



**Boardman to Hemingway  
Transmission Line Project**

**Appendix A—Environmental  
Resources Phased Study Plan**

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**B2H Transmission Line Project in Oregon  
Biological and Other Environmental Resources Phased Study Plan**

**PURPOSE OF PHASED STUDY PLAN APPROACH**

The purpose of this phased study plan is to provide a road map of the transmission line area of analysis, types of data to be collected and timing of collection. The objective is to devise a plan that will allow the NEPA, BLM ROW Grant, Forest Service Special Use Permit and EFSC Site Certificate processes to proceed concurrently based on an adequate level of detail needed for making intermediate and final agency decisions. The specific phasing of data described below takes into account the unique nature of a long cross state high voltage line, public interest in line adjustments and the inherent flexibility of transmission line components to be micro-sited to avoid impact. When the three phases are taken as a total the data collected and analyzed meets all of the typical BLM and Forest Service survey requirements as well as all the substantive requirements of EFSC regulations.

Resource Category	Phase 1 Data Collection	Phase 2 Data Collection	Phase 3 Data Collection
<b>MAJOR SCHEDULE ACTIVITIES</b>			
Schedule Timeline	<b>12 months</b>		<b>4- 6 months</b>
Activities	<b>BLM/FS with cooperating agencies</b> <ul style="list-style-type: none"> <li>• BLM/FS 299</li> <li>• Federal Register NOI</li> <li>• Scoping Meetings</li> <li>• Scoping Report</li> <li>• Preliminary DEIS (PDEIS)</li> <li>• Administrative DEIS (ADEIS)</li> <li>• Draft EIS</li> </ul>	<b>ODOE with ODFW</b> <ul style="list-style-type: none"> <li>• NOI (by Proponent)</li> <li>• Public Notice</li> <li>• Public Information Meetings</li> <li>• Preliminary ASC (by proponent)</li> <li>• Data requests</li> <li>• Deemed Complete</li> <li>• Draft Proposed Order</li> </ul>	<b>BLM/FS with cooperating agencies</b> <ul style="list-style-type: none"> <li>• Comment period</li> <li>• Public Meetings</li> <li>• Final EIS</li> </ul> <b>ODOE with ODFW</b> <ul style="list-style-type: none"> <li>• Public Hearings Proposed Order (by Proponent)</li> </ul> <b>After BLM/FS</b> <ul style="list-style-type: none"> <li>• Record of Decision</li> <li>• Appeal Period</li> <li>• Right of Way Grant and Special Use Permit issued</li> <li>• Approval of Construction POD</li> </ul> <b>After EFSC</b> <ul style="list-style-type: none"> <li>• Contested Case</li> <li>• Site Certificate</li> <li>• Appeal Period</li> <li>• Compliance with all conditions of Certificate</li> </ul>
<b>STUDY PARAMETERS</b>			
Alternatives	<ul style="list-style-type: none"> <li>• Range of Alternatives based on Bureau of Land Management (BLM) /Oregon Department of Energy, Energy Facility Siting Council (EFSC) scoping. The alternatives will be evaluated at same level of analysis in the Draft Environmental Impact Statement (DEIS) based on the Phase 1 data sources described below. These will be the same range of alternatives presented in Applicant's preliminary ASC which will also be based on the Phase 1 data sources described below.</li> </ul>	Includes Applicant's Proposed Route as presented in an amended ASC, BLM Preferred Alternative based on the draft environmental impact statement (DEIS) comments, and any new reasonable alternatives identified as a result of scoping.	Includes route changes identified late in project permitting due to site specific conditions.
Analysis Areas	<ul style="list-style-type: none"> <li>• The analysis area will be specific to each resource area as determined by environmental practice, BLM guidelines or EFSC standards.</li> </ul>	The analysis area will be specific to each resource area as determined by environmental practice, BLM guidelines, or EFSC standards.	
Disturbance Footprint	<ul style="list-style-type: none"> <li>• The disturbance areas within the right-of-way (ROW) include access roads, transmission structure sites, and pulling and tensioning sites. Disturbance areas outside ROW include service and access roads, staging areas and fly yards.</li> </ul>	The disturbance areas within the right-of-way (ROW) include access roads, transmission structure sites, and pulling and tensioning sites. Disturbance areas outside ROW include service and access roads, staging areas and fly yards.	Final modifications included in construction BLM Plan of Development and Supplemental EFSC filing identifying any changes in conditions since Final Project Order
<b>VEGETATION RESOURCES</b>			
Analysis Area	The vegetation Analysis Area includes a buffer of one-half mile on either side of Proposed Route and Route Alternatives centerlines and a buffer of 25 feet on either side of proposed new or reconstructed road centerlines where roads are located outside the proposed route survey area.		

Resource Category	Phase 1 Data Collection	Phase 2 Data Collection	Phase 3 Data Collection
Vegetation Types	<p>Provides the basis for the Draft Environmental Impact Statement (DEIS) analysis and for EFSC to deem the Application for Site Certification (ASC) complete and issued Draft Proposed Order</p> <p><u>Existing Data</u></p> <ul style="list-style-type: none"> <li>• Photo interpretation based on current aerial photography of broad vegetation types</li> <li>• BLM and Forest Service GIS data on vegetation</li> </ul> <p><u>Additional Data</u></p> <ul style="list-style-type: none"> <li>• None</li> </ul>	<p>Supplements the DEIS analysis and provides protocol level information about the Agency preferred alternative and Applicants proposed route filed with EFSC that are presented in the Final EIS and Proposed Order</p>	<p>Provides detailed site specific data for resources that could be affected at the time of construction as well as information on any changed conditions</p> <p>Preconstruction inventory to be used for reclamation planning and quantification of impacts relative to mitigation.</p>
Threatened or Endangered Plant Species	<p><u>Existing Data</u></p> <ul style="list-style-type: none"> <li>• Oregon Department of Agriculture, ONHP, Idaho Conservation Data Center (IDCDC), BLM and Forest Service</li> </ul> <p><u>Additional Data</u></p> <ul style="list-style-type: none"> <li>• Map potential habitat types along routes based on ReGAP and ONHP data.</li> </ul>	<p>Ground surveys for Federally-listed Howell's spectacular thelypody (candidate) and slickspot peppergrass (listed species)</p> <p>Survey of all State listed Threatened or Endangered species along preferred/proposed route and associated project features</p>	<p>Clearance surveys in potential habitat of tower footprints, access road footprints and other disturbance areas</p>
Weeds	<p><u>Existing Data</u></p> <ul style="list-style-type: none"> <li>• Photo interpretation of broad vegetation types</li> <li>• BLM and Forest Service GIS data on weeds</li> <li>• County weed databases or maps</li> </ul>		<p>Preconstruction weed inventory of areas to be disturbed to develop treatment and monitoring plan.</p>
<b>FISH and WILDLIFE RESOURCES</b>			
Analysis Area	<p>The Analysis Area for fish and wildlife habitat varies by species but generally includes a 1-mile-wide area centered on the Proposed Route and its Alternatives (one half-mile on either side of the centerline of each route), a half-mile buffer around access roads, as well as all fly yards, laydown yards, staging areas, and tensioning/splicing sites. In accordance with OAR 345-001-0010 the study area for fish and wildlife habitat should include the site boundary and an area within one-half mile; unless directed otherwise by the agencies</p>		
General Wildlife	<p><u>Existing Data</u></p> <ul style="list-style-type: none"> <li>• Oregon Department of Fish and Wildlife (ODFW) and Idaho Department of Fish and Game (IDFG) big game range information</li> <li>• BLM/Forest Service big game range information</li> <li>• BLM/FS resource management plans and forest plans</li> </ul> <p><u>Additional Data</u></p> <ul style="list-style-type: none"> <li>• none</li> </ul>	<p>Use vegetation mapping to develop habitat map and ODFW habitat categories.</p>	
Greater Sage-grouse	<p><u>Existing Data</u></p> <ul style="list-style-type: none"> <li>• ODFW and IDFG lek data</li> <li>• Sage-Grouse Conservation Assessment and Strategy for Oregon: habitat ranks/viability data</li> <li>• ODFW occurrence data</li> <li>• The Oregon Natural Heritage Program (ONHP) data</li> <li>• ID BLM key habitat</li> </ul> <p><u>Additional Data</u></p> <ul style="list-style-type: none"> <li>• Aerial lek surveys of potential routes in April 2010</li> <li>• Follow-up ground surveys may be conducted at suspected lek locations. A sage grouse specialist would make determination as to whether ground survey is needed.</li> <li>• Refine potential habitat types along routes using ReGAP</li> <li>• Aerial route reconnaissance to verify habitat mapping</li> </ul>	<p>Incorporate any new sage-grouse data from ODFW and IDFG. 2011 aerial lek surveys of preferred/proposed route and associated project features (access roads, lay-down areas, and fly yards) not flown in 2010.</p>	<p>Follow-up surveys of modifications to route access roads, or lay down area prior to construction</p>

Resource Category	Phase 1 Data Collection	Phase 2 Data Collection	Phase 3 Data Collection
Sharp-tailed grouse	Provides the basis for the Draft Environmental Impact Statement (DEIS) analysis and for EFSC to deem the Application for Site Certification (ASC) complete and issued Draft Proposed Order	Supplements the DEIS analysis and provides protocol level information about the Agency preferred alternative and Applicants proposed route filed with EFSC that are presented in the Final EIS and Proposed Order	Provides detailed site specific data for resources that could be affected at the time of construction as well as information on any changed conditions
Washington Ground Squirrel	<u>Existing Data</u> <ul style="list-style-type: none"> <li>ONHP data</li> <li>Additional Data</li> <li>Will be considered during all sage-grouse efforts (above)</li> </ul>	Incorporate any new grouse data from ODFW and IDFG.	Follow-up surveys of modifications to route access roads, or lay down area prior to construction
Great Gray Owl	<u>Existing Data</u> <ul style="list-style-type: none"> <li>Existing data from ONHP, the Nature Conservancy, and military</li> </ul> <u>Additional Data</u> <ul style="list-style-type: none"> <li>Map potentially suitable habitat along all proposed routes based on ReGAP and high quality aerial photography.</li> <li>Ground reconnaissance of all potential habitat in 2010 and 2011 for all proposed routes (on private lands where right of entry granted)</li> <li>Aerial route reconnaissance to verify habitat mapping in areas where access not granted</li> </ul>	Pedestrian protocol surveys of all potential habitats along preferred/proposed route and associated project features in March-May 2011.	Follow-up surveys of modifications to route access roads, or lay down area prior to construction
Flammulated owl	<u>Existing Data</u> <ul style="list-style-type: none"> <li>Forest Service nest occurrence data</li> <li>Forest Service publications: Ecology of the Great Gray Owl</li> </ul> <u>Additional Data</u> <ul style="list-style-type: none"> <li>Map potentially suitable habitat along all proposed routes based on ReGAP, National Land Cover Data (NLCD), stand data if available, aerial photography</li> <li>Aerial route reconnaissance to verify habitat mapping</li> </ul>	Ground survey of potential nesting habitat along preferred/proposed route and associated project features in April-July 2011.	Follow-up surveys of modifications to route access roads, or lay down area prior to construction
Northern Goshawk	<u>Existing Data</u> <ul style="list-style-type: none"> <li>ONHP</li> <li>Forest Service data</li> </ul> <u>Additional Data</u> <ul style="list-style-type: none"> <li>Map potential habitat types along all proposed routes based on ReGAP and stand data from the Forest Service</li> </ul>	Concurrent ground survey (with great gray owl and goshawk) of potential nesting habitat along preferred/proposed route and associated project features in 2011.	Follow-up surveys of modifications to route access roads, or lay down area prior to construction
Three-toed woodpecker	<u>Existing Data</u> <ul style="list-style-type: none"> <li>ONHP</li> </ul> <u>Additional Data</u> <ul style="list-style-type: none"> <li>Map potential habitat types along all proposed routes based on ReGAP</li> </ul>	Ground survey of potential nesting habitat along preferred/proposed route and associated project features in May- July of 2011.	Follow-up surveys of modifications to route access roads, or lay down area prior to construction
Raptor Nest Survey	<u>Existing Data</u> <ul style="list-style-type: none"> <li>ONHP and IDCDC data</li> <li>agency historical records</li> </ul>	Concurrent ground survey (same timeframe as great gray owl and goshawk) of potential nesting habitat along preferred/proposed route and associated project features in April – July 2011.	Aerial raptor nest surveys of all routes in 2011  Preconstruction aerial survey to map active nests for construction avoidance and/or spatial and temporal restrictions.

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Ferruginous Hawk	<p>Provides the basis for the Draft Environmental Impact Statement (DEIS) analysis and for EFSC to deem the Application for Site Certification (ASC) complete and issued Draft Proposed Order</p>	<p>Supplements the DEIS analysis and provides protocol level information about the Agency preferred alternative and Applicants proposed route filed with EFSC that are presented in the Final EIS and Proposed Order</p>	<p>Provides detailed site specific data for resources that could be affected at the time of construction as well as information on any changed conditions</p>
Swainson's Hawk	<p><u>Existing Data</u></p> <ul style="list-style-type: none"> <li>ONHP and IDCDC data</li> <li>agency historical records</li> </ul>	<p>Aerial raptor nest surveys of all routes in 2011</p>	<p>Preconstruction aerial survey to map active nests for construction avoidance and/or timing limiting stipulations.</p>
Peregrine falcon	<p><u>Existing Data</u></p> <ul style="list-style-type: none"> <li>ONHP</li> <li>agency historical records</li> </ul>	<p>Aerial raptor nest surveys of all routes in 2011</p>	<p>Preconstruction aerial survey to map active nests for construction avoidance and/or timing limiting stipulations.</p>
Pygmy rabbit	<p><u>Existing Data</u></p> <ul style="list-style-type: none"> <li>ONHP and IDCDC data</li> <li>ReGAP</li> <li>High quality aerial photos</li> </ul> <p><u>Additional Data</u></p> <ul style="list-style-type: none"> <li>Aerial route reconnaissance to verify habitat mapping</li> </ul>	<p>Terrestrial visual encounter survey of preferred/proposed route and associated project features to record observations or sign</p>	
Columbia spotted frog	<p><u>Existing Data</u></p> <ul style="list-style-type: none"> <li>ONHP</li> <li>USFWS data</li> <li>Potential habitat based on vegetation mapping</li> </ul>		<p>Amphibian surveys of wetlands suspected to contain Columbia spotted frog within tower footprints, road footprints and other disturbance areas</p>
Crucial Habitat Survey (rock outcroppings, talus slopes, cliffs, caves, riparian zones, mature timber stands and permanent and seasonal ponds, lakes, wetlands, and springs)	<p><u>Existing Data</u></p> <ul style="list-style-type: none"> <li>ReGAP</li> <li>High quality aerial imagery</li> <li>Forest Service stand data</li> <li>Forest Inventory Analysis</li> <li>National Hydrography Dataset</li> <li>PNW Hydrography Data</li> <li>NWI mapping</li> </ul> <p><u>Additional Data</u></p> <ul style="list-style-type: none"> <li>Aerial route reconnaissance to locate crucial habitats</li> </ul>	<p>Pedestrian reconnaissance survey of preferred/proposed route and associated project features to record crucial habitats (conducted during terrestrial visual encounter survey). Determination of the location of wetlands crossed by project routes and associated facilities and delineation of wetlands to be impacted by the disturbance footprint</p>	<p>Follow-up surveys where changes have occurred in the location of project facilities and where disturbance is expected.</p>
Terrestrial Visual Encounter Surveys (target species to record: burrowing owl, grasshopper sparrow, loggerhead shrike, sage sparrow, sagebrush lizard, white tailed jackrabbit. Suitable special status plant habitats)	<p><u>Existing Data</u></p> <ul style="list-style-type: none"> <li>ONHP and IDCDC data</li> <li>ReGAP</li> <li>High quality aerial photos</li> </ul> <p><u>Additional Data</u></p> <ul style="list-style-type: none"> <li>Aerial route reconnaissance to verify habitat mapping</li> </ul>	<p>Terrestrial visual encounter survey of preferred/proposed route and associated project features to record special status species observations or sign</p>	<p>Follow-up surveys of modifications to route access roads, or lay down area prior to construction</p>

Resource Category	Phase 1 Data Collection	Phase 2 Data Collection	Phase 3 Data Collection
Wetlands	<p>Provides the basis for the Draft Environmental Impact Statement (DEIS) analysis and for EFSC to deem the Application for Site Certification (ASC) complete and issued Draft Proposed Order</p> <p><u>Existing Data</u></p> <ul style="list-style-type: none"> <li>Hydric soils mapping</li> <li>Pacific Northwest (PNW) Hydrography Clearinghouse data</li> <li>National Wetlands Inventory (NWI) mapping</li> <li>National Hydrography Data</li> </ul>	<p>Supplements the DEIS analysis and provides protocol level information about the Agency preferred alternative and Applicants proposed route filed with EFSC that are presented in the Final EIS and Proposed Order</p> <p>Wetland determinations and mapping for preferred/proposed route and associated project features.</p>	<p>Provides detailed site specific data for resources that could be affected at the time of construction as well as information on any changed conditions</p> <p>Delineation of all wetlands that would be affected by the approved ROW and approved permit applications from COE and Oregon and Idaho state agencies</p>
<b>GEOLOGY AND SOILS</b>			
Analysis Area	<p>The analysis area for landslides, subsidence, and shallow bedrock (blasting) includes 1/2 mile on either side of the transmission line routes centerlines. This area covers all of the potential geologic hazard area that could affect the stability of the transmission line relative to landslides, subsidence, and shallow bedrock. The analysis area for earthquakes includes a distance of 100 miles on either side of the transmission line. At one hundred miles, the effect on the proposed transmission line from earthquakes would have been reduced to minimal damage from even the strongest recorded past earthquakes in the area.</p>		
Minerals	<p><u>Existing Data</u></p> <ul style="list-style-type: none"> <li>Known mineral deposits</li> <li>Mineral leases</li> </ul> <p><u>Additional Data</u></p> <ul style="list-style-type: none"> <li>Active mines</li> </ul>		
Paleontological Resources	<p><u>Existing Data</u></p> <ul style="list-style-type: none"> <li>State/BLM/FS GIS mapping of fossil-bearing formations</li> </ul>		
Geologic Hazards	<p><u>Existing Data</u></p> <ul style="list-style-type: none"> <li>Federal Emergency Management Agency (FEMA) 100-Year Flood maps, United States Geological Survey (USGS) state geologic survey departments (ID &amp; OR)</li> <li>Earthquake epicenters within 100 miles of proposed routes</li> <li>Underground mining areas</li> </ul>		
Soils	<p><u>Existing Data</u></p> <ul style="list-style-type: none"> <li>Natural Resources Conservation Service (NRCS) state soil geographic (STATSGO) database</li> <li>Sensitive soils (landslide prone, highly erosive)</li> </ul>		
<b>WATER</b>			
Analysis	<p>The analysis area for water resources is one-half mile from the centerline of the proposed and alternative transmission line segments, access roads, and surface water crossings.</p>		
Surface Water	<p><u>Existing Data</u></p> <ul style="list-style-type: none"> <li>Mapped streams, lakes, waters of the US, floodplains</li> <li>List of Impaired Streams (Idaho Department Environmental Quality [IDEQ] &amp; Oregon Department Environmental Quality [ODEQ]) and total maximum daily loads (TMDLs)</li> </ul>		<p>Field inventory of stream crossings by access roads</p>
Groundwater	<p><u>Existing Data</u></p> <ul style="list-style-type: none"> <li>NRCS STATSGO database</li> </ul>		

Resource Category	Phase 1 Data Collection	Phase 2 Data Collection	Phase 3 Data Collection
<b>LAND USE</b>			
Analysis Area	The analysis area for characterizing land use and ownership extends a half mile on either side of the proposed and alternative routes, and 25 feet on either side of access roads. This analysis area was used because all of the ground disturbing activities and the transmission line that could cause land use effects would occur within the area. Designated land uses will be identified as crossed or within 1,000 feet of the proposed action and alternative routes to identify specific land uses. In accordance with OAR 345-001.0010 the study area for protected areas, as defined in OAR 345-022.0040, will include the site boundary and an area within 20 miles in terms of general land use.		
	<p><u>Existing Data</u></p> <ul style="list-style-type: none"> <li>• County, state, federal land use plans</li> <li>• GIS mapping city limits and zoning</li> <li>• County growth plans</li> <li>• Locations of special designations in county, state and federal land use plans within ½ mile of routes and alternatives</li> <li>• GIS mapping of county, state or federal land use plan exclusion areas</li> <li>• State parks</li> <li>• Federal parks and monuments</li> <li>• Known existing encumbrances (ROW, easements, special use permits)(pipeline, transmission line, roads, communication facilities)</li> </ul> <p><u>Additional Data</u></p> <ul style="list-style-type: none"> <li>• Photo interpretation of land uses, including residential areas (an number of houses), recreational areas, state</li> </ul>		
<b>AGRICULTURE</b>			
Analysis Area	The analysis area for impacts on agriculture includes the area one-half mile on each side of the proposed and alternative transmission line facilities and 25 feet on each side of the centerline for access roads that extend outside of this area.		
	<p><u>Existing Data</u></p> <ul style="list-style-type: none"> <li>• GIS mapping of vegetation and land use</li> <li>• GIS of federal grazing allotments</li> <li>• Soil data</li> <li>• Essential Farm Use (EFU)</li> </ul> <p><u>Additional Data</u></p> <ul style="list-style-type: none"> <li>• Photo interpretation of irrigated and non-irrigated fields crossed by structures and access roads</li> <li>• Dairies and feedlots</li> </ul>	Verify photo interpretation of irrigated and non-irrigated fields crossed by structures and access roads	Survey of agricultural facilities in ROW and roads including fields, irrigation system, roads, fences. Restoration per mitigation plan or landowner agreement.
<b>TRANSPORTATION</b>			
Analysis Area	The transportation Analysis Area varies. It comprises four parts: 1) Existing state and county maintained roads that would be mostly unaffected except for instances of traffic increases that could temporarily affect the level of service or could have some road damage; 2) off-ROW existing roads needing improvement to a standard to support construction traffic; 3) off-ROW new roads to get to individual structure locations or the ROW; and 4) roads built within the ROW connecting structure locations unless terrain intervenes. The Analysis Area for airports where the routes intersect includes the area 3 miles around an airport, including the controlled airspace. The Analysis Area for railroads and pipelines is the point of intersection with the ROW.		



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	<u>Existing Data</u> <ul style="list-style-type: none"> <li>• GIS locations of roads, highways, railroads, airports and airstrips.</li> <li>• Land use plans and travel management plans, particularly closure areas.</li> </ul> <u>Additional Data</u> <ul style="list-style-type: none"> <li>• Photo interpretation of airstrips not in GIS</li> </ul>		
<b>AIR QUALITY</b>			
Analysis Area	The air quality analysis area includes construction disturbance areas within the proposed or alternative routes, i.e., access road construction and use during the construction phase, tower construction areas, and substation construction areas.		
	<u>Existing Data</u> <ul style="list-style-type: none"> <li>• Air quality within airsheds where project would occur</li> <li>• Existing air permits</li> <li>• GIS of class 1 areas</li> </ul>		
<b>ELECTROMAGNETIC FIELDS (EMF)</b>			
Analysis Area	By design, expected levels of electric and magnetic field, audible noise, and radio noise would be at or below accepted guidelines at the edge of the proposed ROWs (in the range of 60 to 150 feet from the centerline of the ROW for the proposed line designs). For informational purposes, profiles of these levels are calculated and plotted out to a distance of 300 feet beyond either side of the centerlines of the Proposed Route and Route Alternatives..		
	<u>Existing Data</u> <ul style="list-style-type: none"> <li>• GIS locations of existing transmission lines crossed or within 300 feet of proposed routes or alternatives</li> <li>• Algorithms developed by the U.S. Department of Energy, Bonneville Power Administration (BPA) CAFÉ (Corona and Field Effects)</li> </ul>		
<b>PUBLIC SAFETY</b>			
Analysis Area	The Analysis Area is 0.25 miles on either side of the centerline for the Proposed Route and Route Alternatives		
	<u>Existing Data</u> <ul style="list-style-type: none"> <li>• Applicable federal, state and industry codes to minimize the potential for ground contamination, wind, ice, or fire to affect public safety?</li> </ul>		
<b>NOISE</b>			
Analysis Area	The analysis area includes potential noise sensitive areas (NSAs) including residences, schools and day care facilities, hospitals, long-term care facilities, places of worship, libraries, and parks and recreational areas specifically known for their solitude and tranquility such as wilderness areas. Generally, the analysis area was less than 1,000 feet from the proposed edge of the ROW, or from the boundary fence of the substations.		
	<u>Existing Data</u> <ul style="list-style-type: none"> <li>• County/State regulations</li> </ul> <u>Additional Data</u> <ul style="list-style-type: none"> <li>• GIS survey of noise receptors (noise sensitive areas) within 1/2 mile of proposed and alternative routes</li> </ul>		
<b>CUMULATIVE IMPACT</b>			
Analysis Area	For the purposes of this analysis, the temporal extent of the projects to be considered will be the expected physical operational service life of this Project (50 years), plus the estimated 10 years needed for substantial site rehabilitation after decommissioning is completed. Past and present events and projects will be generally identified and their ongoing impacts discussed. "Reasonably foreseeable actions" are proposed projects or actions that have applied for a permit from local, state, or federal authorities and which are publicly known. The spatial extent of the projects considered in the cumulative effects analysis will vary by the project and by resource. In several cases the Cumulative Impact Analysis Area (CIAA) for a resource is substantially larger than the corresponding project-specific Analysis Area in order to consider an area large enough to encompass likely effects from other projects on the same resource.		

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	<u>Existing Data</u> <ul style="list-style-type: none"> <li>• Other transmission lines in or near the Project area or serving similar generation or load areas</li> <li>• Other linear projects in or near the Project area, such as roads and pipelines;</li> <li>• Energy generation projects, including coal, gas, wind, geothermal, and hydroelectric</li> <li>• Oil, gas, and mineral extraction</li> <li>• Other development, including subdivision of lands for commercial, industrial, or residential development; and</li> <li>• Existing and proposed land uses or restrictions on land uses, including hunting and OHV use.</li> </ul>		
<b>VISUAL RESOURCES</b>			
Analysis Area	The visual resources analysis area can be generally defined as up to 5 miles from either side of the centerline of the proposed and alternative routes, and in some instances potentially up to 15 miles, which corresponds with the furthest extent of the BLM defined background distance zone. In accordance with Oregon's administrative rules (OAR) 345-001.0010 the study area for scenic resources should include the site boundary and the area within 10 miles.		
Visually Sensitive Areas	<u>Existing Data</u> <ul style="list-style-type: none"> <li>• Established Key Observation Points (KOPs)</li> </ul> <u>Additional Data</u> <ul style="list-style-type: none"> <li>• KOPs established and photographed in consultation with agencies</li> <li>• Existing KOP photography</li> </ul>		
Visual Effects on Historical Resources	<u>Additional Data</u> <ul style="list-style-type: none"> <li>• KOPs established and photographed in consultation with agencies</li> <li>• Existing KOP photography</li> </ul>		
Land Use Plans Visual Requirements	<u>Existing Data</u> <ul style="list-style-type: none"> <li>• Visual Resource Management (VRM)/ Visual Quality Objectives (VQOs)/SRM mapped in GIS for all BLM and Forest Service lands</li> </ul>		
<b>CULTURAL RESOURCES</b>			
Analysis Area	<p>The analysis area for cultural resources is often referred to as the "area of potential effects" (APE). The definition for APE is set forth in 36 CFR Section 800.16 as follows: the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.</p> <p>The APE for the proposed Project has been established through cooperation among the BLM, Forest Service, and the offices of the Idaho and Wyoming State Historic Preservation Officers (SHPO). The Project APE for direct effects to cultural resources includes a 500-foot-wide corridor that extends the entire length of the transmission system. Cultural resources will be identified within this entire study area. Due to the intermittent ground disturbance associated with transmission line construction, evaluations for potential direct effects to cultural resources would occur as the specific areas for ground disturbance, such as tower locations, are determined.</p> <p>Project impacts include not only the surface disturbance of the activity but also indirect effects such as the visual elements that may alter the character of a historic property, including historic trails and traditional cultural properties (TCPs). The visual component of the Project facilities must be taken into account as part of the Project APE. Changes in distance, topography and angle of view are all factors that contribute to the potential visual effect for any given historic property. For this project, it has been determined that historic properties, in which setting is an important factor for eligibility, within 5 miles of the project are considered to be within the Project's viewshed and will be evaluated for potential visual impact.</p>		
Listed Sites or Sites Eligible for Listing on the National Register of Historic Places	<u>Existing Data</u> <ul style="list-style-type: none"> <li>• Established KOPs</li> </ul> <u>Additional Data</u> <ul style="list-style-type: none"> <li>• Literature review</li> </ul> 15% Class 3 survey of the proposed and alternative routes	Class 3 survey (unless modified by Programmatic Agreement )	Follow-up surveys of modifications to routes roads or staging areas area prior to construction

Resource Category	Phase 1 Data Collection	Phase 2 Data Collection	Phase 3 Data Collection
Visual Effects on Historical Resources	Provides the basis for the Draft Environmental Impact Statement (DEIS) analysis and for EFSC to deem the Application for Site Certification (ASC) complete and issued Draft Proposed Order	Supplements the DEIS analysis and provides protocol level information about the Agency preferred alternative and Applicants proposed route filed with EFSC that are presented in the Final EIS and Proposed Order	Provides detailed site specific data for resources that could be affected at the time of construction as well as information on any changed conditions
	<u>Additional Data</u> <ul style="list-style-type: none"> <li>KOPs established and photographed in consultation with agencies</li> </ul> Existing KOP photography		Follow-up surveys of modifications to roads or staging areas area prior to construction
<b>SOCIAL AND ECONOMIC RESOURCES</b>			
Analysis Area	The counties crossed by the Proposed Action and alternatives, and the communities located within the vicinity of the proposed facilities comprise the overall socioeconomic analysis area.		
Demand for police, fire protection, schools	<u>Existing Data</u> <ul style="list-style-type: none"> <li>Number of public service facilities within the counties that make up the analysis area</li> </ul> <u>Additional Data</u> None		
Population increase and demand for temporary housing	<u>Existing Data</u> <ul style="list-style-type: none"> <li>Census data on population</li> </ul> <u>Additional Data</u> Availability of housing, motels, hotels, RV parks		Survey availability of housing, including motel and hotel rooms, to determine if additional housing will be needed.
Regional Economic Impacts – IMPLAN Modeling	<u>Existing Data</u> <ul style="list-style-type: none"> <li>Census data on economics</li> </ul> <u>Additional Data</u> Availability of EPC data		
Environmental Justice populations and disproportionately high and adverse effects	<u>Existing Data</u> Census data on demographics		

