Exhibit L
Protected Areas

Boardman to Hemingway Transmission Line Project

1221 West Idaho Street
Boise, Idaho 83702

Todd Adams, Project Leader
(208) 388-2740
tadams@idahopower.com

Zach Funkhouser, Permitting
(208) 388-5375
zfunkhouser@idahopower.com

Preliminary Application for Site Certificate

February 2013

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ACRONYMS AND ABBREVIATIONS

Note: Not all acronyms and abbreviations listed will appear in this Exhibit.

°C	degrees Celsius
4WD	4-wheel-drive
A	ampere
A/ph	amperes/phase
AC	alternating current
ACDP	Air Contaminant Discharge Permit
ACEC	Area of Critical Environmental Concern
ACSR	aluminum conductor steel reinforced
AIMP	Agricultural Impact Mitigation Plan
AMS	Analysis of the Management Situation
aMW	average megawatt
ANSI	American National Standards Institute
APE	Area of Potential Effect
APLIC	Avian Power Line Interaction Committee
ARPA	Archaeological Resource Protection Act
ASC	Application for Site Certificate
ASCE	American Society of Civil Engineers
ASP	Archaeological Survey Plan
AST	aboveground storage tank
ASTM	American Society of Testing and Materials
ATC	available transmission capacity
ATV	all-terrain vehicle
AUM	animal unit month
B2H	Boardman to Hemingway Transmission Line Project
BCCP	Baker County Comprehensive Plan
BCZSO	Baker County Zoning and Subdivision Ordinance
BLM	Bureau of Land Management
BMP	best management practice
BPA	Bonneville Power Administration
BOR	Bureau of Reclamation
C and D	construction and demolition
CAA	Clean Air Act
CadnaA	Computer-Aided Noise Abatement
CAFE	Corona and Field Effects
CAP	Community Advisory Process
CBM	capacity benefit margin
CFR	Code of Federal Regulations
CH	critical habitat
CIP	critical infrastructure protection
CL	centerline
cm	centimeter
cmil	circular mil
COA	Conservation Opportunity Area
CO_2e	carbon dioxide equivalent

COM Plan	Construction, Operations, and Maintenance Plan
CPCN	Certificate of Public Convenience and Necessity
cps	cycle per second
CRP	Conservation Reserve Program
CRT	cathode-ray tube
CRUP	Cultural Resource Use Permit
CSZ	Cascadia Subduction Zone
CTUIR	Confederated Tribes of the Umatilla Indian Reservation
CWA	*Clean Water Act of 1972*
CWR	Critical Winter Range
dB	decibel
dBA	A-weighted decibel
DC	direct current
DoD	Department of Defense
DOE	U.S. Department of Energy
DOGAMI	Oregon Department of Geology and Mineral Industries
DPS	Distinct Population Segment
DSL	Oregon Department of State Lands
EA	environmental assessment
EDRR	Early Detection and Rapid Response
EIS	Environmental Impact Statement (DEIS for Draft and FEIS for Final)
EFSC or Council	Energy Facility Siting Council
EFU	Exclusive Farm Use
EHS	extra high strength
EMF	electric and magnetic fields
EPA	Environmental Protection Agency
EPC	Engineer, Procure, Construct
EPM	environmental protection measure
EPRI	Electric Power Research Institute
ERO	Electric Reliability Organization
ERU	Exclusive Range Use
ESA	Endangered Species Act
ESCP	Erosion and Sediment Control Plan
ESU	Evolutionarily Significant Unit
EU	European Union
FAA	Federal Aviation Administration
FCC	Federal Communication Commission
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FFT	find, fix, track, and report
FLPMA	Federal Land Policy and Management Act
Forest Plan	Land and Resource Management Plan
FPA	Forest Practices Act
FSA	Farm Services Agency
FWS	U.S. Fish and Wildlife Service
G	gauss

GeoBOB	Geographic Biotic Observation
GF	Grazing Farm Zone
GHG	greenhouse gas
GHz	gigahertz
GIL	gas insulated transmission line
GIS	geographic information system
GPS	Global Positioning System
GRMW	Grande Ronde Model Watershed
GRP	Grassland Reserve Program
HAC	Historic Archaeological Cultural
HCNRA	Hells Canyon National Recreation Area
HPFF	high pressure fluid-filled
HPMP	Historic Properties Management Plan
HUC	Hydrologic Unit Code
Hz	hertz
I-84	Interstate 84
ICC	International Code Council
ICES	International Committee on Electromagnetic Safety
ICNIRP	International Commission on Non-Ionizing Radiation Protection
IDAPA	Idaho Administrative Procedures Act
IDEQ	Idaho Department of Environmental Quality
IDFG	Idaho Department of Fish and Game
IDWR	Idaho Department of Water Resources
ILS	intensive-level survey
IM	Instructional Memorandum
INHP	Idaho Natural Heritage Program
INRMP	Integrated Natural Resources Management Plan
IPC	Idaho Power Company
IPUC	Idaho Public Utilities Commission
IRP	integrated resource plan
IRPAC	IRP Advisory Council
ISDA	Idaho State Department of Agriculture
JPA	Joint Permit Application
KCM	thousand circular mils
kHz	kilohertz
km	kilometer
KOP	Key Observation Point
kV	kilovolt
kV/m	kilovolt per meter
kWh	kilowatt-hour
L_{dn}	day-night sound level
L_{eq}	equivalent sound level
lb	pound
LCDC	Land Conservation and Development Commission
LDMA	Lost Dutchman's Mining Association
LiDAR	light detection and ranging
LIT	Local Implementation Team

LMP	land management plan
LOLE	Loss of Load Expectation
LRMP	land and resource management plan
LUBA	Land Use Board of Appeals
LWD	large woody debris
m	meter
mA	milliampere
MA	Management Area
MAIFI	Momentary Average Interruption Frequency Index
MCC	Malheur County Code
MCCP	Morrow County Comprehensive Plan
MCE	Maximum Credible Earthquake
MCZO	Morrow County Zoning Ordinance
mG	milligauss
MHz	megahertz
mm	millimeter
MMI	Modified Mercalli Intensity
MP	milepost
MPE	maximum probable earthquake
MRI	magnetic resonance imaging
MVAR	megavolt ampere reactive
Mw	mean magnitude
MW	megawatt
µV/m	microvolt per meter
N_2O	nitrous oxide
NAIP	National Agriculture Imagery Program
NED	National Elevation Dataset
NEMS	National Energy Modeling System
NEPA	*National Environmental Policy Act of 1969*
NERC	North American Electric Reliability Corporation
NESC	National Electrical Safety Code
NF	National Forest
NFPA	National Fire Protection Association
NFS	National Forest System
NGDC	National Geophysical Data Center
NHD	National Hydrography Dataset
NHOTIC	National Historic Oregon Trail Interpretive Center
NHT	National Historic Trail
NIEHS	National Institute of Environmental Health Sciences
NIST	National Institute of Standards and Technology
NOAA	National Oceanic and Atmospheric Administration
NOAA Fisheries	National Oceanic and Atmospheric Administration Fisheries Division
NOI	Notice of Intent to File an Application for Site Certificate
NOV	Notice of Violation
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service

NRHP	National Register of Historic Places
NSR	noise sensitive receptor
NTTG	Northern Tier Transmission Group
NWGAP	Northwest Regional Gap Analysis Landcover Data
NWI	National Wetlands Inventory
NWPP	Northwest Power Pool
NWR	National Wildlife Refuge
NWSRS	National Wild and Scenic Rivers System
NWSTF	Naval Weapons Systems Training Facility
O_3	ozone
O&M	operation and maintenance
OAIN	Oregon Agricultural Information Network
OAR	Oregon Administrative Rules
OATT	Open Access Transmission Tariff
ODA	Oregon Department of Agriculture
ODEQ	Oregon Department of Environmental Quality
ODF	Oregon Department of Forestry
ODFW	Oregon Department of Fish and Wildlife
ODOE	Oregon Department of Energy
ODOT	Oregon Department of Transportation
OHGW	overhead ground wire
OHV	off-highway vehicle
OPGW	optical ground wire
OPRD	Oregon Parks and Recreation Department
OPS	U.S. Department of Transportation, Office of Pipeline Safety
OPUC	Public Utility Commission of Oregon
OR	Oregon (State) Highway
ORBIC	Oregon Biodiversity Information Center
ORS	Oregon Revised Statutes
ORWAP	Oregon Rapid Wetland Assessment Protocol
OS	Open Space
OSDAM	Oregon Streamflow Duration Assessment Methodology
OSHA	Occupational Safety and Health Administration
OSSC	Oregon Structural Specialty Code
OSWB	Oregon State Weed Board
OWC	Oregon Wetland Cover
P	Preservation
PA	Programmatic Agreement
pASC	Preliminary Application for Site Certificate
PAT	Project Advisory Team
PCE	Primary Constituent Element
PEM	palustrine emergent
PFO	palustrine forested
PGA	peak ground acceleration
PGE	Portland General Electric
PGH	Preliminary General Habitats
Pike	Pike Energy Solutions

PNSN	Pacific Northwest Seismic Network
POD	Plan of Development
POMU	Permit to Operate, Maintain and Use a State Highway Approach
PPH	Preliminary Priority Habitats
Project	Boardman to Hemingway Transmission Line Project
PSD	Prevention of Significant Deterioration
PSS	palustrine scrub-shrub
R	Retention
R-F	removal-fill
RCM	Reliability Centered Maintenance
RCRA	Resource Conservation and Recovery Act
ReGAP	Regional Gap Analysis Project
RFP	request for proposal
RLS	reconnaissance-level survey
RMP	resource management plan
ROD	Record of Decision
ROE	right of entry
RNA	research natural area
ROW	right-of-way
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
SC	Sensitive Critical
SEORMP	Southeastern Oregon Resource Management Plan
SF6	sulfur hexafluoride
Shaw	Shaw Environmental and Infrastructure, Inc.
SHPO	State Historic Preservation Office
SLIDO	Statewide Landslide Inventory Database for Oregon
SMS	Scenery Management System
SMU	Species Management Unit
SPCC	Spill Prevention, Containment, and Countermeasures
SRMA	Special Recreation Management Area
SRSAM	Salmon Resources and Sensitive Area Mapping
SSURGO	Soil Survey Geographic Database
STATSGO	State Soil Geographic Database
SUP	special-use permit
SV	Sensitive Vulnerable
SWPPP	Stormwater Pollution Prevention Plan
T/A/Y	tons/acre/year
TDG	Total Dissolved Gas
TES	threatened, endangered, and sensitive (species)
TG	Timber Grazing
TMIP	Transmission Maintenance and Inspection Plan
TNC	The Nature Conservancy
tpy	tons per year
TSD	treatment, storage, and disposal
TV	television
TVES	Terrestrial Visual Encounter Surveys

TVMP	Transmission Vegetation Management Program
UBAR	Umatilla Basin Aquifer Restoration
UBWC	Umatilla Basin Water Commission
UCDC	Umatilla County Development Code
UCZPSO	Union County Zoning, Partition and Subdivision Ordinance
UDP	Unanticipated Discovery Plan
U.S.	United States
USACE	U.S. Army Corps of Engineers
U.S.C.	United States Code
USDA	U.S. Department of Agriculture
USFS	U.S. Department of Agriculture, Forest Service
USGS	U.S. Geological Survey
UWIN	Utah Wildlife in Need
V/C	volume to capacity
V	volt
VAHP	Visual Assessment of Historic Properties
VMS	Visual Management System
VQO	Visual Quality Objective
VRM	Visual Resource Management
WAGS	Washington ground squirrel
WCU	Wilderness Characteristic Unit
WECC	Western Electricity Coordinating Council
WHO	World Health Organization
WMA	Wildlife Management Area
WOS	waters of the state
WOUS	waters of the United States
WPCF	Water Pollution Control Facility
WR	winter range
WRCC	Western Regional Climate Center
WRD	(Oregon) Water Resources Division
WRP	Wetland Reserve Program
WWE	West-wide Energy
XLPE	cross-linked polyethylene

Exhibit L
Protected Areas

1.0 INTRODUCTION

Exhibit L provides an analysis of protected areas for the Boardman to Hemingway Transmission Line Project (Project). Exhibit L demonstrates that Idaho Power Company (IPC) will comply with the approval standard for protected areas in accordance with Oregon Administrative Rule (OAR) 345-022-0040 based on information provided pursuant to OAR 345-021-0010(1)(l), paragraphs (A) through (C).

Specifically, Exhibit L demonstrates that the Project avoids the protected areas listed in OAR 345-022-0040(1) with two exceptions—one state park and one area of critical environmental concern (ACEC). For the state park, the Blue Mountain Forest State Scenic Corridor, IPC demonstrates that it analyzed alternatives to crossing the state park as required by OAR 345-022-0040(2). IPC explains that the crossing of the Blue Mountain Forest State Scenic Corridor by the Proposed Corridor will not result in significant impacts, and further explains why the alternative routes would result in greater impacts (see Section 3.3.3.1). For the Owyhee River Below the Dam ACEC, IPC considered alternatives to crossing the ACEC, as required by OAR 345-022-0040(2) (see Figure L-3). IPC explains that this analysis led to the selection of the Proposed Corridor, which avoids the ACEC; however, IPC has retained the Malheur S Alternate Corridor Segment, which crosses the ACEC. No other protected areas are crossed by the Project.

Exhibit L provides analysis of the potential impacts of the Project on the protected areas listed in Table L-1-1 in Attachment L-1 to meet the approval standard in OAR 345-022-0040. Exhibit L demonstrates that the Project, with mitigation, is not likely to cause significant adverse impacts to the protected areas within the analysis area.[1]

2.0 APPLICABLE RULES AND STATUTES

The Oregon Energy Facility Siting Council (EFSC or Council) protected area approval standard is set forth in OAR 345-022-0040 as follows:

> ***Protected Areas***
>
> *(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;*

[1] In this Exhibit L, IPC concludes that the Project is likely to cause significant adverse visual impacts to two protected areas within the analysis area: the Owyhee River Below the Dam ACEC and the Oregon Trail ACEC – NHOTIC Parcel. As discussed further in Section 3.4, IPC intends to develop mitigation to lessen the Project's visual impacts on both affected protected areas to "less than significant."

(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 * * * 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. * * **

To demonstrate compliance with this standard, and in accordance with OAR 345-021-0010(1)(l), Exhibit L must include the following:

(A) A list of the protected areas within the analysis area showing the distance and direction from the proposed facility and the basis for protection by reference to a specific subsection under OAR 345-022-0040(1).

(B) A map showing the location of the proposed facility in relation to the protected areas listed in OAR 345-022-0040 located within the analysis area.

(C) A description of significant potential impacts of the proposed facility, if any, on the protected areas including, but not limited to, potential impacts such as:

(i) Noise resulting from facility construction or operation;
(ii) Increased traffic resulting from facility construction or operation;
(iii) Water use during facility construction or operation;
(iv) Wastewater disposal resulting from facility construction or operation;
(v) Visual impacts of facility structures or plumes.

Additionally, the Project Order requires Exhibit L to include the following specific information:

- *The applicant should thoroughly research all of the protected areas listed at OAR 345-022-0040 to ensure that the application addresses the potential impacts to protected areas within the Analysis Area identified in Section VI.*
- *Note that OAR 345-022-0040(1) generally prohibits siting of transmission lines through protected areas, which include state parks. However, under OAR 345-022-0040(2), EFSC may approve a route that passes through a protected area if the council determines that other routes outside the protected area would "have greater impacts." If the transmission line routing proposed by the applicant will pass through a protected area, the applicant should describe in detail the alternative routes it studied and provide*

analysis in the application to support a finding that routing the transmission line through the protected area would have less impacts than the alternatives.

- *Where OAR 345-022-0040(3) is applicable, ensure that the application provides evidence that the proposed line is routed 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.*
- *Ensure that each potentially impacted state scenic waterway listed in ORS 390.826 is addressed in Exhibit L and that the evidence to address the requirements of ORS 390.845 is also included. Provide an analysis of the evidence to support a finding by the Council that the requirements of the Oregon Parks and Recreation Department related to the siting of a utility facility in a scenic waterway have been met.*

3.0 ANALYSIS

3.1 Analysis Area

Pursuant to the Project Order, the analysis area for Exhibit L is "the area within the site boundary and 20 miles from the site boundary, including areas outside the state." In accordance with OAR 345-001-0010(55), the "Site Boundary" is "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." The Site Boundary for the Project includes the following related and supporting facilities in Oregon:

- Proposed Corridor: 277.2 miles of 500-kilovolt (kV) transmission line corridor, 5.0 miles of double-circuit 138/69-kV transmission line corridor, and 0.3 mile of 138-kV transmission line corridor.
- Alternate Corridor Segments: Seven alternate corridor segments consisting of approximately 134.1 miles that could replace certain segments of the Proposed Corridor. IPC has proposed these alternate corridor segments in order to allow flexibility for IPC and EFSC, as well as federal agencies, to reconcile competing resource constraints in several key locations.
- One proposed substation expansion of 3 acres; two alternate substation sites (one 3-acre substation expansion and one new 20-acre substation). IPC ultimately needs to construct and operate only one substation expansion or substation in the Boardman area.
- Eight communication station sites of less than one acre each in size; four alternate communication station sites along alternate corridor segments.
- Temporary and permanent access roads.
- Temporary multi-use areas, pulling and tensioning sites, and fly yards.

The features of the Project are fully described in Exhibit B and the Site Boundary for each Project feature is described in Exhibit C, Table C-21. The location of the Project (Site Boundary) is outlined in Exhibit C.

3.2 Methods

The initial step in assessing the potential impacts of the Project on protected areas was to identify the protected areas occurring within the 20-mile analysis area, as required by the Project Order. The protected areas were identified using existing geographic information system (GIS) data, maps, reports, and other information on the 16 categories listed in OAR 345-022-0040(1). Table L-1-1 in Attachment L-1 provides a list of all the protected areas within the

analysis area with their distance and direction to the Proposed Corridor or alternate corridor segments. Once the protected areas were identified, the next step was to evaluate and describe "significant potential impacts of the proposed facility, if any, on the protected areas including, but not limited to, potential impacts such as:

(i) Noise resulting from facility construction or operation;

(ii) Increased traffic resulting from facility construction or operation;

(iii) Water use during facility construction or operation;

(iv) Wastewater disposal resulting from facility construction or operation;

(v) Visual impacts of facility structures or plumes; and

(vi) Visual impacts from air emissions resulting from facility construction or operation, including, but not limited to, impacts on Class 1 Areas as described in OAR 340-204-00."

As discussed above, the analysis area for this Exhibit is the Site Boundary plus 20 miles. However, IPC's assessment for certain impacts was made based upon a shorter distance as discussed below for noise and visual impacts.

3.2.1 Noise Impacts

Project noise impacts are evaluated in Exhibit X, including both construction and operational noise. For Exhibit L, analysis of noise impacts to protected areas was approached differently for construction and operational noise, as explained below.

Construction Noise. Section 3.2.1 of Exhibit X provides a review of construction noise sources. Section 3.4.1.1 of Exhibit X discusses a screening-level evaluation of predicted construction noise levels, and how those would relate to receptor locations. Table X-3 in Exhibit X indicates that the noise from construction sources would attenuate (decrease) rapidly with distance from the source. For example, the composite construction noise level during erection of the support structures (the highest composite noise level among the four phases of Project construction) will be 95 A-weighted decibels (dBA) at a location 50 feet from the source and 60 dBA at a location 1,000 feet from the source. Table X-3 also shows that the composite construction noise at 1,000 feet from the source will be 51 dBA during the site access and preparation, 56 dBA during installation of structure foundations, and 52 dBA during the stringing phase. The construction noise impact discussion notes that no single receptor will be exposed to significant construction noise levels for an extended period, because work in the proximity of any single location will last no more than a few days to a week. The impact assessment for Exhibit L followed a similar approach; it considered the proximity of construction noise sources to the respective protected areas and the timing aspects of the construction noise to make conclusions regarding the significance of construction noise at each recreation area.

Operational Noise. Similarly, IPC has determined that operational noise will be limited to low level noise in locations farther than 0.5 mile from the Site Boundary. For that reason, IPC has determined that any noise impacts beyond this distance would not be significant. As shown in Exhibit X, the Project is expected to operate in compliance with the Oregon Department of Environmental Quality (ODEQ) ambient antidegradation standard at the majority of noise sensitive receptors within 0.5 mile of the Site Boundary. There are no specific noise criteria prescribed by the ODEQ to assess compliance at protected areas but, for the reasons described in detail in Exhibit X, it is reasonable to assume that any significant noise impacts at protected areas would be captured within 0.5 mile from the Site Boundary. As a result, the analyses of potential noise resulting from operations were focused on the area between 0 and 0.5 mile around the Site Boundary. In total, six (6) protected areas were identified within the 0 to

0.5 mile of the Proposed Corridor and alternate corridor segments. Operational noise was evaluated at these protected areas within the 0- to 0.5-mile area. Temporary construction noise was evaluated at the portion of each protected area that is closest to the Proposed Corridor or alternate corridor segment.

3.2.2 Traffic, Water Use, Wastewater, and Visual Impact from Plumes

In order to evaluate potential impacts on protected areas from Project traffic, water, wastewater disposal, and visual impacts from plumes, as required by Exhibit L, IPC reviewed the Project description and Exhibits U, O, and V to reach the conclusions set forth in the impacts analysis below in Section 3.3.3.3.

3.2.3 Visual Resources

Figure L-1 illustrates that the potential visual effects of a lattice 500-kV transmission line at linear distances of 5 miles and greater will not be significant. As a result, the visual impact assessment focused on the 0 to 5.0-mile area around the Site Boundary. Table L-1-2 in Attachment L-1 provides the factors considered and visual assessment results for the protected areas within 5 miles of the proposed and alternate corridor centerlines. Figures L-2-1 through L-2-4 in Attachment L-2 show the locations of the protected areas in the analysis area. In total, 27 protected areas were identified within 0 to 5.0 miles of the Proposed Corridor and alternate corridor segments that were evaluated for potential visual impacts as described below and in Exhibit R and its Attachment R-3. The potential for visual impacts is based on the analysis of topographic maps, aerial and ground-level photography, viewshed maps, available literature on the protected areas, and/or field observations.

3.2.4 Other Potential Impacts

In order to evaluate other potential impacts on protected areas from the Project, as required by Exhibit L, IPC reviewed the Project description and other Exhibits to reach the conclusions set forth in the impacts analysis below in Section 3.3.3.5.

Figure L-1. Lattice Structure Potential Visibility Comparison

3.3 Information Required by OAR 345-021-0010(1)(L)

3.3.1 List of Protected Areas

OAR 345-021-0010(1)(L)(A)

A list of the protected areas within the analysis area showing the distance and direction from the proposed facility and the basis for protection by reference to a specific subsection under OAR 345-022-0040(1).

Within the analysis area there are 82 protected areas (75 in Oregon, 2 in Washington, and 5 in Idaho) as listed in Attachment L-1, Table L-1-1.This table includes the distance and direction from the Proposed Corridor or alternate corridor segments and the basis for protection by reference to a specific subsection under OAR 345-022-0040(1). Of the total number of protected areas, 2 are crossed by the Proposed Corridor and alternate corridor segments, 27 are within 5 miles, and 6 are within 0.5 mile of the Proposed Corridor and alternate corridor segments (see Table L-1).

Table L-1. Summary of Protected Areas by Category

Protected Area Categories	In Analysis Area	Crossed	Within [1] 0.5 Mile	Within [2] 5.0 Miles
National Parks	0	0	0	0
National Monuments	0	0	0	0
Wilderness Areas	3	0	0	0
National and State Wildlife Refuges	5	0	0	3
National Coordination Areas	0	0	0	0
National and State Fish Hatcheries	2	0	0	0
National Recreation and Scenic Areas	0	0	0	0
State Parks and Waysides	12	1	2	7
State Natural Heritage Areas[3]	1	0	0	1
State Estuarine Sanctuaries	0	0	0	0
Scenic Waterways, Wild and Scenic Rivers and Waterways, and Rivers Listed as Potential for Designation	15	0	0	2
Experimental Areas	1	0	0	0
Agricultural Experimental Stations	4	0	0	0
Research Forests	0	0	0	0
BLM ACECs, Outstanding Natural Areas and Research Natural Areas[4]	29	1	4	12
State Wildlife Areas and Management Areas[5]	10	0	0	2
TOTAL	**82**	**2**	**6**	**27**

[1] It was determined that there will be no significant noise impact beyond 0.5 mile from the Proposed Corridor and alternate corridor segments (see Exhibit X).
[2] Based on review of Figure L-1, IPC does not expect significant adverse visual impact for those protected areas 5 miles or more from the proposed and alternate corridor centerlines).
[3] This category list included many protected areas that were already covered under other Protected Area Categories (i.e., H, O, P) and were not duplicated, which explains why there is only one area listed in this category. For full list of State Natural Heritage Areas, see website: http://orbic.pdx.edu/nap-register.html
[4] The Oregon Trail Area of Critical Environmental Concern (ACEC) includes 7 parcels, each of which was individually named and therefore analyzed as separate parcels within Exhibit L.
[5] The Elkhorn Wildlife Area includes 4 tracts that were individually named and therefore analyzed as separate tracts within Exhibit L.

3.3.2 Map Showing Protected Area Locations

OAR 345-021-0010(1)(L)(B)

A map showing the location of the proposed facility in relation to the protected areas listed in OAR 345-022-0040 located within the analysis area.

Attachment L-2 includes maps showing the location of the Proposed Corridor and alternate corridor segments relative to the protected areas.

3.3.3 Description of the Significant Potential Impacts

OAR 345-021-0010(1)(L)(C)

A description of significant potential impacts of the proposed facility, if any, on the protected areas including, but not limited to, potential impacts such as:

(i) Noise resulting from facility construction or operation;
(ii) Increased traffic resulting from facility construction or operation;
(iii) Water use during facility construction or operation;
(iv) Wastewater disposal resulting from facility construction or operation;
(v) Visual impacts of facility structures or plumes.
(vi) Visual impacts from air emissions resulting from facility construction or operation, including, but not limited to, impacts on Class 1 Areas as described in OAR 340-204-0050.

Within the analysis area there are 82 protected areas (Attachment L-1). Table L-1-1 summarizes the protected areas in the analysis area by category and shows how many are crossed by the proposed and alternate corridors, how many are within 5.0 miles (significant visual impact threshold), and how many are within 0.5 mile (operational noise impact threshold). Construction noise was evaluated at the closest area of each protected area to the Proposed Corridor and/or alternate corridors within the 20-mile analysis area.

As discussed above, while EFSC's rules generally prohibit siting of transmission lines through protected areas, under OAR 345-022-0040(2), EFSC may approve a route that passes through a protected area if the Council determines that other routes outside the protected area would "have greater impacts." Because the Project (including alternate corridor segments) crosses two protected areas, subsection 3.3.3.1 will first demonstrate that alternate corridors considered would have greater impacts. The subsequent subsections will then provide IPC's conclusions with respect to the specific types of potential impacts on all protected areas within the Analysis Area.

3.3.3.1 Protected Areas Crossed

The Proposed Corridor crosses one protected area, the Blue Mountain Forest State Scenic Corridor (Blue Mountain Corridor) in Union County. The Malheur S Alternate Corridor Segment crosses one protected area, the Owyhee River Below the Dam ACEC. The Proposed Corridor also crosses the Owyhee River at a location downstream of Owyhee Reservoir in Malheur County; however, this river segment does not meet the protected area definition.[2]

[2] The Owyhee River is crossed by the Proposed Corridor at approximately milepost (MP) 261.6. In compliance with the National Wild and Scenic Rivers Act and the Bureau of Land Management's (BLM's) land use planning requirements, the BLM conducted eligibility and suitability evaluations of free-flowing waterways (BLM 2001). This analysis determined that 13.5 miles of the Owyhee River downstream of the Owyhee Reservoir, which includes the Proposed Corridor crossing, are eligible and administratively suitable for inclusion in the National Wild and Scenic Rivers System (NWSRS). BLM's recommended tentative classification of the Owyhee River segment is "recreational." Until Congress takes action on the BLM's recommendations, BLM is required to manage the administratively suitable waterway corridors (half mile wide, quarter mile either side of the river on federal lands) in a manner to protect and, to the extent practicable, enhance their identified outstandingly remarkable values in accordance with managerial direction for the

Blue Mountain Forest State Scenic Corridor

The Blue Mountain Corridor, which is included in the Oregon Parks and Recreation Department (OPRD) list of state parks, comprises six parcels along Interstate 84 (I-84) from the vicinity of Deadman Pass to Railroad Canyon in the Wallowa-Whitman National Forest (NF).The southernmost parcel of the Blue Mountain Corridor is crossed at approximately milepost (MP) 102.5 to 102.7 (see Figure L-2) by the Proposed Corridor. It is a short crossing (about 1,000 feet) that occurs as the proposed transmission line proceeds through the only available designated utility corridor through the Wallowa-Whitman NF. There are many constraints in this utility corridor including other transmission lines, I-84, and cultural and recreation resources. Although it appeared that the Proposed Corridor could easily span the southernmost parcel of the Blue Mountain Corridor, resulting in modest impacts, IPC identified an alternate route avoiding this protected area as required by OAR 345-022-0040(2).

As shown in Figure L-2, the Blue Mountain Corridor alternate corridor segment is 3.2 miles long and is located within the Wallowa-Whitman NF utility corridor. The alternate departs from the Proposed Corridor at MP 102.1 and proceeds easterly, crossing I-84 at MP 0.9 before angling southeasterly at MP 1.0 to pass along the eastern edge of the southernmost parcel of the Blue Mountain Corridor. At approximately MP 1.7, the alternate angles farther to the south, crosses back over I-84, and rejoins with the Proposed Corridor at MP 105.1.

A subsequent engineering evaluation confirmed the feasibility of a transmission line along the Proposed Corridor to span the parcel of the Blue Mountain Corridor and Old Emigrant Hill Scenic Frontage Road located within the park. The ability of the proposed 500-kV transmission line to span the Blue Mountain Corridor parcel will minimize construction and maintenance impacts by eliminating the need for access roads and tower pads on park lands. In addition, existing vegetation will be maintained to screen many of the potential views from Old Emigrant Hill Scenic Frontage Road. However, as motorists traveling on this road approach the transmission crossing, they will view the conductors spanning the wayside.

In contrast to the Proposed Corridor, a previously considered Blue Mountain Corridor alternate corridor segment would have resulted in two crossings of I-84 (north and south of the Glover Interchange) within approximately a one-mile stretch along the interstate. The previously considered alternate (at least one structure and a set of conductors) would also have been visible from viewpoints within the parcel of the Blue Mountain Corridor. As a result, the visual impact of the alternate on I-84 and the southernmost parcel of the Blue Mountain Corridor would have been greater than that of the current Proposed Corridor.

The potential impacts of the Blue Mountain Corridor alternate corridor segment were then discussed with the Oregon Department of Energy (ODOE) and the OPRD. OPRD reported that a crossing accomplished in a “discreet way is better than crossing the interstate twice from an aesthetic perspective” (OPRD 2011). Subsequently OPRD reported that “all attempts should be made to insure future generations can continue to enjoy this unique area” (OPRD 2012). IPC believes that the previously considered alternative would result in more impacts than the current Proposed Corridor. For this reason, the Blue Mountain Corridor alternate corridor segment was eliminated from further study.

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waterways’ respective interim tentative classification. However, BLM’s administratively suitable designation is not a “Listing as Potential for Designation” under OAR 345-022-0040(1)(k) and therefore is not a protected area for EFSC.

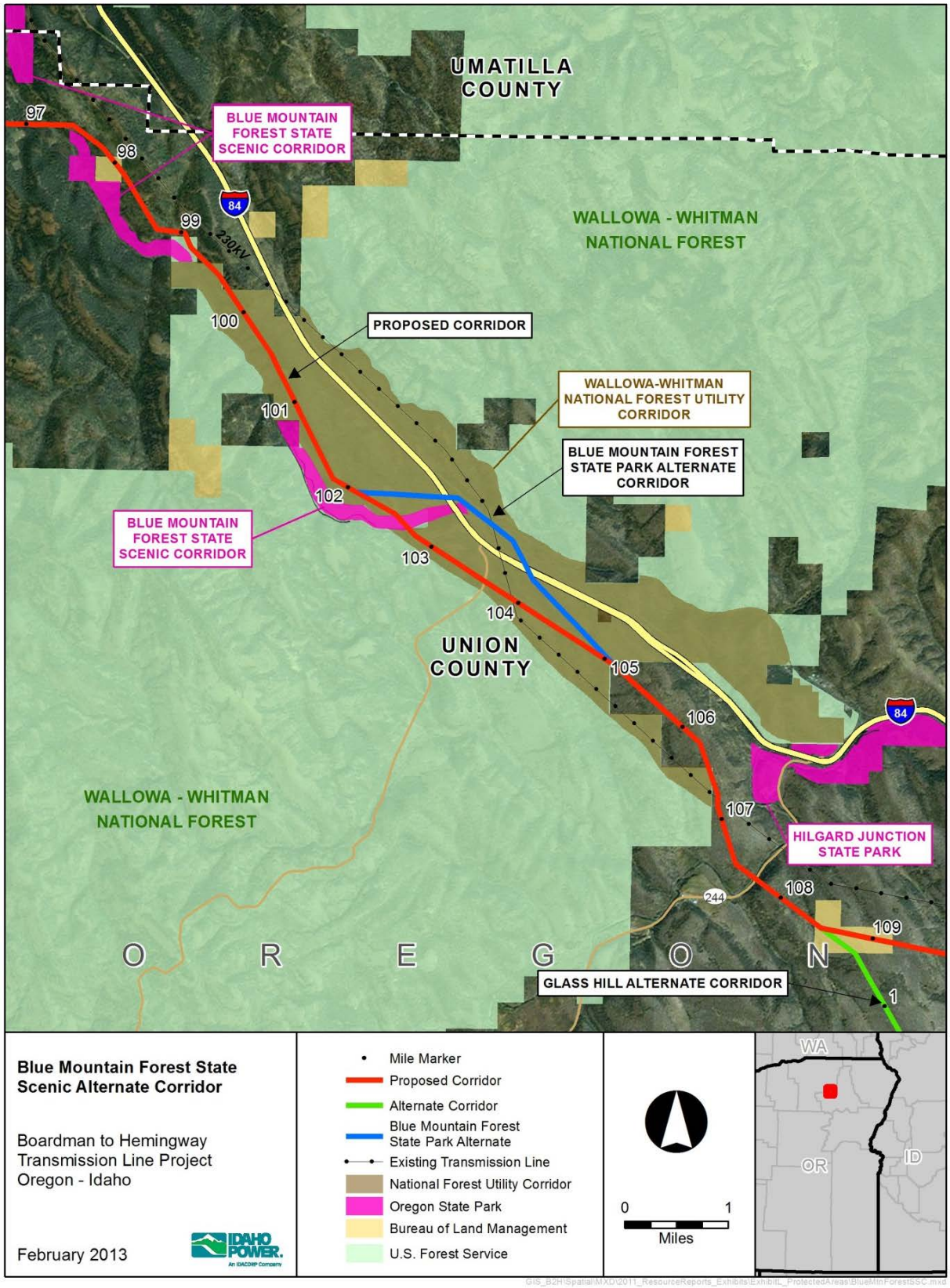

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Figure L-2. Blue Mountain Forest State Scenic Area

Owyhee River Below the Dam ACEC

The Owyhee River Below the Dam ACEC comprises 11,239 acres on both sides of the Owyhee River north of the Owyhee Dam in Malheur County, Oregon. This ACEC was designated for "high scenic values of diverse landscape elements in a substantially natural setting, a special status plant species (Mulford's milk vetch), 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" (BLM 2001).

The Malheur S Alternate crosses approximately 1.4 miles of this ACEC and the Owyhee River about 4.5 miles north of the Owyhee Dam. The majority of this ACEC occupies steep topography and is relatively inaccessible. Most viewers will be those individuals traveling on Owyhee Lake Road. The transmission crossing of the river will be visible from both Owyhee Lake Road and Haystack Rock Road in the ACEC. It appears that most viewers will be in the narrow river valley where there will be limited visibility of the alternate corridor segment except when in proximity to the river crossing. Overall, potential visual impact relative to the ACEC will be moderate to high.

As required by OAR 345-022-0040(2), IPC considered four alternate corridor crossings in proximity to this protected area (see Figure L-3). All of these corridors are located north and east of the Owyhee Dam due to the approximately 30 miles of protected areas that span south and west from the Dam including the Owyhee State Park, Owyhee Views ACEC, and Honeycombs Research Natural Area. Therefore, the most reasonable corridor is northeast of these protected areas, where the Proposed Corridor is located. Table L-2 presents potential environmental impacts associated with the proposed and alternate corridor segments illustrating that the Proposed Corridor avoids the ACEC and that the Malheur S Alternate is the preferred alternate corridor location considered because it would result in a shorter crossing of this ACEC and VRM Class II–designated lands.

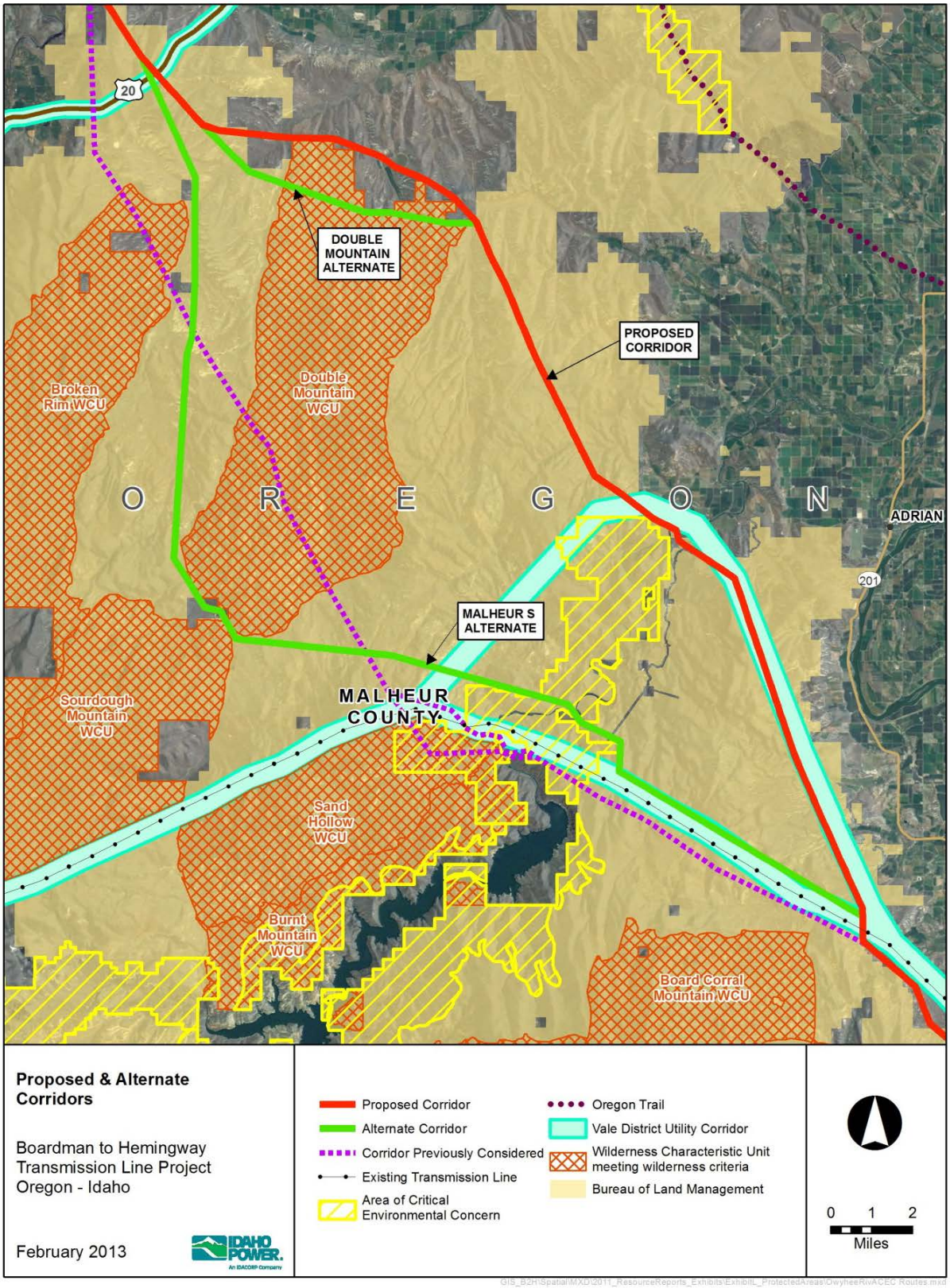

Figure L-3. Owyhee Below the Dam ACEC Proposed and Alternate Corridors Considered

Table L-2. Comparison of Proposed and Alternate Corridor Segments in the Vicinity of the Owyhee River

Constraint	2010 POD Owyhee River Below Dam Alternative (miles)	2010 POD Proposed Route/Malheur A Alternative (miles)	2012 Malheur S Alternate Corridor Segment (miles)	2012 Proposed Corridor (miles)
Owyhee River Below the Dam ACEC/SRMA	2.9	2.4	1.3	0
Vale District Utility Corridor	0.6	3.3	0	1.6
BLM Visual Resource Management Class II	2.8	2.3	1.5	0.7
Wilderness Characteristic Unit Meeting Wilderness Criteria	2.7	0	0	0
Suitable Wild and Scenic River: Recreation	0.5	1.1	1.0	0.9
West-wide Energy Corridor	0.7	0.8	0	0

ACEC – Area of Critical Environmental Concern
POD – Plan of Development
SRMA – Special Recreation Management Area

3.3.3.2 Noise Impacts

OAR 345-021-0010(1)(L)(C)(i)

(i) Noise resulting from facility construction or operation;

Construction noise (along with aircraft operating noise and noise from timber harvest activities) is exempt from state noise standards (OAR 340-035-0035(5)); however, ODOE retains the right to analyze impacts due to construction noise under OAR 345-021-0010. Exhibit X provides a discussion of the predicted sound levels resulting from construction and operation of the Project as required by OAR 340-035-0035, *Noise Control Regulations for Industry and Commerce*, which contains the noise standards and regulations for industrial and commercial facilities in the State of Oregon. Please refer to Exhibit X for further details pertaining to this acoustic modeling and analysis methodology.

Generally the existing acoustic environment within protected areas is variable and includes both natural and human induced sounds. Natural sound includes sound from wind interacting with vegetation, rushing water in streams and rivers, and wildlife. Human-induced sounds include sources such as roadway traffic noise, aircraft over-flights, and existing transmission line corona noise in some areas.

As discussed in Section 3.2.1, potential noise impacts generated during Project construction were evaluated at protected areas within a 0.5-mile analysis area. As stated in Exhibit X, Section 3.4.1.1, the calculation methodology for construction noise incorporates the types of construction equipment, the number of each type and a usage factor for each piece of equipment, by construction phase as well as typical noise levels associated with each equipment type. The analysis of construction noise at protected areas is based on maximum construction noise levels in order to evaluate the worst case scenario. Maximum construction noise levels are associated with the loudest construction phase identified in Table X-3 of Exhibit X (Construction Phase 3, Erection of Support Structures), where the calculation of composite

noise levels assumed the use of heavy-lift helicopters, which will not be used in all construction segments. Noise levels at the respective protected areas were determined using a simple attenuation formula that does not account for effects of terrain or vegetation. This analysis therefore is intentionally conservative, and may overstate actual construction noise levels in some areas. Table L-1-1 in Attachment L-1 lists all protected areas within 20 miles of the proposed and alternate corridor centerlines and the estimated construction noise levels at the portion of each protected area closest to either the Proposed Corridor or alternate corridor segment.

As shown in Attachment L-1, the construction noise created by the Project will be quite significant. However, in determining overall impacts, IPC also considers the fact that construction will last no more than a few weeks in any single area along the corridor and, during those weeks, the construction noise will be intermittent and confined to the work hours. In addition, IPC is considering a number of noise mitigation measures to minimize Project construction noise levels as presented in Section 3.4.3 of Exhibit X. Given these facts, IPC has concluded that the impacts of construction noise are not considered significant.

Sound levels at protected areas generated by the operation of the Project were also evaluated. Discussed below are potential operational noise impacts to protected areas crossed and within 0.5 mile of the Proposed Corridor and alternate corridor transmission line portion of the Site Boundary. As discussed in Exhibit X, any potentially significant sound produced by the Project during operation will be limited to the corona noise that occurs solely during foul weather conditions. This fact is central to IPC's consideration of noise impacts on protected areas and to its conclusions discussed below.

- *Blue Mountain Corridor*—The Blue Mountain Corridor comprises six parcels located along the Old Oregon Trail Highway between Deadman's Pass and Spring Creek. The southern three parcels are located within 0.5 mile of the Proposed Corridor, with the Proposed Corridor actually crossing the southernmost parcel between MPs 101.5 and 101.7. The Blue Mountain Corridor is experienced as a driving route.

  Information about construction noise sources and levels indicates that construction noise will likely be audible at times at locations along the entire length of the Blue Mountain Corridor within the analysis area. It is unlikely that many Blue Mountain Corridor users will actually be exposed to construction noise, however. The predominant means for visitors to "use" the Blue Mountain Corridor is to travel through the corridor in a motor vehicle. Because the Blue Mountain Corridor parcels within the analysis area do not include developed recreation facilities, it is possible or even likely that most visitors do not leave their vehicles during their trip through the corridor, and therefore have limited exposure to external noise sources. In addition, any Blue Mountain Corridor visitors who might hear Project construction noise would experience it on a transitory basis.

  The modeled sound contours for Project operational noise indicate that maximum sound levels (i.e., under foul weather conditions) within the Blue Mountain Corridor will range from 16 dBA to 61 dBA. Sound levels in the lower part of that range represent locations where operational noise from the Project will be below the ambient sound level and not detectable.[3] Sound levels in the higher part of that range represent locations quite close to the Project, such as in the immediate vicinity of the location where the Project crosses the Blue Mountain Corridor at MP 102.6. Operational noise from the Project in the 60 dBA range will be detectable to a person in the immediate vicinity and outside of a

[3] Ambient sound levels specific to the protected areas included in the assessment have not been measured. As documented in Exhibit X, late-night baseline sound levels monitored for the Project ranged from 25 dBA to 63 dBA. ODOE has suggested that 20 dBA should be used as a conservative assumed ambient sound level.

vehicle. While these results indicate that operational noise will be audible at selected locations along the Blue Mountain Corridor, the specific nature of use for this resource suggests that very few or no visitors will actually experience operational noise and that any exposures will be brief. In addition, the section of the Blue Mountain Corridor experiencing the highest sound levels is also near I-84 so it would likely experience higher levels of ambient noise, which may mask some noise from the Project.

- *Hilgard Junction State Park*—The Proposed Corridor is within 0.3 mile of Hilgard Junction State Park, located 8 miles west of La Grande at the intersection of I-84 and Highway 244 near the Grande Ronde River. Project construction noise might be audible at times; given the separation distance and the sound-masking effects of I-84, Oregon Highway (OR) 244, and the Grande Ronde River, the sound levels will be attenuated considerably and will not be intrusive. For similar reasons, operational noise will not be audible. The assessment of Project operational noise indicates that modeled sound contours at the park ranged from 16 dBA to 26 dBA. For reference, a sound level of 35 dBA is characteristic of a typical wilderness area, while 25 dBA is typical of wilderness with no wind or animal activity (see Exhibit X, Table X-10). Given that the Hilgard Junction State Park is located between the river and OR 244 and is nearly adjacent to I-84, it is evident that the typical sound level at the park will be substantially above 25 dBA, and that operational noise from the Project will not be detectable to park visitors.

  The Hilgard Junction State Park is also in the analysis area for the Glass Hill Alternate Corridor Segment. The facilities in Hilgard Junction State Park are located approximately 1.7 miles to the north of the point from where the Glass Hill Alternate Corridor Segment leaves the Proposed Corridor. Construction noise associated with the Glass Hill Alternate might be audible at times, but the sound levels will be attenuated considerably and will not be intrusive. Given the distance from the Glass Hill Alternate, operational noise from the Project will not be audible at Hilgard Junction State Park.

- *Oregon Trail ACEC – National Historic Oregon Trail Interpretive Center (NHOTIC) Parcel, Powell Creek Parcel, and Oregon Straw Ranch Parcels*—The Proposed Corridor is in the vicinity of three parcels of the Oregon Trail ACEC at distances of 0.4, 0.5, and 0.1 mile. Construction noise might be audible at times at the NHOTIC Parcel, but the sound levels will be attenuated considerably and will not be intrusive. The modeled sound contours for the NHOTIC Parcel ranged from 16 dBA to 31 dBA. Based on the size and configuration of the NHOTIC Parcel, the 31 dBA maximum sound level will be applicable to the easternmost part of the NHOTIC Parcel, while sound levels around the Interpretive Center building will be in the middle of the range. Given the level of human activity present at and near the NHOTIC Parcel, daytime ambient sound levels will exceed the 35 dBA level typically found in a wilderness (see Exhibit X, Table X-10). The potential for operational noise from the Project to be audible will be limited to the easternmost part of the NHOTIC Parcel, which does not include developed facilities on the site or any portion of the interpretive trail system (BLM 2012). Consequently, it is highly unlikely that visitors to the NHOTIC Parcel will be in a location where they were close enough to detect operational noise from the Project.

  Received operational sound levels within the Powell Creek Parcel during foul weather events are expected to range from 20 dBA to 30 dBA. Within the Straw Ranch Parcel, received sound levels during foul weather events are expected to range from below 20 dBA to 45 dBA. A 45 dBA sound level is characteristic of a quiet residential area with no activity, and the subjective impression of sound levels between 40 and 60 dBA is characterized as “quiet” (Exhibit X, Table X-10).

- *Oregon Trail ACEC – NHOTIC Parcel*— The Flagstaff Alternate Corridor Segment is separated from the NHOTIC Parcel by approximately 0.2 mile. Construction noise will likely be audible at times in the western part of the parcel and may be audible at the Interpretive Center, but the sound levels will be attenuated and will not be intrusive. The modeled foul-weather sound contours for the NHOTIC Parcel with the Flagstaff Alternate ranged from 16 dBA to 36 dBA. Based on the size and configuration of the NHOTIC Parcel, the 36 dBA maximum sound level will be applicable to the westernmost part of the NHOTIC Parcel, while sound levels around the Interpretive Center building will be in the middle of the range. Given the level of human activity present at and near the NHOTIC Parcel (in particular, OR 86 runs along the southern edge of the NHOTIC Parcel and the Baker Municipal Airport is located approximately 3 miles to the northwest) daytime ambient sound levels will no doubt exceed the 35 dBA level typically found in a wilderness. Overall, it is possible that operational noise from the Project will be detectable within the extreme western part of the NHOTIC parcel. The potential for audible operational noise from the Project will be limited to the westernmost part of the interpretive trail system, and probably to just the western part of the Eagle Valley Railroad Grade Loop Trail (BLM 2012). With-Project sound levels at the Interpretive Center itself, the adjacent outdoor displays, Panorama Point, and the Oregon Trail Ruts Loop Trail will be in the lower part of the modeled range. Consequently, it is likely that at most a small segment of the visitors to the NHOTIC Parcel will be in a location close enough for them to detect operational noise from the Project. If operational noise was audible to those visitors, the sound levels will be in a range characterized as “faint” (Exhibit X, Table X-10).
- *Owyhee River Below the Dam ACEC*—The Proposed Corridor passes along the northeast side of Deer Butte within 500 feet of this ACEC. Construction noise will be audible at times within the eastern part of the ACEC, including at the Lower Owyhee Canyon Watchable Wildlife Area interpretive site and the Snively Hot Springs site. Undeveloped sites along the river that are used for dispersed recreation are far enough upstream that construction noise will not likely be noticeable at these locations. The peak construction noise will be approximately 60 dBA at a point 1,000 feet from the source, for example, and will be less than 60 dBA more than 2,000 feet away at the interpretive site. A 60 dBA sound level is characteristic of the sound from a large store air conditioning unit at a distance of 20 feet, and the subjective impression of sound levels between 40 and 60 dBA is characterized as “quiet” (Exhibit X, Table X-10).

  The modeled sound contours for the Project indicate that foul-weather sound levels within the ACEC will range from 16 dBA to 46 dBA. Sound levels in the higher part of that range represent locations quite close to the Project, such as in the extreme northeastern end of the ACEC, where the ACEC boundary is essentially adjacent to Proposed Corridor near MP 261. A 45 dBA sound level is characteristic of a quiet residential area with no activity, and the subjective impression of sound levels between 40 and 60 dBA is characterized as “quiet” (Exhibit X, Table X-10). Among the commonly used sites within the ACEC, the Lower Owyhee Watchable Wildlife interpretive site is the closest to the Proposed Corridor, at a distance of approximately 0.4 mile; at this distance, the with-Project sound level will be attenuated to a level well below 46 dBA. As noted above, sound levels between 40 and 60 dBA are considered quiet (40 dBA, for example, is the typical sound level of a bedroom or quiet living room or bird calls, and is considered “faint”), and are not likely to be a source of annoyance to visitors present at the interpretive site during foul weather. Therefore, it is likely that very few visitors will be exposed to operational noise from the Project.

- *Owyhee River Below the Dam ACEC*—The Malheur S Alternate crosses the ACEC north of the Owyhee Dam. The portion of the ACEC within the 0.5-mile analysis area consists of 1,183 acres. Construction noise will be audible within the ACEC in the vicinity of the river crossing at times when construction activity is occurring nearby. Construction activity in any given location will occur for up to about a week at a time during each phase of the construction process. The Malheur S Alternate is more than 5 miles south of the existing developed recreation sites in the ACEC (the Lower Owyhee Canyon Watchable Wildlife Area interpretive site and the Snively Hot Springs site) and construction noise will not be noticeable at these sites. The river crossing location is near one undeveloped site along the river where private land is used for dispersed recreation (BOR 1994), and construction noise will likely be noticeable at this location. The modeled sound contours for the Project indicate that foul-weather operational noise within the ACEC will range from 16 dBA to 61 dBA (as discussed previously for the Proposed Corridor). Sound levels in the higher part of that range represent locations quite close to the Project, such as in the immediate vicinity of the crossing location near milepost 24. Based on observed use patterns for the ACEC, this will primarily apply to dispersed recreational visitors near the river and the corridor crossing location. A 60 dBA sound level is characteristic of the sound from a large store air conditioning unit at a distance of 20 feet, and the subjective impression of sound levels from 60 to 70 dBA is characterized as "moderate," while sound levels between 40 and 60 dBA (which will apply to areas beyond the immediate crossing location) are characterized as "quiet" (Exhibit X, Table X-10). As noted above, the two most commonly used sites within the ACEC are both approximately 5 miles distant and will be beyond the range of Project operational noise.

In addition, Table L-1-1 in Attachment L-1 provides a summary of operational noise levels at protected areas expected to experience some sound from the Project. Operational sound levels and the frequency with which they are anticipated to occur are described in detail in Exhibit X. For example, meteorological conditions conducive to the production of operational sound levels from the Project are anticipated to be infrequent across the Project area which includes the above-mentioned protected areas. Therefore, according to historic meteorological data analyzed in Exhibit X, operational sound from the Project is predicted to occur 1.3 percent of the time on an annual basis. Both construction and operational noise impacts are anticipated to be less than significant. See Exhibit X, Section 3.4.3 for measures to reduce noise levels or impacts or address complaints related to Project construction and operation.

3.3.3.3 Traffic, Water Use, Wastewater, and Visual Impact from Plumes and Air Emissions

OAR 345-021-0010(1)(L)(C)(ii-vi) as it pertains to plumes

(ii) Increased traffic resulting from facility construction or operation;
(iii) Water use during facility construction or operation;
(iv) Wastewater disposal resulting from facility construction or operation;
(v) Visual impacts of facility structures or plumes;
(vi) Visual impacts from air emissions resulting from facility construction or operation, including, but not limited to, impacts on Class 1 Areas as described in OAR 340-204-0050.

Increased traffic, water use, wastewater disposal, and visual impacts from air emissions will not result in significant impacts due to the construction and operation of the Project.

Traffic

As described in Exhibit U, Attachment U-2, no increased traffic resulting from facility operation is anticipated because Project operations will not involve significant vehicle traffic. IPC has further concluded that additional Project traffic consisting of construction trucks and construction workers commuting to their work site is not anticipated to cause notable congestion or otherwise impact any of the protected areas listed in Table L-1-1 in Attachment L-1. As explained in Exhibit U, traffic during construction will be dispersed and not concentrated near any specific location for any long period of time. Additionally, with the exception of one multi-use area associated with the Willow Creek Alternate Corridor Segment in the vicinity of the Farewell Bend State Recreation Area, no Project features (including multi-use areas, fly yards, and access roads) are located near any listed protected area to cause a significant increase in traffic during facility construction.[4]

Existing roads that the Project will use have low volume-to-capacity (V/C) ratios, or low levels of congestion. Factoring in the estimated short-term traffic generated during construction activities, none of the potential Project hauling or commuting routes exceeds a maximum V/C ratio established by the Oregon Department of Transportation (Exhibit U, Attachment U-2, Table 8, Evaluation of Project Impacts on Volume-to-Capacity Ratios for Roads Potentially Used during Project Construction). Detailed mitigation measures listed in Attachment U-2 (including Section 4.2.1, Traffic Control, Access, and Safety Measures) will further minimize any short-term traffic impacts on protected areas.

Water Use

Exhibit O demonstrates that the Project will not impact water use because water will be provided from adequate municipal supplies (not protected areas). Water will be used primarily for dust control and concrete mixing. Water will be transported to the Project via water trucks and used only as needed. IPC will minimize water use by implementing appropriate best management practices (BMPs) to reduce water use to the greatest extent feasible.

Wastewater

Exhibit V demonstrates that the Project will not impact wastewater facilities. Construction of the Project will generate only minimal amounts of wastewater. Operation of the Project will not generate any wastewater, and no on-site sewage treatment system will be needed for the construction or operation of the Project.

Visual Impact of Plumes and Air Emissions

The Project will not generate any air emissions or plumes. During construction, fugitive dust may be generated but it will be localized, temporary, and easily mitigated by applying water to areas of surface disturbance from construction or operations of the Project.

There is only one Class I Area in the analysis area,[5] the Eagle Cap Wilderness area, which lies approximately 13 miles from the Proposed Corridor and is within the 20-mile analysis area identified for protected areas. The Eagle Cap Wilderness area will have no visual impact

[4] If IPC selects the multi-use area near Farewell Bend State Recreation Area for development, Project construction activity, primarily traffic associated with the multi-use area, could cause brief, intermittent delays for visitors traveling to Farewell Bend State Recreation Area.

[5] The 1977 Clean Air Act Amendments set forth federally designated Class 1 areas, which include national parks greater than 6,000 acres, wilderness areas and national memorial parks greater than 5,000 acres, and international parks that existed in 1977.

because the protected area is located greater than 5 miles from the Project, which is the threshold for potential significant visual impact.

3.3.3.4 Visual Impacts from Facility Structures

OAR 345-021-0010(1)(l)(C)(v)

Visual impacts of facility structures or plumes. For the portions of the Proposed Corridor and alternate corridor segments that cross lands managed by the Bureau of Land Management (BLM) and U.S. Department of Agriculture, Forest Service (USFS), the assessment of potential visual impacts used the visual assessment methodologies developed by these two federal agencies. On private lands the concepts and tools from the BLM Visual Resource Management (VRM) system were used to evaluate visual impacts on private lands.

The major concepts of the USFS Visual Quality Objective (VQO)/Scenery Management System (SMS) and the BLM VRM system methodologies involve 1) establishing an understanding of the visual character and qualities of the existing landscape environment in the Project area, 2) determining areas from which the proposed Project will be visible and estimating the visual expectations and response of the viewer's experiencing changes to the Project area, and 3) identifying visual contrast resulting from changes as they affect the existing landscape character and qualities in the Project area. These concepts are described in detail in Exhibit R and Attachment R-3. Based on review of Figure L-1, IPC does not expect significant adverse visual impact for those protected areas 5 miles or more from the proposed and alternate corridor centerlines.

The visual impact levels determined for the 27 protected areas within 5.0 miles of the proposed and alternate corridor centerlines are presented in Attachment L-1, Table L-1-1. The visual impacts are rated based on the methodology described in Exhibit R and summarized in Attachment L-1, Table L-1-2 using the terms listed below:

- Low – Minor adverse change to the existing visual resource, with low viewer response to change in the visual environment; Not Significant
- Low to Moderate – Minor to moderate adverse change to the existing visual resource, with low to moderate or moderate viewer response to change in the visual environment; Not Significant
- Moderate – Moderate adverse change to the visual resource with moderate viewer response; Adverse but Not Significant
- Moderate to High – Moderate adverse visual resource change with high viewer response or high adverse visual resource change with moderate viewer response; Adverse and Potentially Significant
- High – A high level of adverse change to the resource or a high level of viewer response to visual change such that without effective mitigation or project redesign significant thresholds would be exceeded; Significant.

Based on the methodology applied above, 25 of the protected areas within 5.0 miles of the Proposed Corridor and alternate corridor segments will have visual impacts ranging from none (not visible) to moderate (see Attachment L-1, Table L-1-1). The Proposed Corridor and the Malheur S Alternate will have a moderate-high (and potentially significant) visual impact to the Owyhee River Below the Dam ACEC and require mitigation to reduce impacts to less than significant. Also, the Proposed Corridor and the Flagstaff Alternate will have a moderate-high (and potentially significant) visual impact to the Oregon Trail ACEC – NHOTIC parcel and require mitigation to reduce impacts to less than significant.

Owyhee River Below the Dam ACEC

Proposed Corridor – The Proposed Corridor passes along the northeast side of Deer Butte within 500 feet of this ACEC (Figure L-4). The visual assessment contained in Exhibit R determined that the Proposed Corridor transmission line will be highly visible from Owyhee Lake Road for about 1 mile proceeding west to east at the eastern end of this ACEC. It will also be visible from the Owyhee Watchable Wildlife Area located about 0.4 mile west of the crossing. The view looking east will include the skylined crossing structure on the north side of the road along with the existing siphon. A simulated view showing the transmission line is contained in Exhibit R, Attachment R-4, Figure R-4-42. This analysis determined that the visual impact will be moderate to high and require mitigation to reduce potential impacts to less than significant.

Malheur S Alternate – The Malheur S Alternate crosses the Owyhee River Below the Dam ACEC approximately 4.5 miles north of the Owyhee Dam. The relevant and important values for which this ACEC was designated include high scenic values of diverse landscape elements in a substantially natural setting, a special status plant species (i.e., the Mulford's milk vetch), 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.

Potential viewers will be primarily recreational viewers within Owyhee Canyon, and are presumed to have a high level of sensitivity to visual change. As stated in Exhibit R, 500-kV transmission facilities will be moderate to highly visible to travelers, campers, hunters, and fishermen in the canyon. Consequently, the overall viewer response will be moderate to high based on the moderate to high visual resource change and low number of users, high sensitivity, and high contrast levels. The incremental visual impacts will be moderate to high in proximity to the crossing; however, this is only a small section of this approximately 14-mile river corridor and as a result the overall visual impact will be less than significant.

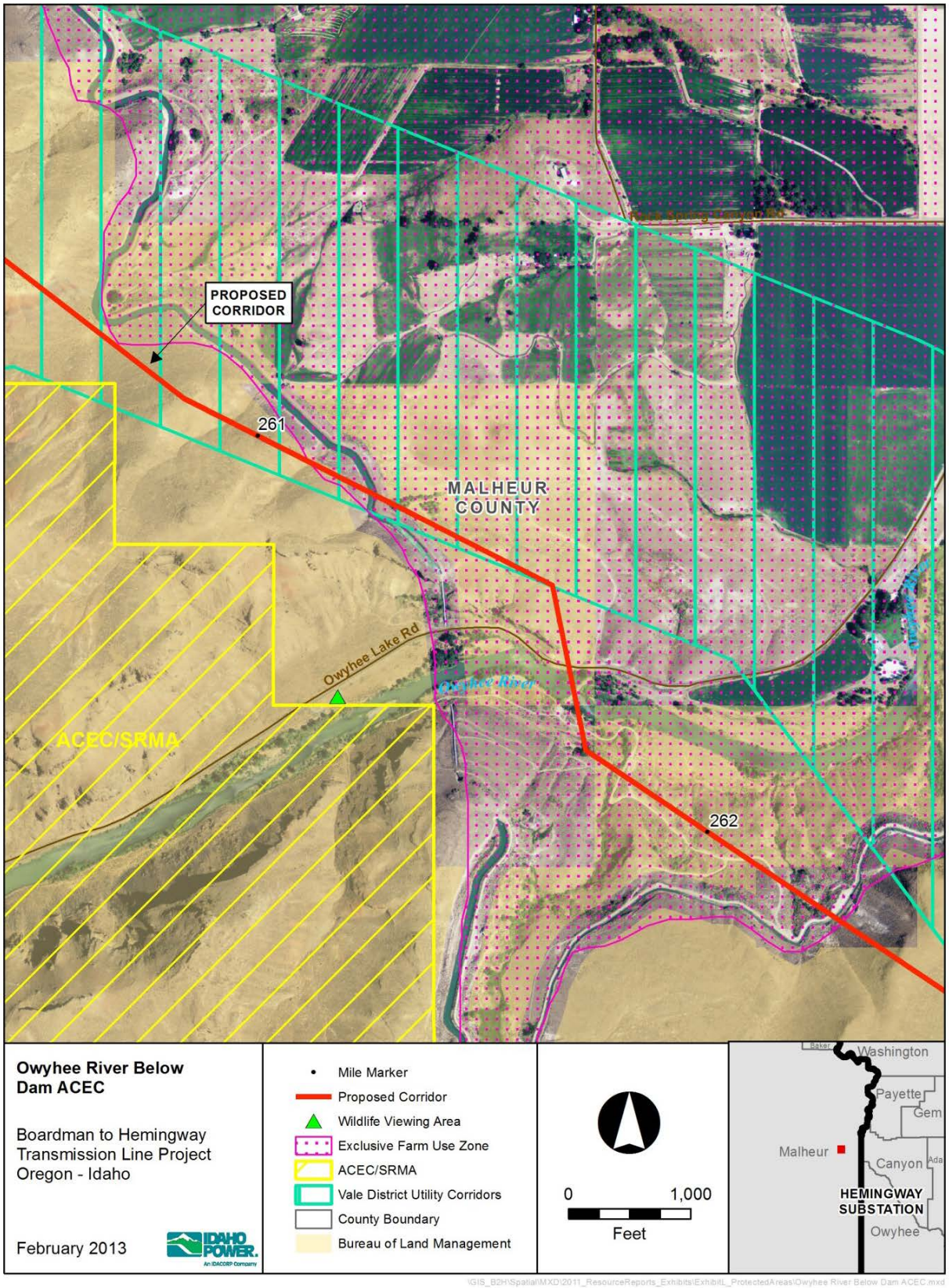

Figure L-4. Owyhee River Below the Dam ACEC Proposed Corridor

Oregon Trail ACEC – NHOTIC Parcel

Proposed Corridor – The NHOTIC is located on the top of Flagstaff Hill north of State Route 86 northeast of Baker City. The Proposed Corridor is located approximately 1.1 miles to the southeast of the NHOTIC and about 0.4 mile from the closest point on the ACEC boundary (see Figure L-5). The visual assessment contained in Exhibit R determined that the Proposed Corridor will have a moderate-high visual impact on the Oregon Trail ACEC – NHOTIC Parcel because the NHOTIC is elevated and most of the structures and conductors will be backdropped. Simulations of the views of the Proposed Corridor transmission line are included in Exhibit R, Attachment R-4, Figures R-4-14 and R-4-24.

Flagstaff Alternate – The Flagstaff Alternate is located within a mile of the NHOTIC and within 1,200 feet of the western boundary of this parcel. From the NHOTIC, approximately 1.6 miles (about 7 or 8 structures) of this alternate may be viewed. Simulated views are contained in Exhibit R, Attachment R-4, Figures R-4-16, R-4-18, and R-4-20. From viewing locations immediately adjacent to and within the NHOTIC, the valley and mountainous landscape provides a backdrop and the presence of an existing 230-kV line mitigate some of the potential visual impact. The alternate corridor also passes within 2,400 feet of a NHOTIC observation platform and is viewed in conjunction with the existing 230-kV line. From the Kiwanis Club Historic Marker on the boundary of the ACEC, viewers will see three existing and three proposed structures resulting in moderate to high visual impact. The overall visual impact of the Flagstaff Alternate on the NHOTIC parcel will be moderate to high and require mitigation to reduce impacts to less than significant.

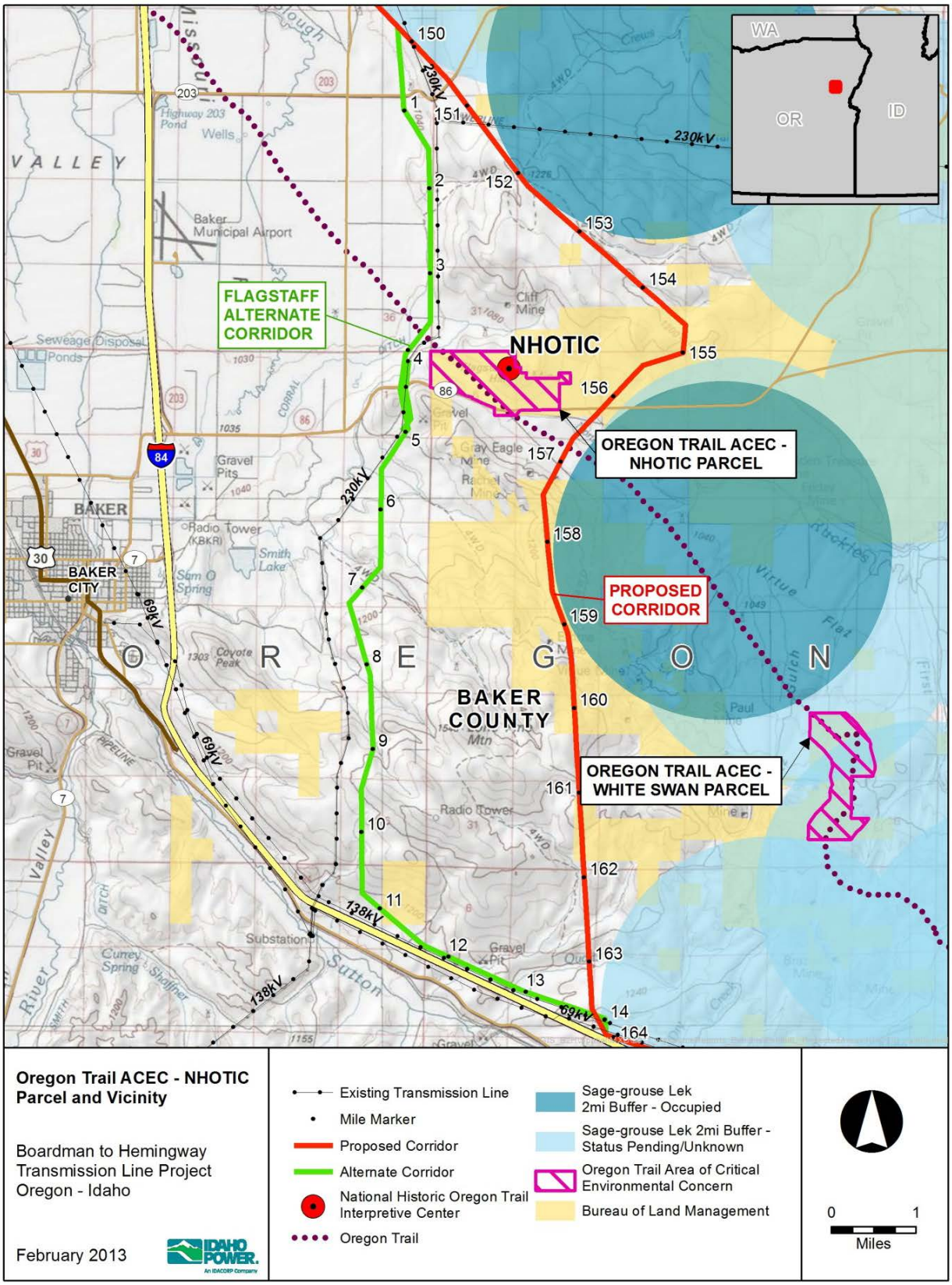

Figure L-5. Oregon Trail ACEC – NHOTIC Parcel and Vicinity

3.3.3.5 Other Impacts

As directed by the requirements for Exhibit L, IPC did consider potential impacts from the Project on protected areas other than those discussed above (noise, traffic, water/wastewater, visual), and concluded that all other potential impacts from the Project are adequately analyzed in the following exhibits: Exhibit P (wildlife habitat), Exhibit Q (threatened and endangered species), Exhibit S (cultural and historic resources), and Exhibit T (recreation).

3.4 Mitigation

In this Exhibit L, IPC concludes that the Project is likely to cause significant adverse visual impacts to two protected areas within the analysis area: the Owyhee River Below the Dam ACEC and the Oregon Trail ACEC – NHOTIC Parcel. IPC will develop a mitigation plan that (1) to the extent possible, is consistent with visual quality objectives identified by BLM and other stakeholders; and (2) identifies site-specific mitigiation measures, such as refinements to Project siting during final design, structural design measures, and ROW vegetation management measures. Mitigation for Project impacts will be included in the final Application for Site Certificate.

4.0 CONCLUSION

Exhibit L provides an analysis of Project impacts to protected areas. This Exhibit demonstrates that the Project, taking into account mitigation, will fully comply with the approval standard in OAR 345-022-0040 and the submittal requirements in OAR 345-021-0010(1)(L). As discussed above in Section 3.4, IPC intends to develop mitigation to lessen the Project's visual impacts on both affected protected areas to "less than significant."

5.0 SUBMITTAL AND APPROVAL COMPLIANCE MATRICES

Tables L-3 and L-4 provide cross references between Exhibit submittal requirements of OAR 345-021-0010(1)(L) and the Council's Approval standards of OAR 345-022-0040 and where discussion can be found in the Exhibit.

Table L-3. Submittal Requirements Matrix

Requirement	Location
OAR 345-021-0010(1)(L)	
(L) **Exhibit L.** Information about the proposed facility's impact on protected areas, providing evidence to support a finding by the Council as required by OAR 345-022-0040, including:	Section 3.3
(A) A list of the protected areas within the analysis area showing the distance and direction from the proposed facility and the basis for protection by reference to a specific subsection under OAR 345-022-0040(1).	Attachment L-1
(B) A map showing the location of the proposed facility in relation to the protected areas listed in OAR 345-022-0040 located within the analysis area.	Attachment L-2

Table L-3. Submittal Requirements Matrix (continued)

Requirement	Location
(C) A description of significant potential impacts of the proposed facility, if any, on the protected areas including, but not limited to, potential impacts such as: (i) Noise resulting from facility construction or operation; (ii) Increased traffic resulting from facility construction or operation; (iii) Water use during facility construction or operation; (iv) Wastewater disposal resulting from facility construction or operation; (v) Visual impacts of facility structures or plumes; (vi) Visual impacts from air emissions resulting from facility construction or operation, including, but not limited to, impacts on Class 1 Areas as described in OAR 340-204-0050.	Section 3.3
Project Order Comments	
The applicant should thoroughly research all of the protected areas listed at OAR 345-022-0040 to ensure that the application addresses the potential impacts to protected areas within the Analysis Area identified in Section VI.	Section 3.3
Ensure that each potentially impacted state scenic waterway listed in ORS 390.826 is addressed in Exhibit L and that the evidence to address the requirements of ORS 390.845 is also included. Provide an analysis of the evidence to support a finding by the Council that the requirements of the Oregon Parks and Recreation Department related to the siting of a utility facility in a scenic waterway have been met.	The Project does not cross any state scenic waterways. See Attachment L-1.

Table L-4. Approval Standard Matrix

Requirement	Location
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;	Section 3.3

Table L-4. Approval Standard Matrix (continued)

Requirement	Location
(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;	

Table L-4. Approval Standard Matrix (continued)

Requirement	Location
(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.	
OAR 345-022-0040(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.	Section 3.3.3
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.	NA

6.0 RESPONSE TO COMMENTS FROM REVIEWING AGENCIES AND THE PUBLIC

Table L-5 cross references comments cited in the Project Order from reviewing agencies and the public and where discussion can be found in the Exhibit.

Table L-5. Public and Reviewing Agency Comments

Public Comments	Response
Both the Boardman Bombing Range and the Boardman Conservation Area contain rare or declining species and should be considered protected areas	The Project is not located in the Boardman Bombing Range or the Boardman Conservation area. This area is not identified as a Protected Area per OAR 345-022-0040(1).
Although the upper Kitchen Creek valley contains no national or state parks, a significant amount of conservation work has been performed in association with federal, state, and local agencies in this area.	This area is not identified as a Protected Area per OAR 345-022-0040(1).

Table L-5. Public and Reviewing Agency Comments (continued)

Public Comments	Response
Intermountain sagebrush ecosystem in the Powder River Sub-basin is very fragile and should be protected.	The Project is not located in the Powder River Basin. This area is not identified as a Protected Area per OAR 345-022-0040(1).
John Day ecosystem should be protected.	The Project is not located in the John Day area. This area is not identified as a Protected Area per OAR 345-022-0040(1).
Virtue Flat Fossil Beds should be considered a protected area, per federal codes.	This area is not identified as a Protected Area per OAR 345-022-0040(1).
Reviewing Agency Comments	
None	

7.0 REFERENCES

BLM (Bureau of Land Management). 2001. Proposed Southeastern Oregon Resource Management Plan and Final Environmental Impact Statement. Vale District Office. April. Available online at: http://www.blm.gov/or/districts/vale/plans/seormp.php

BLM Idaho State Office. 2008. Areas of Critical Environmental Concern (ACECs), Research Natural Areas (RNAs), and Outstanding Natural Areas (ONAs) of Idaho [vector digital data]. Boise, ID: U.S. Bureau of Land Management, Idaho State Office.

BLM. 2012. Vale District Recreation Sites. Accessed at: http://www.blm.gov/or/districts/vale/recreation/activities.

BOR (Bureau of Reclamation). 1994. Owyhee Reservoir Resource Management Plan. U.S. Department of the Interior, Bureau of Reclamation, Pacific Northwest Region, Central Snake Projects Office. Boise, Idaho.

EFSC (Energy Facility Siting Council). 2010. Montague Wind Power Facility, Final Order. September 10, 2010.

GIS Protected Areas Data Sources:

ODFW (Oregon Dept. of Fish and Wildlife). 2006. Hatchery Facilities of Oregon (3) [vector digital data]. Retrieved from ftp://rainbow.dfw.state.or.us/pub/gis/other/cover/hatch-v3.zip

ODFW. 2009. wildarea24odfw [vector digital data]. Salem, OR: Oregon Department of Fish and Wildlife.

OPRD (Oregon Parks and Recreation Department). 2007. OR State Scenic Waterways [vector digital data]. Salem, OR: Oregon Parks and Recreation Department.

OPRD. 2010. Approximate Park Boundary [vector digital data]. Salem, OR: Oregon Parks and Recreation Department.

OPRD. 2011. E-mail from Jim Hutton (OPRD) to Keith Georgeson (IPC) dated March 22, 2011, concerning Oregon Parks and Recreation property.

OPRD. 2012. Memorandum from Alice Beals (OPRD) to Sue Oliver (ODOE) dated October 8, 2012, concerning Blue Mountain Forest State Scenic Corridor.

OR/WA BLM (Oregon/Washington Bureau of Land Management). 2008a. OR/WA Areas of Critical Environmental Concern polygon [vector digital data]. Retrieved from: http://www.blm.gov/or/gis/data-details.php?data=ds000077

OR/WA BLM. 2008b. OR/WA Wild and Scenic River Corridor (Polygon) [vector digital data]. Retrieved from: http://www.blm.gov/or/gis/data-details.php?data=ds000118

Oregon State University College of Agricultural Sciences. No date. Retrieved April 2, 2010, from http://agsci.oregonstate.edu/research/branch_aes.html.

R6 ALPS. 2005. USDA-FS Wilderness Areas of the Blue Mountains (1) [vector digital data]. Pendleton, OR: Umatilla National Forest.

The Nature Conservancy. 2006. The Nature Conservancy Preserves, Conservation Easements, and Managed Lands in Oregon [vector digital data]. Portland, OR: The Nature Conservancy.

United States Fish and Wildlife Service. 2009. United States Fish & Wildlife Service Cadastral Geodatabase – FwsApproved [vector digital data]. Arlington, VA: US Fish and Wildlife Service.

Wallowa-Whitman National Forest, Pacific Northwest Region, Forest Service, U.S. Department of Agriculture. 2010. Management Boundary [vector digital data]. Baker City, OR: Wallowa-Whitman National Forest.

Wild and Scenic River Group. 2000. Wild and Scenic Rivers on the Malheur, Umatilla, and Wallowa-Whitman NF (1) [vector digital data]. Pendleton, OR: Umatilla National Forest.

ATTACHMENT L-1
IDENTIFICATION AND ASSESSMENT OF PROTECTED AREAS

Table L-1-1. Protected Areas within Exhibit L Analysis Area

Protected Area Category	Protected Area Resource within Exhibit L Analysis Area[1]	State - County	Location of Protected Area Relative to Corridor Centerlines[2]	Closest MP by Corridor	KOP Reference	Protected areas within 5 .0 miles	Visual Analysis Results	Construction Noise Analysis Results dBA L_{eq}[3]	Operational Noise Analysis Results dBA L_{50}[4]	Map Sheet Reference
Wilderness Areas	Eagle Cap Wilderness	OR - Baker, Union, Wallowa	14 mi NE of Proposed Corridor	134.2				11	NA	2, 3
			20.2 mi NE of Flagstaff Alternate	0				6	NA	2, 3
	North Fork John Day Wilderness	OR - Baker, Grant, Umatilla	18.4 mi SW of Proposed Corridor	127.5				7	NA	2, 3
	North Fork Umatilla Wilderness	OR - Umatilla, Union	18.7 mi NE of Proposed Corridor	93.2				7	NA	2
National and State Wildlife Refuges	Cold Springs National Wildlife Refuge	OR - Umatilla	17.9 mi E of Longhorn Alternate	11				8	NA	1, 2
			19.3 mi NE of Proposed Corridor	41.8				7	NA	1, 2
	Deer Flat National Wildlife Refuge	OR - Malheur; ID - Ada, Canyon, Owyhee, Payette, Washington	12.2 mi E of Double Mountain Alternate	7.4				12	NA	3, 4, 5
			2.7 mi E of Proposed Corridor	300	10-17	Yes	L-M	30	NA	3, 4, 5
			3.8 mi E of Willow Creek Alternate	5.7		Yes	L	26	NA	3, 4, 5
			6.4 mi NE of Malheur S Alternate	32.8				20	NA	3, 4, 5
	McKay Creek National Wildlife Refuge	OR - Umatilla	23.6 mi NE of Proposed Corridor	72.9	3-20	Yes	M	30	NA	1, 2
	McNary National Wildlife Refuge	OR - Umatilla; WA - Walla Walla	22.6 mi E of Longhorn Alternate	11				5	NA	1, 2
			24.8 mi NE of Proposed Corridor	41.8				4	NA	1, 2
	Umatilla National Wildlife Refuge	OR - Morrow; WA - Benton	1.2 mi N of Longhorn Alternate	0	2-14	Yes	L	39	NA	1
			12.4 mi NE of Horn Butte Alternate					12	NA	1
			9.7 mi N of Proposed Corridor					15	NA	1

Table L-1-1. Protected Areas within Exhibit L Analysis Area (continued)

Protected Area Category	Protected Area Resource within Exhibit L Analysis Area[1]	State - County	Location of Protected Area Relative to Corridor Centerlines[2]	Closest MP by Corridor	KOP Reference	Protected areas within 5 .0 miles	Visual Analysis Results	Construction Noise Analysis Results dBA L_{eq}[3]	Operational Noise Analysis Results dBA L_{50}[4]	Map Sheet Reference
National and State Fish Hatcheries	Irrigon Hatchery	OR - Morrow	18.1 mi N of Horn Butte Alternate	34.8				8	NA	1
			18.1 mi N of Proposed Corridor					8	NA	1
			6.1 mi NE of Longhorn Alternate	1.4				20	NA	1
	Umatilla Hatchery		19.6 mi N of Horn Butte Alternate	34.2				7	NA	1
			19.6 mi N of Proposed Corridor					7	NA	1
			5.4 mi N of Longhorn Alternate	0				22	NA	1
State Parks and Waysides	Battle Mountain Forest State Scenic Corridor	OR - Umatilla	16.3 mi S of Proposed Corridor	65.1	4-5			9	NA	1, 2
	Blue Mountain Forest State Scenic Corridor	OR - Umatilla, Union	Crossed by Proposed Corridor	102.5-102.7	4-5	Yes	M	91	Received sound levels low level to 50 dBA	2
			5.3 mi NW of Glass Hill Alternate	0				22	NA	2
	Catherine Creek State Park	OR - Union	19 mi N of Flagstaff Alternate					7	NA	2, 3
			19.7 mi E of Glass Hill Alternate	7.5				7	NA	2, 3
			7.9 mi NE of Proposed Corridor	134.2				17	NA	2, 3
	Emigrant Springs State Heritage Area	OR - Umatilla	18.1 mi NW of Glass Hill Alternate	0				8	NA	2
			3.3 mi N of Proposed Corridor	90.8	3-14	Yes	L	27	NA	2
	Farewell Bend State Recreation Area	OR - Baker	1.3 mi E of Proposed Corridor	198.4	5-13	Yes	M	38	NA	3, 4
			1.8 mi E of Willow Creek Alternate	0.4	5-13	Yes	L	34	NA	3, 4

Table L-1-1. Protected Areas within Exhibit L Analysis Area (continued)

Protected Area Category	Protected Area Resource within Exhibit L Analysis Area[1]	State - County	Location of Protected Area Relative to Corridor Centerlines[2]	Closest MP by Corridor	KOP Reference	Protected areas within 5 .0 miles	Visual Analysis Results	Construction Noise Analysis Results dBA L_{eq}[3]	Operational Noise Analysis Results dBA L_{50}[4]	Map Sheet Reference
State Parks and Waysides (cont.)	Hat Rock State Park	OR - Umatilla	19.9 mi NE of Longhorn Alternate	11				6	NA	1, 2
			23.1 mi N of Proposed Corridor	41.8				5	NA	1, 2
	Hilgard Junction State Park	OR - Union	0.3 mi E of Proposed Corridor	106.8	4-19	Yes	M	55	Received sound levels below 30 dBA	2
			1.3 mi N of Glass Hill Alternate	0	4-19	Yes	N	38	NA	2
	Lake Owyhee State Park	OR - Malheur	15.3 mi S of Double Mountain Alternate	7.4				10	NA	4, 5
			2.2 mi SW of Malheur S Alternate	25.9	8-18	Yes	M	32	NA	4, 5
	Ontario State Recreation Site	OR - Malheur; ID - Payette	20.3 mi NE of Double Mountain	7.4				6	NA	4
			20.3 mi NE of Proposed Corridor	252.2				6	NA	4
	Red Bridge State Wayside	OR - Union	4.7 mi W of Proposed Corridor	107.4	4-36	Yes	N	23	NA	2
			5.2 mi W of Glass Hill Alternate	0				22	NA	2
	Succor Creek State Natural Area/SNHA	OR - Malheur	23.6 mi S of Double Mountain	7.4				5	NA	4, 5
			3.4 mi SW of Proposed Corridor	275.6	8-37	Yes	L-N	27	NA	4, 5
			4.4 mi S of Malheur S Alternate	33.6	8-37	Yes	L	24	NA	4, 5
	Unity Forest State Scenic Corridor	OR - Baker	10 mi S of Flagstaff Alternate	11.7				14	NA	3, 4
			10.4 mi SW of Proposed Corridor	163.9				14	NA	3, 4
State Natural Heritage Areas	Lindsay Prairie Preserve/ SNHA	OR - Morrow	1.3 mi S of Horn Butte Alternate	25.8	2-16	Yes	M	38	NA	1
			1.3 mi S of Proposed Corridor		2-16	Yes	M	38	NA	1
			6.9 mi W of Longhorn Alternate	18.4				19	NA	1

Table L-1-1. Protected Areas within Exhibit L Analysis Area (continued)

Protected Area Category	Protected Area Resource within Exhibit L Analysis Area[1]	State - County	Location of Protected Area Relative to Corridor Centerlines[2]	Closest MP by Corridor	KOP Reference	Protected areas within 5 .0 miles	Visual Analysis Results	Construction Noise Analysis Results dBA L_{eq}[3]	Operational Noise Analysis Results dBA L_{50}[4]	Map Sheet Reference
Scenic Waterways, Wild and Scenic Rivers and Waterways, and Rivers Listed as Potential for Designation	Eagle Creek (Recreational)	OR - Baker	16.8 mi NE of Proposed Corridor	154.6				8	NA	2, 3
			17 mi NE of Flagstaff	0				8	NA	2, 3
	Eagle Creek (Scenic)		18.4 mi E of Proposed Corridor	154.7				7	NA	3
	East Fork Eagle Creek (Recreational)		19.2 mi NE of Proposed Corridor	154.6				7	NA	3
			20.4 mi E of Flagstaff Alternate	0				6	NA	3
	Five Points Creek (Wild)	OR - Umatilla, Union	1.7 mi NE of Proposed Corridor	106.2	4-14	Yes	L-N	35	NA	2
			3 mi N of Glass Hill Alternate	0	4-14	Yes	L-N	28	NA	2
Waterways, Wild and Scenic Rivers and Waterways, and Rivers Listed as Potential for Designation	John Day River (Recreational)	OR - Gilliam, Jefferson, Sherman, Wasco, Wheeler	20.1 mi W of Horn Butte Alternate	10.4				6	NA	1
			20.1 mi W of Proposed Corridor					6	NA	1
	Minam River (Wild)	OR - Union, Wallowa	19.6 mi E of Proposed Corridor	134.3				7	NA	2, 3
	North Fork Catherine Creek (Recreational)	OR - Union	11.5 mi E of Proposed Corridor	134.8				13	NA	2, 3
			17.9 mi N of Flagstaff	0				8	NA	2, 3
	North Fork Catherine Creek (Wild)		13.6 mi E of Proposed Corridor	134.3				11	NA	2, 3
	North Fork John Day River (Recreational)	OR - Grant, Umatilla	20.8 mi SW of Proposed Corridor	127.4				6	NA	2, 3
	North Fork John Day River (Wild)	OR - Baker, Grant	21 mi SW of Proposed Corridor	127.5				6	NA	3

Table L-1-1. Protected Areas within Exhibit L Analysis Area (continued)

Protected Area Category	Protected Area Resource within Exhibit L Analysis Area[1]	State - County	Location of Protected Area Relative to Corridor Centerlines[2]	Closest MP by Corridor	KOP Reference	Protected areas within 5 .0 miles	Visual Analysis Results	Construction Noise Analysis Results dBA L_{eq}[3]	Operational Noise Analysis Results dBA L_{50}[4]	Map Sheet Reference
Waterways, Wild and Scenic Rivers and Waterways, and Rivers Listed as Potential for Designation (cont.)	North Powder River (Scenic)	OR - Baker	15 mi W of Proposed Corridor	140				10	NA	3
			18 mi W of Flagstaff Alternate	0				8	NA	3
	Powder River (Scenic)	OR - Baker, Union	1.7 mi E of Proposed Corridor	143.8	5-36	Yes	L	35	NA	2, 3
			4.3 mi NE of Flagstaff	0	5-36	Yes	L	24	NA	2, 3
	The Minam Scenic Waterway	OR - Union, Wallowa	19.9 mi E of Proposed Corridor	134.3				6	NA	2, 3
	Upper Grande Ronde River (Recreational)	OR - Union	10.6 mi SW of Proposed Corridor	107.5				14	NA	2, 3
			10.6 mi W of Glass Hill Alternate	2.5				14	NA	2, 3
	Upper Grande Ronde River (Wild)	OR - Grant, Union	14.8 mi SW of Proposed Corridor	118.6				10	NA	2, 3
			15.2 mi S of Glass Hill Alternate	4.9				10	NA	2, 3
Experi-mental Areas	Starkey Game Management Area	OR - Umatilla, Union	13.7 mi W of Glass Hill Alternate	0				11	NA	2, 3
			9.7 mi S of Proposed Corridor	95.6				15	NA	2, 3
Agricultural Experi-mental Stations	Columbia Basin Ag Research Station	OR - Sherman, Umatilla	10.3 mi N of Proposed Corridor	72.8				14	NA	1, 2
	Eastern Oregon Ag Research Station	OR - Union	13 mi E of Glass Hill Alternate	7.5				11	NA	2, 3
			7.1 mi NE of Proposed Corridor	129.2				18	NA	2, 3
	Hermiston Ag Research and Extension Center	OR - Umatilla	12.8 mi E of Longhorn	11				12	NA	1, 2
			16.5 mi NE of Proposed Corridor	37.3				9	NA	1, 2
			17.7 mi NE of Horn Butte					8	NA	1, 2
	Malheur Experiment Station	OR - Malheur	19.8 mi NE of Double Mountain Alternate	7.4				7	NA	4
			19.8 mi NE of Proposed Corridor	252.2				7	NA	4

Table L-1-1. Protected Areas within Exhibit L Analysis Area (continued)

Protected Area Category	Protected Area Resource within Exhibit L Analysis Area[1]	State - County	Location of Protected Area Relative to Corridor Centerlines[2]	Closest MP by Corridor	KOP Reference	Protected areas within 5 .0 miles	Visual Analysis Results	Construction Noise Analysis Results dBA L_{eq}[3]	Operational Noise Analysis Results dBA L_{50}[4]	Map Sheet Reference
BLM ACECs, Outstanding Natural Areas and Research Natural Areas	Columbian Sharp-tailed Grouse Habitat Area ACEC	ID - Washington	18.3 mi E of Proposed Corridor	198.4				7	NA	3, 4
			19.2 mi E of Willow Creek Alternate	0				7	NA	3, 4
	Dry Creek Gorge ACEC	OR - Malheur	15 mi W of Proposed Corridor	268				10	NA	4, 5
			18.7 mi S of Double Mountain Alternate	4.6				7	NA	4, 5
			7.9 mi S of Malheur S Alternate	15.4				17	NA	4, 5
	Hammond Hill Sand Hills RNA		14.4 mi S of Malheur S Alternate	15.3				10	NA	4, 5
			19.2 mi W of Proposed Corridor	272.9				7	NA	4, 5
	Honeycombs RNA		11.3 mi SW of Malheur S Alternate	33.5				13	NA	4, 5
			11.3 mi SW of Proposed Corridor	273				13	NA	4, 5
	Horn Butte ACEC	OR - Gilliam, Morrow	1.6 mi W of Horn Butte Alternate	8.8	1-4	Yes	L	36	NA	1
			1.6 mi W of Proposed Corridor		1-4	Yes	L	36	NA	1
			20.2 mi W of Longhorn	0				6	NA	1
	Hunt Mountain ACEC	OR - Baker	12.8 mi W of Proposed Corridor	144.3				12	NA	3
			14.1 mi W of Flagstaff Alternate	0				10	NA	3
	Jump Creek Canyon ACEC	ID - Owyhee	10.9 mi SE of Malheur S Alternate	33.6				13	NA	4, 5
			6.8 mi SE of Proposed Corridor	283.9				19	NA	4, 5
	Keating Riparian ACEC/RNA	OR - Baker	10.2 mi E of Proposed Corridor	154.7				14	NA	3
			11.3 mi E of Flagstaff Alternate	0				13	NA	3
	Lake Ridge RNA	OR - Malheur	18.7 mi W of Malheur S Alternate	12.6				7	NA	4, 5

Table L-1-1. Protected Areas within Exhibit L Analysis Area (continued)

Protected Area Category	Protected Area Resource within Exhibit L Analysis Area[1]	State - County	Location of Protected Area Relative to Corridor Centerlines[2]	Closest MP by Corridor	KOP Reference	Protected areas within 5 .0 miles	Visual Analysis Results	Construction Noise Analysis Results dBA L_{eq}[3]	Operational Noise Analysis Results dBA L_{50}[4]	Map Sheet Reference
BLM ACECs, Outstanding Natural Areas and Research Natural Areas (cont.)	Leslie Gulch ACEC	OR - Malheur	18.1 mi S of Proposed Corridor	283				8	NA	5
			19.7 mi S of Malheur S	33.6				7	NA	5
	Long-billed Curlew Habitat Area ACEC	ID - Ada, Canyon, Gem, Payette	14.7 mi E of Proposed Corridor	263.5				10	NA	4, 5
			17.2 mi NE of Malheur S	32.8				8	NA	4, 5
			19.6 mi E of Double Mountain	7.4				7	NA	4, 5
	McBride Creek RNA	ID - Owyhee	15.3 mi S of Proposed Corridor	289.5				10	NA	5
			18.8 mi S of Malheur S	33.6				7	NA	5
	North Ridge Bully Creek RNA	OR - Malheur	14.4 mi SW of Proposed Corridor	219.1				10	NA	4
			17.9 mi W of Willow Creek Alternate	24.6				8	NA	4
	Oregon Trail - Birch Creek ACEC		2.7 mi E of Willow Creek Alternate	5.7	8-3	Yes	M	30	NA	3, 4
			6.7 mi SE of Proposed Corridor	200.1				19	NA	3, 4
	Oregon Trail ACEC - Blue Mountain Parcel	OR - Union	0.9 mi NE of Proposed Corridor	99.7	5-24	Yes	L	42	NA	2
			8.2 mi NW of Glass Hill Alternate	0				17	NA	2
	Oregon Trail ACEC - Echo Meadows Parcel	OR - Umatilla	10 mi E of Longhorn Alternate	12.4				14	NA	1, 2
			11.4 mi E of Horn Butte Alternate	41.8				13	NA	1, 2
			8.3 mi N of Proposed Corridor					17	NA	1, 2
	Oregon Trail ACEC - Keeney Pass Parcel	OR - Malheur	11 mi E of Malheur S Alternate	1.7				13	NA	4
			15.3 mi SE of Willow Creek Alternate	24.6				10	NA	4
			5.7 mi NE of Double Mountain	7.4				21	NA	4
			5.7 mi NE of Proposed Corridor	252.2				21	NA	4

Table L-1-1. Protected Areas within Exhibit L Analysis Area (continued)

Protected Area Category	Protected Area Resource within Exhibit L Analysis Area[1]	State - County	Location of Protected Area Relative to Corridor Centerlines[2]	Closest MP by Corridor	KOP Reference	Protected areas within 5 .0 miles	Visual Analysis Results	Construction Noise Analysis Results dBA L_{eq}[3]	Operational Noise Analysis Results dBA L_{50}[4]	Map Sheet Reference
BLM ACECs, Outstanding Natural Areas and Research Natural Areas (cont.)	Oregon Trail ACEC - NHOTIC Parcel	OR - Baker	0.2 mi SE of Flagstaff	3.8	5-25	Yes	M-H	60	Received sound levels low level to 35 dBA	3
			0.4 mi NW of Proposed Corridor	156.6	5-25	Yes	M-H	52	Received sound levels low level to 30 dBA	3
	Oregon Trail ACEC - Powell Creek Parcel		0.5 mi E of Proposed Corridor	191.2	8-3	yes	M	49	Received sound levels below 30 dBA	3, 4
			7.3 mi N of Willow Creek Alternate	0				18	NA	3, 4
	Oregon Trail ACEC - Straw Ranch 1 Parcel		0.1 mi SW of Proposed Corridor	170.3	5-26	Yes	L	68	Received sound levels low level to 45 dBA	3
			6.2 mi E of Flagstaff Alternate	14.2				20	NA	3
	Oregon Trail ACEC - Straw Ranch 2 Parcel		1.1 mi NE of Proposed Corridor	168.7	5-27	Yes	Low	40	NA	3
			4.2 mi E of Flagstaff Alternate	14	5-27	Yes	Low	24	NA	3
	Oregon Trail ACEC - Tub Mountain Parcel	OR - Malheur	16.7 mi NE of Malheur S Alternate	0				9	NA	3, 4
			17.3 mi N of Double Mountain					8	NA	3, 4
			2.5 mi S of Willow Creek Alternate	6.6	8-24	Yes	N	30	NA	3, 4
			7.8 mi SE of Proposed Corridor	202.1	8-24			17	NA	3, 4
	Oregon Trail ACEC - White Swan Parcel	OR - Baker	2.7 mi E of Proposed Corridor	161.7	5-39	Yes	M-L	30	NA	3
			3.2 mi NE of Flagstaff Alternate	14	5-39	Yes	L	28	NA	3

Table L-1-1. Protected Areas within Exhibit L Analysis Area (continued)

Protected Area Category	Protected Area Resource within Exhibit L Analysis Area[1]	State - County	Location of Protected Area Relative to Corridor Centerlines[2]	Closest MP by Corridor	KOP Reference	Protected areas within 5 .0 miles	Visual Analysis Results	Construction Noise Analysis Results dBA L_{eq}[3]	Operational Noise Analysis Results dBA L_{50}[4]	Map Sheet Reference
BLM ACECs, Outstanding Natural Areas and Research Natural Areas (cont.)	Owyhee River Below the Dam ACEC	OR - Malheur	249 ft SW of Proposed Corridor	260.8	8-52	Yes	M-H	76	Received sound levels low level to 35 dBA	4, 5
			Crossed by Malheur S	22.8-24.1	8-96	Yes	M-H	91	Received sound levels low level to 50 dBA	4, 5
			7.6 mi S of Double Mountain Alternate	7.4				18	NA	4, 5
	Owyhee Views ACEC		1.5 mi SW of Malheur S Alternate	25.9	8-28	Yes	M-L	36	NA	4, 5
			14.7 mi S of Double Mountain	7.4				10	NA	4, 5
			5.3 mi W of Proposed Corridor	268.6				22	NA	4, 5
	Powder River ACEC	OR - Baker	1.7 mi E of Proposed Corridor	143.9	5-34	Yes	L	35	NA	2, 3
			3.3 mi NE of Flagstaff Alternate	0	5-34	Yes	L	27	NA	2, 3
	South Alkali Sand Hills ACEC	OR - Malheur	11.9 mi N of Proposed Corridor	249.3				12	NA	4
			12.6 mi N of Double Mountain Alternate	7.4				11	NA	4
			13.4 mi E of Willow Creek Alternate	24.6				11	NA	4
			14 mi NE of Malheur S Alternate	0				11	NA	4
	South Ridge Bully Creek RNA		13 mi W of Proposed Corridor	224.1				11	NA	4
			15.5 mi W of Willow Creek Alternate	24.6				9	NA	4
State Wildlife Areas and Manage-ment Areas	Columbia Basin - Coyote Springs WA	OR - Morrow	0.9 mi W of Longhorn Alternate	0	2-5	Yes	L	42	NA	1

Table L-1-1. Protected Areas within Exhibit L Analysis Area (continued)

Protected Area Category	Protected Area Resource within Exhibit L Analysis Area[1]	State - County	Location of Protected Area Relative to Corridor Centerlines[2]	Closest MP by Corridor	KOP Reference	Protected areas within 5 .0 miles	Visual Analysis Results	Construction Noise Analysis Results dBA L_{eq}[3]	Operational Noise Analysis Results dBA L_{50}[4]	Map Sheet Reference
State Wildlife Areas and Manage-ment Areas (cont.)	Columbia Basin - Coyote Springs WA	OR - Morrow	13.5 mi NE of Proposed Corridor	0				11	NA	1
			14.6 mi N of Horn Butte Alternate					12	NA	1
	Columbia Basin - Irrigon WA	OR - Morrow, Umatilla	17.9 mi N of Proposed Corridor	35.1				8	NA	1
			18 mi N of Horn Butte Alternate					8	NA	1
			6.7 mi NE of Longhorn Alternate	1.4				19	NA	1
	Columbia Basin - Power City WA	OR - Umatilla	14.6 mi E of Longhorn Alternate					12	NA	1, 2
			19.6 mi N of Proposed Corridor	37.3				7	NA	1, 2
	Columbia Basin - Willow Creek WA/SNHA	OR - Gilliam	18.9 mi W of Longhorn Alternate	0				7	NA	1
			5.5 mi N of Proposed Corridor	6.4				21	NA	1
			5.7 mi N of Horn Butte Alternate					21	NA	1
	Elkhorn - Auburn WA Tract	OR - Baker	10.3 mi W of Proposed Corridor	163.5				14	NA	3
			8.1 mi W of Flagstaff	10.7				17	NA	3
	Elkhorn - Muddy Creek WA Tract		11.9 mi W of Proposed Corridor	141.8				12	NA	3
			14.9 mi W of Flagstaff Alternate	0				12	NA	3
	Elkhorn - North Powder WA Tract	OR - Baker, Union	13.3 mi S of Glass Hill Alternate	7.5				11	NA	2, 3
			18 mi W of Flagstaff Alternate	0				8	NA	2, 3
			6.8 mi SW of Proposed Corridor	127.5				19	NA	2, 3
	Elkhorn - Roth WA Tract	OR - Baker	11.3 mi W of Proposed Corridor	142.8				13	NA	3
			13.2 mi W of Flagstaff Alternate	0				11	NA	3

Table L-1-1. Protected Areas within Exhibit L Analysis Area (continued)

Protected Area Category	Protected Area Resource within Exhibit L Analysis Area[1]	State - County	Location of Protected Area Relative to Corridor Centerlines[2]	Closest MP by Corridor	KOP Reference	Protected areas within 5 .0 miles	Visual Analysis Results	Construction Noise Analysis Results dBA L_{eq}[3]	Operational Noise Analysis Results dBA L_{50}[4]	Map Sheet Reference
State Wildlife Areas and Manage-ment Areas (cont.)	Ladd Marsh WA/SNHA	OR - Union	1.3 mi N of Proposed Corridor	120.1	4-27	Yes	M	38	NA	2, 3
			2.3 mi E of Glass Hill Alternate	7.5	4-27	Yes	N	31	NA	2, 3
	Rogers, WA	OR - Malheur	11.9 mi E of Double Mountain Alternate	7.4				12	NA	4, 5
			12.2 mi NE of Malheur S Alternate	25.1				12	NA	4, 5
			7.4 mi NE of Proposed Corridor	263.4				18	NA	4, 5

[1] Analysis Area, as defined in Project Order, extends 20 miles from the Project Site Boundary.
[2] Location of Protected Area is relative to each corridor segment's centerline, not Site Boundary. There are values greater than 20 miles listed because temporary project features (multi-use areas, fly yards) are located several miles away from corridor centerlines. The Project Order states “20 mi from site boundary” and therefore these features beyond 20 miles from centerlines are still analyzed in Exhibit L.
[3] Construction noise levels represent the worst-case scenario and are based on the loudest anticipated construction phase, Erection of Support Structures. See Exhibit X for details on anticipated construction noise levels.
[4] Only applies to those Protected Areas within 0.5 mile of the proposed and alternate corridors.

Table L-1-2. Visual Assessment of Protected Areas within 5 Miles of Proposed and Alternate Corridor Centerlines

Protected Area Resource		Location of Protected Area Relative to B2H Corridors	Map Sheet Reference	KOP	Distance (miles)	Visibility[1]	Existing Scenic Quality[2]	Contrast[3]	Resource Change[4]	Viewers[5]	Viewer Sensitivity[6]	Duration[7]	Viewer Numbers[8]	Viewer Response[9]	Impact Rating[10]
National and State Wildlife Refuges															
D	Deer Flat National Wildlife Refuge	Proposed [illegible]	3, 4, 5	10-17	2.7	L	B	L	L	REC	H	S	L	M	L-M
		Willow Crk Alternate	3, 4, 5		3.8	L-N	B	L	L	REC	H	S	L	M	L
	McKay Creek National Wildlife	Proposed Corridor	1, 2	3-20	3.6	L	B	L-N	L-M	REC	H	M	H	M-H	M
	Umatilla National Wildlife Refuge	Longhorn Alternate	1	2-14	1.2	L	C	L	L	R	H	S	MH	M	L
State Parks and Waysides															
H	Blue Mountain Forest State Scenic Corridor	Proposed Corridor	2	4-5	<0.1	M	C	M	M	REC/ TRAV	M-H	S	L	M	M
	Emigrant Springs State Heritage Area	Proposed Corridor	2	3-14	4.1	L	C	L-N	L	REC	H	M	H	L	L
	Farewell Bend State Recreation Area	Proposed Corridor	3, 4	5-13	5.0	L	C	L-N	L	REC	H	M	M	M-H	M
		Willow Crk Alternate	3, 4	5-13	3	N	B	N	N	REC	H	S,M	M	H	N
	Hilgard Junction State Park	Proposed Corridor	2	4-19	0.9	L	B	L	L	REC	H	L	M	M	M
		Glass Hill Alternate	2	4-19	1.5	L	B	Weak	Weak	REC	H	S	M–H	H	N
	Lake Owyhee State Park	Malheur S Alternate	4, 5	8-18	2.8	L	A	L-N	L-N	REC	H	M	M	M-H	M
	Red Bridge State Wayside	Proposed Corridor	2	4-36	4.9	N	B	N	N	REC	H	M	L	M	N

Table L-1-2. Visual Assessment of Protected Areas within 5 Miles of Proposed and Alternate Corridor Centerlines (cont'd)

Protected Area Resource		Location of Protected Area Relative to B2H Corridors	Map Sheet Reference	KOP	Distance (miles)	Visibility[1]	Existing Scenic Quality[2]	Contrast[3]	Resource Change[4]	Viewers[5]	Viewer Sensitivity[6]	Duration[7]	Viewer Numbers[8]	Viewer Response[9]	Impact Rating[10]
H	Succor Creek State Natural Area/SNHA	Proposed Corridor	4, 5	8-37	3.8	L-M	C	L-N	L-N	REC	M-H	S	L	L	L-M
		Malheur S Alternate	4, 5	8-37	5.9	M	C	L-M	L	REC	M-H	S	L	L-M	L
State Natural Heritage Areas															
I	Lindsay Prairie Preserve/SNHA	Horn Butte Alt.	1	2-16	1.4	M-H	C	M	M-H	REC	H	M	L	L-M	M
		Proposed Corridor	1	2-16	1.4	M–H	C	M	M–H	REC	H	M	L	L–M	M
Scenic Waterways, Wild and Scenic Rivers and Waterways, and Rivers Listed as Potential for Designation															
K	Five Points Creek (Wild)	Proposed Corridor	2	4-14	1.7	L-N	H	N	N	REC	H	S	L	L-M	L - N
		Glass Hill Alternate	2	4-14	3.0	L-N	H	N	N	REC	H	S	L	L-M	L - N
	Powder River (Scenic)	Proposed Corridor	2, 3	5-36	2.5	L-N	C	L	L-N	REC	H	M	L	H	N
		Flagstaff Alternate	2, 3	5-36	2.3	L	C	L	L	REC	H	M	L	H	L
BLM ACECs, Outstanding Natural Areas and Research Natural Areas															
O	Horn Butte ACEC	Horn Butte Alt.	1	1-4	4.9 miles	L	B	L	N	REC	H	M	L	L	L
		Proposed Corridor	1	1-4	4.9 miles	L	B	L	N	REC	H	M	L	L	L
	Oregon Trail - Birch Creek ACEC	Willow Creek Alt.	3, 4	8-3	3.1	M–L	A	M	M	REC	H	S	L	L–M	M
	Oregon Trail ACEC - Blue Mountain Parcel	Proposed Corridor	2	5-24	1.1	L	B	L	L	REC	H	M	L	M	L

Table L-1-2. Visual Assessment of Protected Areas within 5 Miles of Proposed and Alternate Corridor Centerlines (cont'd)

Protected Area Resource		Location of Protected Area Relative to B2H Corridors	Map Sheet Reference	KOP	Distance (miles)	Visibility[1]	Existing Scenic Quality[2]	Contrast[3]	Resource Change[4]	Viewers[5]	Viewer Sensitivity[6]	Duration[7]	Viewer Numbers[8]	Viewer Response[9]	Impact Rating[10]
O	Oregon Trail ACEC - NHOTIC Parcel	Flagstaff Alternate	3	5-25	0.9	M	B	L-M	L-M	REC	H	S	H	M-H	M–H
		Proposed Corridor	3	5-25	1.1	M-H	B	M	M	REC	H	M	H	H	M-H
	Oregon Trail ACEC - Powell Creek Parcel	Proposed Corridor	3, 4	8-3	3.1	M-L	A	M	M	REC	H	S	L	L-M	M
	Oregon Trail ACEC - Straw Ranch 1 Parcel	Proposed Corridor	3	5-26	0.8	L	C	L-N	L	TRAV	M	S	H	L-M	L
	Oregon Trail ACEC - Straw Ranch 2 Parcel	Proposed Corridor	3	5-27	1.7	L-N	C	L-N	L-N	REC	H	S	L	L-M	L
		Flagstaff Alternate	3	5-27	3.3	N	C	N	N	REC	H	S	L	L-M	L
	Oregon Trail ACEC - Tub Mountain Parcel	Willow Creek Alt.	3, 4	8-24	2.7	N	B	N	N	REC	H	S	L	L	N
		Proposed Corridor	3, 4	8-24	8.3	N	B	N	N	REC	H	S	L	M	N
	Oregon Trail ACEC - White Swan Parcel	Proposed Corridor	3	5-39	2.7	M-H	B	M-H	M	REC	H	S	L	M	M
		Flagstaff Alternate	3	5-39	5.2	N	B	N	N	REC	H	S	L	M	N
	Owyhee Below Dam ACEC	Proposed Corridor	4, 5	8-52	0.3	H	B	H	H	REC	H	M	L-M	M-H	M-H
		Malheur S Alternate	4, 5	8-96	1.4	M-H	B	H	M-H	REC	H	M	L	M-H	M-H

Table L-1-2. Visual Assessment of Protected Areas within 5 Miles of Proposed and Alternate Corridor Centerlines (cont'd)

	Protected Area Resource	Location of Protected Area Relative to B2H Corridors	Map Sheet Reference	KOP	Distance (miles)	Visibility[1]	Existing Scenic Quality[2]	Contrast[3]	Resource Change[4]	Viewers[5]	Viewer Sensitivity[6]	Duration[7]	Viewer Numbers[8]	Viewer Response[9]	Impact Rating[10]
O	Owyhee Views ACEC	Malheur S Alternate	4, 5	8-28	2.0	H?	B?	L?	L-M?	REC	H	S	L	M?	M?
O	Powder River ACEC	Proposed Corridor	2, 3	5-34	>3.0	L	B	W	L-N	REC	H	M	L	L	L
O	Powder River ACEC	3.3 mi NE of Flagstaff	2, 3	5-34	>3.0	L	B	W	L-N	REC	H	M	L	L	L
State Wildlife Areas and Management Areas															
P	Columbia Basin - Coyote Springs WMA	Longhorn Alternate	1	2-5	1.2	M-H	C	L	L	REC	M	M	L	L-M	L
P	Ladd Marsh WMA/SNHA	Proposed Corridor	2, 3	4-27	4.9	L	C	L-N	L	TRAV	M	S	M	M	M-L
P	Ladd Marsh WMA/SNHA	Glass Hill Alternate	2, 3	4-27	4.9	N	C	N	N	TRAV	M	S	M	M	N

[1] Visibility is rated as none (N), low (L), moderate (M), or high (H) and is based on factors such as distance and potential screening or backdropping.
[2] Existing Scenic Quality is existing condition, rated as Class A (Distinctive), B (Average or Common) or C (Minimal or Indistinctive), according to BLM or USFS rating procedures.
[3] Contrast rating is detailed in the methodology discussion.
[4] Resource change is an overall rating incorporating the existing scenic quality and contrast ratings.
[5] Viewers represented at each KOP are grouped as travelers (TRAV), residents (RES), and recreationalists (REC).
[6] Viewer sensitivity is rated as low (L), moderate (M), or high (H) based on level of sensitivity to visual change typically ascribed to the respective viewer groups.
[7] Duration of view is rated as short (S), moderate (M) or long (L), based on typical activity patterns for the respective viewer groups and the KOP.
[8] Viewer numbers are classified as low, moderate or high based on available (often limited or assumed) information about approximate numbers of people present at a KOP.
[9] Viewer response is an overall rating incorporating the sensitivity, duration and viewer number ratings (see Table 3, Viewer Response Matrix).
[10] Impact rating is an overall measure incorporating the visual resource change and viewer response components for the KOP (see Table 4, Visual Impact rating Matrix).

ATTACHMENT L-2
MAPS OF PROTECTED AREAS IN THE ANALYSIS AREA

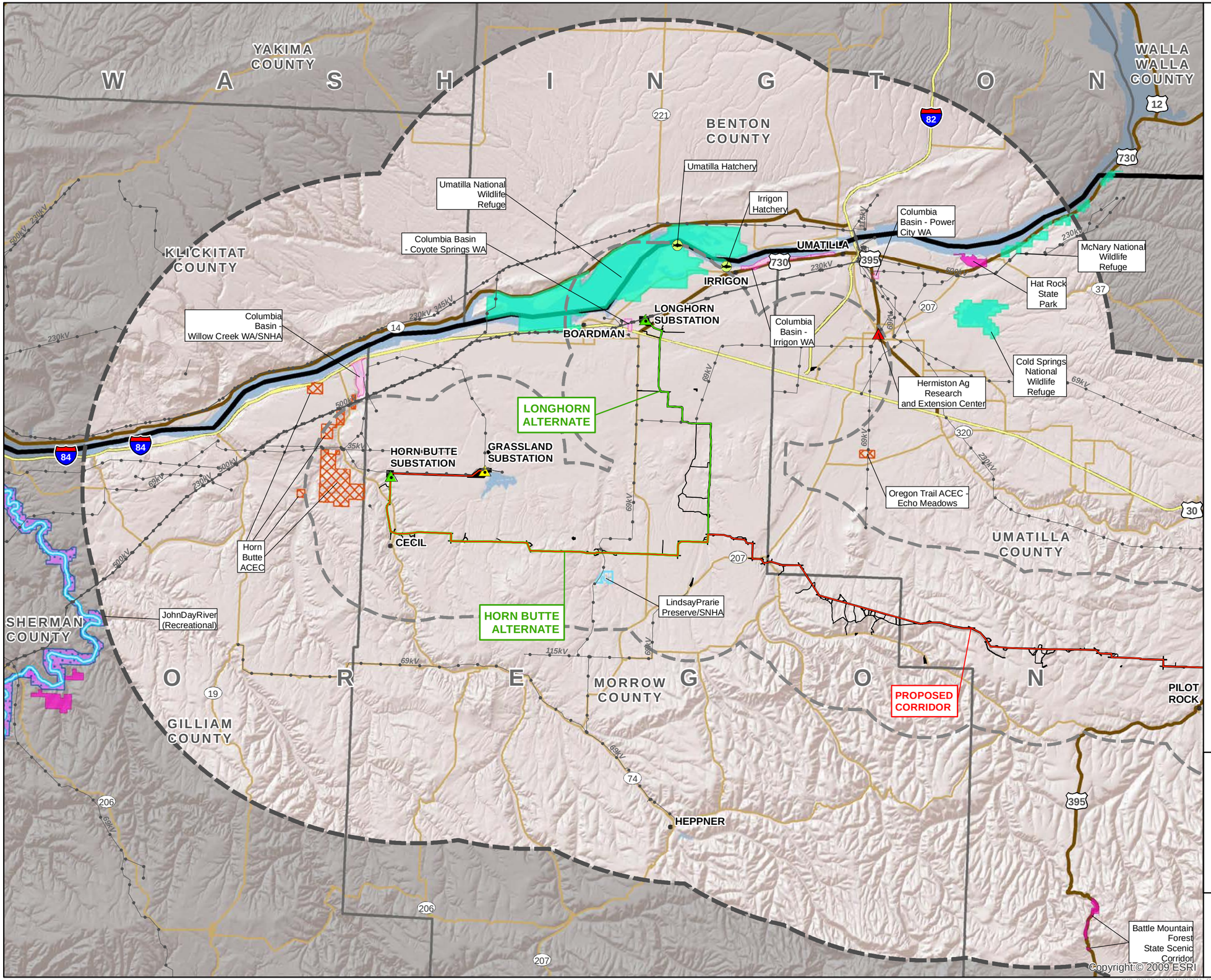

Figure L-2-1

Protected Areas

Legend

- Existing Transmission Line
- Existing Substation
- Proposed Substation
- Alternative Substation
- Proposed Rebuild
- Proposed Corridor
- Alternate Corridor
- Site Boundary
- Agricultural Experiment Station
- Fish Hatchery
- Site Boundary 5mi Buffer
- Site Boundary 20mi Buffer
- State Scenic Waterway
- BLM & USFS Wild and Scenic River: Recreational
- BLM & USFS Wild and Scenic River: Scenic
- BLM & USFS Wild and Scenic River: Wild
- BLM ACEC, RNA, ONA
- State Natural Heritage Area
- Experimental Area
- USFWS National Wildlife Refuge
- Oregon State Park/Wayside
- USFS Wilderness Area
- Wildlife Area
- City/Town
- State Boundary
- County Boundary
- Interstate
- Highway
- Major Road

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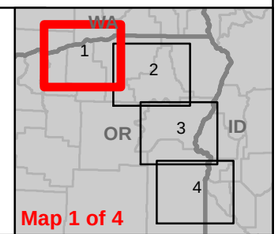
Miles



Map 1 of 4

Boardman to Hemingway Transmission Line Project
Oregon - Idaho

February 2013

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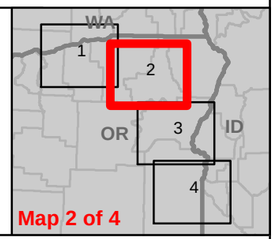
Figure L-2-2

Protected Areas

Legend

- Existing Transmission Line
- Existing Substation
- Proposed Substation
- Alternative Substation
- Proposed Rebuild
- Proposed Corridor
- Alternate Corridor
- Site Boundary
- Agricultural Experiment Station
- Fish Hatchery
- Site Boundary 5mi Buffer
- Site Boundary 20mi Buffer
- State Scenic Waterway
- BLM & USFS Wild and Scenic River: Recreational
- BLM & USFS Wild and Scenic River: Scenic
- BLM & USFS Wild and Scenic River: Wild
- BLM ACEC, RNA, ONA
- State Natural Heritage Area
- Experimental Area
- USFWS National Wildlife Refuge
- Oregon State Park/Wayside
- USFS Wilderness Area
- Wildlife Area
- City/Town
- State Boundary
- County Boundary
- Interstate
- Highway
- Major Road

0 2.5 5
Miles



Map 2 of 4

Boardman to Hemingway Transmission Line Project
Oregon - Idaho

February 2013

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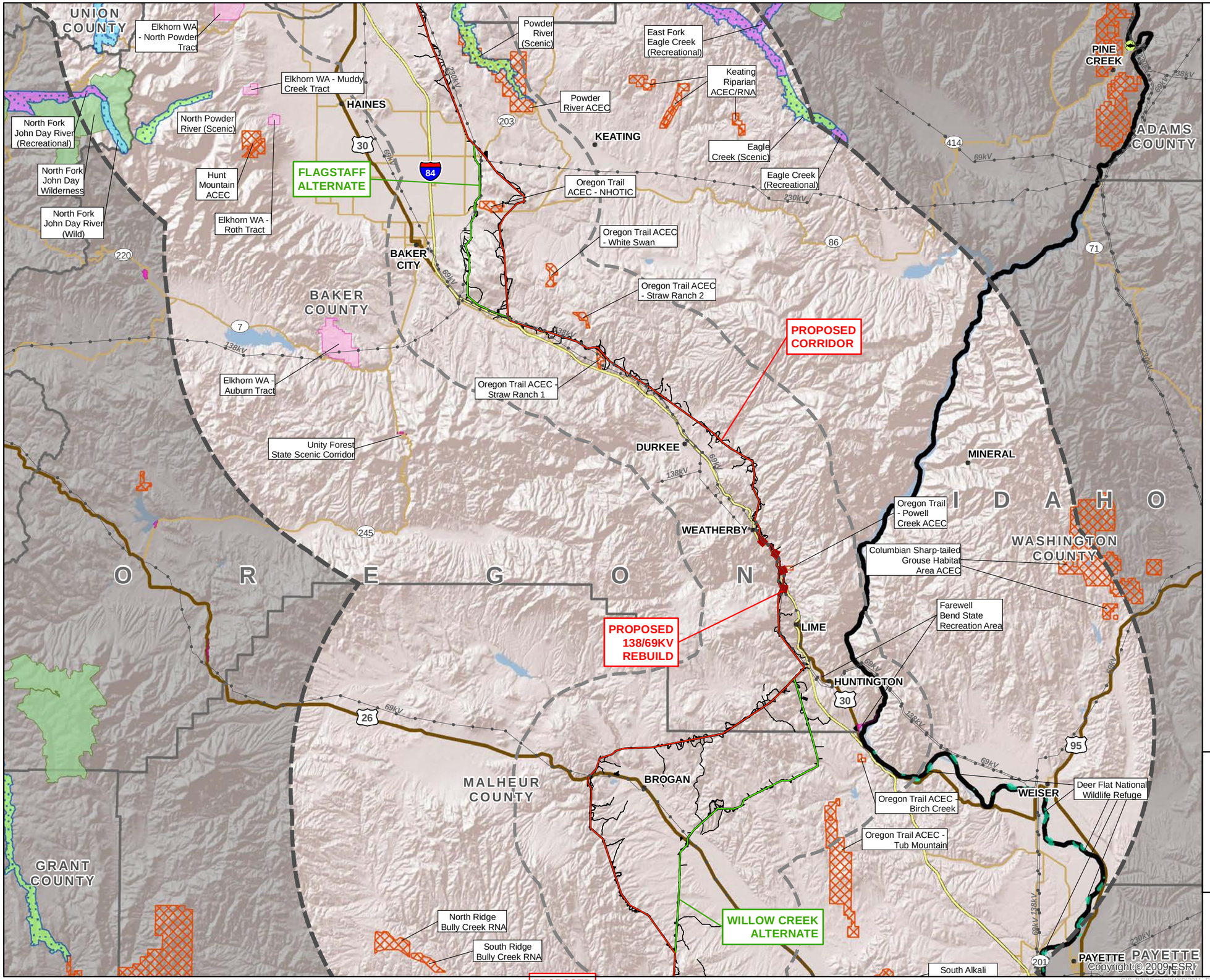

Figure L-2-3

Protected Areas

Legend

- Existing Transmission Line
- Existing Substation
- Proposed Substation
- Alternative Substation
- Proposed Rebuild
- Proposed Corridor
- Alternate Corridor
- Site Boundary
- Agricultural Experiment Station
- Fish Hatchery
- Site Boundary 5mi Buffer
- Site Boundary 20mi Buffer
- State Scenic Waterway
- BLM & USFS Wild and Scenic River: Recreational
- BLM & USFS Wild and Scenic River: Scenic
- BLM & USFS Wild and Scenic River: Wild
- BLM ACEC, RNA, ONA
- State Natural Heritage Area
- Experimental Area
- USFWS National Wildlife Refuge
- Oregon State Park/Wayside
- USFS Wilderness Area
- Wildlife Area
- City/Town
- State Boundary
- County Boundary
- Interstate
- Highway
- Major Road

0 2.5 5
Miles

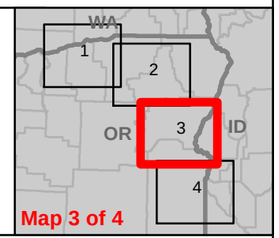

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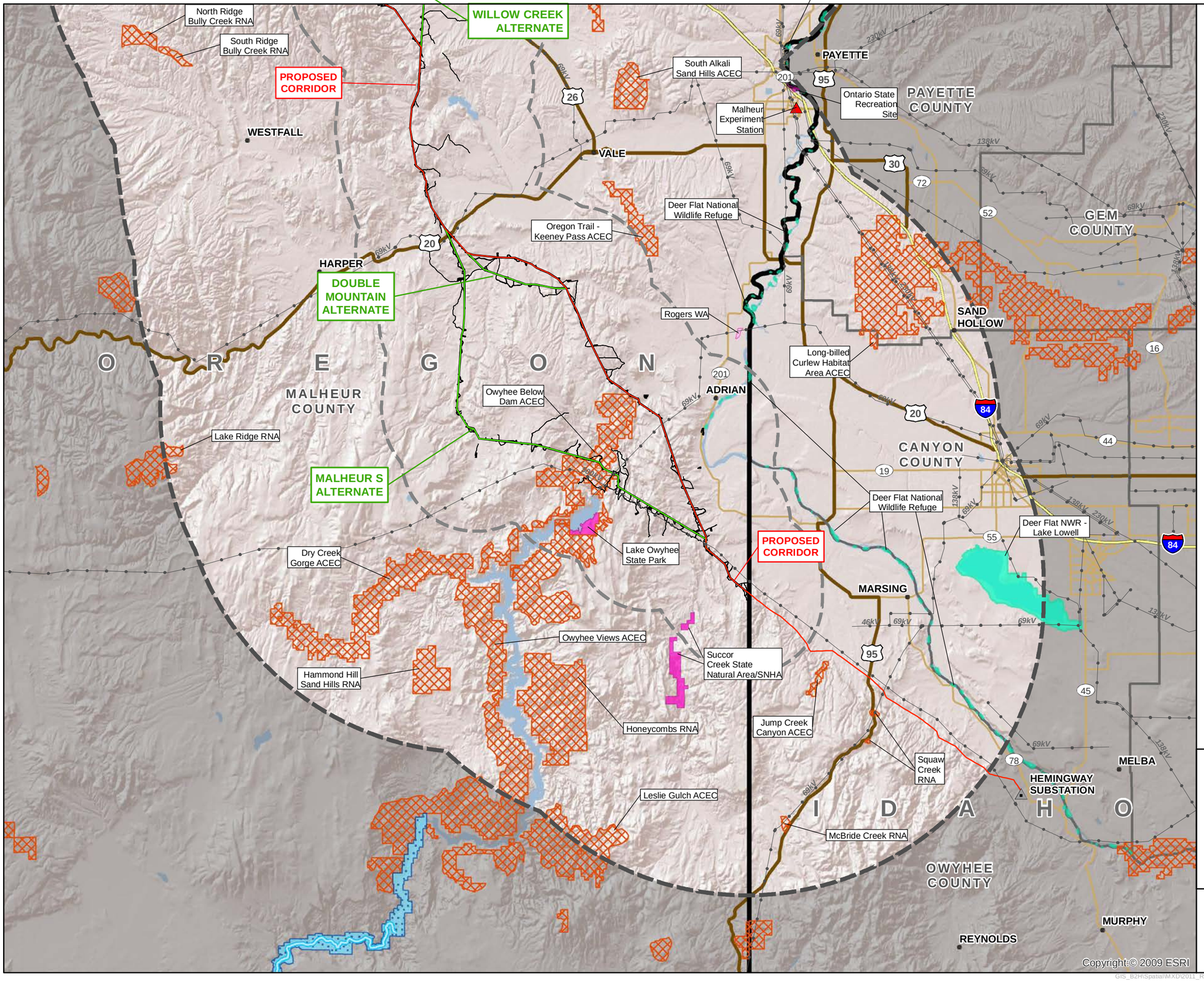
Figure L-2-4

Protected Areas



Legend

- Existing Transmission Line
- Existing Substation
- Proposed Substation
- Alternative Substation
- Proposed Rebuild
- Proposed Corridor
- Alternate Corridor
- Site Boundary
- Agricultural Experiment Station
- Fish Hatchery
- Site Boundary 5mi Buffer
- Site Boundary 20mi Buffer
- State Scenic Waterway
- BLM & USFS Wild and Scenic River: Recreational
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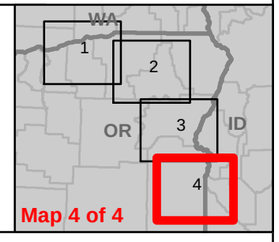
0 2.5 5
Miles



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