunities at the Grand Tour Scenic Bikeway.

Conclusions of Law

Based on the foregoing findings of fact, and subject to compliance with the recommended site certificate condition, the Department recommends that the Council find that the design, construction and operation of the proposed facility, including the proposed and alternative routes, is not likely to result in a significant adverse impact to any important recreational

[427] Id. See Section 3.4.4.20 and Attachment T-3 Section 3.21 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.
[428]Id. See Section 3.4.4.21 and Attachment T-3 Section 3.22 for the applicant's evaluation of the proposed facility's anticipated impacts to the resource.

opportunities in the analysis area and therefore the proposed facility complies with the Council's Recreation standard.

IV.M. Public Services: OAR 345-022-0110

(1) Except for facilities described in sections (2) and (3), to 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 impact to the ability of public and private providers within the analysis area described in the second amended project order to provide: sewers and sewage treatment, water, storm water drainage, solid waste management, housing, traffic safety, police and fire protection, health care and schools.
*****[429]

Findings of Fact

The Council's Public Services standard requires the Council to find that the proposed facility is not likely to result in significant adverse impacts on the ability of public and private service providers to supply sewer and sewage treatment, water, stormwater drainage, solid waste management, housing, traffic safety, police and fire protection, health care, and schools. The applicant addresses the impacts to public services in ASC Exhibit U.

The analysis area for public services is the area within and extending 10-miles from the site boundary. As explained in detail in ASC Exhibits B and C, the proposed facility would extend approximately 270 miles through Oregon. The proposed facility would cross through five Oregon counties: Morrow, Umatilla, Union, Baker, and Malheur. Additionally, two multi-use construction staging areas would be located in the City of North Powder and the City of Huntington.[430]

Construction Activities and Impact Assumptions

To evaluate potential impacts from the construction and operation of the proposed facility, the applicant used and compiled data from federal, state, and local government agencies and private service providers related to sewers and sewage treatment, water, stormwater drainage, solid waste management, police and fire protection, health care, and schools. The applicant's public services impact analysis is based on its proposal to concurrently construct the proposed

[429] OAR 345-022-0110(2) and (3) of the Council's Public Services Standard address wind, solar, or geothermal energy facilities and special criteria facilities. Because the Proposed Facility does not include wind, solar, or geothermal energy facilities or special criteria facilities, neither of those rules apply to this energy facility.
[430] As described in ASC Exhibit B, multi-use areas would be approximately 30 acres in size and would include construction field offices, parking areas, construction vehicle maintenance area, helicopter operations (helipads), explosives storage, hazardous materials storage, water storage tank, portable concrete batch plant, concrete washout station, gravel tire scrub area, noxious weed wash-off station, and bulk materials storage area.

facility in two, approximately 150-mile-long construction "spreads." "Construction Spread 1" would extend from the proposed Longhorn Station in Morrow County at the north (western) end of the proposed transmission line through Umatilla and Union Counties and a portion of Baker County. "Construction Spread 2" would cover the remaining portion of Baker County and Malheur County before concluding in Owyhee, County, Idaho at the south (eastern) end of the line. Table PS-1 provides a summary of the mileage and counties proposed in each proposed Construction Spread.

Table PS-1: Construction Spread and Affected Oregon Counties

Construction Spread	Milepost	Miles (Proposed Route)	Miles (alternative route)	Counties
1	0 to 150	150	19 (Morgan Lake) 2 (West of Bombing Range Road)	Morrow, Umatilla, Union, Baker
2	151 to 299	145	8 (Double Mountain)	Baker, Malheur

The applicant estimates that some construction work is projected to begin simultaneously in Construction Spread 1 and 2 with activities such as material marshaling, ROW clearing, and road and site work starting first. Then other construction activities may occur simultaneously within each Construction Spread including foundation installation, tower erection, and wire stringing. The proposed station expansion construction and the communication station work will begin on a schedule that will allow for completion at approximately the same timeframe as the proposed transmission line. Some workers, such as the construction foremen and inspectors, would stay for the duration of the proposed facility's construction. Most of the workforce would be employed for four to six months conducting construction activities such as clearing and road building, material hauling, restoration, and security services. Based on the applicant's experience constructing linear facilities, such as transmission lines, workers employed tend to relocate along the transmission line route as necessary, staying in each location for a short period. For this reason, workers do not typically bring children but may bring significant others if they do not have dependents.

The applicant explains that construction will generally occur between 7 a.m. and 7 p.m., Monday through Saturday. Additional hours may be necessary to make up schedule deficiencies or to complete critical construction activities.

To evaluate the impact on public services, the applicant's analysis estimates that approximately 25 percent of the projected workforce would be hired from the local workforce (i.e., those currently residing within commuting distance of the job sites), and that those workers would likely commute to and from their homes to work each day. The remaining 75 percent of the workforce would either temporarily relocate or commute in from their permanent residences and stay in temporary overnight lodging.

Although the applicant expects that very few workers temporarily relocating would be accompanied by their families, for the purposes of its analysis, the applicant estimated that 10 percent of relocating workers would bring families, including school-aged children.[431] Table PS-2 below summarizes the estimated temporary workers and commuters within the analysis area based on the proposed or alternative routes.[432] Peak construction generally occurs during summer months and, as the Department recommends in General Standard of Review Condition 1, the applicant would have up to four years after beginning construction to complete all phases of construction.

Table PS-2: Estimated Workers and Population Change during Peak Construction

Workers	Proposed Route		Alternative Routes		
			Double Mountain	Morgan Lake	West of Bombing Range Road
	Spread 1	Spread 2	Spread 2	Spread 1	Spread 1
Commute to Job Site Daily	61	49	2	8	1
Move to the Analysis Area alone	164	131	5	21	1
Move to the Analysis Area with family	18	15	1	2	0
Total	***243***	***194***	***8***	***32***	***2***
Population					
2015 Population (Analysis Area)	129,516	46,385	30,380	25,790	11,190
Number of People Temporarily Relocating	182	146	8	31	2
As a Percent of 2015 Population	0.1%	0.3%	0.0%	0.1%	0.0%

In ASC Exhibit U, the applicant explains that Baker County requested that the applicant contact public and private service providers operating within existing rights-of-way. As part of its application, the applicant has included a number of draft management plans that will guide development of the proposed facility, if approved. As recommended conditions of approval, the Department would require that each draft plan be finalized prior to facility construction. The finalization process would involve consultation between the applicant, the Department, and each affected county. During its review of each plan, the counties may further coordinate with

[431] Based on data compiled by the applicant from the U.S. Census Bureau (2009) as part of the 2008 American Community Survey, the average relocating family consists of two adults and one school-aged child.
[432] See ASC Exhibit U, page U-4, Table U-2 for a complete list of assumptions used to provide information in the table.

any specific public or private provider of services, as it determines appropriate. In ASC Exhibit U, the applicant proposes conditions to be included in the site certificate to consult with public and private service providers during construction and operation of the proposed facility. The Department notes that these applicant representations are satisfied in the applicable conditions for review of the management plans and does not include them as proposed by the applicant in this order. As such, Baker County and the other four affected counties and applicable reviewing agencies will have an opportunity to review and provide input on each management plan in order to further reduce potential impacts to public service providers. The five specific management plans discussed below in this section of the order are: 1) Construction Waste Management Plan, 2) Transportation and Traffic Management Plan, 3) Helicopter Use Plan, 4) Environmental and Safety Training Plan, and 5) Fire Prevention and Suppression Plan.

Operational Activities and Impact Assumptions

The applicant maintains that, during operation of the proposed facility, currently employed Idaho Power staff will be primarily responsible for operations and maintenance of the proposed transmission line, Longhorn Station and associated facilities. One additional part-time position may be filled locally, but the applicant does not anticipate that any current employees will be required to relocate to the area.

IV.M.1. Sewers and Sewage Treatment

The applicant explains in ASC Exhibit V that temporary sanitation during construction activities will consist of portable toilets located at multiuse areas and construction sites. There will not be any connections to a municipal sewage system during construction. Portable toilets will be provided by a subcontractor, who will be responsible for servicing the facilities at regular intervals and disposing of wastewater in accordance with local jurisdictional regulations. The selected construction contractor will ensure that a sufficient number of toilets is provided for the estimated amount of workers that would be on-site. Sanitary wastewater from portable toilets will be handled by a sanitary system subcontractor used to provide the sanitary facilities. This service will consist of scheduled removal of the sanitary waste using a vacuum truck and disposal in accordance with the sanitary system subcontractor's permits and applicable regulations such as the use of holding tanks for biological waste that conform to Oregon Department of Environmental Quality (ODEQ) regulations at OAR Chapter 340, Division 71; and transports waste in accordance with Oregon Revised Statute (ORS) Chapters 465 and 466.[433]

Effluent generated during operation of the proposed facility there will be approximately 11,000 gallons of wastewater annually for operation of a restroom facilities at the Longhorn Station in Morrow County. The restroom facilities at the Station will be connected to the Port of Morrow's water and sewer transport and treatment system. Attachment U-1 of ASC Exhibit U provides correspondence verification with public service providers, including the Port of

[433] B2HAPPDoc3-39 ASC 22_Exhibit V_Waste_ASC 2018-09-28, Section 3.3.2.1.

Morrow. Representatives from the Port states that they have "plenty of capacity" to handle the wastewater associated with operations of the proposed Longhorn Station.

Based on the analysis presented here, the Department recommends 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 sewer and sewage treatment providers within the analysis area.

IV.M.2. Water Supply

The applicant states that the construction of the proposed facility, including related or supporting facilities will require approximately 54.8 million gallons of water under a worst-case scenario.[434] Water will be required for dust control, sanitation purposes, foundation construction, Longhorn Station construction, communication station construction, access road construction, dust control during right-of-way clearing, station grading and site work, and re-seeding restoration work upon construction completion. The applicant explains in ASC Exhibit O that a minor amount of water may be necessary during construction for landscaping at the Station and may be used for drilling lubricant (slurry) and fire prevention activities. Worst-case water use for the construction of the proposed facility are assumed to be if the weather were exceptionally dry with high temperatures, which would require additional water for dust control. Dust control water application may also include eco-safe biodegradable, liquid copolymers to stabilize unpaved road surfaces and manage fugitive dust where extended use is anticipated. Concrete for the tower foundations will be provided by off-site commercial sources, however, to estimate the "worst case" amount of water use, the applicant assumes that concrete will be prepared at the batch plants located at multi-use areas (MUAs). In this circumstance, water would be transported to the concrete batch plant sites at the MUAs where it will be used to mix concrete. From the batch plants, the concrete (ready-mix) will be transported to the structure sites in concrete trucks for use in foundation installations.

In Attachment O-1 of ASC Exhibit W, the applicant provides documentation of correspondence with municipal water providers. In 2011, 2015, and 2016, the applicant sent letters to municipal water providers requesting if the estimated water amounts that were needed for the construction of the proposed facility would significantly impact the provider's ability to meet other water needs or provide water for other users. The municipal water service providers contacted along the proposed and alternative routes are the Public Works Departments at the City of Boardman, City of Pendleton, City of La Grande, Baker City, and the City of Ontario. All service providers provided a response in 2015/16 confirming their ability to provide sufficient water to meet the applicant's estimated needs.

Because water will be procured from municipal suppliers along the proposed route, no groundwater permit, surface water permit, or water right transfer will be required. Municipal

[434] B2HAPPDoc3-38 ASC 21_Exhibit U_PublicServices_ASC 2018-09-28, Section 3.5.1.

water rights held by the water service providers allow use for industrial purposes including facility construction purposes. The applicant states that because no new water rights will be necessary for the construction or operation of the proposed facility, neither a limited license for construction use nor other water right permits will be required.[435] It is noted that decisions on issuance of a limited license or other water right permit for an energy facility, if necessary, are subject to Council jurisdiction.

The applicant estimates that operation of the proposed Longhorn Station would use approximately 11,000 gallons per year (30 gallons per day) of water for operation of restroom facilities at the Station.[436] Attachment U-1 of ASC Exhibit U provides correspondence with the Port of Morrow. Representatives from the Port states that they have "plenty of capacity" to provide potable water for operations of the proposed Longhorn Station.

Based on the analysis presented here, 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 water supply providers within the analysis area.

IV.M.3. Stormwater Drainage

The applicant describes in ASC Exhibit U that the proposed facility will not cross areas that are served or maintained by stormwater drainage providers and that the construction and operation of the proposed facility will not require construction or expansion of stormwater drainage facilities. Information on avoidance, minimization and mitigation measures for potential impacts to soils is discussed further in section IV.D, *Soil Protection*, of this order.

Potential impacts associated with the construction of the proposed facility that may aggravate stormwater drainage, runoff and erosion are soil compaction from construction equipment, vegetation removal, blasting, spills, and concrete washout water produced during construction of tower and substation foundations at MUAs. Potential minor impacts associated with the operation of the proposed facility that may aggravate stormwater drainage, runoff and erosion would consist of soil disturbances at tower sites, Longhorn Station, communication stations, and/or access roads necessary to maintain and inspect the proposed facility.

Stormwater discharges from construction activities that disturb one or more acres are regulated under the Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES) stormwater program. Prior to discharging stormwater, construction operators must obtain coverage under an NPDES permit. Oregon is authorized by the EPA to implement a statewide stormwater program under the NPDES. The ODEQ stormwater program has permits and requirements modeled after EPA's NPDES program.

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[435] B2HAPPDoc3-24 ASC 15_Exhibit O_Water_Use_ASC 2018-09-28, Section 3.6.

[436] B2HAPPDoc3-39 ASC 22_Exhibit V_Waste_ASC 2018-09-28, Section 3.4.2.

ODEQ will require adherence to NPDES stormwater requirements, submittal of a 1200-C construction stormwater permit application, and preparation of an Erosion and Sediment Control Plan (ESCP) that describes construction activities and methods proposed to comply with stormwater requirements. The draft ESCP Plan is in ASC Exhibit I, Attachment I-3 and attached to this order. The ASC and draft ECSP describes that temporary construction disturbance areas will be minimized though the use of related erosion and sedimentation best management practices (BMPs) and restoration efforts to restore soil surfaces and vegetation following disturbances. As discussed in section IV.D, *Soil Protection*, of this order Soil Protection Condition 1 ensures the protective measures set forth in the draft ESCP are incorporated into the final ESCP and to ensure compliance with the final ESCP.

Based on the analysis presented here, 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 stormwater drainage providers within the analysis area.

IV.M.4. Solid Waste Management

In ASC Exhibit U, the applicant identifies landfills along the proposed transmission line route in Oregon, these are summarized in Table PS-3 below. The applicant notes that one landfill is located in nearby Idaho and will be used because the landfill located within Malheur County has a limited daily capacity. The applicant provides correspondence verifications with landfill operators as Attachment U-1 to ASC Exhibit U.

Table PS-3: Solid Waste Disposal Sites within the Analysis Area

Facility Name	County	Current Volume of Waste Received (Tons/Day)	Current Volume of Waste Permitted to Receive (Tons/Day)
Finley Buttes Landfill	Morrow, OR	1,923 tons	No permitting restriction
Baker Sanitary Landfill	Baker, OR	50 to 60 tons	No permitting restriction
Lytle Boulevard Landfill	Malheur, OR	15 to 16 tons	20 tons
Clay Peak Landfill	Payette, ID	184 tons	No permitting restriction

All municipal solid waste landfill facilities must comply with the federal regulations in 40 Code of Federal Regulations (CFR) Part 258 (Subtitle D of the Resource Conservation and Recovery Act [RCRA]), or equivalent state regulations. The disposal of solid waste in Oregon must be conducted in accordance with ORS Chapter 459 and OAR Chapter 340, Divisions 93 through 97.

The applicant describes that the types of waste generated from the construction of the proposed facility are primarily vegetative waste from clearing of the right-of-way, pulling and tensioning sites, and MUAs. The applicant states that it will be able to mulch up to 80 percent

of the vegetative materials and spread the materials around the site boundary, reducing the amount of vegetative waste that will be disposed of. Other materials generated by the construction of the proposed facility are native earth materials consisting of excess soils, fill material, and aggregates that may be generated from access road construction and foundation excavations. The applicant estimates that approximately 90 percent of material excavated for foundations and 50 percent of material removed from tower pad and work area grading will be disposed of at landfills within the vicinity of the construction or used for daily cover at county municipal solid waste landfills. The construction contractor may also opt to arrange for native material disposal at local sand and gravel/aggregate pits where the materials could be recycled for fill or aggregate sources on unrelated projects.[437] Finally, the applicant explains that up to 80 percent of household wastes such as scrap metal, wire, wood, concrete, packing materials such as crates, pallets, and paper wrapping to protect equipment during shipping will be recycled, and the remaining 20 percent, which includes minor amounts of worker personal items, such as meal residue, cups, and debris will be taken to landfills. See Table WM-1: *Materials from Construction Activities, Recycled Totals and Disposal Locations*, in section IV.N., *Waste Minimization*, of this order, for estimates of the types of waste expected to be generated from construction of the proposed facility. Table WM-1: *Materials from Construction Activities, Recycled Totals and Disposal Locations*, also provides estimates of the total quantities estimated to be disposed of at landfills after the applicant has recycled and reused vegetative materials.

Solid waste suitable for disposal at municipal facilities will be transported by a waste disposal subcontractor. Below is a discussion of each disposal site as provided in ASC Exhibit V, see also section IV.N., *Waste Minimization*, of this order:

- Morrow and Southern Umatilla Counties: Morrow County and southern Umatilla County use the Finley Buttes Landfill for waste disposal. Finley Buttes Landfill is a modern municipal solid waste disposal facility permitted by the ODEQ. The landfill is privately owned, but approved by Morrow County in 1987. The landfill is expected to provide service in its current configuration for the next 200 years.[438] Finley Buttes accepts municipal solid waste, construction/demolition waste, and special waste including liquids with proper approvals. Waste in Morrow and Umatilla counties will either be hauled directly to the landfill, or first moved to transfer stations.
- Union County: There is no operating municipal landfill in Union County. Residential and commercial waste is transferred to the Baker Sanitary Landfill, the applicant anticipates the waste disposal subcontractor will transport waste generated in Union County to this disposal site.
- Baker County: Baker County maintains the Baker Sanitary Landfill near Baker City, permitted by the ODEQ. Waste generated in Baker County will be disposed of at this location.

[437] B2HAPPDoc3-39 ASC 22_Exhibit V_Waste_ASC 2018-09-28, Section 3.3.1.2.
[438] B2HAPPDoc3-39 ASC 22_Exhibit V_Waste_ASC 2018-09-28, Section 3.4.3.

- Malheur County: Malheur County holds permits from ODEQ for the operation of the Lytle Boulevard Landfill located approximately 10 miles south of Vale, Oregon. The daily operation is conducted by a private contractor. Lytle Boulevard is permitted to receive only 20 tons per day and currently receives 15 to 16 tons per day. Waste generated in Malheur County will not be disposed of at Lytle Boulevard Landfill, but at a nearby landfill (Clay Peak Landfill) in Payette County, Idaho.

As discussed further in section IV.N., *Waste Minimization*, of this order the applicant represents measures it will install during construction to reduce the amount of waste generated by implementing a Construction Waste Management Plan. This is addressed in Waste Minimization Conditions 1.

Minor amount of solid waste generated during operation of the proposed facility would include replaced equipment and components, packing materials associated with transmission line and Station repairs and maintenance. Minimal amount of solid waste, such as household wastes listed above will be generated by the operation personal at the Longhorn Station. An estimated 850 cubic yards of vegetative debris would be generated during vegetative management intervals as discussed in section IV.H., *Fish and Wildlife Habitat*, and Attachment P1-4, Vegetation Management Plan, of this order.

Based on the analysis presented here, 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 solid waste disposal sites and providers within the analysis area.

IV.M.5. Housing

The availability of temporary housing varies seasonally and geographically within the counties in the analysis area. Demand for temporary housing is generally greatest during the tourism season in the summer, which is also the time of year expected for peak construction impacts. Table U-4 in ASC Exhibit U summarizes data the applicant provides for housing availability including houses, apartments, mobile homes or trailers, groups of rooms, or a single room occupied or intended to be occupied as separate living. Table U-4 does not include housing units only available for seasonal, recreational, or occasional use in the total estimate of available housing units. Table U-5 in ASC Exhibit U summarizes data that the applicant's consultant compiled for hotels, motels, and bed and breakfast inns with 15 or more rooms within the analysis area, and provides an estimate of available rooms based on a statewide average occupancy of 70.3 percent. Table U-6 in ASC Exhibit U summarizes several recreational vehicle (RV) and other types of campsites within the analysis area. The applicant notes that data on the vacancies at these sites is not readily available and that the data provided in the Table are for participating businesses only and do not necessarily represent all the RV spaces within 25 miles of the proposed transmission line or the number of spaces that could be available for use during construction of the proposed facility.

Table PS-4 below combines the data from Tables U-1 (Table PS-3), U-2 (Table PS-2), U-4, U-5, and U-6 to demonstrate the totals of all available housing options for temporary workers associated with each construction spread. Table PS-4, then provides the results of Table PS-3 compared with the total estimated temporary workers associated with each construction spread. The results of this comparison illustrate that, based on the applicants' estimates of occupancies during peak construction season, temporary workers would occupy 9.5 percent of the total available housing options for Construction Spread 1 and 18.4 percent of the total available housing options for Construction Spread 2. Conversely, this leaves approximately 1,734 available housing and rental options within Morrow, Umatilla, Union and Baker counties during the summer season for other non-project-related individuals or families. And it leaves approximately 648 housing and rental options within Baker and Malheur counties during the summer season for other non-project-related individuals or families.

Table PS-4: Available Housing Options based on Construction Spread

Construction Spread- Counties	Estimated Housing Units Available to Rent[1]	Estimated Hotel and Motel Rooms Available[2]	Estimated Spaces at RV Parks and Campsites[3]	Total Combined Available Housing Options for Temporary Workers
Construction Spread 1				**1916**
Morrow County	80	30	166	
Umatilla County	366	342	94	
Union County	319	39	199	
Baker County	96	48	137	
Total	**861**	**459**	**596**	
Construction Spread 2				**794**
Baker County	96	48	137	
Malheur County	262	172	79	
Total	**358**	**220**	**216**	

[1] House, apartment, mobile home or trailer, group of rooms, or single room
[2] Data includes hotels, motels, and bed and breakfasts with 15 or more rooms. Average number of rooms based on 2016 statewide average hotel occupancy rate (i.e., 70.3%).
[3] Recreational vehicle (RV) and other types of campsite data are for participating businesses only and do not necessarily represent all the RV spaces within 25 miles of the proposed transmission line or the number of spaces that could be available for use during construction of the proposed facility.

Sources: B2HAPPDoc3-38 ASC 21_Exhibit U_PublicServices_ASC 2018-09-28.
Smith Travel Research 2009, 2011; Travel Oregon 2009a and 2009b.

Table PS-5: Total Temporary Workers Needing Housing Compared to Available Housing Options

Construction Spread-Counties	Estimated workers move to analysis area[1]	Total Combined Available Housing Options for Temporary Workers[2]	Estimated Impact of Workers on Available Rental Options[3]
Construction Spread 1	182	1916	9.5%
Morrow County			
Umatilla County			
Union County			
Baker County			
Construction Spread 2	146	794	18.4%
Baker County			
Malheur County			

[1] Includes workers who move alone and with families for the proposed route.
[2] Numbers derived from Table PS-4
[3] Estimated Temporary workers divided by total combined available housing options provides an estimate for the impact of construction of the proposed facility on the total available rentals in the analysis area for each construction spread.

As demonstrated in the tables and analysis here, there is sufficient capacity in short-term housing options for construction workforce. Additionally, the applicant's analysis underestimates the available short-term housing options because it is limited to a 10 mile analysis area and as shown on Tables PS-4 and PS-5, only housing options in the affected Oregon counties are considered. The Department notes that there are additional short-term housing options available within reasonable commuting distance to the facility including in Washington and Idaho.[439]

Based on the analysis presented here, 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 housing and rental providers within the analysis area.

IV.M.6. Traffic Safety

The primary impact to the transportation system within the analysis area will be the additional traffic associated with the construction of the proposed facility. Construction equipment and materials will be transported from primary sources to multi-use areas (MUAs) and individual tower construction sites, as well as the construction sites for the station and communication

[439] B2HAPPDoc3-38 ASC 21_Exhibit U_PublicServices_ASC 2018-09-28, Section 3.5.4.

station sites. There will be an increase in traffic related to construction workers commuting to and from the job sites. The potential for construction-related impacts to traffic is greatest where construction will involve regular use of public roads between local communities and multi-use areas, such as I-84, US 20, Oregon State highways, and well-used local roads. The following is an applicant-provided summary of anticipated equipment used for each transmission-line construction activity that will be driven, moved or transported along the construction route:

- Survey work: pickup trucks or ATVs,
- Timber removal: pickup trucks, feller bunchers, dump trucks, wood chippers,
- Road construction: pickup trucks, bulldozers, motor graders, and water trucks,
- Hole digging, installation of directly embedded structures, or foundation installation: pickup trucks, 2-ton trucks, digger derrick trucks, hole diggers, bulldozers, concrete trucks, water trucks, cranes, hydro cranes, wagon rock drills, dump trucks, and front-end loaders,
- Hauling lattice steel members, tubular poles, braces, and hardware to the structure sites: steel haul trucks, carry alls, cranes, and forklifts,
- Assembly and erection of structures: pickup trucks, 2-ton trucks, carry alls, cranes, and a heavy lift helicopter,
- Wire installation: pickups, wire reel trailers, diesel tractors, cranes, 5-ton boom trucks, splicing trucks, three drum pullers, single drum pullers, tensioner, sagging dozers, carryalls, static wire reel trailers, bucket trucks, and a light duty helicopter,
- Final cleanup, reclamation, and restoration: pickup trucks, 2-ton trucks, bulldozers, motor graders, dump trucks, front-end loaders, hydro-seed truck, and water trucks.[440]

The larger potential impact to traffic levels is associated with daily trips in and out of multi-use areas by construction workers personal vehicles, material delivery vehicles, concrete trucks, and construction vehicles moving from work area to work area within the section or Construction Spread. Construction will generally occur between 7 a.m. and 7 p.m., Monday through Saturday. Additional hours may be necessary to make up schedule deficiencies or to complete critical construction activities. Given the early start times and late finish times, construction commuting traffic likely will overlap with only a portion of local community peak traffic hours.

For the purposes of the applicant's traffic impact analysis, Construction Spreads 1 and 2 are divided into smaller sections that are assumed to be sufficiently separate (geographically) so that the use of local access routes will not overlap between smaller sections. In other words, the traffic impacts will not be additive between adjacent sections. Work crews will include those involved in construction activities, as well as workers providing vehicle and equipment maintenance and repairs, refueling, dust control, construction inspection, construction

[440] B2HAPPDoc3-38 ASC 21_Exhibit U_PublicServices_ASC 2018-09-28, Attachment U-2, p. 19.

materials testing, and environmental compliance and surveying, the various types of work crews are listed in Table PS-6 below. The Department highlights that the applicant provided vehicle trips associated with all phases on construction, but that it is not likely that all of these activities will occur at once. Rather, certain types of construction activities may occur simultaneously between Construction Spreads such as ROW clearing, road/pads grading, dust control and refueling. Table 4 and Table 6 in Attachment U-2: Transportation and Traffic Plan, attached to this order, provide the estimated quantities of personal vehicles, construction pickups, and other construction equipment, as well as the total number of one-way trips per day. Table PS-6 below provides a summary of the applicants' estimates from Tables 4 and 6 for personal vehicle trips, light construction vehicle trips and heavy construction vehicle trips.

Table PS-6: Personal Vehicle Trips per Day per Construction Spread

Construction Crew Type	Personal Vehicles	Light Construction Vehicles	Heavy Construction Vehicles
	Total One- way Trips (per day)	**Total One- way Trips (per day)**	**Total One- way Trips (per day)**
Substation Construction	98	40	10
ROW Clearing	18	36	20
Road/Pads Grading	18	36	18
Foundations	22	18	40
Tower Lacing (assembly)	108	54	0
Tower Setting (erection)	54	40	0
Wire Stringing	58	36	36
Restoration	10	6	0
Blasting	10	20	0
Materials Management	20	160	24
Mechanic & Equipment Management	10	30	0
Refueling	10	0	20
Dust Control	10	0	20
Construction Inspection	10	40	0
Materials Testing	10	20	0
Environmental Compliance	10	54	0
Surveyors	10	30	0
Total	**486**	**620**	**188**
Total Estimated Maximum Daily Trips Associated with each Construction Spread: 1,294			

According to the 2008 Oregon Department of Transportation (ODOT) Transportation System Guidelines, roadway and road facility congestion and performance standards may be expressed as level of service (LOS) standards or as volume-to-capacity (V/C) ratios. LOS characterizes the performance of roads, intersections, interchanges, and other transportation facilities. LOS

ratings range from "A" (ideal conditions, with free-flowing traffic) to "F" (complete failure or gridlock). V/C ratios are defined as the peak traffic volume (vehicles/hour) on a highway section divided by the maximum volume that the highway section can handle. The closer the V/C ratio is to 1.0, the more congested traffic is. The 1999 ODOT Oregon Highway Plan and later amendments guide state highway development and management for a 20-year planning horizon. The Plan's highway mobility policy adopted V/C ratio rather than LOS to measure highway performance because V/C ratio is a more precise and consistent measure. Therefore, the applicant conducted and presents its traffic impact estimates in V/C ratios.

To determine the "worst case" impacts of the estimated vehicle traffic associated with construction of the prosed facility, the applicant separated the two Construction Spreads into five smaller sections based on the locations of the multi-use areas that could have additive traffic impacts with similar construction windows and seasonal weather restrictions. To estimate the localized traffic impacts with estimating the volume-to-capacity ratio, the applicant divided the total estimated daily trips, 1,294 trips per day, into five sections associated with the MUA locations and potential hauling or commuting routes.[441] The 1,294 daily one-way trips divided over five sections of more concentrated traffic results in 259 daily one-way vehicle trips per group of adjacent multi-use areas. As noted above, not all construction sections will have the same number or type of concurrent construction activities, depending on how construction is sequenced and executed. Some sections will have fewer daily vehicle trips.

The applicant's engineering contractor estimated that 50 percent of the construction vehicle trips will begin and end at work areas other than multi-use areas. This assumption is based on standard practices during the construction of large, linear project, work crews often leave construction equipment at MUAs instead of driving to and from them daily. Additionally, work crews may meet in central locations and drive together to individual MUAs. This reduces the number of one-way trips for each group of adjacent multi-use areas to 130 per day. Of these, 111 vehicles are anticipated to be less than 10,000 pounds gross vehicle weight and 19 vehicles are anticipated to be greater than 10,000 pounds gross vehicle weight.[442]

The applicant incorporated these estimates into a planning-level analysis of worst-case potential impacts from construction of the proposed facility on V/C ratios and presented its findings in Table 8 of Attachment U-2 ASC, provided below as Table PS-7. Existing peak traffic volumes and V/C ratios were identified or calculated for the routes most likely to be used by trucks hauling construction materials or logs, and by construction workers commuting to construction work sites. Calculations were based on conservative assumptions detailed in the footnotes to Table PS-7. Existing V/C ratios on these routes range from 0.02 to 0.48. The numbers of daily vehicle trips related to construction of the proposed facility were estimated and added to existing peak traffic volumes for each potential hauling or commuting route. The

[441] See appendix A of the attachment U-2 Transportation and Traffic Plan for figures of the preliminary haul routes.
[442] B2HAPPDoc3-38 ASC 21_Exhibit U_PublicServices_ASC 2018-09-28, Attachment U-2, p. 20.

resulting “with facility” traffic volumes were divided by road capacities for each route to arrive at the worst-case V/C ratios that could be expected, by route, during construction of the proposed facility. These peak-hour, “with facility” V/C ratios range from 0.04 to 0.61, resulting from increases of 0.01 to 0.13. Each “with facility” V/C ratio was compared to ODOT’s maximum V/C ratio for that type of road (based on ODOT 1999; V/C ratios last amended in May 2015). Factoring in traffic levels generated from construction activities, none of the potential facility-related hauling or commuting routes exceed a maximum V/C ratio. Given the low V/C ratios on existing roads proposed to be used for construction of the proposed facility and the relatively dispersed distribution of truck traffic and workers near any specific location at any given time, the additional traffic generated during construction of the proposed facility is not anticipated to cause notable congestion or otherwise significantly impact local communities, or service providers for traffic safety.

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Table PS-7: Evaluation of Facility Impacts on Volume-to-Capacity Ratios for Roads Potentially Used during Facility Construction

Multi-use Areas	Potential Hauling or Commuting Route	Road Classification[1]	Existing Peak Traffic Volume[2]	Road Capacity[2]	Existing V/C Ratio[2]	Estimated Daily Personal and Construction Vehicles	With Facility Peak Traffic Voume[3]	With Facility V/C Ratio[4]	Increase in V/C Ratio From Facility Construction[5]	ODOT Maximum V/C Ratio[6]	V/C Ratio Exceeds ODOT Maximum with Facility?
MO-01, MO-02, MO-03, MO-04, UM-01, UM-02	I-84	Interstate Highway, Unincorporated Communities	2,205	5,513	0.40	130	2,335	0.42	0.02	0.70	No
	I-82	Interstate Highway, Unincorporated Communities	2,640	5,500	0.48	130	2,770	0.50	0.02	0.70	No
	US 730	Statewide (Not a Freight Route), Rural Lands	990	2,475	0.40	130	1,120	0.45	0.05	0.70	No
	OR 207	Regional Highway, Rural Lands	56	1,110	0.05	130	186	0.17	0.12	0.70	No
	OR 74	Regional Highway, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.80 to 1.00	No
	US 395	Freight Route on a State Highway, Rural Lands	465	969	0.48	130	595	0.61	0.13	0.70	No
	Big Butter Creek Lane/Butter Creek	District/Local Interest Roads, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
	Lamb Road	District/Local Interest Roads, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
MO-05, UM-03,	I-84	Interstate Highway, Unincorporated	2,205	5,513	0.40	130	2,335	0.42	0.02	0.70	No
	US 395	Freight Route on a State Highway, Rural Lands	465	969	0.48	130	595	0.61	0.13	0.70	No
	OR 74	Regional Highway, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.80 to 1.00	No

Table PS-7: Evaluation of Facility Impacts on Volume-to-Capacity Ratios for Roads Potentially Used during Facility Construction

Multi-use Areas	Potential Hauling or Commuting Route	Road Classification[1]	Existing Peak Traffic Volume[2]	Road Capacity[2]	Existing V/C Ratio[2]	Estimated Daily Personal and Construction Vehicles	With Facility Peak Traffic Voume[3]	With Facility V/C Ratio[4]	Increase in V/C Ratio From Facility Construction[5]	ODOT Maximum V/C Ratio[6]	V/C Ratio Exceeds ODOT Maximum with Facility?
UM-04, UM-05, UM-06, UM-07	Parker Road	District/Local Interest Roads, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
	Southwest Birch Street/East Birch	District/Local Interest Roads, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
	McKay Creek Road	District/Local Interest Roads, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
	Ross Road	District/Local Interest Roads, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
UN-02, UN-03, UN-04	I-84	Interstate Highway, Unincorporated Communities	2,205	5,513	0.40	130	2,335	0.42	0.02	0.70	No
	OR 234	District/Local Interest Road, Rural Lands	700	14,000	0.05	130	830	0.06	0.01	0.75	No
	Foothill Road	District/Local Interest Road, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
	Bagwell Road	District/Local Interest Road, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
	North Powder River Lane	District/Local Interest Road, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
	Olsen Road	District/Local Interest Road, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
BA-01, BA-02, BA-03, BA-04,	I-84	Interstate Highway, Unincorporated	2,205	5,513	0.40	130	2,336	0.42	0.02	0.70	No
	US 30	Freight Route on a State Highway, Rural Lands	2,200	9,565	0.23	130	2,330	0.24	0.01	0.70	No
	CR 203	District/Local Interest Road, Rural Lands	700	14,000	0.05	130	830	0.06	0.01	0.75	No
	Atwood Road	District/Local Interest Road, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No

Table PS-7: Evaluation of Facility Impacts on Volume-to-Capacity Ratios for Roads Potentially Used during Facility Construction

Multi-use Areas	Potential Hauling or Commuting Route	Road Classification[1]	Existing Peak Traffic Volume[2]	Road Capacity[2]	Existing V/C Ratio[2]	Estimated Daily Personal and Construction Vehicles	With Facility Peak Traffic Voume[3]	With Facility V/C Ratio[4]	Increase in V/C Ratio From Facility Construction[5]	ODOT Maximum V/C Ratio[6]	V/C Ratio Exceeds ODOT Maximum with Facility?
BA-05, BA-06, MA-01	Campbell St	District/Local Interest Roads, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
	Oxman Ranch Road	District/Local Interest Road, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
	Sunset Lane	District/Local Interest Road, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
	Hill Creek Road	District/Local Interest Road, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
	Durkee Road	District/Local Interest Road, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
	Rye Valley Lane	District/Local Interest Road, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
	Old Oregon Trail	District/Local Interest Road, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
	Love Reservoir Road	District/Local Interest Road, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
MA-02, MA-03, MA-04, MA-05, MA-06	I-84	Interstate Highway, Unincorporated Communities	2,205	5,513	0.40	130	2,335	0.42	0.02	0.70	No
	US 20	Freight Route on a State Highway, Rural Lands	165	1,625	0.10	130	295	0.18	0.08	0.70	No
	US 26	Statewide (Not a Freight Route), Rural Lands	120	6,000	0.02	130	250	0.04	0.02	0.70	No
	OR 201	Regional or District Highway, Rural Lands	180	1,625	0.11	130	310	0.19	0.08	0.70	No
	East 5th Avenue	District/Local Interest Road, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
	Loop Road	District/Local Interest Road, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No

Table PS-7: Evaluation of Facility Impacts on Volume-to-Capacity Ratios for Roads Potentially Used during Facility Construction

Multi-use Areas	Potential Hauling or Commuting Route	Road Classification[1]	Existing Peak Traffic Volume[2]	Road Capacity[2]	Existing V/C Ratio[2]	Estimated Daily Personal and Construction Vehicles	With Facility Peak Traffic Voume[3]	With Facility V/C Ratio[4]	Increase in V/C Ratio From Facility Construction[5]	ODOT Maximum V/C Ratio[6]	V/C Ratio Exceeds ODOT Maximum with Facility?
MA-02, MA-03, MA-04, MA-05, MA-06	Graham Boulevard	District/Local Interest Road, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
	Rock Canyon Road	District/Local Interest Road, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
	4th Boulevard South	District/Local Interest Road, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
	Bishop Road	District/Local Interest Road, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
	Russell Road	District/Local Interest Road, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
	2nd Boulevard South	District/Local Interest Road, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
	Cow Hollow Road	District/Local Interest Road, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
MA-07, MA-08, MA-09, OW-01, OW-02, OW-03, OW-04, OW-05	I-84	Interstate Highway, Unincorporated Communities	2,205	5,513	0.40	130	2,335	0.42	0.02	0.70	No
	US 95	Freight Route on a State Highway, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.70	No
	Owyhee Tunnel Road	District/Local Interest Road, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
	Nelson Lane	District/Local Interest Road, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
	Succor Creek Road	District/Local Interest Road, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
	State Line Road	District/Local Interest Road, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
	Sage Road	District/Local Interest Road, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No

Table PS-7: Evaluation of Facility Impacts on Volume-to-Capacity Ratios for Roads Potentially Used during Facility Construction

Multi-use Areas	Potential Hauling or Commuting Route	Road Classification[1]	Existing Peak Traffic Volume[2]	Road Capacity[2]	Existing V/C Ratio[2]	Estimated Daily Personal and Construction Vehicles	With Facility Peak Traffic Voume[3]	With Facility V/C Ratio[4]	Increase in V/C Ratio From Facility Construction[5]	ODOT Maximum V/C Ratio[6]	V/C Ratio Exceeds ODOT Maximum with Facility?
	Coyote Grade Road	District/Local Interest Road, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
	Wilson Cemetery Lane	District/Local Interest Road, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No
	Johnstone Road	District/Local Interest Road, Rural Lands	120	1,000	0.12	130	250	0.25	0.13	0.75	No

[1] Road classifications were selected conservatively based on the most rural segment of each route (the segment with the smallest capacity).
[2] Existing peak traffic volumes, capacities, and V/C ratios (representing peak a.m. and p.m. conditions) were estimated using conservative assumptions with the methods described in ODOT's Highway Design Manual (ODOT 2012) or taken directly based on the exact road or roads with similar characteristics from local transportation plans. Where peak traffic volumes are unavailable, peak volumes are assumed to be 15 percent of average daily trips, based on the local transportation plans.
[3] "With facility" peak traffic volume is calculated by adding existing peak traffic volume plus the number of facility-related truck and car trips assumed to occur during the same timeframes.
[4] "With facility" V/C ratio is calculated by dividing the "with facility" peak traffic volume by the road capacity.
[5] The increase in V/C ratio from the facility construction is calculated by subtracting the existing V/C ratio from the "with facility" V/C ratio.
[6] From ODOT (1999).
Travel routes less than a mile from large roads and highways are addressed in Table 5 and 7 and are not in the V/C ratios in this table.
Source: B2HAPPDoc3-38 ASC 21_Exhibit U_PublicServices_ASC 2018-09-28, Attachment U-2.

The applicant discusses in the draft Transportation and Traffic Plan (Plan) (Attachment U-2 of this order) that construction of the proposed facility would not overlap with public transportation systems, such as public bus routes and impacts to railroads or pipelines are not anticipated because construction activities will not be performed on railroad ROWs or near pipelines. Delivery of large equipment and materials via truck could require temporary closures to selected local roads. However, multi-use areas and both tower and station construction sites are located away from high-use public roads, so any closures during construction are anticipated to have minimal impact on local communities and traffic safety providers. Two-lane roads would be most impacted by temporary closures because they provide only one lane of travel per direction.

Construction vehicle traffic on public roadways will be limited to off-peak commuting times as practicable to minimize impacts on local commuters. To minimize conflicts between construction-related traffic and background traffic, movements of heavy trucks will be minimized to the extent practicable during these peak times. If possible and in consideration of worker safety, such oversize deliveries will occur during other parts of the day, when background traffic tends to be lower, such as early morning and late afternoon. To reduce traffic congestion and roadside parking hazards, multi-use areas will provide for parking for construction employee personal vehicles.

In addition, the applicant outlines other provisions in its Plan that the construction contractor will implement, including:

- Coordinating the timing and locations of road closures in advance with emergency services such as fire, paramedics, and essential services such as mail delivery and school buses.
- Maintaining emergency vehicle access to private property.
- Developing plans as required by county or state permits to accommodate traffic where construction would require closures of state or county-maintained roads for longer periods.
- Posting caution signs on county and state-maintained roads, where appropriate, to alert motorists of construction and warn them of slow traffic.
- Using traffic control measures such as traffic control flaggers, warning signs, lights, and barriers during construction to ensure safety and to minimize localized traffic congestion. These measures will be required at locations and during times when trucks will be entering or exiting highways frequently.
- Using chase vehicles as required (or police vehicles, if required by ODOT) to give drivers additional warning.
- Notifying landowners prior to the start of construction near residences.
- Fencing construction areas near residences at the end of the construction day, and restoring residential roads damaged by construction activities as soon as possible.
- Installing access control devices at locations shown in the Road Classification Guide and Access Control Plan (Attachment B-5 of this order).

- All construction personnel will be required to obey local speed limits and traffic restrictions to ensure safe and efficient traffic flow. Construction vehicles on un-posted project roads will travel at speeds that are reasonable and prudent for the conditions. The applicant will work with ODOT and affected counties to establish reduced construction speed limits on impacted roads.[443]

The applicant states that it and its construction contractors will be required to comply with all conditions and requirements stipulated in road use permits, encroachment permits, oversize/overweight permits or similar documents and agreements, including rehabilitation or reconstruction of roadways and structures damaged during construction. The construction contractors will be required to obtain these permits and agreements from local jurisdictions and agencies. Work on existing county, state, or federal roads, or construction of new roads, may require permits from affected jurisdictions. These types of permits including road encroachment permits and oversize/overweight transportation permits, are outside of Council jurisdiction and are the responsibility of the applicant to secure independent of the EFSC process.

For new access roads, the design of higher-standard roads will conform to the most current edition of AASHTO's Guidelines for Geometric Design of Very Low-Volume Local Roads, for access roads with an anticipated average daily traffic of less than 400 vehicles. Roads on federal lands will meet USFS and BLM standards for roads that will be added to federal jurisdiction. Existing USFS and BLM roads which cannot be used in their existing condition will be brought up to these standards. For instance, road improvements and new road construction will meet the OAR Chapter 629, Division 625 road construction standards, and standards on USFS lands will be similar to ODF standards.[444] For roads on state forest land, the applicant states that it will work with ODOT, Oregon Department of Forestry, and other agencies to ensure compliance with applicable road standards and to obtain any necessary approvals or permits. Roads that remain in the applicant's jurisdiction (ROW) may not be designed to all federal standards. Roads developed specifically for the proposed facility that are identified by the applicant as no longer necessary will be reclaimed as specified in the Reclamation and Revegetation Plan (Attachment P1-3 and recommended Fish and Wildlife Condition 1).

The applicant will require its construction contractors to comply with the provisions in the Transportation and Traffic Plan and submit the following information based on final design and the construction logistics of a phase or segment of the proposed facility, this information will also be included in the Plan submitted to the Department, counties and local jurisdictions:

- Materials and equipment;
- Final material/equipment transportation routes;

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[443] See also section IV.H., *Fish and Wildlife Habitat*, Fish and Wildlife Habitat Condition 8, imposing a 25 MPH speed limit during construction.

[444] B2HAPPDoc3-19 ASC 11_Exhibit K_Land Use_ASC 2018-09-28, Attachment K-2, p. 11.

- Total number of trips associated with delivery of materials and equipment;
- Total number of construction workers and their distribution throughout the construction schedule;
- Likely commuting routes and total number of trips for construction workers;
- Specific road improvements needed to allow use of transportation routes; and
- Construction Best Management Practices (BMPs) that will be required

The applicant explains that construction of the proposed facility is not expected to result in damage to existing roads, bridges, or overhead power distribution lines, however there will the need to improve some local roads to accommodate oversize truck deliveries.[445] In its letters on the ApASC and on the ASC, the City of La Grande a reviewing agency for the proposed facility, expressed concerns about impacts to proposed access roads within its jurisdiction and requested that the applicant provide detailed information and coordinate with the City.[446] To ensure the information and protective measures set forth in the draft Transportation and Traffic Plan are finalized and implemented to avoid and reduce impacts to traffic service providers and reduce impacts to roads maintained by local jurisdictions, the applicant proposes, and the Department recommends, Public Services Condition 1 below. This condition stipulates that, prior to construction of a phase or segment off the proposed facility within a county or local jurisdiction, the protective measures in the Plan are approved by the Department in consultation with each affected County and jurisdiction. Prior to construction of a phase or segment of the proposed facility, the applicant will provide the draft Plan to each affected County and jurisdiction and the Department for review and Department approval. To reduce potential traffic impacts and ensure adequate coordination with the applicable Counties and other jurisdictions (including the Planning Department, Road Department, or Public Works Department) during construction of the proposed facility, the Department recommends Council impose the following condition:

Recommended Public Services Condition 1: At least 90 days prior to construction of a facility phase or segment in each affected county and jurisdiction, unless otherwise approved by the Department, the certificate holder shall complete the following to address traffic impacts and transportation coordination in each county and jurisdiction:

a. The certificate holder shall submit to the Department, appropriate county, and jurisdiction, a final county-specific Transportation and Traffic Plan associated with the phase or segment of the facility to be constructed. The protective measures described in the draft Transportation and Traffic Plan, Attachment U-2 to the Final Order on the ASC, shall be included and implemented as part of the final county-specific Plan, unless otherwise approved by the Department, in consultation with the county or jurisdiction;

[445] B2HAPPDoc3-38 ASC 21_Exhibit U_PublicServices_ASC 2018-09-28. Attachment U-2, Section 4.1.
[446] B2HAPPDoc13-11 ASC Reviewing Agency Comment City of La Grande_Strope 2018-11-26.

b. The final county-specific Transportation and Traffic Plan submitted to the Department, county, and jurisdiction shall include:
   i. The identification of the final material/equipment transportation/haul routes and the documentation of the existing condition of the routes/roads;
   ii. Attachment B-5 Road Classification Guide and Access Control Plan attached to the Final Order on the ASC updated to reflect the final design of the proposed facility. Include applicable road segment maps, road improvements designations and final access control device description and locations;
   iii. List any road use permits, encroachment permits, oversize/overweight permits, or road use or other legal agreements obtained by the construction contractor or applicant.
c. The final Transportation and Traffic Plan for a phase or segment of the facility must be approved by the Department, in consultation with each county or jurisdiction, prior to construction.

The applicant explains that the operations phase will have little to no effect to local and regional traffic. During operations, vehicle traffic will be limited to inspections and maintenance of the transmission line and communication stations and regular operation of the Longhorn Station. Following construction of the proposed facility and during operations, existing and new permanent access roads will be used by maintenance crews and vehicles for inspections and maintenance of the new facilities. Most inspections of the transmission line will be conducted aerially. If major maintenance and repair work requires lane restrictions and/or roadway closures, the applicant will coordinate with landowners and service providers to allow access to private property. The applicant estimates that it will use existing staff for operations so traffic from staff during operations will not affect traffic within the analysis area.

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.

Air Traffic

The applicant proposes to use 30 temporary multi-use areas (MUAs) spaced along the proposed and alternative routes. The applicant proposes to stage helicopter operations out of some MUAs and four of the pulling and tensioning sites will be equipped and used as light-duty fly yards (LDFY), with similar operations as helicopter uses at MUAs. Construction activities facilitated by helicopters could include delivery of construction laborers, equipment, and materials to structure sites; transmission structure placement; hardware installation; and wire stringing operations. Helicopters could also be used to support the construction and

administration and management. Heavy-lift and light duty helicopters may be used during construction of the proposed facility in areas where access roads and/or rough terrain will not permit the delivery of equipment, materials or personnel. If used, heavy lift and light duty helicopters would deploy from multi-use areas or light duty fly yards.

The frequency of helicopter use depends on whether the proposed facility structure would be assembled at a structure site or a multi-use area. If assembly takes place at the structure site, daily helicopter operations at the relevant multi-use areas and light-duty fly yards would typically involve approximately 15 to 20 flights per day and last for approximately 2 to 3 months. If assembly takes place at the multi-use areas, daily helicopter operations would typically involve approximately 10 to 15 flights per day and might last for a year but trips would not take place every day and would be more sporadic. The applicant states that helicopter operations are expected to be limited to daylight hours.[447] As discussed further in section IV.E., *Land Use*, all of the MUAs and two of the LDFYs yards are located within areas zoned as Exclusive Farm Use (EFU) and two of the LDFYs are located in Umatilla County within forest areas and considered Goal 4 Forest Lands.

If not coordinated, helicopter use could interfere with flights to and from local regional airports. Table PS-8 below identifies airports within the analysis area and the distances of proposed facility components to the nearest airport.

Table PS-8: Airport Distances from Facility Components

Airport Name	Code	County	Distance (miles)
Boardman Airport	M50	Morrow	9.1
Hermiston Municipal Airport	HRI	Umatilla	5.7
Lexington Airport	9S9	Morrow	9.4
La Grande Municipal Airport/Union County Airport	LGD	Union	2.5
Baker City Municipal Airport	BKE	Baker	3.1
Miller Memorial Airpark	S49	Malheur	7.3
Source: B2HAPPDoc3-38 ASC 21_Exhibit U_PublicServices_ASC 2018-09-28, Table U-8.			

The applicant states that it would require its construction contractor to develop a Helicopter Use Plan that would address the helicopter operations during construction and include information regarding the type of helicopter use, duration and timing of helicopter use, flight

[447] B2HAPPDoc3-41 ASC 24_Exhibit X_Noise_ASC 2018-09-28, Section 3.1.1.

data management, and other requirements of both the Oregon Department of Aviation and the FAA. The applicant represents that all helicopters must be compliant with the noise certification and noise level limits set forth in the Code of Federal Regulations 14 CFR § 36.11 which outlines the requirements needed to demonstrate compliance with the regulations including the measuring, evaluation and calculation of noise levels in accordance with the applicable procedures and conditions. For additional discussion of noise associated with proposed helicopter use during construction of the proposed facility see section IV.Q.1., *Noise Control Regulations and Variances*, of this order.

The Helicopter Use Plan would identify that if the helicopters would be lifting external loads and carrying them over roads or residences they might need to complete a congested area plan and provide that to the FAA. The Helicopter Use Plan would also specify that the applicant or its aviation contractor should provide notices to airmen regarding the location and nature of work being performed. This notice would be posted at each of the airports in the vicinity of the proposed facility to alert other aviators of the location and timing of facility-related helicopter construction activities. The applicant proposes, and the Department recommends with revisions to reflect applicant representations, the Council adopt the following site certificate condition providing for the development of the Helicopter Use Plan:

Recommended Public Services Condition 2: At least 90 days prior to use of a helicopter(s) during construction, the certificate holder shall submit to the Department and each affected County Planning Department a proposed Helicopter Use Plan. The plan must be approved by the Department, in consultation with each county where helicopter use is proposed, prior to use of a helicopter during construction. The certificate holder shall conduct all work in compliance with the approved Helicopter Use Plan. The Helicopter Use Plan shall identify or provide:

a. The type of helicopters to be used (all helicopters must be compliant with the noise certification and noise level limits set forth in 14 CFR § 36.11);
b. The duration of helicopter use;
c. Approximate helicopter routes to be used;
d. Protected areas and recreation areas within two miles of the approximate helicopter routes;
e. Roads or residences over which external loads will be carried;
f. Multi-use areas and light-duty fly yards containing helipads shall be located: (i) in areas free from tall agricultural crops and livestock; (ii) at least 500 feet from organic agricultural operations; and (iii) at least 500 feet from existing dwellings on adjacent properties;
g. Flights shall occur only between sunrise and sunset;
h. At least 30 days prior to initiating helicopter operations at any multi-use area or light-duty fly yard, the certificate holder shall contact adjacent property owners within 1,000 feet of the relevant multi-use area or light-duty fly yard;
i. At least 30 days prior to initiating helicopter operations, the certificate holder shall provide notices to airmen regarding the location and nature of work being

performed. The notice will be posted at each of the airports in the vicinity of the facility to alert other aviators of the location and timing of facility-related helicopter construction activities; and

j. The certificate holder shall maintain a customer service telephone line to address, among other things, complaints regarding helicopter operations.

In its comment letter on the ASC, the Oregon Department of Aviation (ODA) requested that the Council include a condition of approval requiring the applicant to file FAA Form 7460-1 with the FAA and the Oregon Department of Aviation and to determine if any facility structures or power lines, within 5 miles of airports, will pose a hazard to aviation safety.[448] Upon review of the FAA Form 7460-1, ODA will evaluate the FAA Part 77 Imaginary Surfaces for the La Grande /Union County Airport and Baker City Airport and determine if marking lights or other notification measures will be necessary for any facility structures or transmission lines. Under the Public Services Standard, the Council must consider a facility's potential impact to public service providers to provide traffic safety, including air traffic safety. In order to ensure that the proposed facility would not result in adverse impacts to the ability of the La Grande /Union County Airport and Baker City Airport to provide service, and to address the concerns of the Oregon Department of Aviation regarding impacts to air navigation safety, the Department recommends the Council adopt the following condition:

Recommended Public Services Condition 3: Prior to construction of any phase or segment of the facility, the certificate holder shall submit to the Federal Aviation Administration (FAA) and the Oregon Department of Aviation (ODA) a FAA Form 7460-1 Notice of Proposed Construction or Alteration for transmission structures within 5-miles of a public airport (La Grande /Union County Airport and Baker City Airport) and cranes exceeding 200 feet in height. The certificate holder shall submit to the Department a copy of the FAA and ODA hazard determination.

Helicopters may also be used during the operations phase to transport crews (e.g., to support on-site safety inspections) and identify areas where maintenance activities are necessary.[449] Other information regarding how inspections will be conducted is provided in Section IV.B., *Organizational Expertise*.

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 air traffic safety providers within the analysis area.

[448] B2HAPPDoc13-24 ASC Reviewing Agency Comment ODA_Caines 2019-03-07.

[449] B2HAPPDoc3-41 ASC 24_Exhibit X_Noise_ASC 2018-09-28, Section 3.3.2.

IV.M.7. Police Protection

Five county sheriff's departments are within the Oregon portion of the analysis area. The Oregon portion of the analysis area also includes United States Forest Service (USFS) and Bureau of Land Management (BLM)-managed lands, which are subject to federal law enforcement. ASC Exhibit U Table U-9 identifies the staffing levels at the county level sheriff's departments and Attachment U-1B provides the applicant's correspondence with law enforcement agencies who provided feedback. The Oregon State Police Department also has State troopers that patrol the analysis area, however, the applicant focused its analysis on local law enforcement agencies.

Several of the law enforcement agencies expressed concerns about adverse impacts to their departments resulting from a potential increase in crime associated with the construction of the facility. These concerns are primarily from the potential for the construction sites (MUAs and LDFYs) to be a target for theft of materials or equipment and that the construction will attract people, which may increase thefts at other properties. The applicant describes that transmission lines, stations, and associated facilities could be targets of intentional destructive acts, such as sabotage, terrorism, vandalism, and theft.[450] Such acts include firing at insulators, powerlines, transmission towers, or station equipment; vandalism; and theft of equipment, supplies, tools, or materials. Of these acts, vandalism and thefts are most common. The applicant explains that it will require its construction contractor to develop an Environmental and Safety Training Plan that will include specific rules of conduct applicable to workers and management of construction work sites. The Plan will include measures for securing multi-use areas and work sites when not in use such as locked gates, fencing and securing portable items in locked storage containers. The Plan will also address safety policies for personnel addressing drug, alcohol, firearm violations with clear consequences. The applicant explains that, in the event of an emergency, the communication that would occur with local authorities would be dependent on the type of emergency that arose. For major incidents, 911 would be called; for vandalism and theft, the local Sheriff's office would be contacted. The applicant proposes to include an emergency and medical response plan as part of the Environmental and Safety Training Plan. The emergency and medical response plan will contain contact information for federal, state, and county emergency management services. The applicant also explains it will contain emergency response procedures for helicopter emergency response, spill reporting, hospitals closest to the transmission line route and other emergency response procedures. In its comment letter on the ASC Baker County expressed concerns about the medical response times for helicopters and ambulances, and suggested that landing locations along the site boundary should be pre-identified for medical emergency life-flights.[451] The Department recommends this information be provided in the in the emergency and medical response plan as part of the Environmental and Safety Training Plan.

[450] B2HAPPDoc3-38 ASC 21_Exhibit U_PublicServices_ASC 2018-09-28, Section 3.5.6.1.

[451] B2HAPPDoc13-17 ASC Reviewing Agency Comment Baker County_Kerns 2018-12-14.

The applicant proposes conditions to ensure compliance with the Environmental and Safety Training Plan during construction to address the concerns raised by sheriff's departments. Therefore, the applicant proposes, and the Department recommends with additional clarification language, the following site certificate condition:

Recommended Public Services Condition 4: At least 90 days prior to construction of a facility phase or segment, the certificate holder shall submit to the Department and each affected County Planning Department a proposed Environmental and Safety Training Plan. The plan must be approved by the Department, in consultation with each affected county planning department, prior to construction of a facility phase or segment. The plan must include at a minimum, the following elements:

a. Measures for securing multi-use areas and work sites when not in use;
b. Drug/alcohol/firearm policies with clear consequences for violations; and
c. An emergency and medical response plan including:
   i) Contact information for federal, state, and county emergency management services;
   ii) Emergency response procedures for helicopter emergency response, spill reporting, hospitals closest to the transmission line route, and any other emergency response procedures;
   iii) Landing locations for medical emergency life-flights.
d. Requirements for training workers on the contents of the plan.
e. The certificate holder shall maintain copies of the Environmental and Safety Training Plan onsite and conduct all work in compliance with the plan during construction and operation of the facility.

It is possible that during operation of the proposed transmission line unauthorized access to facility-related roads may increase the risk of wildfire, dumping, timber theft, and vandalism, which may place increased demands on local law enforcement. Additional operational maintenance roads allow access to more area for authorized and unauthorized users of the land. Strategic placement of gates will help to control this potential increased risk and will be utilized consistent with Exhibit B, and Attachment B-5 to this order. For instance, access roads on private land will have some form of access control (gate, barrier, signage) as preferred by the property owner. These access controls are assumed to be an effective deterrent against trespassing; therefore, minimal increased demands are anticipated for local law enforcement. No access control is proposed for improved existing roads on BLM-managed and USFS lands. New roads will have access control based on travel management plan designations for the area, and the likelihood of access control being effective Improved existing roads and some open new roads on BLM-managed and USFS lands are not anticipated to increase demands on law enforcement because they are not anticipated to result in a significant increase in public use. Recommended Public Services Condition 1 above, is intended to maintain compliance during construction with the final approved County-Specific Transportation and Traffic Plan, which references also the Road Classification Guide and Access Control Plan (Attachment B-5), which will be maintained during construction and operation of the proposed facility to reduce potential impacts to law enforcement agencies.

During operation of the proposed Longhorn Station and communication stations, physical deterrents such as fencing, cameras, and signs will be employed to prevent theft, vandalism, and unauthorized access.[452] Use of these deterrents during operation of the proposed facility will minimize demands on local law enforcement services. In the event of intentional destructive acts, operational protocols will be implemented with detailed procedures in accordance with the applicant's emergency response procedures as discussed above in Public Services Condition 4 above outlining the information required in the Environmental and Safety Training Plan.

Several of the potentially affected sheriff's departments expressed concerns that the temporary influx of construction workers could result in short-term increases in traffic incidents and other disturbances. The Morrow County Sherriff's Office expects temporary increased traffic impacts would require speed trailers, signage, and other measures to increase safety.[453] As discussed in the above section relating to the potential impacts to traffic safety providers and Recommended Public Services Condition 1, the applicant represents it will develop and comply with a Transportation and Traffic Plan (Plan). Several of the provisions in the Plan are intended to avoid, minimize and mitigate impacts to law enforcement agencies due to the expected increase in construction-related traffic. These provisions include: coordinating the timing and locations of road closures in advance with emergency services, posting caution signs on county and state-maintained roads to alert motorists of construction, and using traffic control measures such as traffic control flaggers, warning signs, lights, and barriers during construction to ensure safety and to minimize localized traffic congestion. The Plan also outlines that the applicant will fence construction areas near residences at the end of the construction day, and restoring residential roads, and install access control devices at locations shown in the Road Classification Guide and Access Control Plan, Attachment B-5 to this order and discussed in the same condition above. Finally, all construction personnel will be required to obey local speed limits and traffic restrictions to ensure safe and efficient traffic flow, as noted in the Plan.

Following construction of the proposed facility, existing and new permanent access roads will be used during facility operations by maintenance vehicles for inspection and maintenance of the proposed facility and related or supporting facilities. The applicant explains that the operations phase will have little to no effect on local and regional traffic because vehicle trips will be limited to inspections and maintenance of the transmission line and facilities. Regular hauling over time of materials and equipment is not necessary so would not occur. The applicant will provide staff at the operations and maintenance with existing staff so operational staff will not affect community peak hour traffic. Operation of the proposed facility will not cause emergency access restrictions or impacts to area public transit services, nor will they increase roadway hazards or cause damage to existing roads or bridges.[454]

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[452] B2HAPPDoc3-38 ASC 21_Exhibit U_PublicServices_ASC 2018-09-28, Section 3.5.6.1.

[453] B2HAPPDoc3-38 ASC 21_Exhibit U_PublicServices_ASC 2018-09-28, Attachment U-1B.

[454] B2HAPPDoc3-38 ASC 21_Exhibit U_PublicServices_ASC 2018-09-28, Attachment U-2, p. 26.

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 police and public safety providers to provide services within the analysis area.

IV.M.8. Fire Protection

The prevention and suppression of wildfires in eastern Oregon is carried out by the Bureau of Land Management (BLM), United States Forest Service (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. 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.[455]

As described in ASC Exhibit U, federal agencies are responsible for fire suppression efforts on federal lands in the analysis area, including BLM-managed and National Forest (NF) lands. The BLM has jurisdiction over fire suppression on BLM-managed lands; the USFS has jurisdiction over fire suppression on NF lands.[456] The State of Oregon is responsible for fire suppression on state lands. The Oregon Department of Forestry is the primary wildland fire protection agency on forested private and state lands and much of the nonforested lands. Municipal fire departments and rural and rangeland fire districts are the primary responders for incidents on private land. The applicant explains that approximately 72 percent of the land within the site boundary is privately owned. The BLM manages about 25 percent of the land in the site boundary, with the remaining three percent managed by other federal (USFS and U.S. Bureau of Reclamation) or State agencies. Table PS-9, below, summarizes staffing levels, equipment, and estimated response times for fire departments, rural fire protection districts, and rangeland fire protection associations that respond to incidents on privately-owned lands within the analysis area.

[455] B2HAPPDoc3-38 ASC 21_Exhibit U_PublicServices_ASC 2018-09-28, Attachment U-3, p. 1.
[456] B2HAPPDoc3-38 ASC 21_Exhibit U_PublicServices_ASC 2018-09-28, Section 3.4.6.2.

Table PS-9: Fire Departments, Rural Fire Protection Districts, and Rangeland Fire Protection Associations within the Analysis Area

Department	County	Number of Fire-Fighters	Equipment	Estimated Response Time
Boardman Rural Fire Protection District	Morrow	7 paid; 12 volunteers	(3) type 1 interface engines (off-road); (2) type 1 engines; (1) type 1 tender with a 3,000 gallon tank; (1) type 6 engine	0.5 hour south-route; 10 minutes north-route.
Hermiston Fire and Emergency Services	Umatilla	27 paid 8 interns 25 volunteers	(6) engines; (1) ladder truck; (5) tenders; (5) brush engines; (1) medium rescue; (6) ambulances (1) mass casualty trailer; (5) command vehicles; (2) hazmat vehicles	5-6 minutes
Echo Rural Fire Department	Umatilla	22 volunteers	(7) brush rigs; (3) tankers; (4) pumpers	20-25 min. near Pilot Rock; 40 min. in other areas
Ione Rural Fire Department	Umatilla	12 volunteers	(2) pumpers; (1) tender; (4) brush rigs; (2) type 6 brush rigs; (2) type 3 rigs	Response times depend on the volunteers
Pilot Rock Rural Fire Protection District	Umatilla	25 volunteers	(2) type 1 engines (1) type 2 engine (4) type 6 brush rigs (1) tender (1) four-wheel drive truck (1) quick response unit	At least 30 minutes
North Powder Fire Department	Union	17 volunteers	(2) type 6 brush rig (1) 2 tender (1) type 1 truck (1) type 3 truck (1) 5,000-gallon tank-trailer (1) D5 dozer	12-15 minutes

Table PS-9: Fire Departments, Rural Fire Protection Districts, and Rangeland Fire Protection Associations within the Analysis Area

Department	County	Number of Fire-Fighters	Equipment	Estimated Response Time
La Grande Rural Fire Protection District	Union	2 paid; 23 volunteers	(2) command vehicles; (3) type 1 engines; (2) brush trucks; (1) 3,000-gallon water tender; (1) medium duty rescue vehicle.	4-8 minutes
Oregon Department of Forestry	Union, Baker, Umatilla, Morrow, Malheur	8 permanent staff, 50 summer seasonals	(20) type 6 wildland engines; (2) single air tankers; (1) type 2 helicopter; (2) dozers.	15-30 minutes
Burnt River Rangeland Fire Protection Association	Baker	15-20 volunteers	(1) D7 bulldozer (2) D6 and D4 bulldozers (Privately owned but are used on fires when needed) (1) 4,500-gallon tender (2) 750-gallon 4x4 tenders (6) 200-300-gallon pickup truck mounted tanks	45 minutes
Baker Rural Fire Protection District	Baker	22 volunteers	(3) structure trucks; (1) compressed air foam system truck; (2) 4,200-gallon tenders; (1) heavy rescue truck; (3) command vehicles; (4) brush trucks.	8-14 minutes
Lookout-Glasgow Rangeland Fire Protection Association	Baker	15-30 volunteers	(1) D7 bulldozer (1) 3,500-gallon 4x4 tender (1) 1,000-gallon 4x4 tender (1) 750-gallon 4x4 tender (1) 1,200-gallon 10-wheel truck tender (1) Road grader	30-60 minutes
Adrian Rural Fire Protection District	Malheur	12 volunteers	(1) 1,000-gallon pumper engine; (1) 3,000-gallon tender truck; (1) heavy truck with an 800-gallon tank; (1) light truck with a 300-gallon tank.	20-25 minutes
Source: B2HAPPDoc3-38 ASC 21_Exhibit U_PublicServices_ASC 2018-09-28, Table U-10, Attachment U-1C. And B2HAPPDoc3-56 ASC Exhibit U - Errata Info 2019-03-28.				

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 respond to fires on a county and state level instead of isolating efforts to local districts.[457] 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. The applicant provided correspondence summaries with fire departments, rural fire protection districts, and rangeland fire protection associations in ASC Exhibit U, Attachment U-1C. The majority of fire protection providers discussed that the proposed facility would not adversely impact their ability to provide fire prevention services. There were concerns expressed from some fire protection providers that fire districts within the analysis area are comprised of volunteers, so it may take considerable time to collect and mobilize an entire fire crew and that 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. The Department notes that the response times provided in Table PS-9: *Fire Departments, Rural Fire Protection Districts, and Rangeland Fire Protection Associations*, are estimates that may not contemplate a busy fire season with longer delays or response times. Addressed below is the discussion of the draft Fire Prevention and Suppression Plan and measures the applicant would be required to take to minimize on-site fire risks and the applicant's ability to provide fire protection measures itself until responders arrive.

Construction of the proposed transmission line would take place year-round, however, most activities would occur during summer when the weather may be hot and dry. Much of the proposed construction would occur in grassland and shrub-dominated landscapes where the potential for naturally occurring fire is high in summer. Construction-related activities, including the use of vehicles, chainsaws, and other motorized equipment, could increase this potential risk in some areas within the site boundary. Fire hazards can also be related to workers smoking, refueling, and operating vehicles and other equipment off roadways. Welding on broken construction equipment could also potentially result in the combustion of native materials near the welding site.

To reduce the potential for construction-related fires and provide a plan for responding to any fires, the applicant developed a draft Fire Prevention and Suppression Plan (Attachment U-3 to this order) to coordinate fire prevention and suppression measures are carried out in accordance with federal, state, and local regulations. The draft Fire Prevention and Suppression Plan (Plan) stipulates that the applicant and its construction contractor will train all personnel in regular safety briefings. All personnel will be informed of the smoking policy on-site during construction as discussed in Section 2.1.2 in the Plan. The construction contractor and applicant's Incident Management Team will train all personnel on the measures to take in the

[457] B2HAPPDoc3-38 ASC 21_Exhibit U_PublicServices_ASC 2018-09-28, Attachment U-1C.

event of a fire. The contractor and applicant will immediately proceed to control and extinguish any fire started resulting from their activity and will inform crew member of fire dangers, locations of extinguishers and equipment, and individual responsibilities for fire prevention and suppression during regular safety briefings. All construction equipment operating with an internal combustion engine will be equipped with federally-approved spark arresters and motorized equipment, including worker transportation vehicles and will not be allowed to be driven or parked outside the designated and approved work limits.

Pursuant to ORS 447.515 and ORS 447.535, burn permits are required for all burning except camp fires during closed fire season on lands protected by ODF and, once Regulated Use Closure has been executed, burning of any type is banned with no exceptions. Additional mitigation factors to avoid and minimize the risk of fires are seasonal restrictions, such as restricted hours and actions, which may occur during fire season.[458] Section 2.1.5 of the Plan describes the fire suppression equipment that will be provided to each construction vehicle. Based on comments provided from the Oregon Department of Forestry (ODF), the applicant updated the information in the Plan to be consistent with current administrative rules for fire prevention.[459] The applicant updated and represents that during construction of the proposed facility it would comply with the requirements for water supply and equipment for fire suppression under OAR 629-043-0020 and requirements for Firewatch under OAR 629-043-0030. In its comment letter, ODF found that fire prevention measures and vegetation management objectives (proposed by the applicant) are consistent with current policies, laws and rules under Oregon Revised Statute Chapters 477 (Fire Protection of Forests and Vegetation) and 527 (Forest Practices) and Oregon Administrative Rules Chapter 629 (Department of Forestry).[460]

The applicant explains in its draft Fire Prevention and Suppression Plan that in the event of a fire, the Incident Management Team may request local assistance in firefighting if personnel have required training including the use of construction equipment on the facility site. In the event where there is a construction-related fire within the analysis area, the construction contractor and applicant would take the following actions:

- Site personnel would aid in extinguishing a fire ignition before it gets out of control and take action that a prudent person would take to control the fire while still accounting for their own and others safety.
- Immediately notify the nearest fire-suppression agency of the fire location, action taken, and status.
- Immediately notify the construction contractor and applicant of the fire location and action taken.

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[458] B2HAPPDoc3-19 ASC 11_Exhibit K_Land Use_ASC 2018-09-28, Attachment K-2, p. 16.

[459] B2HAPPDoc13-22 ASC Reviewing Agency Comment ODF_Fields 2019-02-04, and B2HAPPDoc13-23 ASC Reviewing Agency Comment ODF_Fields 2019-02-19.

[460] B2HAPPDoc13-23 ASC Reviewing Agency Comment ODF_Fields 2019-02-19.

- Relinquish fire-suppression activities to agency fire-management officers upon their arrival.

In addition to the provisions outlined in the Plan and discussed above, the applicant describes other measures the applicant and its construction contractor would implement that may reduce fire risks and adverse impacts to fire departments and districts during proposed facility construction. Some of these measures include use of on-site earthmoving equipment to combat any fires that occur and to assist local fire departments and districts and that trucks with water holding tanks would be on-site during construction so water would be in the immediate vicinity to be used to combat any fire that may ignite.

To ensure compliance with the protective measures identified in the draft Fire Prevention and Suppression Plan and reduce the potential adverse impacts to fire protection providers, the applicant proposes, and the Department recommends, the Council include the following condition in the site certificate:

Recommended Public Services Condition 5: At least 90 days prior to construction of a facility phase or segment, the certificate holder shall submit a Fire Prevention and Suppression Plan, for review and approval by the Department, in consultation with each county planning 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.
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 applicant explains that during operation the primary causes of fire in the ROW is likely to result from unauthorized entry by individuals for recreational purposes and from fires started from other sources outside the ROW. The applicant explains in its Right-of-Way Clearing Assessment, Attachment K-2 to this order, that additional roads allow access to more area for authorized and unauthorized users of the land. Unauthorized access to facility-related roads may increase the risk of wildfire, dumping, timber theft, and vandalism. As addressed in Public Services Condition 1 above, the strategic placement of access controls will help to control the potential increased risk of public access and possibly an increase in fire risks. Further, the applicant will be compliant with the Oregon Forest Practices Act (FPA) rules, Oregon Revised Statute 527, OAR chapter 629, divisions 605 through 665 which provide regulations that govern the location, construction, maintenance, and repair of roads on non-federal forest lands.

Vegetation, including trees, limbs, and branches, may create safety and service reliability risks because vegetation touching power lines can spark, start fires and cause interruptions in

electric supply. While uncommon, the operational risk of the proposed facility igniting a wildfire may be caused by overgrown vegetation contacting the transmission line, a tree falling on the transmission line, or from equipment failure. The applicant states that vegetation management is expected to be minimal, because the vast majority of the proposed facility crosses through areas that contain low-growing vegetation cover types such as grasses and shrubs that would not interfere with transmission line operations. However, as identified in the draft Vegetation Management Plan, Attachment P1-4 of this order, vegetation that would require management would 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), and the North American Electric Reliability Council's (NERC) Standard FAC-003-3 Transmission Vegetation Management Program (TVMP).[461]

As such, following the guidelines of the draft Vegetation Management Plan would reduce the potential for an increase in wildfire as a result of proposed facility operation. The draft Vegetation Management Plan is discussed further in section IV.H., *Fish and Wildlife Habitat*, and is addressed in recommended Fish and Wildlife Condition 2. Forest and woodlands make up 13 percent of the area within the site boundary and would account for the majority of the vegetation management activities. Methods for clearing vegetation within forested areas to reduce the risk that combustible materials that would come into contact with the conductors and ignite a fire is discussed in the Right-of-Way Clearing Assessment (Attachment K-2 of this order). All logging operations, methods and procedures outlined in the Right-of-Way Clearing Assessment follow guidance in ODF's Fire Prevention Rules, OAR Chapter 629, Division 43, such as fire equipment requirements, treatment of slash for protection of adjacent lands, filing of a "smoke management plan" (OAR 629-048-0001) and obtaining a burn permit. The Right-of-Way Clearing Assessment is discussed further in section IV.E., *Land Use*, and is addressed in recommended Land Use Condition 16.

As discussed in section IV.P.1., *Siting Standards for Transmission Lines*, the proposed transmission line and structures used to support overhead transmission lines must meet the requirements of the Public Utility Commission of Oregon Construction Standards and the National Electrical Safety Code. These codes and standards also include actions to design, construct and operate the proposed facility to minimize the risks of fire hazard. These include requirements pertaining to the prevention of fire hazards related to outdoor public utility installations and the National Fire Protection Association Uniform Fire Code Handbook guidance related to the clearance of brush and vegetative growth in and around transmission lines.[462] Further, the applicant explains that the steel towers proposed will not burn and are

[461] B2HAPPDoc3-25 ASC 16A_Exhibit P1_Wildlife_ASC_Part 1_Main thru Attach P1-6 rev 2018-09-28, Attachment P1-4 p. 4.
[462] B2HAPPDoc3-19 ASC 11_Exhibit K_Land Use_ASC 2018-09-28, Attachment K-2, p. 22.

designed to dissipate lightning strikes and that the integrity of the grounding and other hardware will be tested on a regular basis during scheduled maintenance, thereby minimizing the potential for fire ignitions. Transmission line protection and control systems will be incorporated into the overall operating system and are designed to detect faults (such as arcing from debris contacting the line) and will rapidly shut off power flow (in 1/60th to 3/60th of a second) if arcing is detected.[463]

Representatives from fire departments within the analysis area expressed concerns about the impact on their departments due to the operation of the proposed transmission line. The general concerns reported were concerning potential delays in fire-fighting efforts the departments may experience due to waiting for the proposed transmission line to be de-energized, so they may safely fight fires in the vicinity of transmission lines. The applicant describes that it will provide relevant fire departments and agencies its emergency 24/7 dispatch center contact information.

Upon being notified of a fire within the vicinity of the proposed transmission line, the applicant will dispatch and send personnel on site. Once onsite, and if requested, applicant representatives will confirm facilities to be removed from service, the applicant's control center and dispatch then removes the proposed transmission line from service (de-energizes the transmission line). Once onsite, applicant representatives requesting a line outage from dispatch for safety concerns can expect a line outage within a few minutes. The proposed transmission line would then be considered unavailable to return to service until onsite applicant personnel are able to verify with onsite emergency agencies that all personnel and equipment are no longer in danger of electrical contact.[464]

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 fire protection providers to provide fire response services within the analysis area.

IV.M.9. Health Care

Workers suffering minor injuries needing medical attention will be treated at local medical facilities or emergency rooms. Workers suffering more serious injuries, were they to occur, will be taken to one of the major hospitals in the project vicinity. Two medical facilities serve the communities within the analysis area along the proposed and alternative routes. Two major hospitals capable of treating serious injuries are located within the five counties in the Oregon portion of the analysis area: Grande Ronde Hospital in La Grande and Saint Alphonsus Medical Center in Ontario. One additional major hospital, Saint Anthony Hospital in Pendleton, could also be utilized in the case of emergencies, it is capable of treating serious injuries. The

[463] B2HAPPDoc3-38 ASC 21_Exhibit U_PublicServices_ASC 2018-09-28, Attachment U-3, p. 7.
[464] B2HAPPDoc3-56 ASC Exhibit U - Errata Info 2019-03-28.

applicant provided correspondence with local medical service providers in ASC Exhibit U, Attachment U-1D.

- Saint Anthony Hospital (Pendleton) is a Level III hospital licensed for 49 beds, 5 of which are intensive care beds. The hospital employs approximately 80 nurses, and 30 physicians have staffing privileges. Medical transportation is provided by Life Flight. One Life Flight helicopter is stationed at the hospital and one is stationed at the Pendleton airport. The hospital also has access to a fixed-wing craft. Flight times between the hospital and the Project area are about 15 minutes for the portions of the proposed facility located near Pilot Rock, and 40 minutes for areas located further east. As provided in ASC Attachment U-1D, per hospital staff, patients suffering major injuries, such as severed limbs or electrical burns, are stabilized at Saint Anthony Hospital and then transported to a regional hospital for treatment.
- Grande Ronde Hospital (La Grande) is a Level IV hospital licensed for 25 beds, 6 of which are intensive care beds. The hospital employs about 137 nurses, and 45 physicians have staffing privileges. Medical transportation is provided by Airlink. An Airlink fixed-wing craft is stationed at the local airport, and flight times between the airport and the Project area are about 20 to 90 minutes. Patients suffering major injuries, such as severed limbs or electrical burns, are stabilized at Grande Ronde Hospital and then transported to a regional hospital for treatment.
- Saint Alphonsus Medical Center (Baker City) is a 25 bed, critical access hospital with a skilled nursing-type facility called a swing bed. They offer inpatient services and outpatient services. It staffs approximately 160 full-time employees and has a total headcount of 200 employees. The medical center periodically conducts emergency preparedness drills with the county, utilizing the county's resources. They have approximately 7,000 ER visits per year. They could likely serve 3,500 more ER visits a year and would have capacity to still serve the community.

As would be required by recommended Public Services Condition 4, prior to construction the applicant would be required to finalize an Environmental and Safety Training Plan. The plan would contain emergency response procedures for helicopter emergency response, spill reporting, hospitals closest to the transmission line route and other emergency response procedures. In its comment letter on the ASC Baker County expressed concerns about the medical response times for helicopters and ambulances, and suggested that landing locations along the site boundary should be pre-identified for medical emergency life-flights. The Department agrees with Baker County's comment and the finalized Environmental and Safety Training Plan would be required to contain such information.

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 health care providers to provide health care services within the analysis area.

IV.M.10. Schools

There are 10 school districts within the analysis area. Table PS-10 below identifies each school district, the student enrollments, student/teacher ratio and general enrollment trends in 2016. The student/teacher ratios and enrollment trends were provided by the applicable school district and is evidenced by correspondence in ASC Exhibit U, Attachment U-1E.

Table PS-10: School District Information

School District	County	Student Enrollment in 2015-2016	Student/ Teacher Ratio 2015-2016	Enrollment Trends
Morrow School District 001	Morrow	2,238	21	flat
Ione School District	Morrow	197	11.5	increasing
Pilot Rock School District 002	Umatilla	372	14	declining
La Grande School District 001	Union	2,203	18.6	increasing
Union School District 005	Union	335	15	declining
Baker School District	Baker	1,692	16	flat to declining
Huntington School District 16J	Baker	64	5	flat
Vale School District 084	Malheur	912	24	increasing
Nyssa School District 026	Malheur	1,124	Not provided	slightly increasing
Adrian School District 061	Malheur	281	16	increasing
Source: B2HAPPDoc3-38 ASC 21_Exhibit U_PublicServices_ASC 2018-09-28, Table U-11.				

As discussed above under the, *Construction Activities and Impact Assumptions*, and in Table PS-1: *Construction Spread and Affected Oregon Counties*, construction of the proposed facility is assumed for the purposes of analysis to involve two construction spreads that will be built concurrently. The applicant assumes that approximately 10 percent of non-local construction personnel would relocated to the analysis area with their families. The applicant provides that based on data compiled from the 2009 U.S. Census Bureau, as part of the 2008 American Community Survey, the average relocating family consists of two adults and one school-aged child. Consistent with the estimates provided in Table PS-2: *Estimated Workers and Population Change during Peak Construction*, this would mean up to 18 children may need to be enrolled in local schools along Construction Spread 1 and up to 15 children along Construction Spread 2. The applicant states that the likelihood that construction workers will temporarily relocate their families to the area is low and the school districts that responded to enquiries all indicated that they will be able to accommodate the low levels of estimated additional students.

During operation the applicant states that it will staff the Longhorn Station with existing staff who will be primarily responsible for operation and maintenance of the new transmission line

and associated facilities. They note that potentially one additional part-time position may be filled locally, but no existing employees will be required to relocate to the analysis area, therefore local school districts will not be impacts from the operation of the proposed facility.

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 education providers to provide education services within the analysis area.

Conclusions of Law

Based on the foregoing findings of fact, and the evidence in the record, and subject to compliance with the recommended conditions, the Department recommends that the Council find that the construction and operation of the proposed facility, including the proposed and alternative routes, is not likely to result in significant adverse impact to the ability of public and private providers within the analysis area to provide public services and therefore the proposed facility complies with the Council's Public Services standard.

IV.N. Waste Minimization: OAR 345-022-0120

(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the Council must find that, to the extent reasonably practicable:

(a) The applicant's solid waste and wastewater plans are likely to minimize generation of solid waste and wastewater in the construction and operation of the facility, and when solid waste or wastewater is generated, to result in recycling and reuse of such wastes;

(b) The applicant's plans to manage the accumulation, storage, disposal and transportation of waste generated by the construction and operation of the facility are likely to result in minimal adverse impact on surrounding and adjacent areas.

(2) The Council may issue a site certificate for a facility that would produce power from wind, solar or geothermal energy without making the findings described in section (1). However, the Council may apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.
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Findings of Fact

The Waste Minimization standard requires the Council to find that the certificate holder will minimize the generation of solid waste and wastewater, and that the waste generated will be managed to result in minimal adverse impacts on surrounding and adjacent areas. The applicant provided information about waste minimization in ASC Exhibits G, V, and U. Exhibit V includes the applicant's plans for solid waste and wastewater management during construction

and operation of the proposed facility, ASC Exhibit U discusses solid waste providers, and ASC Exhibit G provides additional information relating to the management of potentially hazardous materials.

Solid Waste

The applicant discusses anticipated generation of non-hazardous and hazardous solid wastes in ASC Exhibits V and G. Primary sources of nonhazardous construction waste include vegetation waste, native earth materials, and household-type waste.

Numerous areas along the proposed transmission line would require vegetative clearing and possible grading; these areas include areas associated with the Longhorn Station, access roads, multi-use areas, temporary pulling and tensioning site, fly yards, and other temporary and permanent disturbance areas. Vegetative waste would consist mainly of herbaceous plant materials scraped from disturbance areas. Additionally, vegetative waste would include trees and shrubs that are removed to allow for the construction of transmission line infrastructure, to allow for transmission line stringing, and to minimize risk of interference with energized circuits. As noted in Table WM-1, the applicant expects to generate approximately 3,516,256 cubic yards of vegetative waste; the applicant represents that it could mulch up to 80 percent of vegetative materials and spread the mulch within the site boundary, thereby substantially reducing the amount of material that would otherwise be disposed at a landfill.

Native earth materials would consist of excess soil, fill material, and aggregates that may be generated from access road construction, as well as from the construction of foundations and tower pads. The applicant represents that it would balance soil cuts and fills to the greatest extent possible to minimize excess waste, but also acknowledges that surplus native earth material would require disposal. As noted in Table WM-1, the applicant expects to generate approximately 197,218 cubic yards of native earth material waste; the applicant estimates that it would be required to dispose of approximately 90 percent of material excavated for foundations, and approximately 50 percent of the material excavated for tower pad construction and work area grading. Construction contractors may elect to dispose native material at local sand or gravel / aggregate pits where native materials could be recycled for other projects.[465]

Household-type solid waste would include materials such as scrap metal, wire, wood, concrete, incidental litter, and other debris. As noted below in Table WM-1, the applicant expects to generate approximately 6,235 cubic yards of solid waste; up to 80 percent could be recycled while approximately 20 percent would be disposed at a landfill.[466]

[465] B2HAPPDoc3-39 ASC 22_Exhibit V_Waste_ ASC 2018-09-28, Section 3.3.1.2
[466] B2HAPPDoc3-39 ASC 22_Exhibit V_Waste_ ASC 2018-09-28, Section 3.3.1.3

The applicant provides estimates of waste materials generated from retirement and decommissioning of the proposed facility in Table V-2 in Exhibit V of the ASC.

As described in Section IV.M., *Public Services* of this draft proposed order, four solid waste landfills are located within the analysis area as listed in Table PS-3; all municipal landfill facilities must comply with the Code of Federal Regulations (CFR) Part 258, as well as relevant state statutes and administrative rules.

Table WM-1, below (reprinted from ASC Exhibit V, Table V-1), provides anticipated vegetation waste, native material waste, and solid waste that would be generated in each affected county.

Table WM-1: Materials from Construction Activities, Recycled Totals and Disposal Locations

Route/County	Site Boundary in cubic yards (tons)		
	Vegetation[1]	**Native Material[2]**	**Solid Waste[3]**
Proposed[4]/Morrow	157,300 (47,190)	37,635 (48,926)	1,380 (414)
Amount Recycled[5]	125,840 (37,752)	3,764 (4,893)	1,104 (331)
Amount to Finley Buttes Landfill[6]	31,460 (9,438)	33,871 (44,033)	276 (83)
Proposed/Umatilla	492,066 (147,620)	28,920 (37,596)	805 (242)
Amount Recycled[5]	393,653 (118,096)	2,892 (3,760)	664 (194)
Amount to Finley Buttes Landfill[6]	98,413 (29,524)	26,028 (33,836)	161 (48)
Proposed/Union	680,019 (204,006)	21,665 (28,165)	852 (256)
Amount Recycled[5]	544,015 (163,205)	2,167 (2,817)	682 (205)
Amount to Baker County Landfill[6]	136,004 (40,801)	19,499 (25,349)	170 (51)
Proposed/Baker	746,166 (223,850)	47,995 (62,394)	1,407 (422)
Amount Recycled[5]	596,933 (179,080)	4,800 (6,239)	1,126 (338)
Amount to Baker County Landfill[6]	149,233 (44,770)	43,196 (56,155)	281 (84)
Proposed/Malheur	1,432,639 (429,792)	58,925 (76,603)	1,691 (507)
Amount Recycled[5]	1,146,111 (343,834)	5,893 (7,660)	1,353 (406)
Amount to Clay Peak Landfill[6]	286,528 (85,958)	53,033 (68,943)	338 (101)
Proposed 230-kV Rebuild/Baker	4,033 (1,210)	929 (1,208)	45 (14)
Amount Recycled[5]	3,226 (968)	93 (121)	36 (11)
Amount to Baker County Landfill[6]	807 (242)	836 (1,087)	9 (3)
Proposed 138/69-kV Rebuild/Baker	4,033 (1,210)	1,149 (1,493)	55 (17)
Amount Recycled[5]	3,226 (968)	115 (149)	44 (14)
Amount to Baker County Landfill[6]	807 (242)	1,034 (1,344)	11 (3)
TOTAL Proposed Route			
Total Generated	***3,516,256 (1,054,877)***	***197,218 (256,383)***	***6,235 (1,870)***

Table WM-1: Materials from Construction Activities, Recycled Totals and Disposal Locations

Route/County	Site Boundary in cubic yards (tons)		
	Vegetation[1]	Native Material[2]	Solid Waste[3]
Proposed Route TOTAL Amount Recycled[5]	**2,813,005 (843,902)**	**19,722 (25,638)**	**4,988 (1,496)**
Proposed Route TOTAL Amount to Landfill[6]	**703,251 (210,975)**	**177,496 (230,744)**	**1,247 (374)**
Alternative Routes			
Route/County	**Site Boundary in cubic yards (tons)**		
	Vegetation[1]	**Native Material[2]**	**Solid Waste[3]**
Double Mountain	124,227 (37,268)	5,758 (7,485)	169 (51)
Amount Recycled[5]	99,382 (29,814)	576 (749)	135 (41)
Amount to Baker County Landfill[6]	24,845 (7,457)	5,182 (6,737	34 (10)
Morgan Lake Alternative/Union	1,161,599 (348,480)	15,499 (20,149)	409 (123)
Amount Recycled[5]	929,279 (278,784)	1,550 (2,015)	327 (98)
Amount to Baker County Landfill[6]	232,320 (69,696)	13,949 (18,134)	82 (25)
West of Bombing Range Rd	10,890 (3,267)	5,678 (7,381)	225 (68)
Amount Recycled[5]	8,712 (2,614)	568 (738)	180 (54)
Amount to Baker County Landfill[6]	2,178 (653)	5,110 (6,643)	45 (14)
Total Alternative Routes			
Alternative Routes TOTAL Amount Recycled[5]	**1,037,372 (311,212)**	**2,693 (3,501)**	**642 (192)**
Alternative Routes TOTAL Amount to Landfill[6]	**259,343 (77,803)**	**24,241 (31,513)**	**160 (48)**

[1] Vegetation consists of woody vegetation to be removed during construction. It is assumed that approximately 80 percent can remain within the site boundary and 20 percent will be hauled away to a county landfill for recycling or disposal, as approved by local entities.
[2] Native material consists of excess soil, large rocks, or other natural materials that cannot be reused on-site. It is assumed that approximately 10 percent of native material excavated for structure foundations, temporary work areas, the Longhorn Station, or access roads, can be recycled on site. Native materials may be suitable for disposal at fill dirt sites, or county construction and demolition (C and D) landfills, as approved by local entities.
[3] Solid waste is non-hazardous refuse from materials delivered for the proposed facility, and includes containers, boxes, bags, sacks, packing materials, broken insulators, scrap conductor, empty wire spools, and other miscellaneous non-hazardous paper, plastic or similar materials. These are materials that will be recycled, hauled directly, or placed in a dumpster or roll-off for disposal at a municipal solid waste landfill, as approved by local entities. It is estimated that up to 80 percent of solid waste would be recycled.
[4] Includes materials generated from construction of Longhorn Station.
[5] Amount Recycled for vegetation is the amount of vegetation that will be left on-site. Amount Recycled for solid waste is the amount of material that goes to a recycling facility for future useful purposes.
[6] Amount to Landfill: Includes vegetation and native material that would go to a County C and D landfill, or solid waste that would go to a municipal solid waste landfill for all facilities within Site Boundary.
NA – not applicable

1

Morrow County Solid Waste Management Ordinance

One of the counties for which proposed and alternative facility components would be located, Morrow County, has adopted a Solid Waste Management Ordinance establishing requirements for the transportation and disposal of hazardous solid waste generated or accumulated during construction and operation. To ensure that the applicant adheres to applicable solid waste requirements within Morrow County, the Department recommends Council impose Waste Minimization Condition 1, which includes various measures but also addresses Morrow County's applicable requirements.

The Department notes that the applicant has proposed conditions in the ASC, however, in this section the Department recommends Council consider alternative condition language that includes more details and the provisions proposed by the applicant. While the applicant would recycle and reuse materials to the extent possible, in order to further reduce waste and to establish procedures for recycling, material handling and disposal, and management of hazardous and non-recyclable waste, the applicant proposes to develop and implement a Construction Waste Management Plan. The applicant proposes and the Department recommends that the following conditions be included within the Site Certificate:

Recommended Waste Minimization Condition 1: At least 90 days prior to construction of a facility phase or segment, the certificate holder shall submit to the Department a Construction Waste Management Plan. The Department must review and approve the plan prior to construction of a facility phase or segment. The site certificate holder shall conduct all work in compliance with the approved Plan. The Plan must address, at a minimum:

a. The number and types of waste containers to be maintained at multi-use areas and pulling and tensioning sites;
b. Waste segregation methods for recycling or disposal;
c. Names and locations of appropriate recycling and waste disposal facilities, collection requirements, and hauling requirements to be used during construction;
d. Recycling steel and other metal scrap;
e. Recycling wood waste;
f. Recycling packaging wastes such as paper and cardboard;
g. Collecting non-recyclable waste for transport to a local landfill by a licensed waste hauler or by using facility equipment and personnel to haul the waste;
h. Segregating all hazardous and universal wastes such as used oil, oily rags and oil-absorbent materials, mercury-containing lights and lead-acid and nickel cadmium batteries for disposal by a licensed firm specializing in the proper recycling or disposal of hazardous and universal wastes;
i. When possible, discharging concrete truck rinse-out within foundation holes, completing truck wash-down off-site, and burying other concrete waste as fill on-site whenever possible; and
j. For waste hauling and disposal within Morrow County, the certificate holder shall ensure its personal or third party contractors adhere to the applicable

requirements in the Morrow County Solid Waste Management Ordinance Section 5.000 Public Responsibilities, 5.010 Transportation of Solid Waste and 5.030 Responsibility for Propose Disposal of Hazardous Waste which requires that all loads be covered and secured and that operators be responsible for hazardous waste disposal in accordance with applicable regulatory requirements.

k. If required by county ordinance, solid waste transported on public roads must be covered and secured during transporting, including:

i. Loads which are totally contained within an enclosed vehicle or container;

ii. Loads of solid waste contained in garbage cans with tightly fitting lids, tied plastic bags or similar totally enclosed individual containers that are completely contained within the walls of a vehicle or container, such that no solid waste can reasonably be expected to escape during hauling;

iii. Loads of brush, building materials and similar bulky materials which are secured in or on the hauling vehicle or completely contained within the walls of a vehicle or container, such that none can reasonably be expected to escape during hauling; or

iv. Loads consisting entirely of rock, concrete, asphalt paving, stumps and similar materials that are completely contained within the walls of a vehicle or container, such that none can reasonably be expected to escape during hauling.

l. A requirement that the certificate holder report to the Department on the implementation of the Plan during construction must be included in the six month construction report required pursuant to OAR 345-026-0080(1)(a).

Hazardous materials, industrial materials, and explosives are expected to be used during construction; estimated quantities of hazardous materials and disposal methods are described in Exhibit G, Table G-3, of the ASC. The applicant states that hazardous materials would be segregated and stored in approved containers within multi-use areas. As described in *Section IV.D. Soil Protection* of this draft proposed order, the applicant expects that construction of the facility would require approximately 72,000 gallons of gasoline; 216,000 gallons of diesel; 4,000 gallons of motor and gear oil; 400 gallons of antifreeze; 400 gallons of transmission fluid; 400 gallons of hydraulic fluid; and detergents. In addition, construction of the facility would require the use of paint/solvents, herbicides, jet fuel for helicopter use, and blasting materials to blast rock. As discussed in Exhibits G and V of the ASC, the applicant represents that construction contractors must maintain an inventory of all hazardous materials with corresponding material safety data sheets (MSDS), that it would minimize use of hazardous materials through the use of alternative nonhazardous substances as appropriate, that it would ensure handlers and transporters of hazardous materials are familiar with State Fire Marshal and ODEQ laws, and that hazardous releases would be promptly cleaned and reported, if required by law, to ODEQ and the Department.[467]

As noted in Section IV.D., *Soil Protection,* of this order, the applicant would require its construction contractors to adhere to a Spill Prevention, Control, and Countermeasures Plan

[467] B2HAPPDoc3-39 ASC 22_Exhibit V_Waste_ ASC 2018-09-28, Section 3.10

(SPCC) as well as a Blasting Plan. An SPCC Plan contains site-specific spill prevention, response, and cleanup procedures to minimize the risk and impacts of spills or leaks of fuels, lubricants, coolants, or solvents; the SPCC is discussed in further detail in Section IV.D. *Soil Protection* of this draft proposed order, and the draft SPCC plan is also included as Attachment G-4 to ASC Exhibit G. The applicant proposes, and the Department recommends, Soil Protection Conditions 2, and 3, which relate to the approval of and compliance with an SPCC plan. A blasting plan would delineate procedures relating to the safe use and storage of explosives; blasting may be required to loosen or fracture rock to reach the required depth to install foundation structures. The blasting plan is discussed in further detail in Section IV.D., *Soil Protection* of this draft proposed order and the draft Framework Blasting Plan is included as Attachment G-5 to ASC Exhibit G and this order. The applicant proposes, and the Department recommends, Soil Protection Condition 4 which relates to the approval of and compliance with blasting plan.

During operations, the applicant represents that the facility would generate an insignificant amount of solid waste, which would include replaced equipment and components, packing materials, and soils.

Wastewater

Construction-related wastewater would predominately be generated during foundation construction for transmission line towers and the Longhorn Station, from concrete wash water. Concrete wash water would include water with residual concrete, concrete associated liquids, and the wash water from cleaning trucks, hoppers, and chutes. As described in ASC Exhibit V, washout liquids would generally be allowed to evaporate or would be pumped out and properly disposed of by the construction contractor. Washout liquids would not be discharged into storm drains, ditches, streams or other water bodies. Concrete washout areas would be located in designated aboveground earthen berms or straw bale enclosures lined with plastic, a storage tank, or other structure approved by the engineer or inspector. These washouts would be located within each structure work area at least 50 feet away from storm drains, ditches, streams, or other water bodies. Washouts would be visually inspected on a daily basis to ensure there are no leaks and that they are operating effectively. They would be cleaned out when they reach 75 percent of their design capacity.

As described in ASC Exhibit V, some foundations may require slurry to stabilize foundation shafts during drilling. Slurry fluids would consist of a mixture of bentonite and water. Excess and degraded slurry fluids would be contained in designated aboveground washouts similar to those described above for concrete. The slurry fluids would be allowed to completely evaporate or they would be pumped out and properly disposed of by the construction contractor. Slurry fluids would not be discharged into storm drains, ditches, streams, or other water bodies.

Sanitary wastewater would also be generated during construction from portable toilets. Wastewater associated with portable toilets will be disposed by a local contractor in

accordance with state law.[468] The subcontractor would ensure that a sufficient number of portable toilets are provided.

During operations, the restroom facility at the Longhorn Station would generate approximately 11,000 gallons of wastewater annually. As noted in Section IV.Q.3., *Water Rights*, of this draft proposed order, the Longhorn Station would connect to the Port of Morrow's water and sewer system. The Port of Morrow has confirmed that it could adequately serve the facility.

Conclusions of Law

Based on the analysis presented here and the evidence in the record and subject to compliance with the recommended conditions of approval, the Department recommends that the Council find that the proposed facility, including the proposed and alternative routes, would satisfy the Council's Waste Minimization standard.

IV.O. Division 23: Need Standard for Nongenerating Facilities

The Division 23 standards apply only to "nongenerating facilities" as defined in ORS 469.503(2)(e)(K), except nongenerating facilities that are related or supporting facilities.

IV.O.1. Need for a Facility: OAR 345-023-0005

> **** To issue a site certificate for a facility described in sections (1) through (3), the Council must find that the applicant has demonstrated the need for the facility. The Council may adopt need standards for other nongenerating facilities. This division describes the methods the applicant shall use to demonstrate need. In accordance with ORS 469.501(1)(L), the Council has no standard requiring a showing of need or cost-effectiveness for generating facilities. The applicant shall demonstrate need:*
>
> > *(1) For electric transmission lines under the least-cost plan rule, OAR 345-023-0020(1), or the system reliability rule for transmission lines, OAR 345-023-0030, or by demonstrating that the transmission line is proposed to be located within a "National Interest Electric Transmission Corridor" designated by the U.S. Department of Energy under Section 216 of the Federal Power Act;*
> > ******

The Least-Cost Plan Rule, OAR 345-023-0020, states:

> *(1) The Council shall find that the applicant has demonstrated need for the facility if the capacity of the proposed facility or a facility substantially similar to the proposed facility, as defined by OAR 345-001-0010, is identified for acquisition in the short-term plan of action of an energy resource plan or combination of plans:*

[468] B2HAPPDoc3-39 ASC 22_Exhibit V_Waste_ ASC 2018-09-28, Section 3.3.2.1

****

(2) The Council shall find that a least-cost plan meets the criteria of an energy resource plan described in section (1) if the Public Utility Commission of Oregon has acknowledged the least cost plan.

The System Reliability Rule for Electric Transmission Lines, OAR 345-023-0030, states:

The Council shall find that the applicant has demonstrated need for an electric transmission line that is an energy facility under the definition in ORS 469.300 if the Council finds that:

(1) The facility is needed to enable the transmission system of which it is to be a part to meet firm capacity demands for electricity or firm annual electricity sales that are reasonably expected to occur within five years of the facility's proposed in-service date based on weather conditions that have at least a 5 percent chance of occurrence in any year in the area to be served by the facility;

(2) The facility is consistent with the applicable mandatory and enforceable North American Electric Reliability Corporation (NERC) Reliability Standards in effect as of September 18, 2015 as they apply either internally or externally to a utility system; and

(3) Construction and operation of the facility is an economically reasonable method of meeting the requirements of sections (1) and (2) compared to the alternatives evaluated in the application for a site certificate.

<u>Findings of Fact</u>

Under the Need Standard for Nongenerating Facilities, an applicant shall demonstrate need for the facility under the least-cost plan rule (OAR 345-023-0020), the system reliability rule for electric transmission lines (OAR 345-023-0030), or by demonstrating that the transmission line is proposed to be located within a National Interest Electric Transmission Corridor designated by the U.S. Department of Energy under Section 216 of the Federal Power Act. Although an applicant must demonstrate need for a facility under only one of these three pathways, in ASC Exhibit N the applicant elected to provide information demonstrating need for the proposed facility under both the least-cost plan rule and the system reliability rule. The Department therefore provides an assessment under each of those two pathways in this order.

Least-Cost Plan Rule

1. *The Council shall find that the applicant has demonstrated need for the facility if the capacity of the proposed facility or a facility substantially similar to the proposed facility, as defined by OAR 345-001-0010, is identified for acquisition in the short-term plan of action of an energy resource plan or combination of plans adopted, approved or acknowledged by a municipal utility, people's utility district, electrical cooperative, other governmental body that makes or implements energy policy, or electric transmission system operator that has a*

> *governance that is independent of owners and users of the system and if the energy resource plan or combination of plans…*
> *****

Section (1) of the least-cost plan rule lists the criteria a least-cost plan must meet to be considered an energy resource plan for the purposes of this rule. Section (2) states that the Council shall find that a least-cost plan meets the criteria of an energy resource plan described in Section (1) if the Oregon Public Utility Commission (OPUC) has acknowledged the least cost plan:

> 2. *The Council shall find that a least-cost plan meets the criteria of an energy resource plan described in section (1) if the Public Utility Commission of Oregon has acknowledged the least cost plan.*

OAR 860-038-0080 outlines OPUC rules for resource policies and plans electric companies operating in Oregon must comply with, including integrated resource plans (IRPs). The applicant explains in ASC Exhibit N that the IRP process requires a utility to identify several portfolios of different combinations of resources that can be used to meet the utility's load and demand over a 20-year planning horizon. Each of the portfolios are analyzed and a preferred portfolio is identified, representing the optimal combination of costs and risks from the perspective of impacts to rate payers and the OPUC. As explained in OPUC Order No. 18-176 (Docket LC 68), the objective of the IRP is to ensure an adequate and reliable supply of energy at the least cost to the utility and customers in a manner consistent with the long-run public interest and that the Commission's (OPUC) acknowledgement of the IRP means that the Commission finds that the utility's preferred portfolio is reasonable at the time of acknowledgement.[469] The language of OAR 345-023-0030 (Council rules) references that a least-cost plan meets the criteria of an energy resource plan or combination of plans if the OPUC has acknowledged the least cost plan. An IRP as defined in the OPUC's rules meets the definition of an energy resource plan or combination or least cost plan in the Council's rules.

The applicant attached its IRPs for the following years to ASC Exhibit N: 2009, 2011, 2013, 2015, and 2017.[470] The OPUC previously acknowledged each of these plans;[471] therefore, the applicant can rely on these plans to support its argument under Section (1) of the least-cost plan rule. The applicant must next demonstrate that the capacity of the proposed facility or a facility substantially similar to the proposed facility is identified for acquisition in one or more of these IRPs.

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[469] B2HAPPDoc3-23 ASC14b_Exhibit N_Need_ASC_Part 2, Attachment N-10, pp. 2-3. 2018-09-28
[470] B2HAPPDoc3-22 ASC 14a_Exhibit N_Need_ASC_Part 1 2018-09-28, Attachments N-1 and N-2, and B2HAPPDoc3-23 ASC14b_Exhibit N_Need_ASC_Part 2 2018-09-28, Attachments N-3 through N-5.
[471] B2HAPPDoc3-23 ASC14b_Exhibit N_Need_ASC_Part 2 2018-09-28, Attachments N-6 through N-10.

Each of these IRPs (2009, 2011, 2013, 2015, and 2017) identifies the proposed Boardman to Hemingway Transmission Line as part of the applicant's preferred resource portfolio. The OPUC acknowledged the ongoing permitting, planning studies, and regulatory filings for the proposed facility as part of the 2013 IRP, but at that time declined to acknowledge the construction phase of the proposed facility because the timing of the construction phase was beyond the two-to-four year period for action items specified by IRP Guidelines.[472] In a January 2018 request for additional information, the Department informed the applicant that the Department and Council would not consider OPUC acknowledgement of only ongoing permitting, planning, and regulatory filings associated with the proposed facility as meeting the requirements in OAR 345-023-0020.[473] The Department informed the applicant that it and the Council would only consider the Least Cost Plan Rule and Need Standard met if the OPUC acknowledged the ongoing permitting, planning studies, and regulatory filings for the proposed facility as well as an acknowledgement of construction of the proposed facility. OPUC Order No. 18-176 (OPUC acknowledgement of the applicant's 2-017 IRP) acknowledges both the ongoing permitting, planning, and regulatory filings and to conduct preliminary construction activities, acquire long-lead materials, and to construct the proposed facility.[474] Therefore, the Department points the Council to the language of the standard and that because OAR 345-023-0020(2) has been met, "*The Council shall find that a least-cost plan meets the criteria of an energy resource plan described in section (1) if the Public Utility Commission of Oregon has acknowledged the least cost plan,*" that the applicant has demonstrated the need for the facility under OAR 345-023-0005(1), and the Council must find that the Need Standard has been met.

System Reliability Rule

> *The Council shall find that the applicant has demonstrated need for an electric transmission line that is an energy facility under the definition in ORS 469.300 if the Council finds that:*
>
> 1. *The facility is needed to enable the transmission system of which it is to be a part to meet firm capacity demands for electricity or firm annual electricity sales that are reasonably expected to occur within five years of the facility's proposed in-service date based on weather conditions that have at least a 5 percent chance of occurrence in any year in the area to be served by the facility;*

To demonstrate need for the facility under section (1) of the system reliability rule, an applicant must show that the transmission line is needed to meet the firm capacity demands for

[472] B2HAPPDoc3-23 ASC14b_Exhibit N_Need_ASC_Part 2 2018-09-28, Attachment N-8, p. 5.
[473] B2HAPPDoc ApASC Exhibit N - IPC Responses to ODOE's RAI-4 2018-01-16.
[474] B2HAPPDoc3-23 ASC14b_Exhibit N_Need_ASC_Part 2 2018-09-28, Attachment N-10, p. 9.

electricity or firm annual electricity sales anticipated to occur within five years of the facility's proposed in-service date based on weather conditions that have at least a five percent chance of occurrence in any year in the area to be served by the facility. The applicant explains that the load-resource balance tables contained in Appendix C of its 2017 IRP (Attachment N-5 of ASC Exhibit N) are based upon these data.[475] The tables reflect a 20-year planning period that begins in 2017 and extends through 2036. The earliest anticipated facility in-service date is 2024;[476] therefore, the forecast extends twelve years from the earliest date the facility is expected to be in service. The load-resource balance tables compare the anticipated energy load (demand) against the available resources (from generation units and market purchases) to determine if, on balance, there will be surplus or deficit of resources for any given month during the planning period. The forecast accounts for factors that would reduce firm capacity demands and firm annual electricity sales (such as energy conservation programs) as well as the anticipated retirement of over 700 MW of coal-fired generating capacity during the first 15 years of the planning period. The load-resource balance tables show that additional supply-side resources or the inclusion of demand response programs are necessary to avoid a resource deficiency (unmet peak-hour load) of up to 34 MW in 2026, 94 MW in 2027, 159 MW in 2028, 397 MW in 2029, and 986 MW by 2036.[477]

In addition to needing sufficient resources to meet forecasted load, the applicant states that it also requires additional transmission capacity in order to comply with the minimum operating criteria for reliability and to provide transmission service to its wholesale customers.[478] The applicant maintains 330 MW of transmission import capacity above the forecasted peak load to cover the worst single planning contingency, which is defined as an unexpected loss (generator downtime) equal to the applicant's share of two units at the Jim Bridger coal facility or the loss of the Langley Gulch combined-cycle natural gas facility. This additional transmission capacity allows for the applicant to import energy during such an emergency.[479] In addition, the additional transmission capacity enables the applicant to comply with a FERC tariff requiring the utility to construct and provide transmission service to wholesale customers.[480] As discussed by the applicant, the proposed facility (along with other resource additions beginning in 2031) would enable it to meet these needs by adding 500 MW of transfer capacity in the months of April through September and 200 MW of transfer capacity from October through March.[481]

Based upon the preceding analysis, the Department recommends that the Council find that the proposed transmission line is needed to meet the firm capacity demands for electricity or firm

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[475] The monthly average energy load-resource balance values are reported on pages 19 through 38 and the monthly peak hour load-resource balance values are reported on pages 40 through 59 of Appendix C of the 2017 IRP. B2HAPPDoc3-23 ASC14b_Exhibit N_Need_ASC_Part 2 2018-09-28, Attachment N-5.

[476] B2HAPPDoc3-22 ASC 14a_Exhibit N_Need_ASC_Part 1 2018-09-28, Section 3.3.9.

[477] B2HAPPDoc3-22 ASC 14a_Exhibit N_Need_ASC_Part 1 2018-09-28, Section 3.3.1.

[478] B2HAPPDoc3-22 ASC 14a_Exhibit N_Need_ASC_Part 1 2018-09-28, Section 3.3.1.

[479] B2HAPPDoc3-22 ASC 14a_Exhibit N_Need_ASC_Part 1 2018-09-28, Section 3.3.2.2.

[480] B2HAPPDoc3-23 ASC14b_Exhibit N_Need_ASC_Part 2 2018-09-28, Attachment N-5, p. 2.

[481] B2HAPPDoc3-23 ASC14b_Exhibit N_Need_ASC_Part 2 2018-09-28, Attachment N-5, p. 7 (Table 1.2).

annual electricity sales anticipated to occur within five years of the facility's proposed in-service date based on weather conditions that have at least a five percent chance of occurrence in any year in the area to be served by the facility.

2. *The facility is consistent with the applicable mandatory and enforceable North American Electric Reliability Corporation (NERC) Reliability Standards in effect as of September 18, 2015 as they apply either internally or externally to a utility system; and*

As previously discussed, the proposed facility would enable the applicant to maintain 330 MW of transmission import capacity above forecasted peak load to cover the worst single planning contingency. If the applicant's system sustained the loss of a major generation resource, the proposed facility would enable the applicant to import energy in order to continue to serve load (demand for electricity). A 330-MW reserve margin also results in a loss of-load expectation (LOLE, the anticipated number of days per year for which available generating capacity is insufficient to serve the daily peak demand) of roughly one day in 10 years, a standard industry measurement. Therefore, the proposed facility would enable the applicant to meet LOLE performance requirements and would provide sufficient resource adequacy for forecasted customer demands.[482]

As a utility subject to NERC and WECC reliability criteria and compliance, the applicant must not only reliably serve customer demand, but must also ensure system stability during both normal system operations and contingency/emergency events. The NERC transmission planning (TPL) standards prescribe acceptable system operating limits for a wide range of system conditions, including loss of generator units and transmission facilities. The applicant states that it has evaluated the proposed facility annually as part of NERC TPL compliance requirements, and those modeling results demonstrate that, with the proposed facility in service, it can meet NERC TPL criteria for the planning horizon.[483]

In order to purchase sufficient resources from the Northwest electric power market to serve load while maintaining the necessary contingency reserves and capacity margins, the applicant states that historically it needed to utilize nearly 100 percent of the available transmission capacity on its intertie lines. Therefore, currently little or no available transmission capacity exists on the applicant's intertie lines. By increasing the applicant's transmission import capacity, the proposed facility would be consistent with NERC transmission operations standards requiring that transmission schedules across WECC transmission paths do not exceed system operating limits.[484]

[482] B2HAPPDoc3-22 ASC 14a_Exhibit N_Need_ASC_Part 1 2018-09-28, Sections 3.3.2.2 and 3.3.6.
[483] B2HAPPDoc3-22 ASC 14a_Exhibit N_Need_ASC_Part 1 2018-09-28, Section 3.3.6.
[484] B2HAPPDoc3-22 ASC 14a_Exhibit N_Need_ASC_Part 1 2018-09-28, Section 3.3.6.

The applicant maintains that the additional transmission import capacity provided by the proposed facility would reduce the load on its existing transmission lines. Heavily loaded transmission lines consume large amounts of reactive power. Without sufficient reactive power, voltage collapse and regional blackouts may occur. The WECC standard *TPL-001-WECC-RBP-2 – System Performance Criterion Under Normal Conditions, Following Loss of a Single BES Element, and Following Extreme BES Events* contains reactive power/voltage stability adequacy criteria applicable to the applicant's transmission system. The applicant states that its Ten-Year Transmission Reliability Assessments demonstrates that, with the addition of the proposed facility, its future transmission system would have sufficient reactive power resources to ensure system performance as defined in this WECC standard. Furthermore, a regional project review group reviewed the proposed facility as part of the WECC Project Coordination, Path Rating and Progress Report Process and determined that the proposed facility would meet regional performance criteria.[485]

Based upon the preceding analysis, the Department recommends that the Council find that the proposed facility is needed to meet NERC and WECC reliability criteria requiring the applicant to reliably serve customer demand, maintain acceptable system operating limits, maintain voltage through reactive power control, and maintain adequate contingency/emergency reserves. Therefore, the Department recommends that the Council find that the proposed facility is consistent with the applicable mandatory and enforceable NERC Reliability Standards in effect as of September 18, 2015 as they apply either internally or externally to a utility system.

3. *Construction and operation of the facility is an economically reasonable method of meeting the requirements of sections (1) and (2) compared to the alternatives evaluated in the application for a site certificate.*

As discussed earlier in this section, the integrated resource planning process requires an investor-owned utility to compare multiple potential resource portfolios and to select the resource portfolio for the planning period that provides an adequate and reliable supply of energy at the least cost and risk to the utility and its customers.[486] In its 2017 IRP, the applicant evaluated one dozen different resource portfolios to determine 1) the cost-effectiveness of installing selective catalytic reduction (SCR) emissions-control technology on the applicant's share of two units at the Jim Bridger coal facility versus retiring that facility early, and 2) the cost-effectiveness of the Boardman to Hemingway Transmission Line in meeting resource needs versus practicable resource alternatives. Each resource portfolio considered either retiring or making SCR investments in the applicant's share of the Jim Bridger coal facility. Of the 12 resource portfolios evaluated, four portfolios contained the proposed facility as part of the resource mix (the B2H-based portfolios), while eight portfolios contained alternative resource mixes (the B2H alternative portfolios). Each of the "B2H alternative portfolios" contained either

[485] B2HAPPDoc3-22 ASC 14a_Exhibit N_Need_ASC_Part 1 2018-09-28, Section 3.3.6.
[486] Oregon Public Utility Commission_Frequently Asked Questions_General IRP Information. https://www.puc.state.or.us/admin_hearings/IRP-FAQs.pdf Accessed 04-10-2019.

only natural gas-powered generating capacity or a mix of solar- and natural gas-powered generating capacity as alternatives to the proposed facility. All "B2H alternative portfolios" included expanded demand response capacity.

As shown in ASC Exhibit N, the applicant's cost analysis demonstrated that its preferred portfolio (P7, which includes the proposed facility) would be the least cost portfolio over the planning period.[487]

In its order acknowledging the 2017 IRP, the OPUC stated that "we acknowledge Idaho Power's selection of the B2H project as a least cost, least risk resource to meet the needs of its customers." The OPUC went on to state:

> *Our decision does not mean that Action Item 6* [the preliminary construction activities, acquisition of long-lead materials, and construction of the proposed facility] *is the only possible option for meeting Idaho Power's resource needs,* [it] *simply means that we are satisfied that it is the least cost, least risk resource for meeting the demonstrated resource needs of Idaho Power's customers. We recognize that there may be other ways of meeting the capacity needs identified in this IRP that may not have the same impacts to eastern Oregon as B2H. In this proceeding, however, we do not find that any such alternatives have been demonstrated to be lower cost and lower risk, based on the information presented…Our decision is supported by the fact that B2H has been prioritized over multiple portfolios in different IRPs using numerous different modeling concepts and reflecting many different assumptions. While presence in numerous IRPs is not determinative for our acknowledgement judgement, it is indicative to us of sustained value that has remained robust across industry and market changes to date. In each of these portfolios, B2H has proven to be a low-cost resource that provides considerable value to the system. While we are sensitive to the arguments that the utility industry is in flux, and that technological changes are impacting the system in unanticipated ways, we have not seen information presented as part of this IRP process indicating that large-scale transmission resources will not be an important part of future utility systems. We recognize that B2H has the potential to create significant regional benefits and could represent a tool for allocating and moving a diverse set of new low-carbon resources across the west.*

In addition to evaluating expanded demand response capacity and development of new electric generating facilities (including natural gas and solar) as alternatives to construction and operation of the proposed facility, the applicant evaluated a range of transmission line capacities for the facility. The proposed facility would include, in part, 270.8 miles of single-circuit 500-kV transmission line. The applicant evaluated other options for this transmission line, including constructing the facility as a 230-kV single circuit, 230-kV double circuit, 345-kV single circuit, 500-kV double circuit, 765-KV single circuit, or two separate 500-kV transmission

[487] B2HAPPDoc3-23 ASC14b_Exhibit N_Need_ASC_Part 2 2018-09-28, Attachment N-5, Table 9.3

lines from Longhorn to Hemingway. As shown in Table N-2a of ASC Exhibit N, the applicant must design the transmission line for an operating voltage of 500 kV or greater for the proposed facility to be capable of providing the needed 1,050 MW of west-to-east capacity. Therefore, according to the applicant's analysis, designing the transmission line for a lower operating voltage than currently proposed is not a practicable alternative.

The applicant also evaluated rebuilding an existing transmission line as an alternative to construction and operation of the proposed facility. Each rebuild scenario considered would require a minimum of 136 miles of new construction in a new ROW. As shown in Table N-2b of ASC Exhibit N, none of the transmission line rebuild scenarios evaluated would be capable of providing the needed 1,050 MW of west-to-east capacity. Therefore, according to the applicant's analysis, none of the transmission line rebuild scenarios would be a practicable alternative to the proposed facility.

Based upon this alternatives assessment, and in consideration of the OPUC's determination that the proposed facility would be a least cost, least risk resource to meet the needs of the applicant's customers, the Department recommends that the Council find that construction and operation of the proposed facility is an economically reasonable method of meeting the requirements of sections (1) and (2) of the system reliability rule compared to the alternatives evaluated in the application for a site certificate.

As previously discussed, the Department recommends that the Council find that the facility would meet the requirements of sections (1), (2), and (3) of the system reliability rule; the Department therefore also recommends that the Council find that the applicant has demonstrated the need for the facility under the system reliability rule.

Conclusions of Law

Based on the foregoing findings of fact and conclusions of law, the Department recommends that the Council find that the proposed facility, including the proposed and alternative routes, would comply with the Council's Need Standard for Nongenerating Facilities.

IV.P. Division 24 Standards

The Council's Division 24 standards include specific standards for siting certain facilities.

IV.P.1. Siting Standards for Transmission Lines: OAR 345-024-0090

> *To issue a site certificate for a facility that includes any transmission line under Council jurisdiction, the Council must find that the applicant:*

(1) Can design, construct and operate the proposed transmission line so that alternating current electric fields do not exceed 9 kV per meter at one meter above the ground surface in areas accessible to the public;
(2) Can design, construct and operate the proposed transmission line so that induced currents resulting from the transmission line and related or supporting facilities will be as low as reasonably achievable.

Findings of Fact

The Siting Standards for Transmission Lines address safety hazards associated with electric and magnetic fields generated by high-voltage transmission lines. OAR 345-024-0090(1) sets a limit for electric fields from transmission lines of not more than 9 kV per meter at one meter above the ground surface in areas that are accessible to the public. Section (2) requires the certificate holder to design, construct and operate the line in a manner that reduces the risk posed by induced current. The applicant provided information on the Siting Standards for Transmission Lines in ASC Exhibits AA and DD.

Electric Fields

The electric charge (measured as voltage) on an energized transmission line conductor produces electric fields. The greater the overall transmission line voltage, the greater the strength of the electric field. In contrast, the amount of current flowing on the conductor, which fluctuates daily and seasonally with changes in electricity usage, does not impact the strength of electric fields produced by the conductor. Electric fields diminish in strength proportional to distance from the transmission line conductors (the greater the distance from the conductors, the lower the electric fields), and are weakened or blocked by conductive objects (such as trees or buildings).[488]

In Oregon, there has been prior concern by the public about the potential health effects of exposure to low frequency electric and magnetic fields (EMF). As a response to this concern, ORS 469.480 and OAR 345-001-0035 were adopted to require the establishment of an EMF Committee to "monitor information available and being developed on the health effects of exposure to low frequency electric and magnetic fields and report the committee's findings periodically to the Council." The Council in turn is required to report the findings of the committee to the Legislative Assembly. The EMF Committee was last discussed by Council at the April, 2016 Council meeting. During that meeting Council took note of: 1) the history of the statute and rule; 2) the prior EMF Committee meetings; and 3) the last literature review commissioned by the Department in 2009 which concluded that while there is a need to continue to monitor the science on EMF, low cost prudent avoidance measures of public EMF exposure is appropriate and that health-based exposure limits are not appropriate with the scientific data available to date. Based on this information, the Council declined to reform the

[488] B2HAPPDoc3-44 ASC 27_Exhibit AA_EMF_ASC 2018-09-28, Section 3.2.1.

EMF Committee at that time but understood that it could do so at any point in the future if it determined there is a need.

The standard related to EMF under OAR 345-024-0090(1) continues to be a low cost prudent avoidance measure of public EMF exposure based on available scientific data.

The applicant used a model developed by the Electric Power Research Institute[489] (which utilizes a methodology developed by the Bonneville Power Administration) to calculate the electric fields, measured in units of kilovolts per meter (kV/m), which would be produced by the proposed new 500 kV transmission line, rebuilt 230-kV transmission line, and rebuilt 138-kV transmission line. The model considered the following line geometries that the applicant expects to use in Oregon:

- 500-kV transmission line on a single-circuit lattice tower (delta configuration; ASC Exhibit B, Figure B-15) with a minimum ground clearance of 34.5 feet
- 230-kV transmission line on a single-circuit H-frame structure (horizontal configuration; ASC Exhibit B, Figure B-19) with a minimum ground clearance of 20 feet
- 138-kV transmission line on a single-circuit H-frame structure (horizontal configuration; ASC Exhibit B, Figure B-20) with a minimum ground clearance of 20 feet

In addition, the applicant modeled the electric fields from one alternative geometry that would be used when unique siting concerns require the use of special structures:

- 500-kV transmission line on a single-circuit H-frame or Y-frame structure (horizontal configuration; see ASC Exhibit B, Figures B-16 and B-17) with a minimum ground clearance of 34.5 feet

The model used the nominal voltage of the 230-kV and 138-kV transmission lines, but evaluated a more conservative (higher) voltage of 550-kv for the 500-kv transmission line to account for overvoltage situations.[490] The model provided the predicted electric field levels out to distances of 200 feet on either side of each proposed transmission line structure type. Table SSTL-1, reproduced from ASC Exhibit DD, Table DD-1, summarizes the electric field strengths at the peak and edge of the ROW for each of these transmission line configurations.[491] The 500-kV single-circuit lattice tower configuration would produce the highest electric fields. As shown in Table SSTL-1, the maximum electric field modeled is 8.9 kV/m at one meter above the ground. This value is below the limit for electric fields from transmission lines (set at OAR 345-024-0090(1)) of not more than 9 kV per meter at 1 meter above the ground surface in areas that are accessible to the public. For this assessment, it is assumed the areas under the 500 kV line are

[489] The model is EMFWorkstation: ENVIRO (Version 3.52).

[490] B2HAPPDoc3-44 ASC 27_Exhibit AA_EMF_ASC 2018-09-28, Section 3.5.2.

[491] ASC Exhibit AA provides electric field profiles illustrating how the strength of the electric field will vary across the ROW for each transmission line configuration.

"accessible to the public," though not all areas would be accessible to the public due to private property access restrictions.

Table SSTL-1: Electric Field Strength for Each Considered Structural Configuration

Structure Type	ROW Width (feet)	South/West ROW Edge (kV/m)	Maximum within ROW (kV/m)	North/East ROW Edge (kV/m)
500-kV lattice	250	0.8	8.9	0.8
500-kV tubular steel H-frame and Y-frame monopole	250	0.9	8.8	0.9
230-kV wood H-frame	125	0.8	5.0	0.8
138-kV wood H-frame	100	0.5	2.3	0.5
Electric field strength calculated at standard height of one meter above ground surface. kV/m = kilovolt per meter; ROW = right-of-way				

The applicant's position is that post-construction monitoring of electric fields is unnecessary because the modeling results assumed worst-case conditions of line overvoltage and minimum ground clearance, and those conservative calculations show that the electric fields would be below the threshold established at OAR 345-024-0090(1).[492] Because the model shows that the maximum electric field strength that would be produced by the 500-kV lattice single-circuit lattice tower configuration is 8.9 kV/meter at one meter above the ground when the line is modeled at 34.5 feet from the ground, a lesser minimum conductor clearance could result in electric fields that exceed 9 kV/m at one meter above the ground. The applicant therefore commits to designing the transmission line to meet specific minimum ground clearances under all operating conditions, including maximum load conditions, maximum sag conditions, and locations where the line crosses or is adjacent to other transmission lines.[493] Accordingly, the applicant proposes, and the Department recommends the Council adopt, the following condition:

Recommended Siting Standards for Transmission Lines Condition 1: To reduce or manage human exposure to electromagnetic fields, the certificate holder shall design and construct:

a. All aboveground 500-kV transmission lines with a minimum clearance of 34.5 feet from the ground under all operating conditions;
b. All aboveground 230-kV transmission lines with a minimum clearance of 20 feet from the ground under all operating conditions; and
c. All aboveground 138-kV transmission lines with a minimum clearance of 20 feet from the ground under all operating conditions.

[492] B2HAPPDoc3-44 ASC 27_Exhibit AA_EMF_ASC 2018-09-28, Section 3.8.
[493] B2HAPPDoc3-58 ASC Exhibit AA - Errata Sheet 2019-03-28.

d. In areas where an aboveground transmission line will cross an existing transmission line, the certificate holder shall construct the transmission line at a height and separation that would ensure that alternating current electric fields do not exceed 9-kV per meter at one meter above the ground surface.
e. The Department may authorize a lower conductor clearance in areas determined to not be accessible to the public or otherwise demonstrated by the applicant to be compliant with the standard.

In areas where an existing transmission line would parallel a proposed transmission line, the electric fields within the transmission line ROW may increase or decrease depending on the proximity, load, and phasing of the parallel line.[494] Therefore, in addition to modeling the electric fields that would be produced by each transmission line alone, the applicant also modeled the interactions between the electric fields that would be produced by the 500-kV lattice structures and the electric fields that would be produced by parallel transmission lines.[495] ASC Exhibit AA, Figure AA-9 shows that existing parallel lines located near the proposed 500-kV corridors will not result in exceedances of 9 kV/m at one meter above the ground surface, in compliance with OAR 345-024-0090(1). The proposed 500-kV transmission line has the potential to exceed this threshold, however, where the line would cross (rather than parallel) existing transmission lines. The applicant explains that it would design the transmission line with a vertical height and separation that would maintain electric fields in the area of any crossing at below the 9 kV/m at one meter above the ground threshold. Recommended Siting Standards for Transmission Lines Condition 1 would impose this requirement as a condition of the site certificate.

Based upon review of the applicant's evaluation presented in Exhibit AA, and subject to the Recommended Siting Standards for Transmission Lines Condition 1, the Department recommends that the Council find that electric fields generated by the proposed new 500 kV transmission line, rebuilt 230-kV transmission line, and rebuilt 138-kV transmission line would not exceed 9-kV per meter at one meter above ground level.

Induced Voltage and Current

The Siting Standards for Transmission Lines requires the Council to find that the applicant "can design, construct and operate the proposed transmission line so that induced currents resulting

[494] A single-circuit transmission line carries one phase in each of its three conductors. The voltage and current in each phase conductor is out of sync with the other two phases by 120 degrees, or one-third of the 360 degree cycle. The fields from these conductors tend to cancel out because of this phase difference. Therefore, depending on the geometry and arrangement of the conductors in the parallel transmission line, a parallel transmission line can either increase or decrease the electric fields within the transmission line ROW. B2HAPPDoc3-44 ASC 27_Exhibit AA_EMF_ASC 2018-09-28, Section 3.2.1.

[495] The 500-kV lattice configuration would produce the highest electric fields; therefore, the applicant modeled the interaction of electric fields from parallel transmission lines with the electric fields from this transmission line configuration. B2HAPPDoc3-44 ASC 27_Exhibit AA_EMF_ASC 2018-09-28, Section 3.5.3.

from the transmission line and related or supporting facilities will be as low as reasonably achievable."

As explained in ASC Exhibit DD, the flow of electricity in a transmission line can induce a small electric charge, or voltage, in nearby conductive objects, such as metallic objects (e.g., vehicles, equipment, metal fences, signs, and metallic roofs). An induced electric charge can flow, or become electric current, when a path to ground is presented. For example, a vehicle that is insulated from grounding by its tires and is parked under a transmission line long enough to build up a charge can cause humans that touch the vehicle to experience a momentary shock as the person becomes the conducting path for the current to flow to ground. A person can generally notice induced current if the available electrical charge is greater than one milliampere (mA), and at five mA most children (99.5 percent) are able to still let go of an electrified object.[496] The National Electric Safety Code (NESC) sets a performance standard at Rule 234G.3 limiting the steady-state current due to electrostatic effects to five mA.

The strength of the induced current in an object is positively related to the electric field strength of a nearby transmission line. The applicant therefore calculated the induced current expected to result for various objects located near the 500-kV lattice configuration, because this configuration would produce the strongest electric fields. Table SSTL-2 below, reproduced from Table DD-2 of ASC Exhibit DD, shows the maximum current that could be induced in several types of vehicles and agricultural equipment if those objects were located in the transmission line ROW. The maximum induced current is calculated by multiplying the factors in the middle column (derived from an Electric Power Research Institute publication) by the maximum expected electric field strength from the proposed facility (under normal operating conditions). As shown in Table SSTL-2, cars, pickup trucks, and combines located within the ROW of the 500-kV lattice transmission line configuration would build up an inducible charge that would be less than the 5-mA threshold established by the NESC. If a large tractor-semitrailer were located parallel to and directly under the transmission line, it would have the potential to build up an inducible charge that would exceed the 5-mA threshold. However, the applicant explains that tractor-semitrailers are unlikely to drive directly under and parallel to the line; tractor-semitrailers may briefly cross under the line where the transmission line crosses a road, but in these circumstances the tractor-semitrailer would be under the transmission line for only a short duration and would not be parallel to the line. If the transmission line crossed a location where tractor-semitrailers may be parked long enough to build up an inducible charge (such as at a gas station or a parking lot), the resulting induced current may exceed the 5-mA threshold; therefore, the applicant represents that at these locations it would alter the transmission line design if necessary to ensure that the line complies with the 5-mA threshold established by the NESC.

[496] B2HAPPDoc3-47 ASC 30_Exhibit DD_Specific Standards_ASC 2018-09-28, Section 3.4.1.

Table SSTL-2: Induced Current Factors

Object	Isc/E (mA/kV/m)	Maximum Induced Current (mA)[1]
Car—L 4.6 m x W 1.78 m x 1.37 m	0.088	0.78
Pickup Truck—L 5.2 m x W 2.0 m x H 1.7m	0.10	0.89
Large Tractor-Trailer—Total Length 15.75 m Trailer: 12.2 m x W 2.4 m x H 3.7 m	0.64	5.70
Combine—L 9.15 m x W 2.3 m x H 3.5 m	0.38	3.38

Source: Table 7-8.2, EPRI AC Transmission Line Reference Book: 200 kV and Above (EPRI 2005)
[1] Maximum induced current calculated for strongest predicted electric field of 8.9 kV/m, associated with the proposed lattice segment.
Isc = short-circuit current E = AC electric field
m = meter

To reduce the risk of induced current and nuisance shocks, the applicant proposes to inform landowners of the risks of induced current, develop and implement a program to ground or bond conductive objects or structures that could become charged by the electric fields from the transmission line, and to follow NESC grounding requirements. The applicant therefore proposes, and the Department recommends, that the Council impose the following site certificate condition:

> **Recommended Siting Standards for Transmission Lines Condition 2:** Prior to placing the facility in service, the certificate holder shall take the following steps to reduce the risk of induced current and nuisance shocks:
>
> a. Provide to landowners a map of overhead transmission lines on their property and advise landowners of possible health and safety risks from induced currents caused by electric and magnetic fields.
> b. Implement a safety protocol to ensure adherence to National Electric Safety Code grounding requirements.

In addition, the applicant states that it would design, construct, and operate the facility in accordance with the version of the NESC that is most current at the time final engineering of the facility is completed. Like the proposed transmission lines (the new 500 kV transmission line, rebuilt 230-kV transmission line, and rebuilt 138-kV transmission line), the Longhorn Station and communication stations have the potential to generate induced currents in nearby conductive objects. The applicant would follow the NESC requirements for employee training about shock hazards as well as NESC requirements for grounding, bonding, shielding, signage, and physical barriers such as fencing around the Longhorn Station and communication stations. As discussed in Section IV.A, General Standard of Review of this order, under OAR 345-025-0010, the Council may include site-specific conditions in the site certificate. The site-specific condition at OAR 345-025-0010(4) provides reference to the 2012 edition of the NESC and requires that conductive structures (such as gates and fences) be grounded or bonded. The Department acknowledges that the 2012 version of the NESC has already been updated, so to design, construct and operate the proposed facility in compliance with the most up-to-date NESC code may create a compliance issue with the site-specific condition as written in rule.

Therefore, based upon the applicant's representations and to align the site-specific condition with the most current version of the NESC, the Department recommends that the Council adopt the following condition:

Recommended Siting Standards for Transmission Lines Condition 3:

a. The certificate holder shall design, construct, and operate the transmission lines, Longhorn Station, and communication stations in accordance with the requirements of the version of the National Electrical Safety Code that is most current at the time that final engineering of each of these components is completed; and
b. The certificate holder shall develop and implement a program that provides reasonable assurance that all fences, gates, cattle guards, trailers, or other objects or structures of a permanent nature that could become inadvertently charged with electricity are grounded or bonded throughout the life of the line. The certificate holder shall be responsible for any costs associated with grounding or bonding of permanent infrastructure such as are required for compliance with this condition.

[Site-Specific Condition OAR 345-025-0010(4)]

The applicant is an operator of electrical supply lines (i.e., power lines) and is subject to the jurisdiction of the Oregon Public Utility Commission (under ORS 757.035) for the entire life of the proposed facility. As an electric supply operator, the operator must comply with Oregon Public Utility Commission safety rules in OAR Chapter 860, Division 024. To ensure compliance with applicable Oregon Public Utility Commission safety requirements, and in order to maintain compliance with OAR 345-024-0090, the Department recommends the Council adopt the following conditions:

Recommended Siting Standards for Transmission Lines Condition 4: Prior to construction, the certificate holder shall schedule a time to brief the Public Utility Commission Safety, Reliability, and Security Division (Safety) Staff as to how it will comply with OAR Chapter 860, Division 024 during design, construction, operations, and maintenance of the facilities. The certificate holder shall notify the Department how and when it briefed the Public Utility Commission staff.

Recommended Siting Standards for Transmission Lines Condition 5: During operation, the certificate holder shall:

a. Annually update the Public Utility Commission Safety Staff as to how the operator will comply with OAR Chapter 860, Division 024 considering future operations, maintenance, emergency response, and alterations until project retirement.
b. File the following required information with the Commission:
    i. 758.013 Operator of electric power line to provide Public Utility Commission with safety information; availability of information to public utilities. (1) Each person who is subject to the Public Utility Commission's authority under ORS 757.035 and who engages in the operation of an electric power line as described in ORS 757.035 must provide the

commission with the following information before January 2 of each even-numbered year:

a. The name and contact information of the person that is responsible for the operation and maintenance of the electric power line, and for ensuring that the electric power line is safe; and
b. The name and contact information of the person who is responsible for responding to conditions that present an imminent threat to the safety of employees, customers and the public.
c. In the event that the contact information described in subsection (1) of this section changes or that ownership of the electric power line changes, the person who engages in the operation of the electric power line must notify the commission of the change as soon as practicable, but no later than within 90 days.
d. If the person described in subsection (1) of this section is not the public utility, as defined in ORS 757.005, in whose service territory the electric power line is located, the commission shall make the information provided to the commission under subsection (1) of this section available to the public utility in whose service territory the electric power line is located. [2013 c.235 §3]

c. Provide Public Utility Commission Safety Staff with:
   i. Maps and drawings of routes and installation of electrical supply lines showing:
      - Transmission lines and structures (over 50,000 Volts)
      - Distribution lines and structures - differentiating underground and overhead lines (over 600 Volts to 50,000 Volts)
      - Substations, station, roads and highways
   ii. Plan and profile drawings of the transmission lines (and name and contact information of responsible professional engineer).

(d) Document compliance with the above provisions in its annual report to the Department as provided in General Standard of Review Condition 4.

Based upon review of the applicant's evaluation presented in ASC Exhibits AA and DD, and subject to recommended Siting Standards for Transmission Line Conditions 1 through 5, the Department recommends that the Council find that the applicant can design, construct and operate the proposed facility so that induced currents would be as low as reasonably achievable.

<u>Conclusions of Law</u>

Based on the foregoing findings of fact and conclusions of law, and subject to compliance with the recommended site certificate conditions, the Department recommends that the Council

find that the proposed facility, including the proposed and alternative routes, complies with the Council's Siting Standards for Transmission Lines.

IV.Q. Other Applicable Regulatory Requirements Under Council Jurisdiction

Under ORS 469.503(3) and under the Council's General Standard of Review (OAR 345-022-0000), the Council must determine whether the proposed facility complies with "all other Oregon statutes and administrative rules…, as applicable to the issuance of a site certificate for the proposed facility." This section addresses the applicable Oregon statutes and administrative rules that are not otherwise addressed in Council standards, including Oregon Noise Control Regulations, Removal Fill Law, Water Rights, and Fish Passage.

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 submits its request for exemption directly to the Oregon Department of Forestry, consistent with the approach described in ASC Exhibit K and BB where the applicant represents it would work directly with the state agency on FPA requirements.[497]

IV.Q.1. Noise Control Regulations: OAR 340-035-0035, OAR 340-035-0010 and OAR 340-035-0100

OAR 340-035-0035: Noise Control Regulations for Industry and Commerce

(1) Standards and Regulations:
*****

[497] As detailed in this order, the applicant recommends, and the Department supports, that Council impose various conditions related to compliance with FPA requirements, where compliance with the requirements would minimize potential impacts and hazards in forest lands during construction and operation of the proposed facility. However, the Department's recommendation that Council impose such conditions is not intended to assume enforcement authority over FPA requirements, but that Council find that compliance with the FPA requirements would reduce potential impacts evaluated under Council's Land Use and Protected Areas standards.

(b) New Noise Sources:

(A) New Sources Located on Previously Used Sites:
No person owning or controlling a new industrial or commercial noise source located on a previously used industrial or commercial site shall cause or permit the operation of that noise source if the statistical noise levels generated by that new source and measured at an appropriate measurement point, specified in subsection (3)(b) of this rule, exceed the levels specified in Table 8, except as otherwise provided in these rules. For noise levels generated by a wind energy facility including wind turbines of any size and any associated equipment or machinery, subparagraph (1)(b)(B)(iii) applies.

(B) New Sources Located on Previously Unused Site:
(ii) 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).
(iii) 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. Sources exempted from the requirements of section (1) of this rule, which are identified in subsections (5)(b) - (f), (j), and (k) of this rule, shall not be excluded from this ambient measurement.
*****

(c) Quiet Areas. No person owning or controlling an industrial or commercial noise source located either within the boundaries of a quiet area or outside its boundaries shall cause or permit the operation of that noise source if the statistical noise levels generated by that source exceed the levels specified in Table 9 as measured within the quiet area and not less than 400 feet (122 meters) from the noise source.
*****

(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.

(4) Monitoring and Reporting:

(a) Upon written notification from the Department, persons owning or controlling an industrial or commercial noise source shall monitor and record the statistical noise levels and operating times of equipment, facilities, operations, and activities, and shall submit such data to the Department in the form and on the schedule requested by the Department. Procedures for such measurements shall conform to those procedures which are adopted by the Commission and set forth in Sound Measurement Procedures Manual (NPCS-1);…[498]

(5) Exemptions: Except as otherwise provided in subparagraph (1)(b)(B)(ii) of this rule, the rules in section (1) of this rule shall not apply to:

*****

Warning devices not operating continuously for more than 5 minutes;

(c) Sounds created by the tires or motor used to propel any road vehicle complying with the noise standards for road vehicles;

*****

(g) Sounds that originate on construction sites.

(h) Sounds created in construction or maintenance of capital equipment;

*****

(j) Sounds generated by the operation of aircraft and subject to pre-emptive federal regulation. This exception does not apply to aircraft engine testing, activity conducted at the airport that is not directly related to flight operations, and any other activity not pre-emptively regulated by the federal government or controlled under OAR 340-035-0045;

(k) Sounds created by the operation of road vehicle auxiliary equipment complying with the noise rules for such equipment as specified in OAR 340-035-0030(1)(e);

*****

(m) Sounds created by activities related to the growing or harvesting of forest tree species on forest land as defined in subsection (1) of ORS 526.324

(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:

(c) Unusual and/or infrequent events;

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[498] In ASC Exhibit X, the certificate holder argues that OAR 340-035-0035(4) does not apply to the proposed facility because it would only apply where the ODEQ Director has required specific noise sources to meet certain monitoring and reporting requirements, which has not occurred. In contrast, because Council assumes the authority as the decision maker to implement ODEQ noise rules, the Department recommends Council consider this rule provision applicable and assume notification would be directed from the Department on behalf of the Council versus ODEQ.

(d) Industrial or commercial facilities previously established in areas of new development of noise sensitive property;
(e) Those industrial or commercial noise sources whose statistical noise levels at the appropriate measurement point are exceeded by any noise source external to the industrial or commercial noise source in question;
(f) Noise sensitive property owned or controlled by the person who controls or owns the noise source;
(g) Noise sensitive property located on land zoned exclusively for industrial or commercial use.

OAR 340-035-0010: Exceptions

(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: Variances

(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.

(2) Procedure for Requesting. Any person requesting a variance shall make his request in writing to the Department for consideration by the Commission and shall state in a concise manner the facts to show cause why such variance should be granted.
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Findings of Fact

Noise control requirements established in OAR 345-035-0035 apply to new industrial and commercial noise sources, which are defined as "noise generated by a combination of equipment, facilities, operations or activities employed in the production, storage, handling, sale, purchase, exchange, or maintenance of a...service."[499] The proposed facility would be a new industrial noise source and therefore the noise control requirements established in OAR 345-035-0035 are applicable.[500]

The noise impact analysis area includes the area within and extending one-half mile from the proposed site boundary, as presented in Figure 2, *Proposed and Alternative Transmission Line Routes*.[501]

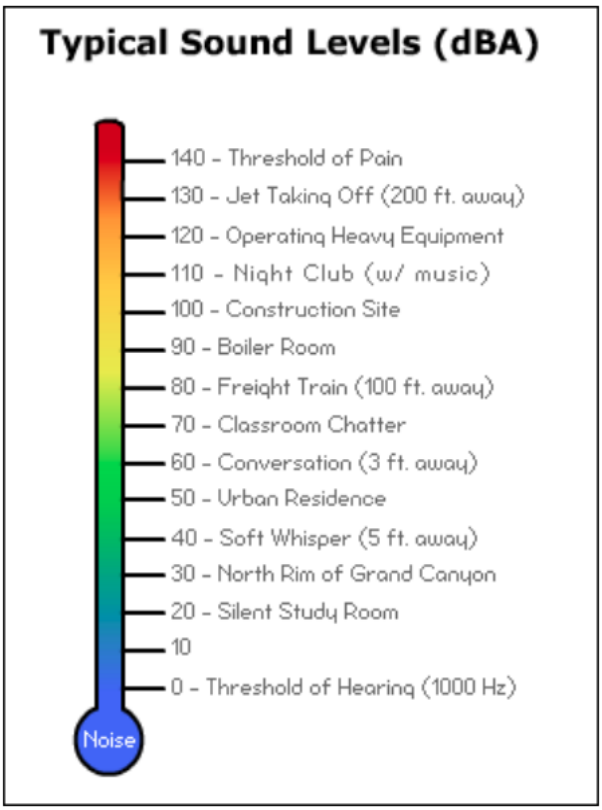
Expected noise levels from common noise sources are presented in Figure 12*, Common Noise Sources and Expected Noise Levels* and indicate, for example, that noise levels of 40 A-weighted decibels (dBA) represent a soft whisper at a distance of 5-feet, and noise levels of 80 dBA represent a freight train at 100-feet.

[499] OAR 340-035-0015(24)

[500] As provided in OAR 340-035-0110, in 1991, the Legislative Assembly withdrew all funding for implementing and administering DEQ's noise program; therefore, Council assumes the authority as the decision maker to implement the DEQ noise rules.

[501] OAR 345-001-0010(2) and OAR 345-015-0160

Figure 12: Common Noise Sources and Expected Noise Levels



Source: OSHA
https://www.osha.gov/SLTC/noisehearingconservation/
Accessed 01-14-2019

Construction Noise

Construction noise would occur during general construction activities, blasting and rock breaking, use of implosive devices during conductor stringing, helicopter operations, and vehicle traffic. However, construction noise is exempt from the noise standards pursuant to OAR 340-035-0035(5)(g) and (h). The evaluation of construction-related noise, including methodology and assumptions, is an informational requirement per OAR Chapter 345 Division 21 and can be utilized to inform the evaluation of construction-related noise impacts under the Council's Protected Areas and Recreation standard of this order. ASC Exhibit X discusses construction-related noise sources, predicted noise levels, methods and assumptions for the construction noise analysis.

Construction activities would be phased and linear. Construction phases would generally include site access and preparation, transmission tower foundation installation, support structure erection, conductor stringing, and wiring installation (including installation of shield wires and fiber-optic ground wires). Construction phases may overlap, with construction crews operating simultaneously along the transmission line route and at different construction areas

such as access roads, structure sites, conductor pulling sites, and staging and maintenance areas (referred to as multi-use areas).

General Construction Activities

General construction activities including operation of construction vehicles and equipment (i.e. auger drill rig, backhoe, crane, dump truck, grader, pickup truck, and tractor) would occur at a construction site and would be the result of construction of capital equipment. Pursuant to OAR 340-035-0035(5)(g) and (h), these noise generating activities would be exempt from DEQ noise rules. However, potential noise levels from general construction activities are described below.

In ASC Exhibit X, the applicant evaluates potential noise levels from general construction activities based on an assumed operation of 5 construction vehicles, at 40 percent hourly usage. As presented in Table NC-1, *Predicted Noise Levels from General Construction* Activities, the 1-hr average predicted noise level from the combined operation of five pieces of equipment is 83 dBA at 50 feet, 79 dBA at 100 feet, and attenuates to 46 dBA at 6,400 feet. Representative noise levels for general construction equipment was obtained from the Federal Highway Administration (FHWA) Roadway Construction Noise Model User's Guide (FHWA 2006).

Table NC-1: Predicted Noise Levels from General Construction Activities

Noise Source and Assumptions	Distance from Construction Activity (feet)	Leq Noise Level (dBA)
5 construction vehicles at 40% usage factor: 1 at 50 ft 2 at 100 ft 2 at 200 ft	50	83
	100	79
	200	74
	400	69
	800	63
	1,600	58
	3,200	52
	6,400	46
Leq = Equivalent sound pressure level Usage factor = Percent of time equipment is in use over time period (1 hr)		

Blasting, Rock Breaking, and Implosive Devices

Blasting, rock breaking, and use of implosive devices during construction could occur at a construction site and would be the result of construction of capital equipment. Pursuant to OAR 340-035-0035(5)(g) and (h), these noise generating activities would be exempt from the DEQ noise rules. However, potential noise levels from blasting activities are described below.

ASC Exhibit X Section 3.3.1.1 describes that blasting would be a short-duration event compared to rock removal methods, such as using track rig drills, rock breakers, jackhammers, rotary percussion drills, core barrels, or rotary rock drills. The applicant anticipates that tower foundations would typically be installed using drilled shafts or piers; however, blasting may be needed if hard rock is encountered. In such circumstances, impulse noise from blasts could reach up to 140 dBA at the blast location or over 90 dBA within 500 feet of the blast location.[502] The applicant may use an implosive conductor splice consisting of a split-second detonation with sound and flash; this activity is anticipated to occur during daytime hours. The applicant addresses protective measures for blasting and implosive devices in its draft Framework Blasting Plan provided in Attachment G-5 to this order, and discussed in Section IV.D. *Soil Protection*.

Helicopter Use for Construction

Helicopter use during construction would occur at a construction site and would be the result of construction of capital equipment. Pursuant to OAR 340-035-0035(5)(g) and (h), these noise generating activities would be exempt from DEQ noise rules. Further, OAR 340-035-0035(5)(j) provides that sounds generated by aircraft operation and subject to pre-emptive federal regulation are also exempt from DEQ noise rules. However, potential noise levels from construction-related helicopter use is described below for informational purposes.

Heavy-lift and light duty helicopters may be used during construction of the proposed facility in areas where access roads and/or rough terrain would not permit the delivery of equipment, materials or personnel. Helicopters may also be used for structure/tower placement; hardware installation; and wire-stringing operations. If used, heavy-lift and light duty helicopters would deploy from multi-use areas or light duty fly yards; the frequency of helicopter trips depends on whether the proposed facility structure would be assembled at a structure site or a multi-use area. If assembly takes place at the structure site, daily helicopter operations at the relevant multi-use areas and light-duty fly yards would typically involve approximately 15 to 20 flights per day and last for approximately two to three months. If assembly takes place at the multi-use areas, daily helicopter operations would typically involve approximately 10 to 15 flights per day and might last for a year but trips would not take place every day and would be more sporadic.

Audible noise from light duty and heavy-lift helicopters ranges between 62 and 84 dBA, respectively, at a 1,000 foot distance. The applicant states that helicopter operations are expected to be limited to daylight hours.[503] The applicant represents that all helicopters must be compliant with the noise certification and noise level limits set forth in the Code of Federal Regulations 14 CFR § 36.11 which outlines the requirements needed to demonstrate compliance with the regulations including the measuring, evaluation and calculation of noise

[502] B2HAPPDoc3-41 ASC 24_Exhibit X_Noise_ASC 2018-09-28, Section 3.3.1.1.
[503] B2HAPPDoc3-41 ASC 24_Exhibit X_Noise_ASC 2018-09-28, Section 3.3.1.1.

levels in accordance with applicable procedures and conditions. These are discussed further in Section IV.M., *Public Services,* of this order and secured in recommended Public Services Condition 2 which outlines an applicant represented Helicopter Use Plan to be provided to the Department, affected County Planning Department, Oregon Department of Aviation, and the Federal Aviation Administration (FAA).

Operational Noise

Operational noise would include potential corona noise generated from the proposed transmission line and operations and maintenance (O&M) activities. The proposed Longhorn Station would not include transformers, would not be located within half-mile of any noise sensitive receptor (NSR), and would not generate operational noise.[504]

Maintenance of proposed facility components, which is considered "capital equipment," is exempt from the noise rules pursuant to OAR 340-035-0035(5)(h), but is evaluated in ASC Exhibit X for informational purposes. Maintenance activities would include vegetation management, transmission line inspections, transmission line repair and maintenance activities, and access road repair. Regular maintenance activities would also include but are not limited to traffic noise from routine inspections, the use of helicopters to perform inspections, the inspections themselves, repairs or replacement of equipment and vegetation management within the ROW.

Operational Noise Rules

The DEQ noise rules set noise limits for new industrial or commercial noise sources based upon whether those sources would be developed on a previously used or unused site. Pursuant to OAR 340-035-0015(47), a "previously unused industrial or commercial site" is defined as property which has not been used by any industrial or commercial noise source during the 20 years immediately preceding commencement of construction of a new industrial or commercial source on that property.

The applicant assumed the proposed facility would be a new industrial or commercial noise source located on previously unused industrial or commercial sites. The standards for noise sources proposed to be located on previously unused industrial or commercial sites are more restrictive than on sites of previous industrial or commercial use. While historic use was not evaluated for the entire proposed facility site, based on land use zoning designations presented in ASC Exhibit K and the applicant's application of the more restrictive noise standards, the Department recommends Council evaluate the proposed facility under OAR 340-035-0035(b)(B) as a new noise source located on a previously unused industrial or commercial site.

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[504] Noise from stations or substations is typically a result of transformer operation; the proposed Longhorn Station would not include transformers.

Operational noise generated by a new industrial or commercial noise source to be located on a previously unused site must comply with two standards: the "ambient antidegradation standard" and the "maximum allowable noise standard." Under the ambient antidegradation standard, facility-generated noise must not increase the ambient hourly L10 or L50 noise levels at any noise-sensitive properties by more than 10 dBA.[505] In ASC Exhibit X, the applicant refers to noise-sensitive properties as noise sensitive receptors (NSRs).

Under the maximum allowable noise standard at OAR 340-035-0035(1)(b)(B)(i), a new industrial or commercial noise source to be located on a previously unused site may not exceed the noise levels specified in Table 8 of the noise rules, as represented in Table NC-2, *Statistical Noise Limits for Industrial and Commercial Noise Sources* below.

Table NC-2: Statistical Noise Limits for Industrial and Commercial Noise Sources

Statistical Descriptor[1]	Maximum Allowable Noise Standards (dBA)	
	Daytime (7:00 AM - 10:00 PM)	Nighttime (10:00 PM - 7:00 AM)
L50	55	50
L10	60	55
L1	75	60

Notes:
1. The hourly L50, L10 and L1 noise levels are defined as the noise levels equaled or exceeded 50 percent, 10 percent, and 1 percent of the hour, respectively.

Source: OAR 340-035-0035, Table 8

Proposed Transmission Line - Corona Noise

The corona effect (corona) is audible noise that emits from transmission lines and facility structures caused from the partial electrical breakdown of the insulating properties of air around the conductors of a transmission line. Heat and energy are dissipated in a small volume near the surface of the conductors - part of this energy is in the form of small local pressure changes that result in audible noise.[506] Corona-generated audible noise is characterized by a low hum, hissing, frying, or crackling sound. Corona is a function of transmission line voltage, altitude, conductor diameter, condition of the conductor, suspension hardware and specific damp weather conditions.

As explained in ASC Exhibit X, other sources of corona may include a "burn in period," which typically occurs within a year of the transmission line being operational, in which dirt or oil from

[505] OAR 340-35-0015(38) defines 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."
[506] B2HAPPDoc ApASC Exhibit X - Idaho Power's Responses to ODOE's RAI-4 2017-11-06.

construction wears off. Corona may be associated with irregularities (such as nicks and scrapes on the conductor surface), or sharp edges on suspension hardware that concentrate the electric field and corona at these locations. Other irregularities that may cause corona are contamination on the conductor surface, such as dust or insects, raindrops, snow, fog, or condensation.

The highest levels of audible corona noise would occur in wet and raining weather conditions when the transmission lines are wet, which the applicant refers to as foul weather events. The applicant notes that during heavy rain events, the ambient noise from the rain would be greater than the noise generated by the corona effect, and therefore not audible at NSR's. However, to assume a "worse-case" scenario, the applicant anticipates that during occasional foul weather events, noise associated with corona may be perceptible at certain NSRs and therefore this is the focus of the applicant's noise analysis. ASC Exhibit X provides substantial details about the applicants' noise analysis including a discussion, justification of the methods and assumptions used for identifying NSR's, estimating the expected noise levels at NSR's during differing times of the day, weather conditions and representative locations along the proposed and alternative routes. The Department provides a summary of the analysis and the results in the below section.

Methods and Assumptions for Corona Noise Analysis

To demonstrate compliance with OAR 340-035-0035(1)(b)(B)(i), the ambient antidegradation standard and the maximum permissible sound level standard (Table 8 of OAR 340-035-0035), the applicant conducted a noise (acoustic) analysis using a multistep process that is described in detail in ASC Exhibit X Section 3.2.1 thru Section 3.2.4 and Attachments X-1 through X-6. The noise modeling (referred to in ASC Exhibit X as "initial screening-level modeling") included two separate analytical methods. The first method used the US Department of Energy's (DOE) Corona and Field Effects (CAFE) program developed by the Electric Power Research Institute (EPRI), which the applicant used to determine anticipated corona noise source levels. The second method used the Datakustik Computer-Aided Noise Abatement Program (CadnaA) program, which conforms to the Organization for International Standardization (ISO) standard 9613-2, Attenuation of Sound During Propagation Outdoors.[507] CadnaA was used to model how sound travels outward from the transmission line to receivers in multiple dimensions.

The applicant predicted audible noise generated from corona in fair and foul weather conditions at the edge of the right of way (ROW) and directly under the transmission line using the ENVIRO program, which utilizes the BPA CAFE calculation method. The edge of the ROW represents the closest point of the site boundary where the proposed transmission line may be located. During fair weather conditions, predicted operational noise levels for single-circuit 500-

[507] B2HAPPDoc3-41 ASC 24_Exhibit X_Noise_ASC 2018-09-28, Attachment X-3, p.4.

kV lattice structure transmission lines, operating at a 550-kV voltage, are approximately 27 dBA at the ROW edge. Under foul weather conditions, audible noise levels are expected to be approximately 52 dBA at the ROW edge.[508] These noise levels can be compared to Figure 12, *Common Noise Sources and Expected Noise Levels*, which illustrates that a soft whisper three feet away has a noise level of approximately 40 dBA and a conversation at three feet away is approximately 60 dBA.

NSRs were identified within the analysis area based on aerial imagery, GIS analysis, property records databases and visual verification. To evaluate compliance with the ambient antidegradation standard, the applicant evaluates compliance with the L50 noise standard, versus the L10 noise standard, because it is more restrictive. As a first-level screening review for NSRs, the applicant then conservatively assumed an ambient hourly L50 noise level of 20 dBA. Because ambient L50 noise levels at any NSR cannot increase by more than 10 dBA in one hour, the associated "threshold" to establish if there would be an exceedance to the ambient antidegradation standard is 30 dBA. Based on the assumed 20 dBA ambient hourly L50 noise level (30 dBA threshold), 36 NSR locations were identified for additional study. At or near these locations, the applicant conducted representative baseline sound measurements. The applicant describes that, except when to accommodate a landowner request, the monitoring position for baseline sound measurements were set up on each property at a point 25 feet towards the noise source. When monitoring positions were placed to accommodate property owner's requests, field engineers sited the equipment so that the location maintained the intended goals of the monitoring program. Ambient baseline sound levels were compared to predicted audible corona noise during foul weather events to assess compliance with the ambient degradation standard.

To determine the frequency of foul weather events in the vicinity of potentially impacted NSRs, the applicant conducted an analysis of the historical meteorological data at four data collection stations located in proximity to the proposed facility. The applicant assumed foul weather to be a rain rate ranging from 0.8 to five millimeters (mm)/hour because it is a more conservative definition of the weather conditions likely to result in maximum corona noise used by the CAFE program (one mm/hour), and is consistent with EPRI guidance.[509] It also excludes precipitation heavy enough that it could be expected that the noise from the weather would increase ambient sound levels to the extent that the corona noise would be masked and not audible.

The Department engaged its consultant, Golder Associates Inc. (Golder), appointed by the Council, to assist in ASC review. The Department requested that Golder provide an evaluation of ASC Exhibit X, specifically on the applicants' methodologies for conducting baseline surveys and analysis for identifying the frequency of foul weather. Golder provided a technical

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[508] B2HAPPDoc3-41 ASC 24_Exhibit X_Noise_ASC 2018-09-28, Section 3.3.2.1.

[509] B2HAPPDoc ApASC Exhibit X - Idaho Power's Responses to ODOE's RAI-4 2017-11-06.

memorandum stating that, "…sound measurement procedures… found the baseline noise analysis to be properly performed from a technical standpoint and the use of the "late night" noise level to be conservative in nature for use as the baseline noise level for comparison to the ambient antidegradation standard."[510] Additionally, Golder's technical memorandum expressed that historical weather data is the preferred standard to use to perform similar noise analyses and that the weather stations chosen for analysis were complete and accurate. The results of the applicants' noise analysis are presented below.

Results of Noise Analysis

The results of the corona noise analysis are presented in ASC Exhibit X, Attachment X-4 which is also attached to this order. The tabulated summary of the noise modeling analysis in Attachment X-4 identifies the NSR number, distance to the proposed transmission line (edge of the site boundary), baseline late night sound pressure levels, predicted sound levels during fair and foul weather, and the estimated increase in ambient noise during foul weather conditions at the late night baseline. ASC Exhibit X Attachment X-5 (also attached to this order) provides aerial maps showing all of the NSR's identified and evaluated during the study, and indicates if there is an expected exceedance of the ambient antidegradation standard. Table NC-3, *Summary of Acoustic Modeling Results – Comparison of Predicted Facility Sound Levels to Late Night Baseline L50* below specifies the NSR's where the ambient L50 noise level is expected to increase by 10 dBA or more in one hour, which would represent an exceedance of the ambient antidegradation standard.

Table NC-3: Summary of Acoustic Modeling Results—Comparison of Predicted Facility Sound Levels to Late Night Baseline L50 (NSR Exceedances)

NSR Number (Map ID)	Distance from NSR to the Transmission Line (feet)	Nearest Milepost	County	Late Night Baseline Sound Pressure Level (dBA)	Future Sound Level (Foul Weather) (dBA)	Increase (dBA)
5002	2,067	58.9	Umatilla	25	36	+11
8	2,139	58.9	Umatilla	25	36	+11
9	1,834	59.6	Umatilla	25	36	+12
10	1,834	59.6	Umatilla	25	36	+12
11	1,398	59.7	Umatilla	25	38	+13
5004	338	106.7	Union	32	47	+15
69	1,467	142.6	Baker	27	39	+12
70	1,053	142.7	Baker	27	40	+14
5010	1,170	174.2	Baker	24	41	+17
92	2,434	215.2	Malheur	24	35	+12
93	2,283	216	Malheur	24	35	+11
94	1,801	216.2	Malheur	24	37	+12

[510] B2HAPPDoc ApASC Golder Noise Memo 1788390_B2H_Exhibit X 2017-12-19.

Table NC-3: Summary of Acoustic Modeling Results—Comparison of Predicted Facility Sound Levels to Late Night Baseline L50 (NSR Exceedances)

NSR Number (Map ID)	Distance from NSR to the Transmission Line (feet)	Nearest Milepost	County	Late Night Baseline Sound Pressure Level (dBA)	Future Sound Level (Foul Weather) (dBA)	Increase (dBA)
95	2,070	216.3	Malheur	24	36	+12
96	1,470	216.5	Malheur	24	38	+13
97	1,693	216.5	Malheur	24	37	+13
98	1,102	216.8	Malheur	24	39	+15
99	1,768	216.9	Malheur	24	37	+13
100	2,119	217	Malheur	24	36	+12
101	673	217	Malheur	24	42	+17
102	607	217.3	Malheur	24	42	+18
103	2,575	217.4	Malheur	24	35	+11
104	1,598	217.4	Malheur	24	37	+14
105	745	217.4	Malheur	24	41	+17
106	2,621	217.7	Malheur	24	35	+11
107	2,474	217.9	Malheur	24	35	+12
108	2,119	218.1	Malheur	24	36	+12
109	2,595	218.1	Malheur	24	35	+11
110	2,648	218.1	Malheur	24	35	+11
5011	780	227.1	Malheur	24	42	+18
111	2,746	253.5	Malheur	24	35	+11
5008	1,340	254.7	Malheur	24	38	+14
5009	2,060	254.7	Malheur	24	26	+12
112	1,732	254.9	Malheur	24	37	+13
113	3,087	263.7	Malheur	24	34	+11
115	659	6.1	Union	32	43	+11
133	890	255.4	Malheur	24	40	+16
Source: B2HAPPDoc3-41 ASC 24_Exhibit X_Noise_ASC 2018-09-28, Table X-5.						

Compliance with DEQ Noise Rules: Maximum Allowable Sound Level Standard

The maximum allowable L50 sound level standard is 50 dBA. ASC Exhibit X Attachment X-4 provides the results of the applicants' noise modeling analysis and demonstrates that at the relevant NSRs, the maximum sound level in a "worse-case scenario" (during foul weather) will be no greater than 46 dBA. The Department recommends that the Council find that because the maximum L50 sound levels would be less than the "Table 8" maximum allowable sound level, 50 dBA, even during foul weather conditions, the proposed facility would be in compliance with the maximum allowable sound level standard identified in OAR 340-035-0035(1)(b)(B)(i).

Compliance with DEQ Noise Rules: Ambient Antidegradation Standard

The ambient antidegradation standard authorizes an ambient noise level increase of 10 dBA. Based on the applicant's analysis, operational noise from the proposed facility, during foul weather and low wind conditions, may exceed the ambient antidegradation standard at 36 NSRs. Although these specific circumstances are limited, the applicant first seeks an exception and, then, in the alternative, seeks a variance from Council for non-compliance with the ambient antidegradation standard.

The applicant requests that Council grant an exception to the ambient antidegradation standard (L50 ambient sound level) for unusual or infrequent events, as authorized under OAR 340-035-0035(6)(a), for the entirety of the proposed facility. The Department first evaluates whether the exception should be granted for the entirety of the proposed transmission line route; and, then whether the identified foul weather events should be considered unusual or infrequent.

Request for Exception to the Ambient Antidegradation Standard – Entirety of Proposed Transmission Line Route

The applicant requests Council authorization of an exception from compliance with the ambient antidegradation standard due to unusual or infrequent foul weather events, as authorized under OAR 345-035-0035(6)(a), for the entirety of the proposed transmission line route. While exceedances are only predicted at 36 NSR locations, the exception is requested for the entirety of the proposed transmission line route because the applicant interprets the noise control regulations to apply to the "noise source," or the entire proposed transmission line route, and not to specific NSR locations.

The Department agrees that OAR 340-035-0035 applies to new industrial or commercial noise sources, and in this instance, the noise source is the proposed transmission line. However, in the absence of a formal definition of "noise source" within the rule and given the extent of the linear facility, the Department interprets noise source as the source of noise and specific noise level at identified NSR locations. Based on this interpretation, the exception would only apply at the identified NSR locations or grouping of NSRs where the specific noise level from the noise source exceeds the ambient antidegradation noise standard, which is estimated to occur at 36 specific NSR locations. An exception for the entirety of the proposed transmission line is not necessary as the noise source would not exceed the ambient antidegradation standard at other NSR locations along the route. Therefore, the Department recommends Council evaluate and apply the requested exception to the noise source at the 36 identified NSR locations, and not for the entire alignment of the proposed.

Request for Exception to the Ambient Antidegradation Standard – Unusual or Infrequent Events (OAR 340-035-0035(6)(a))

The applicant requests Council authorization of an exception from compliance with the ambient antidegradation standard due to unusual or infrequent foul weather events, as authorized under OAR 345-035-0035(6)(a). 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.

OAR 345-035-0035(6)(a) establishes that an exception to compliance with rule requirements may be granted for events considered infrequent or unusual. While there is no definition of "infrequent" or "unusual," based in rule, the Department interprets infrequent or unusual events as events that are not constant, not continuous, and not representative of normal operating conditions. Based on the analysis presented in ASC Exhibit X and described above, the Department recommends that Council grant an exception to the ambient antidegradation standard at the identified 36 NSR locations pursuant to OAR 345-035-0035(6)(a) because the circumstances where foul weather conditions would generate audible corona noise represent unusual or infrequent events.

OAR 340-035-0010(2) provides a directive to DEQ for establishing exceptions, which the Department interprets as applying to DEQ in the assessment of exceptions established pursuant to OAR 345-035-0035(6)(a). However, the applicant interprets the directive as additional considerations to be evaluated by Council in determining whether to grant an exception; these considerations include:

- the protection of health, safety, and welfare of Oregon citizens;
- the feasibility and cost of noise abatement;
- the past, present, and future patterns of land use;

- relative timing of land use changes; and
- other legal constraints

In the event Council considers OAR 340-035-0010(2) to represent evaluative criteria for determining whether to grant an exception, the Department presents its review of the applicant's evaluation below.

Protection of Health, Safety, and Welfare of Oregon Citizens

The applicant requests that Council consider that granting an exception to DEQ's ambient antidegradation standard would not preclude the protection of health, safety and welfare of Oregon citizens otherwise afforded through compliance, based on the following reasons. Potential impacts from the ambient antidegradation standard exceedance at 36 NSR locations would be infrequent; and, actual noise-related impacts are assumed to be minimal as residents are assumed to be indoors at the time of the exceedance (during foul weather, and at night) and therefore would experience noise levels 10 to 20 dBA lower than modeled in ASC Exhibit X due to noise attenuation of residential structures. The applicant also commits to working with impacted NSRs to attempt to resolve concerns caused by audible corona noise and potential exceedances. Based on the applicant's representation, the Department recommends Council impose the following conditions:

Recommended Noise Control Condition 1: Prior to construction, the certificate holder will work with the 36 NSR property owners identified in Attachment X-5 of the Final Order on the ASC (NSR: 8, 9, 10, 11, 5002, 69, 70, 5004, 5010, 5011, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 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 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.
b. If the certificate holder cannot reach an agreement with the NSR property owner, the certificate holder will submit to the Department a list of the dates that the certificate holder communicated with, or attempted to communicate with, the NSR property owners; and the names, addresses, and phone numbers of the NSR owners.

Recommended Noise Control Condition 2: During operation, the certificate holder shall develop and implement a complaint response plan to address noise complaints. The plan shall be submitted to the Department and shall include the following:

a. 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.

b. The certificate holder shall 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), 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 subsections c and d of this condition).

c. If a noise complaint is received, the certificate holder shall follow the following process to determine if corona noise exceeds the ambient antidegradation standard:

    i. 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.

    ii. If the complainant's noise sensitive 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.

    iii. If the complainant voluntarily provides alternative noise data and it represents noise levels greater than the certificate holder's modeling results conducted per (ii), the complaint shall be verified through site specific sound monitoring conducted by the certificate holder. If site specific sound monitoring is not authorized by the complainant, the certificate holder's modeling results may be relied upon to determine compliance.

d. If it is determined pursuant to the process described in subsection c of this condition that corona noise exceeds the ambient antidegradation standard, the certificate holder shall address the exceedance by the following process:

    i. The certificate holder will 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. If 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 the certificate holder cannot reach an agreement with the NSR property owner, the certificate holder will submit to the Department a list of the dates that the certificate holder communicated with, or attempted to communicate with, the NSR property owners; and the names, addresses, and phone numbers of the NSR owners.

e. 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 c 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.

Based on the above analysis and compliance with the recommended conditions, the Department recommends Council consider that granting the exception would not preclude the protection of health, safety, and welfare of Oregon citizens otherwise afforded through compliance with DEQ's noise control regulation.

Feasibility and Cost of Noise Abatement

The applicant requests that Council consider that granting an exception to DEQ's ambient antidegradation standard is appropriate due to the limitations of the feasibility and cost of noise abatement. The applicant represents that the design of the proposed transmission line would minimize corona noise, specifically a design that includes a triple bundled configuration with sufficient subconductor spacing. The triple-bundled configuration and subconductor spacing would provide adequate current carrying capacity and provide for a reduction in audible noise (corona effect) and radio interference.

The applicant describes that typical noise abatement technologies, such as insulators, silencers, and shields, are not reasonable technologies for transmission lines due to length; and, safety and operational limitations. To ensure the applicant constructs the proposed transmission line using materials to reduce corona noise, the applicant proposes and the Department recommends, the Council impose the following condition:

Recommended Noise Control Condition 3: During construction, the certificate holder shall implement the following design measures and construction techniques to minimize potential corona noise during operations:

a. For 500 kV transmission lines, use a triple bundled conductor configuration.
b. Maintain tension on all insulator assemblies to ensure positive contact between insulators.
c. Protect conductor surface to minimize scratching or nicking.

Because the applicant proposes to design and construct the proposed facility in a manner that reduces audible corona noise, and has described the limitations of noise abatement technologies, the Department recommends that Council consider that noise abatement technology is not feasible when granting the exception to compliance with DEQ's noise control regulation.

Past, Present, and Future Patterns of Land Use and Relative Timing of Land Use Changes

For the purposes of the Council's consideration of the past, present, and future patterns of land use and relative timing of land use changes for evaluating an exception to the DEQ noise rules, the Department presumes this evaluation may be the most informative in the context of residential areas because of the increased potential to impact NSRs. The applicant explains that the location of the NSR's where there is an expected exceedance would be in natural resource zones (EFU or Goal 4 forest lands) and that none of the anticipated exceedances occur on residential use zoned land.[511] Further, the applicant states that it has no information to indicate that significant future land use changes are likely to occur at or near the relevant NSRs.

The Department recommends that the Council consider that because the proposed facility is not located within residential use zoned land and there is no indication that any of these land use areas will be changed to residential zoning in the future, that this factor not be considered relevant to the request for exception.

Other Legal Constraints

In ASC Exhibit X, the applicant summarizes legal constraints that directed or contributed to the final location of the proposed and alternative routes for the Council's review. These constraints include the following:

- Federal land management agency requirements, including the federal land management plans governing many of the federal lands in the analysis area;
- The transmission line route on lands managed by the Bureau of Land Management as issued in the BLM's Record of Decision (ROD);
- Western Electricity Coordinating Council Common Corridor Criteria and prudent utility practice, including minimum separation distances from existing transmission lines to ensure reliability of facilities;
- Council's Fish and Wildlife Habitat Standard, adopts the Oregon Department of Fish and Wildlife's habitat mitigation policy; which does not permit siting of an energy facility on lands designated Category 1 habitat and recommends avoidance and minimizing impacts to Greater Sage Grouse habitat; and
- Council's Protected Area Standard, which does not permit siting of an energy facility in certain protected areas, such as parks, scenic waterways, and wildlife refuges, and certain federally designated areas, such as areas of critical environmental concern, wilderness areas, wild and scenic rivers, BLM Class I and U.S. Department of Agriculture, Forest Service Retention visual management areas, national monuments, and National Wildlife Refuges (NWRs)

[511] B2HAPPDoc3-19 ASC 11_Exhibit K_Land Use_ASC 2018-09-28, Section 7.10.

In addition to the summary of the legal constraints provided above, the applicant provides site-specific descriptions of the siting constraints and obligations that directed the placement of the proposed and alternatives routes in proximity to the NSRs that are predicted to experience exceedances. The below site-specific and NSR-specific descriptions inform the above analysis and also are relied upon for the later analysis of the applicant's request for a variance to the DEQ noise rules. The Department recommends that the Council consider that other legal constraints directed the placement of the proposed transmission line with respect to NSR's, and meets the evaluation for an exception to the DEQ noise rules.

NSR-8, -9, -10, -11, and -5002 (Attachment X-5, Map 6): Comments from Morrow and Umatilla counties, provided to the Bureau of Land Management (BLM) during the NEPA review in the Draft Environmental Impact Statement (DEIS), recommended the locations of this portion of the proposed facility. As shown in ASC Exhibit X, Figure X-5, the proposed route threads between NSR-11 and NSR-9/-10 at a point that is approximately halfway between those NSRs. Moving the proposed route immediately to the north would increase the noise levels at NSR-11, and moving the proposed route immediately to the south would increase the noise levels at NSR-9/-10. Moving the proposed route to the north or south and beyond these NSRs would result in a route that no longer follows the route recommended by the counties. Moving the proposed route would impact new landowners, potentially impact new resources including new NSRs, and would potentially trigger additional permitting requirements. With respect to NSR-8/-5002, the applicant estimates that the noise levels at these NSRs would potentially increase by 11 dBA, which is one dBA above the regulatory threshold (requiring no more than a 10 dBA increase). The applicant states they may be able to microsite the proposed route near the southern edge of the site boundary to lessen the noise levels at NSR-8/-5002 to potentially avoid an exceedance.

NSR-69 and -70 (Attachment X-5, Map 21): The proposed route parallels existing transmission lines to the north and south of this portion of the proposed facility. In the vicinity of NSR-69 and NSR-70, the proposed route bumps out from existing transmission lines to avoid affecting an Oregon Department of Transportation (ODOT) rock quarry. As shown In ASC Exhibit X, Figure X-6, if the proposed route continued along the path paralleling the existing transmission line it would affect the operations of the ODOT quarry. Additionally, the relevant area is designated Greater Sage-Grouse Core Area Habitat; a state sensitive and protected species with protected habitat. Re-routing to the east would result in greater impacts the Sage Grouse habitat.

NSR 5004 (Attachment X-5, Map 15): The proposed route runs northwest to southeast near NSR- 5004, tracing the foothills above the City of La Grande. As shown in ASC Exhibit X, Figure X-7, the location of the proposed route in this vicinity was a result of a route-variation recommended by Union County provided in the BLM's Final Environmental Impact Statement (FEIS). The recommendation was to parallel the existing 230-kV transmission line except in the general area of the City of La Grande. The relevant section of the proposed route may be visible from the City of La Grande, and rerouting may increase the visibility of the proposed transmission line from the City. The City of La Grande and Union County have expressed their

concerns about the visual impacts of the proposed facility, in particular the visual impacts from the proposed route on the City of La Grande.

NSR 5010 (Attachment X-5, Map 34): The proposed route runs northwest to southeast near NSR- 5010, through the hills west of Durkee. This portion of the proposed route was developed in response to comments received on the BLM's Draft EIS and in coordination with Baker County. The route is intended to reduce impacts on agricultural land uses, high-value soils for agricultural uses, and privately-owned lands in and around Durkee. As shown in ASC Exhibit X, Figure X-8, moving the proposed transmission line to the east may increase the visibility of the proposed transmission line from the Durkee; moving the proposed route to the west may increase impacts to Bighorn Sheep Occupied Range, which is Category 2 habitat designated by the Oregon Department of Fish and Wildlife (ODFW).

NSR-92 through -110 (Attachment X-5, Map 30 and Map 31): In earlier versions of the proposed transmission line route, the applicant proposed to avoid the Willow Creek valley area due to the presence of several NSR's. The applicant proposed to locate the route primarily on Bureau of Land Management (BLM) lands to the north and west of the proposed route location. However, these proposals were in Greater Sage-Grouse habitat and near known Sage-Grouse leks (Sage-Grouse Core Area Habitat and Sage-Grouse Areas of High Population Richness). As a result, the BLM required the applicant to avoid those areas. The BLM then identified the current proposed route (as shown in ASC Exhibit X, Figure X-9 and X-10), which required crossing the Willow Creek valley. The BLM chose the current crossing (proposed route) because it represented the location where BLM lands encroached furthest into the valley thereby having the proposed route cross the fewest miles of private property. The applicant evaluated route options through the private property but the options appeared to have similar effects with respect to the number of affected NSRs, property owners, and transmission line miles on private property. Accordingly, the proposed route represented the best option for minimizing impacts to NSRs and to avoid affecting center-pivot irrigated agricultural plots, threading its way past NSR-92 through -110 and connecting with the relevant BLM lands.

NSR-5011 (Attachment X-5, Map 35): The proposed route runs northeast to southwest near NSR- 5011. This portion of the proposed route was developed as part of the Willow Creek valley route (discussed above), intended to avoid the more developed areas of the Vale valley, near Vale, Oregon (ASC Exhibit X, Figure X-11). The applicant states that it may be possible to micro-site the proposed transmission line to the east or west of NSR-5011 to avoid or minimize the exceedance.

NSR-111, -112, -133, -5008, and -5009 (Attachment X-5, Map 32): Regarding NSR-111, the applicant's modeling estimates that the noise levels at this NSR may potentially increase by 11 dBA, which is 1 dBA above the DEQ regulatory threshold. The applicant states that it may be able to microsite the transmission line near the western edge of the site boundary to lessen the noise levels at NSR-111 and potentially avoid an exceedance. For NSR-112, -133, -5008, and -5009, the BLM developed this route section as mitigation to avoid and minimize visual impacts

to the Owyhee River Below the Dam, which is a BLM designated Area of Critical Environmental Concern (ACEC). This moved the proposed facility to the east while also trying to maximize the use of the designated utility corridor and avoiding new private land impacts, as is illustrated in ASC Exhibit X, Figure X-12. Where the transmission line threads between NSR-112/-5008/-5009 and -133, it is approximately equidistant between those NSR groups. Moving the transmission line to the north would increase the noise levels at the NSR-112/-5008/-5009 group, and moving the transmission line to the south would increase the noise levels at NSR-133. Where the transmission line passes to the east of NSR-133, the applicant may be able to microsite the transmission line near the eastern edge of the site boundary to lessen the noise levels at NSR-133.

NSR-113 (Attachment X-5, Map 33): The BLM directed applicant to maximize its use of existing designated utility corridors throughout the proposed transmission line routes, where possible. In the vicinity of NRS-113 (shown in ASC Exhibit X, Figure X-13), the proposed transmission line will be located near the edge of the utility corridor that is farthest from NSR-113. The applicant's modeling estimates that the noise levels at this NSR potentially will increase by 11 dBA, which is 1 dBA above the regulatory threshold of a 10 dBA increase. The applicant may be able to microsite the transmission line near the western edge of the site boundary to lessen the noise levels at NSR-113 and potentially avoid an exceedance. However, the BLM likely will not allow the applicant to move the site boundary to the west outside the utility corridor.

NSR-115 (Attachment X-5, Map 15): The applicant's modeling estimates that the noise levels at NSR-115 potentially will increase by 11 dBA, which is 1 dBA above the regulatory threshold. The applicant may be able to microsite the transmission line near the northeastern edge of the site boundary to lessen the noise levels at NSR-115 and potentially avoid an exceedance. However, the proposed transmission line threads between NSR-115 and Twin Lake at a point that is approximately equidistant between the two (as illustrated in ASC Exhibit X, Figure X-14). The applicant must avoid micrositing the transmission line too close to the lake so as to avoid any direct impacts to it. Additionally, the transmission line in this area is also close to Morgan Lake and moving the transmission line to the northeast may also impact the scenic resources at that lake, which the applicant has been requested to avoid and minimize by Union County.

Timing of an Exception

OAR 340-035-0010(2) stipulates that for exceptions, if granted, Council shall specify:

- the times during which the noise rules can be exceeded;
- the quantity and quality of the noise generated;
- when appropriate shall specify the increments of progress of the noise source toward meeting the noise rules

The applicant requests that an exception not be limited to a specific time of day or in any other temporal or weather-dependent manner. The applicant requests Council not impose time

limitations because the proposed transmission line would operate 24 hours a day, day and night, and may emit audible corona noise at any time of the day based on infrequent foul weather conditions.

The applicants' noise analysis made conservative assumptions to create a "worse-case" scenario in which corona noise could be heard. This scenario is based on particular foul weather conditions occurring during late night hours where the ambient noise levels surrounding NSRs is lower, allowing the potential for any corona noise to be heard. It is possible that there may circumstances during daytime hours in which the specific foul weather conditions in conjunction with low ambient noise levels could render corona noise audible. Further, the applicant maintains that, regardless of the time of day, the proposed transmission line would remain below the 50 dBA maximum allowable noise standard. Because foul weather conditions may occur at any point during the day or night, and the proposed transmission line would operate 24 hours a day, year-round, the Department recommends Council establish that the ambient antidegradation standard may be exceeded at any time at the identified NSR locations. In accordance with OAR 340-035-0010(2), the Department further recommends Council specify that the exceedance at each identified NSR location shall not be more than 10 dBA above the ambient antidegradation standard and consist of corona noise, as follows:

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 pursuant to OAR 345-035-0035(6)(a) at 36 NSR locations identified in Attachment X-5 of the Final Order on the ASC (NSR: 8, 9, 10, 11, 5002, 69, 70, 5004, 5010, 5011, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 133, 5008, 5009, 113, and 115).
b. The ambient antidegradation standard at OAR 340-035-0035(1)(b)(B) may be exceeded at the 36 NSR locations identified in Attachment X-5 of the Final Order on the ASC at any time of day or night. [OAR 340-035-0010(2)]
c. The quantity and quality of noise generated in exceedance of the ambient antidegradation standard (ambient plus 10 dBA) at OAR 340-035-0035(1)(b)(B) shall not be more than 10 dBA (or ambient plus 20 dBA) 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)]

Request for Variance to the Ambient Antidegradation Standard

As previously described in this section, the ambient antidegradation standard authorizes an ambient noise level increase of 10 dBA. Operational noise from the proposed facility, during foul weather and low wind conditions, may exceed the ambient antidegradation standard at 36 NSRs. Although these specific circumstances are limited, the applicant first seeks an exception and, then, in the alternative, seeks a variance from Council for non-compliance with the

ambient antidegradation standard. The evaluation of the applicant's request for an exception is presented above; the evaluation of the applicant's request for a variance is presented below.

The applicant requests that Council grant a variance to the ambient antidegradation standard (L50 ambient sound level) for the entirety of the proposed facility. The Department first evaluates whether the variance should be granted for the entirety of the proposed transmission line route; and, then whether the variance should be granted.

Request for Variance to the Ambient Antidegradation Standard – Entirety of Proposed Transmission Line Route

The applicant requests Council authorization of a variance from compliance with the ambient antidegradation standard for the entirety of the proposed transmission line route. While exceedances are only predicted at 36 NSR locations, the variance is requested for the entirety of the proposed transmission line route because the applicant interprets the noise control regulations to apply to the "noise source," or the entire proposed transmission line route, and not to specific NSR locations.

The Department agrees that OAR 340-035-0035 applies to new industrial or commercial noise sources, and in this instance, the noise source is the proposed transmission line. However, in the absence of a formal definition of "noise source" within the rule and given the extent of the linear facility, the Department interprets noise source as the source of noise and specific noise level at identified NSR locations. Based on this interpretation, the variance would only apply at the identified NSR locations or grouping of NSRs where the specific noise level from the noise source exceeds the ambient antidegradation noise standard, which occurs at 36 specific NSR locations. A variance for the entirety of the proposed transmission line is not necessary as the noise source would not exceed the ambient antidegradation standard at other NSR locations along the route. Therefore, the Department recommends Council evaluate and apply the requested variance to the noise source at the 36 identified NSR locations.

Council may grant a variance to specific DEQ noise rules or portions of rules if the Council finds that strict compliance with such rule or regulation:

- 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 is yet available

The Department presents an evaluation of the applicant's variance request below.

Conditions beyond the Control of the Persons, Special Circumstances and Physical Conditions

The applicant seeks a variance from compliance with the ambient antidegradation standard because, the applicant argues, the conditions where the exceedance would occur would be beyond the applicant's control. As the applicant's noise analysis illustrates, ambient antidegradation standard exceedance are predicted during foul weather conditions. The applicant explains that it cannot be accountable for weather conditions that may cause audible corona noise, as the weather is a condition beyond its control.

As discussed elsewhere in this section under *Other Legal Constraints*, the proposed and alternative transmission line routes, as presented in the ASC, were derived from a lengthy siting process, much of which was directed by the BLM, in consultation with agencies and affected counties. Further, the routes proposed for Council's review were also constrained by resources protected under the EFSC standards. These constraints include the following:

- Federal land management agency requirements, including the federal land management plans governing many of the federal lands in the analysis area;
- Input on route locations from local governments, counties, and landowners;
- The transmission line route on lands managed by the Bureau of Land Management as issued in the BLM's Record of Decision (ROD);
- Western Electricity Coordinating Council Common Corridor Criteria and prudent utility practice, including minimum separation distances from existing transmission lines to ensure reliability of facilities;
- EFSC's Fish and Wildlife Habitat Standard, adopts the Oregon Department of Fish and Wildlife's habitat mitigation policy; which does not permit siting of an energy facility on lands designated Category 1 habitat and recommends avoidance and minimizing impacts to Greater Sage Grouse habitat; and
- EFSC's Protected Area Standard, which does not permit siting of an energy facility in certain protected areas, such as parks, scenic waterways, and wildlife refuges, and certain federally designated areas, such as areas of critical environmental concern, wilderness areas, wild and scenic rivers, BLM Class I and U.S. Department of Agriculture, Forest Service Retention visual management areas, national monuments, and National Wildlife Refuges (NWRs)[512]

Specific directions and constraints that impacted the proposed route in proximity to each NSR or grouping of NSR's is also discussed in the above section and those constraints apply to the analysis of the applicant's request for a variance to the DEQ noise rules. The Department considers the constraints and obligations listed above and described for each NSR as special circumstances, because the applicant was directed to route the proposed transmission line on federal lands and is obligated to avoid and minimize impacts to resources protected by EFSC standards. The applicant is also obligated to design and construct the proposed facility in

[512] B2HAPPDoc3-41 ASC 24_Exhibit X_Noise_ASC 2018-09-28, Section 3.4.5.1.

compliance with applicable safety and engineering standards, which directs the placement of the proposed routes as well. The Department considers the above listed constraints and obligations as well as the descriptions associated with the proposed transmission line location related to each NSR as special physical conditions and special circumstances. Locating the proposed facility as to avoid and minimize impacts to protected areas are special physical conditions that directed the placement of the proposed transmission line in proximity to NSR's, because protected areas are based on their physical locations. Other special physical conditions that influenced the siting of the transmission line are actual physical and engineering limitations such as avoiding steep cliffs, ravines and geotechnical vulnerable areas.

Greater Sage Grouse habitat, including Areas of High Population Richness and Core Areas, are protected under the Council's Fish and Wildlife Habitat Standard and Oregon Department of Fish and Wildlife's habitat mitigation policy with an emphasis on avoiding and minimizing impacts. Sage Grouse habitat is location dependent and is determined by field surveys and habitat that is most suitable for Sage Grouse, and therefore can be considered a special physical condition. Special circumstances that informed the placement of the proposed transmission line near NSRs are the combination of all of the siting constraints (listed above) and siting opportunities (co-locating the transmission line, using existing right-of-ways, etc.).

As discussed in this section and in great detail in ASC Exhibit B, the applicant describes the siting process and studies they conducted since 2008 as a result of the federal and state permitting processes. The Department considers that the applicant's voluntary consideration to minimize impacts to some resources and landowners, in combination with the legal direction from the federal review process and obligations for avoidance of resources in the EFSC process constitutes a special circumstance that resulted in the proposed route in proximity to NSR's. The Department recommends the Council find that strict compliance with the ambient antidegradation standard in DEQ rule is inappropriate, unreasonable, or impractical because of special physical conditions and special circumstances contributed to the applicant's proposed transmission line location relating to NSRs that may experience noise exceedances.

Strict Compliance Resulting in Substantial Curtailment of Operation and Alternative Facility

The applicant seeks a variance from compliance with the ambient antidegradation standard because strict compliance would terminate the facility from becoming operational if the proposed transmission line could not receive the necessary permitting approvals, and therefore could not proceed with construction and operations. Similarly, the applicant argues that there is not another alternative facility available to achieve the goals for the proposed facility, such as providing reliable and redundant transmission services. The Department recommends the Council find that strict compliance with the OAR 340-035-0035(1)(b)(B)(i) associated with the ambient antidegradation standard, would result in the substantial curtailment or closing down (never building) the proposed transmission line and that, based on the routing discussion presented in this section that there is not another alternative facility available.

Based on the evaluation of the variance criteria, the Department recommends Council impose the following condition:

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) (i.e. an increase of 10 dBA above ambient sound pressure levels) is granted pursuant to OAR 345-035-0100(1) at 36 NSR locations identified in Attachment X-5 of the Final Order on the ASC (NSR: 8, 9, 10, 11, 5002, 69, 70, 5004, 5010, 5011, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 133, 5008, 5009, 113, and 115).
b. The ambient antidegradation standard at OAR 340-035-0035(1)(b)(B) may be exceeded at the 36 NSR locations identified in Attachment X-5 of the Final Order on the ASC at any time of day or night. [OAR 340-035-0100]

Conclusions of Law

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 exception or variance be granted for the proposed facility at 36 NSR locations 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).

IV.Q.2. Removal Fill Law: OAR 141-085-0500 through -0785

Under ORS 469.503(3) and under the Council's General Standard of Review (OAR 345-022-0000), the Council must determine whether the proposed facility complies with "all other Oregon statutes and administrative rules…, as applicable to the issuance of a site certificate for the proposed facility." The Oregon Removal-Fill Law (ORS 196.795 through 196.990) and Department of State Lands (DSL) regulations (OAR 141-085-0500 through 141-085-0785) require a removal-fill permit if 50 cubic yards or more of material is removed, filled, or altered within any "waters of the state."[513] The Council, must determine whether a removal-fill permit is needed and if so, whether a removal-fill permit should be issued. The analysis area for wetlands and other waters of the state is the area within the site boundary.

[513] ORS 196.800(15) defines "Waters of this state" as "all natural waterways, tidal and nontidal bays, intermittent streams, constantly flowing streams, lakes, wetlands, that portion of the Pacific Ocean that is in the boundaries of this state, all other navigable and nonnavigable bodies of water in this state and those portions of the ocean shore, as defined in ORS 390.605 (Definitions), where removal or fill activities are regulated under a state-assumed permit program as provided in 33 U.S.C. 1344(g) of the Federal Water Pollution Control Act, as amended."

Findings of Fact

The applicant provides information regarding wetlands and other waters of the state (WOS) within the site boundary in ASC Exhibit J. Additionally, Exhibit J includes evidence supporting issuance of a DSL Removal-Fill Permit under ORS 469.401(3). The applicant's Joint Permit Application (JPA) to DSL and U.S. Army Corps of Engineers is included as ASC Exhibit J Attachment J-3.[514] In ASC Exhibit J, the applicant proposes conditions to be included in the site certificate including conditions stipulating that a removal-fill permit be obtained from DSL, that a JPA be obtained and submitted to the Department, and that construction activities be conducted in compliance with removal fill permit conditions.[515] The Department notes that the applicant has proposed these conditions, however, in this section the Department recommends Council consider alternative condition language that includes more details in addition to condition language proposed by the applicant.

In response to the size and complexity of the proposed facility and after consultation with applicable federal and state agencies, the applicant determined that data collection and field surveys would be conducted via a phased study approach which utilizes three distinct phases. During Phase 1, the applicant obtained existing information regarding the occurrence of wetlands and other waters within the site boundary. The applicant used this information to conduct desktop studies, which were used for preliminary facility siting. In Phase 2, the applicant's consultants undertook comprehensive field surveys of all portions of the site boundary to which the applicant was granted access.[516] During Phase 3, the applicant will perform pre-construction surveys to microsite route changes, or to close data gaps on previously unsurveyed parcels for which the applicant did not have right-of-entry prior to conducting wetland delineations in support of the application. This is discussed further below.

Delineation of and Impacts to Wetlands and Waters of the State

The applicant conducted desktop studies and field investigations to delineate potential locations of wetlands and WOS located within the site boundary. The desktop study of potentially jurisdictional wetlands and WOS included an evaluation of multiple existing data

[514] Federal law may require a nationwide or individual fill permit for the project if waters of the United States (U.S.) are affected. The U.S. Army Corps of Engineers administers Section 404 of the Clean Water Act, which regulates the discharge of fill into waters of the U.S. (including wetlands), and Section 10 of the Rivers and Harbors Appropriation Act of 1899, which regulates placement of fill in navigable waters. A single application form (a Joint Permit Application) is used to apply for both the state and federal permits. IPC's Joint Permit Application for the project was included in ASC Exhibit J (Attachment J-3). The lateral extent of federal jurisdiction of waterbodies under Section 404 of the Clean Water Act is delineated by the ordinary high water mark. The Council does not have jurisdiction over the federal permits that may be required for the project, and federal permits are not included in or governed by the site certificate.

[515] B2HAPPDoc3-18 ASC 10a_B2H_2018 Exhibit J Waters of the State Part 1 2018-09-28. Section 4.0.

[516] See DPO Section III.D., Survey Data Based on Final Design and Site Access.

sources including the U.S. Fish and Wildlife Service National Wetlands Inventory (NWI), the USGS National Hydrography Dataset (NHD), the Oregon Department of Transportation Salmon Resources and Sensitive Area Mapping, and areas of hydric soil mapped by the Natural Resources Conservation Service.[517] The applicant and its consultant, Tetra Tech, conducted field investigations in 2011, 2012, 2013, and 2016.[518] Prior to conducting the field surveys, Tetra Tech plotted data from the Oregon Spatial Data Library (Oregon Wetlands database) and the NHD on high-resolution aerial photography to identify locations of probable wetlands and non-wetland waters within the site boundary. Field staff identified wetland presence using the methodology provided by the 1987 U.S. Army Corps of Engineers (USACE) *Wetlands Delineation Manual* as well as the USACE *Arid West Regional Supplement* (used in the majority of the analysis area) and the *Western Mountains, Valleys, and Coast Regional Supplement* (for the higher elevation areas of the analysis area around the Wallowa-Whitman National Forest).

As presented in ASC Exhibit J (Section 3.4.3), Tetra Tech identified 177 potential wetlands and 425 potential non-wetland WOS. ASC Exhibit J, Attachment J-2 Tables J-2-1A through J-2-5B provide the wetland type (Cowardin class) and stream type (e.g., intermittent) for each of these wetlands and other WOS.[519] Of the potential wetlands and non-wetland WOS identified, Tetra Tech field delineated 45 wetlands, 54 waterways, and five ponds within the analysis area. On September 13, 2018, DSL issued a letter concurring with the wetland and waterway boundaries mapped by the applicant.[520] As noted in DSL's letter, Tetra Tech also delineated 51 ephemeral waterways; however, DSL stated that ephemeral waterways are not subject to current state removal-fill requirements per OAR 141- 085-0515(3).

Tetra Tech delineated 11 wetlands and 26 non-wetland WOS in the field that may be subject to some temporary or permanent impact. Construction activities that would cause temporary impacts to wetlands and WOS, include the preparation and construction of roads, laydown areas, staging areas; temporary contouring allowing for equipment access; and stream crossings. ASC Exhibit J, Attachment J-2 Tables J-2-6 through J-2-7 provide the temporary and permanent impact amounts for each delineated wetland and non-wetland WOS.

As summarized in Tables RF-1 and RF-2 below, the estimated impact to field surveyed/delineated wetland features includes 0.21 acres of total permanent impacts and 0.386 acres of total temporary impacts. The impact tables provide estimates in acres and in cubic yards (cy), the volume metric that DSL also uses to evaluate in a removal-fill permit. The estimated impact to field surveyed/delineated non-wetland waters of the state (WOS) includes 0.07 acres of total permanent impacts and 0.139 acres of total temporary impacts.[521] The

[517] B2HAPPDoc3-18 ASC 10a_B2H_2018 Exhibit J Waters of the State Part 1 2018-09-28, Section 3.3.1.
[518] B2HAPPDoc3-18 ASC 10a_B2H_2018 Exhibit J Waters of the State Part 1 2018-09-28, Section 3.4.1.
[519] B2HAPPDoc3-18 ASC 10c_B2H_2018 Exhibit J Waters of the State Part 3 2018-09-28, Section 3.4.3.
[520] B2HAPPDoc13 ASC Reviewing Agency Comment DSL_Wetland Concurrence WD2017-0229_Brown 2018-09-13.
[521] B2HAPPDoc3-18 ASC 10a_B2H_2018 Exhibit J Waters of the State Part 1 2018-09-28, Section 3.4.3.

combined total permanent and temporary impacts to wetlands and waters of the state is less than one acre (0.793 acres).

Table RF-1: Summary of Estimated Wetland Impacts

County/Delineated Wetland	Removal Fill Impact Area (Acres)		Permanent Fill Volume (Cubic Yards)	
	Permanent	Temporary	Removal	Fill
Baker County				
BA_BR_W446	0.003	0.008	8	8
BA_FL_W_011	0.006	0.008	16	17
BA_FL_W_012	0.008	0.019	21	22
BA_WT_W_010	0.002	0.002	5	6
BA_WT_W_202	0.003	0.008	8	8
BA_WT_W_204	0.015	0.037	39	41
BA_WR_W_206	0.006	0.013	16	17
Union County				
UN_MC_W_018	0.151	0.177	390	413
UN_MC_W_019	0.010	0.099	26	28
UN_ML_W_004	0.003	0.006	8	8
UN_ML_W_015	0.003	0.008	8	8
Total =	**0.211**	**0.386**	**545**	**576**
Source: ASC Exhibit J, Attachment J-3 Part 3, Appendix O, Table O-1A				

Table RF-2: Summary of Estimated Waterway Impacts

County/Delineated Waterway	Removal Fill Impact Area (Acres)		Permanent Fill Volume (Cubic Yards)	
	Permanent	Temporary	Removal	Fill
Baker County				
BA_FL_008	0.001	0.002	0	0
BA_FL_STRM_023	0.002	0.003	4	3
BA_FL_STRM_024	0.000	0.004	0	0
BA_WT_STRM_017	0.006	0.007	12	8
BA_WT_STRM_020	0.002	0.002	4	3
BA_WT_STRM_027	0.005	0.012	4	6
BA_WT_STRM_029	0.001	0.004	1	1
BA_WT_STRM_211	0.001	0.002	2	1
BA_WT_STRM_213	0.001	0.002	2	1
BA_WT_STRM_214	0.001	0.001	2	1
BA_WT_STRM_215	0.007	0.009	14	9

Table RF-2: Summary of Estimated Waterway Impacts

County/Delineated Waterway	Removal Fill Impact Area (Acres)		Permanent Fill Volume (Cubic Yards)	
	Permanent	Temporary	Removal	Fill
BA_WT_STRM_225	0.002	0.004	4	3
Malheur County				
MA_TM_005	0.001	0.001	2	1
MA_TM_465	0.000	0.000	0	0
Morrow County[1]				
MO_SW_STRM_300	0.007	0.015	14	9
Umatilla County[2]				
UM_SW_STRM_004	0.013	0.027	26	17
UM_SW_STRM_008	0.000	0.000	0	0
UM_SW_STRM_013	0.011	0.013	22	15
Union County				
UN_MC_STRM_001	0.002	0.004	4	3
UN_MC_STRM_005	0.004	0.006	8	5
UN_MC_STRM_006	0.001	0.001	2	1
UN_MC_STRM_300	0.000	0.000	0	0
UN_MC_STRM_301	0.001	0.002	2	1
UN_ML_STRM_300	0.002	0.005	0	0
Total =	**0.071**	**0.125**	**88**	**129**

Notes:
1. Stream in Morrow County is a Goal 5 inventoried stream (Butter Creek).
2. Streams in Umatilla County are Goal 5 inventoried waterfowl/furbearer areas (Butter Creek, West Birch Creek); and anadromous fish streams (West Birch Creek, California Gulch Creek)

Source: ASC Exhibit J, Attachment J-3 Part 3, Appendix O, Table O-2A

As discussed in Section III.D., *Survey Data Based on Final Design and Site Access*, the Council's review process requires several types of survey data, including wetland delineation report information. This information is typically provided to the Department based on field surveys conducted once site access is granted and upon final design. As noted at the beginning of this section, the applicant explains the phased approach to collect and submit the additional survey data to the Department and the Oregon Department of State Lands (DSL). To ensure that additional wetland delineation reports are submitted to the Department and to DSL prior to any construction activities on any unsurveyed parcels within the site boundary the Department recommends the below condition. Recommended Removal-Fill Condition 1 also includes stipulations to ensure that, prior to construction, the Department receives a copy of the DSL Letter of Concurrence associated with the wetland delineation reports submitted by the applicant for a phase or segment of the facility.

Recommended Removal-Fill Condition 1: The certificate holder shall:

a. Prior to construction of a phase or segment of the facility, submit updated electronic wetland delineation report(s) to the Department and to the Oregon Department of State Lands. All wetland delineation report(s) submitted to the Oregon Department of State Lands shall follow its submission and review procedures.
b. Prior to construction of a phase or segment of the facility, the Department must receive a Letter of Concurrence issued by the Oregon Department of State Lands referencing the applicable wetland delineation for the phase or segment of the facility comply with removal-fill permit requirements in Removal-Fill Condition 6.

The applicant explains that there will not be any new removal or fill activities of wetlands or WOS during operation of the proposed facility and therefore there will not be any adverse impacts to wetland or WOS during operations. The permanent impacts to wetlands and WOS are from the placement of permanent facility components.

Avoidance and Mitigation Measures for Impacts to Wetlands and Waters of the State

As discussed in ASC Exhibit J, the applicant utilized the information from the desktop analysis and field delineation surveys to inform the preliminary engineering and location of towers, roads, and other facility components. Based on updated data, the applicant relocated components to avoid or minimize impacts. Indirect impacts to wetlands and other waters of the state would be avoided and minimized by employing the Best Management Practices (BMPs) for erosion and sediment control listed in the Erosion and Sediment Control Plan (ESCP) that would be part of the National Pollutant Discharge Elimination System (NPDES) 1200-C Construction Stormwater Permit for the facility. Recommended Soil Protection Condition 1 would require compliance with the NPDES 1200-C permit and a DEQ- approved ESCP (see Section IV.D., *Soil Protection*, of this order).

In addition to the measures established in the NPDES permit and ESCP, the applicant proposes to implement additional measures to reduce and avoid potential temporary impacts to wetlands and other waters of the state during facility construction, including the following best management practices for stream crossings, as presented in Appendix L of the Joint Permit Application (also see Section IV.Q.5., *Fish Passage*, of this order):

- No streams would be dewatered.
- Avoid crossing streams when practical.
- Cross at right angles at a point where the stream bed is straight and uniform.
- Minimize the use of equipment in the stream bed.
- Limit construction activity to periods of low flow or when streams are dry.
- Avoid activity in streams outside of preferred in-stream work windows.
- Minimize excavation and fill at stream crossings and other disturbances to stream banks and channels.

- Use materials that are clean, non-erodible and non-toxic.
- Avoid using soil as fill except when installing culverts.
- Avoid altering stream flow.
- Divert runoff from roads and trails leading to stream crossings into undisturbed vegetation. Avoid directing runoff directly into streams, including ephemeral streams.
- Stabilize approaches to stream crossings with aggregate or other suitable material.
- Stabilize exposed soil as soon as practicable.
- Maintain crossings in safe, functional condition.
- Restore natural stream flow as soon as temporary crossings are no longer needed.
- The use of a temporary matting may be considered to accommodate construction traffic.

The estimated 0.511 acres of temporary impacts to wetlands and WOS associated with the construction of the proposed facility would be mitigated by restoring the sites to existing conditions so long-term adverse effects to these sites are not anticipated. The restoration of these areas would be in accordance with DSL's *A Guide to the Removal-Fill Permit Process,* included in the applicant's draft Site Rehabilitation Plan (Attachment J-2 to this order and included in the JPA). Impacts to wetlands and non-wetland WOS would be mitigated within 24 months of disturbance of a phase or segment of the facility. The draft Site Rehabilitation Plan describes how the applicant would prepare sites prior to construction including topsoil collection, separation and storing, and the use of certified weed-free erosion control blankets and/or certified weed-free straw bales will be used to contain and limit erosion at the stockpiles as needed. Measures in the draft Site Rehabilitation Plan that address site restoration include re-establishing pre-existing contours of the site, decompaction of soils to a minimum depth of 6-12 inches, re-establish the pre-existing vegetation community, and to provide for rapid site stabilization to prevent erosion.

Following the final engineering of the facility or a phase or segment of the facility, the applicant commits to preparing a final Site Rehabilitation Plan for submittal to state and federal agencies. Accordingly, and so that temporary impacts to wetlands and non-wetland WOS are sufficiently mitigated and restored, the Department recommends that the Council adopt the following condition:

Recommended Removal-Fill Condition 2: The certificate holder shall:

a. Prior to construction of a phase or segment of the facility, submit to the Department and Oregon Department of State Lands (DSL) a final Site Rehabilitation Plan (Plan), consistent with the draft Plan provided in Attachment J-2 of the Final Order on the ASC. The Department shall provide written verification of its review of the final Plan, confirming that the Plan is consistent with the draft Site Rehabilitation Plan.
b. Following construction and during operation of a phase or segment of the facility, the certificate holder shall ensure that temporary impacts to wetlands

and non-wetland waters of the state are restored in accordance with the final Plan.

c. The Department will provide updates to Council on the certificate holder's implementation of the final Plan and of any Plan revisions at Council meetings, following submittal of the certificate holder's six-month construction progress report per General Standard of Review Condition 3 or annual report per General Standard of Review Condition 4.

Permanent impacts from the proposed facility are associated with the permanent placement of facility components such as towers and roads associated with operations. To mitigate for the estimated 0.282 acres of permanent impacts to wetlands and WOS from removal and fill activities, the applicant would implement the Compensatory Wetland and Non-Wetland Mitigation Plan (CWNWMP). A draft of the CWNWMP is part of the JPA in ASC Exhibit J, and attached to this order as Attachment J-1.[522] To meet DSL requirements for stream functional assessments, the applicant developed a stream function assessment tool specifically for the proposed facility and includes it in the CWNWMP.

The CWNWMP is also intended to mitigate permanent impacts to wetland functions and values through the creation of functioning wetlands and enhancement of existing wetlands at a mitigation site (referred to as the Hassinger Mitigation Site) adjacent to Catherine Creek in the Grande Ronde Basin in Union County, Oregon.[523] The applicant would create approximately 0.57 acres of Palustrine Forested, 1.69 acres of Palustrine Scrub-Shrub, and 2.50 acres of Palustrine Emergent wetlands, and would enhance approximately 1.45 acres of existing Palustrine Emergent wetlands. In addition, the applicant would construct a side-channel between Catherine Creek which is a tributary to the Grande Ronde River and an oxbow to improve hydrologic connectivity.

Additional activities at the site are to remove invasive species to improve the wetlands and wetland functions. Utilizing DSL's compensatory wetland mitigation ratios for created and enhanced wetlands, the combined acreages of 6.21 acres of created or enhanced wetlands equate to 3.66 acres of wetland mitigation credit.[524] This amount of wetland mitigation credit (3.66 acres) is greater than the estimated impacts to field surveyed/delineated wetland features and non-wetland WOS (see Tables RF-1 and RF-2). The total of permanent impacts to wetlands and waters of the state is less than one acre (0.282 acres). The applicant explains that it believes this is a conservative estimate of the impacts to both field surveyed/delineated wetlands and WOS and those potential wetland and WOS in areas that the applicant has not yet

[522] B2HAPPDoc3-18 ASC 10f_B2H_2018 JPA Part 3 2018-09-28. Joint Permit Application, Attachment J-3, at Appendix T.
[523] B2HAPPDoc3-18 ASC 10a_B2H_2018 Exhibit J Waters of the State Part 1 2018-09-28, Section 3.4.6.
[524] B2HAPPDoc3-18 ASC 10f_B2H_2018 JPA Part 3 2018-09-28, Appendix T (Section 1.4.1).

obtained survey access.[525] On November 2, 2018, the Department received an email from DSL stating that the CWNWMP is "well done and meets [DSL's] requirements."[526]

Based upon the applicant's representations, and so that permanent impacts to wetlands and non-wetland WOS from removal and fill activities are mitigated, the Department recommends that the Council adopt the following condition:

Recommended Removal-Fill Condition 3:

a. Prior to construction of a phase or segment of the facility, submit an updated final Compensatory Wetland and Non-Wetland Mitigation Plan (CWNWMP), consistent with the draft CWNWMP (Attachment J-1 to the Final Order on the ASC), for review and approval by the Department, in consultation with Department of State Lands (DSL). The Department shall provide written verification of its review and approval of the final CWNWMP. The final amount of wetland mitigation credit required shall be based on the final design configuration of the phase or segment of the facility and the estimated acres of wetlands and non-wetland waters of the state that would be permanently impacted, unless otherwise agreed to by the Department.
b. Following construction and during operation of a phase or segment of the facility, the certificate holder shall implement the actions described in the final CWNWMP.
c. The Department will provide updates to Council on the certificate holder's implementation of the final CWNWMP and of any Plan revisions at Council meetings, following submittal of the certificate holder's six-month construction progress report per General Standard of Review Condition 3 or annual report per General Standard of Review Condition 4.
d. The final CWNWMP version approved when the facility begins operation may be revised or updated from time to time by agreement of the certificate holder and the Oregon Energy Facility Siting Council. Such revisions or updates may be made without amendment of the site certificate. The Council authorizes the Department to agree to revisions or updates to this plan, in consultation with DSL. The Department shall notify the Council of all revisions or updates, and the Council retains the authority to approve, reject, or modify any revisions or updates of the plan agreed to by the Department.

Further based upon the applicant's representations of compliance with the measures outlined in the JPA and its commitment to provide updates to the JPA to the Department, the Department recommends the Council adopt the following condition requiring the certificate holder to provide an electronic copy of the updated JPA to the Department:

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[525] B2HAPPDoc3-18 ASC 10a_B2H_2018 Exhibit J Waters of the State Part 1 2018-09-28, Section 3.4.6.
[526] B2HAPPDoc13-3 ASC Reviewing Agency Comment DSL_Cary 2018-11-02.

Recommended Removal-Fill Condition 4: Prior to construction of a phase of segment of the facility, the certificate holder shall provide an electronic copy of the updated Joint Permit Application (JPA) to the Department.

Removal-Fill Permit

A removal-fill permit is required for the proposed facility because 50 cubic yards or more of material would be removed, filled or altered within waters of the state. The removal-fill permit is a state permit within the Council's jurisdiction as discussed in the introduction to Section IV.Q. Pursuant to ORS 469.503(3) and ORS 469.401(3), the Council must determine whether DSL should issue the removal-fill permit and, if so, the Council must determine the conditions of that permit.[527] The Department conducted ongoing consultation with DSL during the review of the preliminary applications and the ASC. On April 4, 2019 DSL submitted the draft removal-fill permit with project-specific conditions based on its technical review for the facility and the mitigation site. Upon Council approval of the removal-fill permit, DSL would have continuing enforcement authority over the permit with the Council.

Oregon Administrative Rules 141-085-0565 details the requirements for DSL issuance and enforcement of removal fill authorizations. Written findings are required in specific circumstances stipulated in OAR 141-085-0565(7), including subsection (b) of the rule in circumstances where an individual removal-fill permit decision for a project will permanently fill two or more acres in wetlands. As discussed above, the estimated permanent impacts to wetlands from the proposed facility is 0.282 acres, less than the two-acre threshold requiring DSL (Council) to provide written findings defined in OAR 141-085-0565(4) for the issuance of a removal-fill permit.[528] However, in ASC Exhibit J Section 3.6, the applicant provides information for the determinations under OAR 141-085-0565(1) based on the considerations outlined in OAR 141-085-0565(4).[529] Additionally, the Council's statutory obligations under ORS 469.503(3) requires it to evaluate compliance with applicable Oregon statutes and administrative rules. Therefore, the Department provides recommendations for the Council to make the determinations based on the considerations under OAR 141-085-0565.

Issuance of a removal-fill permit requires the following determinations: the project "(a) Is consistent with the protection, conservation and best use of the water resources of this state as specified in ORS 196.600 to 196.905; and; (b) Would not unreasonably interfere with the paramount policy of this state to preserve the use of its waters for navigation, fishing and public recreation." These criteria are outlined in ORS 196.825. The implementing rules at OAR 141-085-0565 require these same determinations as well as a determination that the project (as

[527] See also OAR 345-021-0010(1)(j)(E).

[528] The 0.282 acres is the estimated permanent impacts to wetland and waters of the state. Although OAR 141-085-0565(7), provides that written findings be provided for project that impact two acres or more in wetlands, the Department included impacts to waters of the state as well into the total provided.

[529] ORS 196.825(1) and ORS 196.825(3)

defined in OAR 141-085-0510(80)) has independent utility. To make these three determinations, nine criteria must first be considered in evaluating individual removal-fill permit decisions, as outlined in OAR 141-085-0565(4). Therefore, the Department recommends Council consider the following factors as proposed by the applicant and supported by the information in the ASC:

> *(4) Department Considerations. In determining whether to issue a permit, the Department will consider all of the following:*
>
> *(a) The public need for the proposed fill or removal and the social, economic or other public benefits likely to result from the proposed fill or removal. When the applicant for a permit is a public body, the Department may accept and rely upon the public body's findings as to local public need and local public benefit;*

Under OAR 141-085-0565(4)(a), the Council considers the public need for, and the social, economic or other public benefits of, the proposed removal-fill activities. The applicant explains that the proposed removal and fill associated with the construction of the proposed facility would provide social, economic, or other public benefits. The applicant's reasons are that the facility would provide cost-effective electric service, improve inter-regional access to power markets, facilitate the applicant's compliance as a utility company with electric service reliability standards, and provide transmission service to its customers, including customers in Oregon.[530] As discussed in more detail in Section IV.O.1., *Need for a Facility* of this order, the Need Standard for Nongenerating Facilities, specifies that the Need for a Facility may be met by two pathways, the Least-Cost-Plan Rule and the System Reliability Rule. The Least-Cost-Plan Rule is met if the Oregon Public Utility Commission (OPUC) determines that the proposed facility would be a least cost, least risk resource to meet the needs of the applicant's customers by acknowledging the applicant's Integrated Resource Plan (IRP). The objective of the IRP is to ensure an adequate and reliable supply of energy at the least cost to the utility and customers in a manner consistent with the long-run public interest. In ASC Exhibit N and in this order, the applicant provides documentation that the ongoing permitting as well as the construction of the proposed facility has been acknowledged by the OPUC in its IRP, therefore the Council's Need for a Facility under OAR 345-023-0005 has been met. Section IV.O.1., *Need for a Facility*, also evaluates the applicant's request to meet the Council's Need for a Facility under the System Reliability Rule. The Council's System Reliability Rule requires an evaluation of the applicant's capacity demands, compliance with North American Electric Reliability Corporation (NERC) Reliability Standards, and an economic evaluation of the route and alternative routes. Based on the Department's assessment of the information the applicant provided, the Department recommends the Council find the applicant has also met the System Reliability Rule. Thus, the Need for a Facility is met by both pathways in Council's rules. Based upon the Department's assessment in that section of this order and on the information the applicant provides in ASC Exhibit J, the Department recommends the Council conclude that the public

[530] B2HAPPDoc3-18 ASC 10a_B2H_2018 Exhibit J Waters of the State Part 1 2018-09-28, Section 3.6.2.1.

need, and social, economic and other public benefits likely to result from the proposed removal and fill activities was considered.

(b) The economic cost to the public if the proposed fill or removal is not accomplished;

This consideration is a mirror to the second part of (a). As explained in Section IV.O.1, *Need for a Facility* of this order, the facility would provide the additional transmission capacity necessary for the applicant to meet forecasted load, comply with the minimum operating criteria for reliability, and to provide transmission service to its wholesale customers. The applicant asserts that if the proposed facility (for which the applicant states removal and fill are necessary) is not constructed, the applicant would need to develop additional generation resources or make higher cost market purchases to meet its forecasted load and regulatory obligations. As a result, the applicant states that failure to develop the facility would result in higher power costs to electric utility customers in the Pacific Northwest.[531]

As discussed in more detail in Section IV.O.1, *Need for a Facility* in this order, the applicant compared multiple potential resource portfolios as part of the integrated resource planning process and selected the resource portfolio for the planning period that provides an adequate and reliable supply of energy at the least cost and risk to the utility and its customers. In its 2017 IRP, the applicant evaluated one dozen different resource portfolios, including eight portfolios that included alternative resource mixes (as alternatives to the proposed facility). As discussed, the applicant's cost analysis demonstrated that its preferred portfolio (P7, which includes the proposed facility) would be the least cost portfolio over the planning period. In other words, every resource portfolio that did not contain the proposed facility would cost more than the preferred portfolio that includes the proposed facility. Therefore, the applicant's assertion that failure to develop the facility would result in higher electricity costs to electric utility customers in the Pacific Northwest appears reasonable to the Department and has been vetted and acknowledged by the OPUC. Based upon the Council's review of the Department's assessment in Section IV.O.1 of this order and on the information the applicant provides in ASC Exhibit J and N, the Department recommends Council conclude the economic cost to the public if the proposed fill or removal is not accomplished was considered.

(c) The availability of alternatives to the project for which the fill or removal is proposed;

As previously discussed, the applicant evaluated one dozen different resource portfolios as part of its 2017 IRP, including eight portfolios that included alternative resource mixes (as alternatives to the proposed facility). The results of this evaluation show that every resource portfolio that did not contain the proposed facility would cost more than the preferred portfolio that includes the proposed facility. In addition to evaluating expanded demand response capacity and development of new electric generating facilities (including natural gas and solar) as alternatives to construction and operation of the proposed facility in the IRP

[531] B2HAPPDoc3-18 ASC 10a_B2H_2018 Exhibit J Waters of the State Part 1 2018-09-28, Section 3.6.2.2.

portfolios, the applicant evaluated a range of transmission line capacities for the facility. The applicant also evaluated rebuilding an existing transmission line as an alternative to construction and operation of the proposed facility.[532] For the reasons discussed in Section IV.O., *Need for Nongenerating Facilities* of this order, designing the transmission line for a lower operating voltage than currently proposed or rebuilding an existing transmission line are not practicable alternatives.

Furthermore, the applicant describes in detail in ASC Exhibit B (and its attachments) the routing and siting process it conducted and results of the federal permitting process which contributed to the proposed and alternative routes the applicant includes in the ASC. This is summarized in Section III.A., *Transmission Corridor Selection* of this order, which describes the siting studies and process the applicant employed to establish the transmission corridors (proposed and alternative routes) for the proposed facility. This effort was conducted for the federal NEPA review process and for the ASC and included planning for avoidance and minimization of impacts to numerous resources including but not limited to waters of the state, visual resources, and NHPA Section 106 resources.[533] Other siting constraints included ODFW Category 1 habitat, Greater sage grouse habitat, agricultural and farming lands, protected areas, mountainous areas with steep slopes, and highly populated residential areas. These siting constraints are also discussed in Section IV.Q.1., *Noise Control Regulations*, which also provides the siting constraints and considerations around noise sensitive properties, such as residences, within the analysis area. The proposed and alternative transmission line routes included in the ASC were selected to avoid or reduce impacts to these resources. Based upon a review of the assessments in the applicable sections of this order and on the information the applicant provided in ASC Exhibits, the Department recommends Council conclude the availability of alternatives to the project for which the fill or removal is proposed was considered.

(d) The availability of alternative sites for the proposed fill or removal;

The availability of alternative sites for the permanent removal or fill activities relates to the section directly above that provides a description of the siting process the applicant used to establish the proposed and alternative routes, which employed the siting opportunities and siting constrictions that informed or directed the routes. Section III.B.1., *Site Boundary and Right of Way Dimensions*, of this order provides a discussion of the site boundary, micrositing corridor and right-of-way dimensions for the proposed facility and related or supporting facilities, such as roads. As stated in that section, the micrositing corridor is the site boundary for the proposed transmission line. This means that the entire width of the site boundary is evaluated for impacts to the resources protected under the EFSC standards. This allows the applicant to "microsite" within the site boundary for the final placement of the ROW to avoid and minimize impacts to resources, including activities that involve removal or fill activities in wetlands. Taking into account the micrositing, as discussed in the above section, the applicant

[532] B2HAPPDoc3-22 ASC 14a_Exhibit N_Need_ASC_Part 1 2018-09-28, Section 3.3.8.
[533] B2HAPPDoc3-18 ASC 10e_B2H_2018 JPA Part 2 2018-09-28, Appendix I.

states that the estimated permanent impacts to wetlands and WOS from the proposed facility is 0.282 acres. Because the applicant engaged in the siting process to inform the proposed and alternative routes, the applicant also evaluated alternative sites for the proposed removal or fill activities because wetland and WOS impacts was one of the considerations the applicant evaluated in its route selection process. The Department notes as well, that for portions of the routes located on federal lands, that the lead federal agencies direct the final routes in the issued Record of Decision (ROD).

The applicant also explains that the total acreage of wetlands and other waters that would be temporarily or permanently impacted by the proposed removal and fill activities has decreased due to efforts to avoid and minimize those impacts. Attachment I (Tables I-1 through I-5) of the Joint Permit Application shows wetlands and other waters in each county that were avoided during facility siting or to which impacts would be minimized. [534] Based upon the Department's assessments in the applicable sections of this order, the consideration of criterion (c) above, and on the information the applicant provided in ASC Exhibits, the Department recommends Council conclude the availability of alternative sites for the proposed fill or removal activities was considered.

(e) Whether the proposed fill or removal conforms to sound policies of conservation and would not interfere with public health and safety;

ORS 196.805 outlines the policy for the Oregon Department of State Lands, which, in relevant part states; "The protection, conservation and best use of the water resources of this state …including not only water and materials for domestic, agricultural and industrial use but also habitats and spawning areas for fish, avenues for transportation and sites for commerce and public recreation…Unregulated filling in the waters of this state for any purpose, may result in interfering with or injuring public navigation, fishery and recreational uses of the waters."

The EFSC standards the applicant has to demonstrate that it meets provide protections for a wide array of resources and require compliance with a variety of state and federal conservation strategies and policies. The standards and sections in this order that specifically address the best uses for water resources of the state that DSL's statutory requirements require to protect and conserve are listed in the following table:

[534] B2HAPPDoc3-18 ASC 10e_B2H_2018 JPA Part 2 2018-09-28.

Table RF-3: Department of State Lands Best Uses for Water Resources and EFSC Standards

DSL Designated Water Use[535]	Council Standard or Regulation	Location in this Order
Water and materials for domestic and industrial use	Public Services Water Rights	Section IV.M., subsection *Water Supply* Section IV.Q.3.
Water for agricultural use	Land Use	Section IV.E., subsections IV.E.1., *Local Applicable Substantive Criteria*, and IV.E.2. *Directly Applicable State Statutes and Administrative Rules*
Habitats and spawning areas for fish Fisheries/fishing	Fish and Wildlife Habitat Threatened and Endangered Species Fish Passage	Section IV.F. Section IV.I. Section IV.Q.4.
Avenues for transportation, sites for commerce and public recreation Public navigation, and recreational uses of the waters	Land Use Recreation	Section IV.E. Section IV.L.

Each of these sections discusses the applicable resources, potential impacts to the resources and avoidance, minimization and mitigation measures to address any potential impacts from the construction and operation of the proposed facility. Each of these resources is evaluated and addressed in a manner that encourages, requires, and implements conservation, preservation, enhancement and mitigation strategies. These are also discussed in the evaluation of OAR 141-085-0565(4)(f) below.

As discussed in Section, IV.B., Organizational Expertise, of this order OAR 345-022-0010 requires the Council to find that the applicant has the organizational expertise to construct, operate and retire the proposed facility in compliance with Council standards and conditions of the site certificate. To reach this finding, the Council must find that the applicant has demonstrated the ability to design, construct and operate the proposed facility in compliance with site certificate conditions and in a manner that protects public health and safety and has demonstrated the ability to restore the site to a useful, non-hazardous condition. As outlined in that section and relying upon information provided in the ASC, the Department provides a

[535] ORS 196.805 and ORS 196.825(1)(b)

discussion of the applicant's experience and expertise permitting, constructing, operating, and maintaining facilitates similar to the proposed facility, as well as the applicant's experience in compliance with state and federal safety and reliability standards for similar facilities. Based on the information and analysis provided, the Department recommends that the construction and operation, and retirement of the proposed facility will be consistent with the organizational expertise standard and thus in a manner that protects public health and safety. Additional safety standards specific to transmission lines is discussed further in Section IV.P.1., *Siting Standards for Transmission Lines*.

The applicant explains in ASC Exhibit J that the proposed removal and fill would conform to the sound policies of conservation because of the evaluation and planning it employed to inform its wetland analysis to avoid and minimize impacts to wetlands and WOS.[536] Based on the information gathered from the desktop analysis and field surveys, the applicant committed to avoiding wetlands and other waters and to minimizing impacts to those wetlands and other waters that are not practicable to avoid. To mitigate the impacts that would occur, the applicant developed the draft CWNWMP as discussed above and implemented via Recommended Removal-Fill Condition 3. The CWNWMP would mitigate permanent impacts to wetland functions and values through the creation of functioning wetlands and enhancement of existing wetlands at a mitigation site connected to a tributary to the Grande Ronde River. The applicant also points to its commitments to implement best management practices (BPMs) to avoid adverse impacts to wetlands, WOS and other natural resources from construction and operation activities associated with the proposed facility. These BMPs are discussed in the above section as well as in Sections IV.D., *Soil Protection*, of this order. The proposed facility would be subject to the requirements of the NPDES 1200-C general stormwater permit, which requires the applicant to develop and implement an ESCP to minimize impacts to soils and the environment (including to resources adjacent to removal-fill sites and areas near WOS). The applicant will also be required to comply with a DEQ-approved construction-related final Spill Prevention, Control, and Countermeasures Plan (SPCC Plan). The BMPs discussed in this order and covered in the NPDES 1200-C general stormwater permit, SPCC and ESCP are consistent with the states polices for conservation and to safeguard public health and safety.

Based upon the Council's review of the Department's assessments in the applicable sections of this order, on the information the applicant provided in ASC J and other ASC Exhibits, the Department recommends Council conclude that the proposed fill or removal conforms to sound policies of conservation and would not interfere with public health and safety and has been considered.

[536] B2HAPPDoc3-18 ASC 10a_B2H_2018 Exhibit J Waters of the State Part 1 2018-09-28, Section 3.6.2.5.

(f) Whether the proposed fill or removal is in conformance with existing public uses of the waters and with uses designated for adjacent land in an acknowledged comprehensive plan and land use regulations;

In ASC Exhibit J, the applicant lists the existing public uses of the waters subject to the proposed removal and fill associated with the proposed facility include withdrawals of surface water, agricultural use, boating, and fishing.[537] As discussed in the Water Supply portion of Section IV.M., *Public Services* and in Section IV.Q.3*., Water Rights*, of this order, the applicant provides a description of the estimated amount of water used during construction and operation of the proposed facility, the uses for the water, and the public sources of water that will supply the water needs. The applicant will not need a groundwater permit, surface water permit, or water right transfer, and as evidenced with correspondence in ASC Exhibit O and in the Public Services section of this order, the applicant will supply water for construction and operation of the proposed facility from municipal sources and the sources have verified they have adequate water supplies to meet the demands of the project. The Department recommends in this section that the construction and operation of the proposed facility will not adversely affect public and private water service providers.

Section IV.E., *Land Use*, of this order evaluates land use compliance for the proposed facility, including an evaluation of applicable land use state statutes and Land Conservation and Development Commission rules. Many applicable state statutes are adopted by county governments in their comprehensive plans, however, if a statute is not adopted in the plan it is nonetheless evaluated in the Land Use section of this order. Section IV.E.2., *Directly Applicable State Statutes and Administrative Rules* and in Section IV.E.1., *Local Applicable Substantive Criteria*, for each affected county there is a discussion of ORS 215.283, ORS 215.275 and ORS 215.296, as they apply to the facility according to the zoning designation crossed. A component of this evaluation requires a discussion of potential impacts to adjacent agricultural uses, adjacent landowners and agricultural practices in the vicinity of the proposed facility, and therefore in the vicinity of the proposed removal or fill activities. As referenced in that section and attached to this order is Attachment K-1, *Agricultural Lands Assessment*. The Agricultural Lands Assessment (Agricultural Assessment) describes agricultural crops and existing agricultural practices within the analysis area and analyzes the temporary and permanent impacts that would occur as a result of the construction and operation of the proposed facility. Finally, the Agricultural Assessment describes in detail the measures the applicant will implement to avoid, minimize and mitigate and adverse impacts to agricultural practices.

[537] See ORS 196.805. See also ORS 196.825(1)(b) which states; "Would not unreasonably interfere with the paramount policy of this state to preserve the use of its *waters for navigation, fishing and public recreation*." Emphasis added.

The applicant discusses the potential impacts of the removal or fill activities from the proposed facility on navigation and recreational opportunities such as boating and fishing, in ASC Exhibit J. The applicant states that no existing public use of affected waters of the state would be eliminated or degraded.[538] The applicant would site facility components as to avoid impacts to all streams, rivers, or lakes currently used for navigation. For instance the applicant can propose to span (stretch the transmission lines cross) all streams, rivers, or lakes currently used for navigation. Therefore, removal or fill activities associated with the proposed facility would not result in any loss of navigability of waters of the state, including boating. Neither removal nor fill activities are proposed inside the bankfull channel on any fish-bearing streams.[539] As described in Section IV.Q.4, *Fish Passage* of this order, the applicant has designed all crossings of fish-bearing streams so that the movement of native migratory fish would not be restricted. The BMP's proposed by the applicant discussed in this section and in this order also would avoid potential negative impacts to fish and fish-bearing streams. The applicant states that the public's opportunity to fish or otherwise recreate on any water of the state would be neither impeded nor reduced, and may instead be improved. Implementation of the CWNWMP would result in the creation of functioning wetlands and enhancement of existing wetlands at the Hassinger Mitigation Site. This mitigation would improve in-stream and riparian habitat conditions, which may improve public fishing opportunities by increasing salmon and steelhead access to in-stream and off-channel habitat in the Grande Ronde River.[540]

To evaluate whether the proposed fill or removal activities is in conformance with uses designated for adjacent land in an acknowledged comprehensive plan and land use regulations, the Department points to Section IV.E., *Land Use*, of this order which provides a land use evaluation demonstrating how the applicant has proposed to meet the applicable substantive criteria from each affected county that is crossed by the prosed facility. 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. An evaluation of the statewide planning goals is provided in the Land Use section, including Goal 5 resources that are identified and adopted by the County.[541] Wetlands, streams, and WOS are generally identified as Goal 5 resources and the evaluation and protection measures for these resources are discussed in the applicable county in the Land Use section of this order. In that section, the Department recommends the Council find that the facility complies with the identified applicable substantive criteria and the directly applicable state statute and rule and, therefore, complies with the Council's Land Use standard. As such, and relying upon the Council's review of the Department's assessments in the applicable sections of this order, on the information the applicant provided in ASC J and other ASC Exhibits, the Department recommends Council conclude that the proposed fill or removal is in conformance with existing public uses of the

[538] B2HAPPDoc3-18 ASC 10a_B2H_2018 Exhibit J Waters of the State Part 1 2018-09-28, Section 3.6.2.6.
[539] B2HAPPDoc3-18 ASC 10a_B2H_2018 Exhibit J Waters of the State Part 1 2018-09-28, Section 3.6.1.3.
[540] B2HAPPDoc3-18 ASC 10a_B2H_2018 Exhibit J Waters of the State Part 1 2018-09-28, Section 3.6.1.3.
[541] Goal 5 resources include designated natural resources, scenic and historic areas, and open spaces.

waters and with uses designated for adjacent land in an acknowledged comprehensive plan and land use regulations and was considered.

> *(g) Whether the proposed fill or removal is compatible with the acknowledged comprehensive plan and land use regulations for the area where the proposed fill or removal is to take place or can be conditioned on a future local approval to meet this criterion;*

The Department provides an overview of the Council's land use evaluation in the section directly above which applies to this criterion as well. Also in Section IV.E, *Land Use* of this order, the Department recommends that the Council find that construction (during which the removal and fill activities would occur) and operation of the proposed facility would comply with the local applicable substantive criteria and any directly applicable statewide planning goals. The Council's approval is subject to compliance with the conditions recommended to be included in the site certificate, consistent with the Council's review and approval process describe further in Section III.D., *Survey Data Based on Final Design and Site Access* in this order. The Department recommends approval of the Council's Land Standard, which includes conditions of approval. Conditions for a future approval for compatibility with the acknowledged comprehensive plan and land use regulations, is not necessary, as stated in OAR 141-085-0565(4)(g). Therefore and founded upon the Council's review of the Department's assessments in the above section, applicable sections of this order, on the information the applicant provided in ASC J and other ASC Exhibits, the Department recommends Council conclude that the proposed fill or removal is compatible with the acknowledged comprehensive plan and land use regulations for the area where the proposed fill or removal is to take place or can be conditioned on a future local approval to meet this criterion, and therefore this criterion has been considered.

> *(h) Whether the proposed fill or removal is for stream bank protection; and*

Based on the response provided by the applicant in ASC Exhibit J, the proposed removal and fill is not for stream-bank protection.[542] Therefore this criterion is not applicable.

> *(i) Whether the applicant has provided all practicable mitigation to reduce the adverse effects of the proposed fill or removal in the manner set forth in ORS 196.800.*

The applicant must provide practicable mitigation measures to reduce any adverse effects from the removal or fill activities associated with the proposed facility as prescribed by ORS 196.800:

- Avoidance
- Minimization
- Repair, rehabilitation, or restoration

[542] B2HAPPDoc3-18 ASC 10a_B2H_2018 Exhibit J Waters of the State Part 1 2018-09-28, Section 3.6.2.8.

- Monitoring and corrective measures; and
- Compensatory mitigation

The Department addresses each of these considerations:

Avoidance: As discussed throughout this section and in ASC Exhibit J, through desktop analysis and field surveys within the site boundary the applicant and its consultant delineated wetlands and other waters of the state. Based on this information, and the wetland delineation review concurrence from DSL, the applicant committed to avoiding many of these wetlands and other waters. Measures the applicant will utilize to avoid impacts to wetland and WOS are micrositing and placing facility components to avoid wetlands and WOS. The applicant explains they can also avoid impacts to wetlands and WOS by spanning them, meaning they can avoid direct impacts by only crossing over them with the transmission line and not placing structures in wetlands.

Minimization: After applying all possible avoidance measures, the applicant commits to minimizing impacts to those wetlands and other waters that are not practicable to avoid. The applicant may implement the same measures stated above to also minimize impacts to wetlands and WOS. For instance, to minimize an unavoidable impact from a tower pad foundation, the applicant may be able to span portion of the wetland area, thus reducing the impact. The proposed facility would be subject to the requirements of the NPDES 1200-C general stormwater permit, which requires the applicant to develop and implement an ESCP to minimize impacts to soils and the environment (including to resources adjacent to removal-fill sites). Recommended Soil Protection Condition 1 would require compliance with the NPDES 1200-C permit and a DEQ- approved ESCP (see Section IV.D., *Soil Protection*, of this order). In addition, the applicant represents that it would implement the best management practices for stream crossings listed in Appendix L of the Joint Permit Application and in this section of the order.

Repair, rehabilitation, or restoration: Effects of the removal or fill activities would be rectified in accordance with the draft Site Rehabilitation Plan (Attachment J-2 to this order). Temporary impacts to wetlands and WOS would be repaired, rehabilitated, and restored within 24 months of the disturbance. The draft Site Rehabilitation Plan describes how the applicant would re-establish the pre-existing contours of the site, re-establish the pre-existing vegetation community, and provide for rapid site stabilization to prevent erosion. Recommended Removal-Fill Condition 2 would require the certificate holder to ensure that temporary impacts to wetlands and non-wetland waters of the state are mitigated in accordance with the final Site Rehabilitation Plan for a phase or segment of the facility.

Monitoring and corrective measures: The Site Rehabilitation Plan would require the certificate holder to monitor temporary impact sites for three years using the guidance in DSL's *Routine Monitoring Guidance for Vegetation*. As described in the draft

monitoring plan within the draft Site Rehabilitation Plan, the purpose of monitoring is to evaluate vegetative survival and establishment, soil moisture, sustaining hydrology, and occurrence of noxious weeds and to identify corrective measures that may be required to ensure successful restoration. The draft monitoring plan contains goals, objectives, and performance standards for rehabilitation. The certificate holder would document the monitoring results in an annual report that would provide a summary of reclamation activities and observations, discuss progress towards or achievement of success, identify any specific problem areas, and include recommendations for additional corrective actions if necessary. The draft Site Rehabilitation Plan also lists contingency measures (such as reseeding, replacing, live cuttings, and transplanting) that may be required where initial restoration and plant establishment efforts fail to meet the performance standards.

Compensatory mitigation: The applicant developed the draft CWNWMP, which would mitigate permanent impacts to wetland functions and values through the creation of functioning wetlands and enhancement of existing wetlands at a compensatory mitigation site. The proposed mitigation site described in this section and in the CWNWMP would compensate for the impacts to wetlands and WOS by creating, restoring, enhancing and preserving substitute functions and values for the waters of the state. Recommended Removal-Fill Condition 3 would require the certificate holder to implement the actions described in the CWNWMP.

Based upon the Council's review of the Department's assessments in the applicable sections of this order, on the information the applicant provided in ASC J and other ASC Exhibits, the Department recommends Council conclude the applicant has provided all practicable mitigation to reduce the adverse effects of the proposed fill or removal in the manner set forth in ORS 196.800.

OAR 141-085-0565(3): The Department [DSL] will issue a permit if it determines the project described in the application:

Based upon the nine considerations discussed above, the Department recommends that the Council make the following three determinations required by OAR 141-085-0565(3):

(a) Has independent utility;

In accordance with OAR 141-085-0510(43), independent utility "means that the project accomplishes its intended purpose without the need for additional phases or other projects requiring further removal-fill activities."[543] Under ORS 469.503(3) and under the Council's General Standard of Review (OAR 345-022-0000), the Council must determine whether the

[543] OAR 141-085-0510(80) defines project as the "primary development or use, having independent utility, proposed by one person. A project may include more than one removal-fill activity."

proposed facility complies with "all other Oregon statutes and administrative rules…, as such, Oregon Removal-Fill Law (ORS 196.795 through 196.990) and Department of State Lands (DSL) regulations (OAR 141-085-0500 through 141-085-0785) fall under the Council's jurisdiction. Therefore, because of this consolidated review, the Council must determine whether a removal-fill permit is needed and if so, whether a removal-fill permit should be issued.
The applicant seeks Council approval for the construction and operation of the entirety of the proposed facility. The applicant's request and the Council's consolidated review of the proposed facility encompasses all the necessary phases including desktop analysis and field surveys conducted based on site access and final design. As outlined in Section III.D., *Survey Data Based on Final Design and Site,* and the subsection titled, *Delineation Surveys for Wetlands and Waters of the State*, pursuant to ORS 469.503, ORS 469.401, and ORS 469.402, the Council may approve a facility subject to the conditions in the site certificate. Further, the Council may delegate future review of draft plans and survey information to the Department in consultation with reviewing agencies. If approved by Council, the site certificate authorizes the applicant to construct, operate and retire the facility subject to the conditions set forth in the site certificate. Therefore, consistent with OAR 141-085-0510(43) and under OAR 141-085-0565(3)(a) the Department recommends the Council determine that its review of the proposed facility and issuance of the site certificate accomplishes the intended purpose of the applicant's request to review the facility in its entirety, without the need for additional phases or other projects that require further removal-fill activities.

In the section directly above, the Department presents the nine criteria from DSL's rules and statutes to inform Council's determinations about whether to issue a removal-fill permit. The evaluation of the considerations is based on the information provided by the applicant in ASC Exhibits, on the Department's analysis in the applicable sections of this order, and on the recommended site certificate conditions of approval. Upon review of these criteria in totality, the Council has considered the public need for the facility, the economic costs to the public if the facility is not constructed, an evaluation of alternative routes and the siting of facility components to avoid impacts to wetlands. The Council has also considered the conformance of the proposed facility consistent with state conservation policies, as well as the facility's compatibility with land use regulations. Finally, the Council has considered the practicable mitigation to reduce the adverse effects of the fill or removal activities associated with the proposed facility. Therefore, the Department recommends the Council determine, based on the considerations set forth in this section identified in OAR 141-085-0565(4), that the proposed facility has independent utility.

(b): Is consistent with the protection, conservation and best use of the water resources of this state as specified in ORS 196.600 to 196.905; and

ORS 196.805 outlines DSL's policy for the protection, conservation and best use of the water resources of this state. As explained in the above evaluation of considerations under OAR 141-085-0565(4)(e) and (f), the best uses established in DSL's rules include uses for water including domestic, agricultural and industrial use, fisheries and fish habitat, navigation and recreational

uses of waters of the state. In the evaluation of these considerations as provided above, the Department points to the applicable sections of this order and ASC Exhibit that address the protection and conservation these resources. As discussed above in the analysis under OAR 141-085-0565(4)(i), the applicant would reduce the adverse impacts of the proposed facility through avoidance; minimization; repair, rehabilitation, or restoration; monitoring or corrective measures; and compensatory mitigation. For the reasons provided in the above consideration assessment, the Department recommends that the Council determine that the construction and operations of the proposed facility is consistent with the protection, conservation and best use of the water resources of this state as specified in ORS 196.600 to 196.905.

> *(c): Would not unreasonably interfere with the paramount policy of this state to preserve the use of its waters for navigation, fishing and public recreation, when the project is on state-owned lands.*

In the analysis under OAR 141-085-0565(3)(b) above, the Department recommends that the Council determine that the proposed removal or fill activities associated with the proposed facility is in conformance with the protection, conservation and best uses of water resources in the state. The determination under this subsection OAR 141-085-0565(3)(c) is more limited in that it is only applicable to state-owned lands. The applicant does not propose removal or fill of WOS on any state-owned land inside the site boundary.[544] The applicant does not propose any removal or fill activities within the bankfull channel of any fish bearing streams. Further protections specific to fish habitat and provisions to protect streams and waterways from crossings or impacts from the construction of the prosed facility are discussed in Sections IV.H. and IV.Q.4. The applicant reiterates that the construction and operation of the proposed facility will not result in any loss of navigability on any WOS because the proposed facility will span all streams, rivers, or lakes currently used for navigation. The proposed facility will also avoid and minimize impacts to recreational opportunities as discussed in Section IV.L. Because the applicant does not propose any removal or fill activities on state-owned land, the Department recommends that the Council determine that the construction and operations of the proposed facility would not unreasonably interfere with the paramount policy of this state to preserve the use of its waters for navigation, fishing and public recreation, when the project is on state-owned lands.

On April 1, 2019, the Department received from the Oregon Department of State Lands (DSL), the recommended conditions for the removal-fill permit to include in the site certificate.[545] [546] The recommended removal-fill permit conditions are included in Attachment J-3 of this order. The recommended conditions include numbered General Conditions that appear in all removal-fill permits issued by DSL as well as numbered Special Conditions that are specific to the

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[544] B2HAPPDoc3-18 ASC 10a_B2H_2018 Exhibit J Waters of the State Part 1 2018-09-28, Section 3.6.1.3.

[545] B2HAPPDoc13-25 ASC Reviewing Agency Comment DSL_61621 RF Authorization 2019-04-01.

[546] Removal/Fill Permit No. 61621-RF.

applicant's application and project. DSL uses information from the applicant's wetland delineation reports, DSL's Letter of Concurrence and the JPA when determining the conditions.

The conditions in the removal-fill permit are conditions of approval in the site certificate that the applicant must comply with. Therefore, the Department recommends Removal-Fill Permit Condition 5, specifying that the conditions set forth in the removal-fill permit are conditions of approval in the site certificate.

> **Recommended Removal-Fill Condition 5:** Prior to construction of a phase of segment of the facility and during operation, the certificate holder shall maintain compliance with the General and Special Conditions set forth in the removal-fill permit (Attachment J-3 to the Final Order on the ASC).

Special Condition 3 in the recommended removal-fill permit addresses the wetland data gap created by site access restrictions within the site boundary and stipulates that the additional wetland delineation data must be provided to DSL for concurrence prior to any construction activities in area not previously surveys. This condition mirrors Recommended Removal-Fill Condition 6 in this section. The approved and issued removal-fill permit must be updated prior to any construction activities on currently unsurveyed parcels. The permit information must be updated to reflect final impacts to and mitigation accounting for a phase or segment of the proposed facility the applicant intends to construct. The Department, therefore recommends Council adopt the following condition to ensure that the removal-fill permit is updated prior to construction of the facility and any impacts to wetlands or WOS.[547]

> **Recommended Removal-Fill Condition 6:** The certificate holder shall:
>
> a. Prior to construction of a phase or segment of the facility, comply with procedures in all Removal-Fill Conditions, and receive an updated removal-fill permit (Attachment J-3 of the Final Order on the ASC) reviewed and approved by the Department in consultation with the Oregon Department of State Lands.
> b. Prior to construction of a phase or segment of the facility, submit a final copy of the updated removal-fill permit issued by the Oregon Department of State Lands.
> c. Following construction and during operation of a phase or segment of the facility, the certificate holder shall implement the actions described in the removal-fill permit.
> d. The Department will provide updates to Council on the certificate holder's implementation of the removal-fill permit and of any permit revisions at Council meetings, following submittal of the certificate holder's six-month construction progress report per General Standard of Review Condition 3 or annual report per General Standard of Review Condition 4.

[547] The Department notes that the version of the Removal Fill Permit attached as Attachment J-3 to the Final Order on the ASC is the version that will be provided to DSL for them to issue to the applicant.

e. The removal-fill permit version approved when the facility begins operation may be revised or updated from time to time by agreement of the certificate holder and the Oregon Energy Facility Siting Council. Such revisions or updates may be made without amendment of the site certificate. The Council authorizes the Department to agree to revisions or updates to this permit. The Department shall notify the Council of all revisions or updates, and the Council retains the authority to approve, reject, or modify any revisions or updates of the permit agreed to by the Department.

Conclusions of Law

Based on the foregoing findings of fact and conclusions of law, and subject to compliance with the recommended conditions to the site certificate, the Department recommends that the Council find the proposed facility, including the proposed and alternative routes, would comply with Oregon removal-fill law; and that DSL shall issue a removal-fill permit that includes the recommended conditions contained in Attachment J-3 of this order.

IV.Q.3. Water Rights: OAR 690-310-0000; OAR 690-380-0000

Under ORS Chapters 537 and 540 and OAR Chapter 690, the Oregon Water Resources Department (OWRD) administers water rights for appropriation and use of the water resources of the state. Under OAR 345-022-0000(1)(b), the Council must determine whether the facility would comply with these statutes and administrative rules identified in the second amended project order. The second amended project order identifies OAR 690, Divisions 310 and 380 (Water Resources Department permitting requirements) as the administrative rules governing use of water resources and water rights as applicable to the proposed facility.

Findings of Fact

OAR 690 establishes the procedures and standards which shall be applied by the OWRD in the evaluation of applications for a permit to appropriate surface water, ground water, to construct a reservoir and store water, to use reserved water, or to use water stored in a reservoir.

As explained in ASC Exhibit O, the applicant does not request a groundwater permit, a surface water permit, or a water right transfer; the applicant would procure water for use during construction and operations from municipal sources.

During construction, water use would include dust suppression measures, drinking and sanitary purposes, concrete mixing for foundations, access road construction, as well as reseeding and restoration efforts. The applicant estimates that facility construction would require approximately 36.5 million gallons over a 36-month construction period under annual average conditions; the applicant estimates that it would require 54.8 million gallons under worst-case

conditions.[548] The worst case estimate could occur if the weather is especially hot and dry, which would result in a higher level of water use for dust suppression.[549] For comparative reference, the applicant represents that the estimate of 36.5 million gallons of water is the amount of water that 83 typical families would use over the same time period, and the worst case estimate of 54.8 million gallons would be equivalent to the amount of water required to farm approximately two to three acres of alfalfa for one season.

The majority of expected water use 26,280,000 gallons (approximately two-thirds of the total) would be used for dust suppression; approximately 3,898,125 gallons for foundation construction; approximately 4,425,000 for restoration and; approximately 1,701,600 gallons for road construction.[550] The worst case estimates for these sub-categories are approximately 39,420,000 gallons for dust suppression; 5,847,188 gallons for foundation construction; 6,637,500 gallons for restoration and; 2,552,400 gallons for road construction.[551] The applicant indicates that the amount of water used for dust control purposes would not result in water runoff outside the site boundary.

During construction, all water would be obtained through contracts with municipal sources including the City of Boardman, the City of Pendleton, the City of La Grande, Baker City, and the City of Ontario.[552] Water would be pumped into tanker trucks and transported to multi-use areas. The applicant represents that it contacted all potential municipal suppliers of water (listed above), and that each supplier provided either written or oral assurances that the amounts requested by the applicant could be provided at the time of construction. As explained in ASC Exhibit V, portable toilets would be located at construction sites; portable toilets would be provided by a subcontractor that would service the facilities and dispose of wastewater in accordance with local regulations.[553]

During facility operations, the water use would be limited to the restroom facility at the Longhorn Station, which would be connected to the Port of Morrow's water and sewer system. The restroom facility would use approximately 30 gallons per day, and would not require the construction of a well. The Port of Morrow confirmed that it could adequately serve the facility.

Based on the applicant's analysis and calculations, the Department recommends the Council find that the applicant has established that it can obtain adequate water for construction and operation of the proposed facility and does not need a groundwater permit, surface water

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[548] B2HAPPDoc3-24 ASC 15_Exhibit O_Water_Use_ASC 2018-09-28, Table O-1a, Footnote 7. The applicant notes that it calculated its worst case estimates by multiplying its expected water use estimates by 150 percent.
[549] B2HAPPDoc3-24 ASC 15_Exhibit O_Water_Use_ASC 2018-09-28, Section 3.4.
[550] B2HAPPDoc3-24 ASC 15_Exhibit O_Water_Use_ASC 2018-09-28, Table O-1a.
[551] The Department estimates water use sub-categories based on estimated water use multiplied by 150 percent.
[552] B2HAPPDoc3-24 ASC 15_Exhibit O_Water_Use_ASC 2018-09-28, Section 3.4.
[553] B2HAPPDoc3-39 ASC 22_Exhibit V_Waste_ASC 2018-09-28, Section 3.3.2.1

permit, or water right transfer. If such a permit is required by the applicant at a later time, a site certificate amendment would be required to review and consider such a permit application.

Conclusions of Law

Based on the foregoing findings of fact, the Department recommends Council conclude that the proposed facility, including the proposed and alternative routes, would not need a groundwater permit, surface water permit, or water right transfer.

IV.Q.4. Fish Passage: OAR 635-412-0035

Pursuant to ORS 469.503(3) and under the Council's General Standard of Review (OAR 345-022-0000), the Council must determine whether the proposed facility complies with "all other Oregon statutes and administrative rules…, as applicable to the issuance of a site certificate for the proposed facility." Under OAR 635-412-0020, new construction affecting fish-bearing streams in Oregon will trigger fish passage rules and regulations and require review by the Oregon Department of Fish and Wildlife (ODFW). This requires upstream and downstream fish passage at all existing or new artificial obstructions in Oregon waters in which migratory native fish are currently or have historically been present, except under certain circumstances. The applicant identified areas (primarily stream crossings), where this requirement would be triggered, therefore the applicant requests that under ORS 469.401(3) and ORS 469.503(3) Council approve the applicant's Fish Passage Plan in ASC Exhibit BB, and Attachment BB-2 to this order.

Findings of Fact

In ASC Exhibit BB, the applicant describes that the design, construction and operation of the proposed facility will require the construction of new roads and the modification of existing roads, as discussed in Section III.C., *Proposed Facility*, and also described in the Road Classification Guide and Access Control Plan (ASC Attachment BB-2, and to this order). To construct these access roads, crossings may involve the design and construction of new crossing structures, modifications to existing structures, or use of existing structures with no improvements. A Report titled, Fish Habitat and Stream Crossing Assessment Summary Report, was submitted to the Department and ODFW in 2014.[554] The report was updated in 2016 identified a total of 58 fish-bearing streams that would be crossed by access routes within the states of Oregon and Idaho. Table 1 in ASC Exhibit BB, provides the stream name, proposed crossing type, and fish passage information. Crossing Types 3A and 3B were selected as proposed alternatives for the seven crossing sites; these crossings were deemed likely to trigger ODFW review because they would require some new construction. Section 3.2 further describes these crossing types. Section 4.1 describes the existing stream conditions, the criteria

[554] B2HAPPDoc3-45 ASC 28_Exhibit BB_Other_Info_ASC 2018-09-28.

applied to evaluate the stream crossing and the proposed type of crossing for the follow streams or stream segments:

- Little Rock Creek, Site R-33010
- 4.1.2 Rock Creek, Site R-33011
- 4.1.3 Rock Creek, Site R-33033
- 4.1.4 Rock Creek, Site R-33147
- Goodman Creek, Site R-65725
- Cavanaugh Creek, Site R-66818
- Benson Creek, Site R-68790

Appendix C of the Fish Passage Plan (Attachment B-2) provides the design drawings for these crossing. In its comment letter on the ASC the Oregon Department of Fish and Wildlife (ODFW) stated that its Fish Division and local District Fish Programs reviewed the Fish Passage Plan and, subject to finalization prior to construction, "ODFW finds fish impacts to be adequately considered and addressed. It is ODFW's understanding that fish passage plans and approvals have yet to be finalized prior to construction." [555]

The applicant also notes that unrestricted access to habitat is important for both resident and anadromous salmonids. Upstream-migrating fish require access to suitable spawning gravel and juvenile fish must be able to disperse upstream and downstream to take advantage of available rearing habitat. If culverts or other types of road crossing structures are poorly designed, constructed, or maintained, they can affect the population of entire stream drainages. As discussed above, Table P1-18 depicts each of the road crossings of fish-bearing streams. 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.[556]

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 (Attachment BB-2 to this order) to avoid impacts to fish bearing streams from the construction of the proposed facility, the applicant proposes and the Department recommends following site certificate condition:

Recommended Fish Passage Condition 1:

c. 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. The protective measures described in the draft Fish Passage Plan in Attachment

[555] B2HAPPDoc13-21 ASC Reviewing Agency Comment ODFW_Reif 2019-01-25.

[556] B2HAPPDoc3-25 ASC 16A_Exhibit P1_Wildlife_ASC_Part 1_Main thru Attach P1-6 rev 2018-09-28. Section 3.5.5.6. In addition, on federally managed lands, any crossing structure not already approved would be installed in accordance with BLM and USFS requirements.

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.

d. The certificate holder shall maintain compliance with the measures outlined in the final Fish Passage Plan approved by the Department in consultation with ODFW.

Conclusions of Law

Based on the foregoing analysis and findings of fact, and subject to the site certificate conditions, the Department recommends Council conclude that the proposed facility, including the proposed and alternative routes, would comply with the Fish Passage Plan.

V. PROPOSED CONCLUSIONS AND ORDER

The applicant has submitted an application for site certificate to construct and operate a transmission line and its related or supporting facilities (Longhorn Station, communication stations, new and substantially modified roads, and temporary multi-use areas) to be located in the counties of Morrow, Umatilla, Union, Baker, and Malheur; and the cities of North Powder and Huntington. 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 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.

Based on the recommended findings of fact, reasoning, recommended conditions and conclusions of law in this draft proposed order, the Department recommends that the Council conclude that the applicant has satisfied the requirements for issuance of a site certificate for the proposed Boardman to Hemingway Transmission Line. The Department further recommends that, pursuant to ORS 469.401, the Chairperson execute the certificate authorizing the applicant to construct, operate and retire the facility subject to the conditions set forth in the site certificate.

Issued this 22nd day of May, 2019

The OREGON DEPARTMENT OF ENERGY

By: _____

Todd Cornett
Assistant Director, Energy Facility Siting Division
Oregon Department of Energy

Attachments:

Attachment 1: Recommended Site Certificate Conditions (To be replaced with Site Certificate)
Attachment 2: (Reserved for DPO Comment Index)
Attachment 3: Reviewing Agency Comment Letters and Documents Referenced in DPO
Attachment B-5 Road Classification Guide and Access Control Plan (No Maps)
Attachment B-5 Road Classification Guide and Access Control Plan (Maps Only)
Attachment BB-1 Plan for an Alternative Practice
Attachment BB-2 Fish Passage Plans and Designs
Attachment G-4 Draft Spill Prevention Control and Countermeasure Plan
Attachment G-5 Draft Framework Blasting Plan
Attachment H-1 Proposed Site Specific Geotechnical Work
Attachment H-2 Summary of Proposed Boring Locations
Attachment H-3 Seismic Tables and Maps
Attachment H-4 Landslide Inventory
Attachment I-3 1200-C Permit Application and Erosion and Sediment Control Plan
Attachment J-1 Draft Removal-Fill Compensatory Wetland Non-Wetland Mitigation Plan
Attachment J-2 Draft Removal-Fill Temp Impacts Draft Site Rehabilitation Plan
Attachment J-3 Removal Fill Permit Conditions
Attachment K-1 Agricultural Lands Assessment
Attachment K-2 Right of Way Clearing Assessment with Errata
Attachment P1-3 Draft Reclamation and Revegetation Plan with Errata
Attachment P1-4 Draft Vegetation Management Plan
Attachment P1-5 Draft Noxious Weed Plan with Errata
Attachment P1-6 Draft Fish and Wildlife Habitat Mitigation Plan
Attachment P1-9 Avian Protection Plan
Attachment P2-3 Greater Sage-Grouse Habitat Mitigation Plan
Attachment S-9 Draft Historic Properties Management Plan (Inadvertent Discovery Plan) with Errata
Attachment U-2 Draft Transportation and Traffic Plan
Attachment U-3 Draft Fire Prevention and Suppression Plan with Errata
Attachment W-1 Facilities Removal and Site Restoration Cost Estimate with Errata
Attachment X-4 Noise Analysis Results by NSR Location
Attachment X-5 Maps - All NSRs and NSR Exceedances

Notice of the Right to Appeal

[Text to be added to Final Order]