Creston-Bell Transmission Line Rebuild Project

Department of Energy
Bonneville Power Administration

Mitigation Action Plan
DOE/EA-4406

Summary

This Mitigation Action Plan (MAP) is part of the Finding of No Significant Impact (FONSI) for the Creston-Bell Transmission Line Rebuild Project (Proposed Action). The Proposed Action involves rebuilding the 53.8-mile-long 115-kilovolt (kV) transmission line from the existing Creston Substation, located in Lincoln County, Washington, to the existing Bell Substation, located in the city of Spokane, Washington.

This MAP is for the Proposed Action and includes all of the integral elements and commitments made in the Environmental Assessment (EA) to mitigate any potential adverse environmental impacts.

The Bonneville Power Administration (BPA) and its contractor are responsible for implementation of mitigation measures during various phases of the Proposed Action. A BPA contractor will remove old wood-pole structures and replace them with new wood-pole structures and associated structural components. To ensure the contractor will implement mitigation measures, the relevant portions of this MAP will be included in the construction contract specifications developed for the project. This will obligate the contractor to implement the mitigation measures identified in the MAP that relate to contractor responsibilities during construction and post-construction.

If you have general questions about the project, contact the Project Environmental Manager, Stephanie Breeden, at 503-230-5192. If you have questions about the MAP, contact the Project Environmental Manager or Erich Orth, toll-free, at 800-282-3713. This MAP may be amended, if revisions are needed due to new information or if there are any significant project changes.

Consultation Related to Mitigation Measures

BPA sent a copy of the Preliminary EA to U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service to review. BPA did not receive any comments from U.S. Fish and Wildlife Service or NOAA. NOAA indicated via email in January of 2011 that there are no salmon or steelhead populations in the vicinity of the Proposed Action and that formal consultation would not be required for the Proposed Action.

There are two fish and wildlife species federally listed as threatened (bull trout and pygmy rabbit) under the jurisdiction of the U.S. Fish and Wildlife Service that may occur in the counties crossed by the rebuild project. These species and their habitat are not present in rebuild area. The rebuild area is within the potential habitat range of three federally listed plant species under the

jurisdiction of the U.S. Fish and Wildlife Service: water howelia, Spalding's catchfly, and Ute ladies'-tresses. These species are not present within the rebuild project ROW. In the unlikely event these species are identified as present during pre-construction surveys along project access roads, they will be avoided.

Although a formal delineation of waters of the U.S. has not been conducted, it is anticipated that the Proposed Action would have some wetland impacts, but likely below 0.1 of an acre at any given wetland. BPA will coordinate with the U.S. Army Corps of Engineers to determine the need for permitting. The mitigation provided below would minimize potential effects on waters of the U.S., and would be reflected in any permit applications submitted in the future.

As part of the Section 106 of the National Historic Preservation Act (NHPA) consultation process, BPA completed a cultural resources assessment of the study area in 2011, with a separate report prepared for the access roads also completed in 2011. BPA also provided information and requested input on the Proposed Action from the following tribes: the Spokane Tribe of Indians and the Confederated Tribes of the Colville Indian Reservation. Consultation with these tribal organizations was initiated on February 7, 2011. BPA also initiated consultation with the Washington State Department of Archaeology and Historic Preservation on February 7, 2011. Consultation was initiated with the Washington Department of Natural Resources, Bureau of Land Management (BLM), and Washington State Parks on February 15, 2011. BPA made a finding of no adverse effect to historic properties and the Washington SHPO concurred in February 2012. The mitigation measures prescribed for cultural resources below include measures intended to minimize impacts on unknown cultural resources, should they be discovered during construction of the Proposed Action.

Mitigation Measures

The following minimization and mitigation measures have been identified to reduce potential impacts associated with the Proposed Action.

Mitigation Action Plan Table

Environmental Resource	Mitigation
Land Use and Recreation	• Distribute a schedule of construction activities to all potentially affected landowners. • Schedule construction during periods when active farms along the corridor are likely to be fallow, where possible, to minimize the potential for crop damage. • Compensate landowners for the value of commercial crops damaged or destroyed by construction activities. • Revegetate disturbed areas after the conclusion of construction, with the exception of those areas required to remain clear of vegetation to ensure the safety of the transmission line and access to the structures. • Keep construction activities and equipment clear of residential driveways, to the extent possible. • Use water trucks or other measures to minimize fugitive dust during project construction. • Coordinate the routing and scheduling of construction traffic with Washington State Department of Transportation and county road staff. • Publicize road closures and traffic delays to minimize impacts to traffic. • Coordinate construction in Riverside State Park with the Washington State Parks Lands Program. • Employ traffic-control flaggers and post signs warning of construction activity and merging traffic, when necessary, for short interruptions of traffic.
Geology and Soils	• Locate offset replacement structures as far as possible from nearby streams and wetlands where adjustments are possible. • Space and size culverts, cross-drains, and water bars to prevent erosion. • Minimize erosion, sedimentation, and soil compaction by conducting as much work as possible during the dry season when streamflow, rainfall, and runoff are low. • Prepare and implement a stormwater pollution prevention plan that addresses measures to reduce erosion and runoff and stabilize disturbed areas. • Limit heavy equipment use to minimize soil compaction, particularly during the critical erosion period (November through March). Do not operate equipment on saturated soils. • Revegetate disturbed, non-farmed, areas with a predominantly native seed mix or a seed mix agreed upon with landowners. • Inspect and maintain access roads, culverts, and other facilities after construction to ensure proper function and nominal erosion levels. • Inspect revegetation work and sites to verify adequate growth, and contingency measures as needed.

Environmental Resource	Mitigation
Vegetation	• Assess whether noxious weeds have spread or increased in abundance as a result of construction activities using the results of the pre-construction noxious weed survey conducted for the Proposed Action (Woodland Resource Services Inc. 2011). • Implement measures to minimize the introduction and broadcast of weed seeds during construction. Wash equipment and vehicles before entering construction areas. • Restrict construction activities to the area needed to work effectively to limit disturbance of native plant communities and to prevent expansion of noxious weed species. • Mulch and reseed disturbed, non-farmed areas once construction is complete using a predominantly native seed mix or a seed mix agreed upon with landowners to make it less likely that noxious weed infestations will expand within the study area. • Periodically inspect reseeded sites to verify adequate growth. If necessary, implement contingency measures to ensure adequate growth and vegetation cover. • Conduct surveys for federally and state-listed plant species along proposed off-right-of-way (ROW) access roads and travel routes between line mile 17 and the Bell Substation prior to construction-related use of these access roads and travel routes. • Install stakes or flagging in sensitive areas such as the vicinity of special status plant species populations (including those identified during pre-construction surveys) prior to construction, where needed to minimize disturbance and to restrict vehicles and equipment to designated routes. • Minimize chip, sawdust, or brush accumulation in the ROW and haul these materials out, if possible. • Continue to implement weed control efforts in the ROW as part of ongoing vegetation management efforts.
Water Resources and Water Quality	• Conduct all culvert installation/replacement work in the dry, either when there is no flow or by diverting flow from the stream culvert location during installation/replacement, as necessary, to avoid impacts on water quality. • Keep disturbance to the minimum necessary when working in or near water bodies, and install stakes or flagging to restrict vehicles and equipment to designated routes and areas. • Prepare and implement a stormwater pollution prevention plan that addresses measures to reduce erosion and runoff and stabilize disturbed areas. • Retain vegetative buffers, where possible, to prevent sedimentation into water bodies. • Minimize erosion, sedimentation, and soil compaction by conducting as much work as possible during the dry season when stream flow, rainfall, and runoff are low. • Install sediment barriers and other suitable erosion- and runoff-control devices, where needed, prior to ground-disturbing activities at construction sites to minimize offsite sediment movement. • Place construction vehicles or equipment at least 50 feet from any stream or wetland unless authorized by a permit or on an existing road. • Locate tensioning sites at least 50 feet from streams or floodplains. • Design and construct roads to minimize drainage from the road surface directly into water features. • Prepare and implement spill prevention and response plans to minimize the potential for spills of hazardous material. • Keep spill prevention materials on site and with equipment. • Maintain vehicles and equipment in good working order to prevent oil and fuel leaks. • Cover approaches to streams and crossings of streams in clean cobble rock to minimize erosion and sedimentation from BPA and landowner use, where appropriate. Steel plates and/or grates may also be used for driving surfaces across streams to minimize erosion and sedimentation, where appropriate.

Environmental Resource	Mitigation
Fish and Wildlife	• Minimize potential impacts on salmonids by avoiding the use of fords wherever an alternative route is available. Alternately a temporary fish and water passage structure could be installed if water is present when the ford is in use. • Conduct all culvert installation/replacement work in the dry, either when there is no flow or by diverting flow from the stream culvert location during installation/replacement, as necessary, to avoid impacts on fish species. • Limit disturbance to the minimum necessary when working in or near water bodies and wetlands or their buffers. Install stakes or flagging to restrict vehicles and equipment to designated routes and areas. . • Mark the transmission line with bird flight diverters over any major water body that may be a potential flyway for migratory bird species (water fowl) where appropriate, including the Spokane River and specifically identified wetlands and wetland complexes. • Inspect danger trees for the presence of nesting avian species—cavity nesters, small and large stick nests—prior to removal to minimize impacts to nesting birds. Large stick nests (raptors) would be documented to species to determine whether they can be removed. No trees containing large stick nests would be removed during the nesting season, typically February 1 (owls) through July 30 (cavity nesters and raptors). • Top and leave tall dead trees (snags) in place for wildlife habitat, where possible and appropriate, in accordance with BPA's *Transmission System Vegetation Management Program Final Environmental Impact Statement* (BPA 2000). • Avoid construction activities within high-use native habitats, especially riparian, shrub-steppe, and pine forest habitat, during spring to reduce the potential for impacting reproduction of various wildlife taxa, wherever possible. • Gate and lock access and restrict vehicle traffic in areas where the ROW crosses habitats heavily used by wildlife. • Avoid construction-related disturbances within 1.2 miles (2 km) of known active leks between 05:00 and 09:00 from March 1 through April 30 to reduce potential impacts to Columbian sharp-tailed grouse during mating season (Stinson and Schroeder 2010). • Prepare and implement a stormwater pollution prevention plan that addresses measures to reduce erosion and runoff and stabilize disturbed areas. • Retain vegetative buffers, where possible, to prevent sedimentation into water bodies. • Minimize erosion, sedimentation, and soil compaction by conducting as much work as possible during the dry season when streamflow, rainfall, and runoff are low. • Install sediment barriers and other suitable erosion- and runoff-control devices, where needed, prior to ground-disturbing activities at construction sites to minimize offsite sediment movement. • Place construction vehicles or equipment at least 50 feet from any stream or wetland unless authorized by a permit or on an existing road. • Locate tensioning sites at least 50 feet from streams or floodplains. • Design and construct roads to minimize drainage from the road surface directly into water features. • Prepare and implement spill prevention and response plans to minimize the potential for spills of hazardous material. • Keep spill prevention materials on site and with equipment. • Maintain vehicles and equipment in good working order to prevent oil and fuel leaks.

Environmental Resource	Mitigation
Wetlands	• Locate roads and structures to avoid wetlands, whenever possible. • Design construction activities within wetlands to minimize unavoidable impacts, and coordinate with the U.S. Army Corps of Engineers and Washington Department of Ecology for appropriate permits. • Flag or stake wetland boundaries in the vicinity of construction areas and avoid these areas during construction. • Place construction vehicles or equipment at least 50 feet from any wetland unless authorized by a permit or on an existing road. • Locate tensioning sites outside of wetlands and buffers when possible. • Limit disturbance to the minimum necessary when working in wetlands or their buffers. • Place geotextile fabric around the work area when working on structures within 25 feet of wetlands to avoid depositing excavated material into the wetlands. Remove and stabilize material in an upland area. • Store fuel and refuel machinery at least 200 feet from wetlands and waterways and inspect regularly for leaks. • Require an environmental specialist to meet with contractors and inspectors in the field and visit wetlands near or within construction areas to go over mitigation measures and any permit requirements. • Install sediment barriers and other suitable erosion- and runoff-control devices, where needed, prior to ground-disturbing activities at construction sites to minimize offsite sediment movement near wetlands. • Underlay temporary fill for temporary roads in wetlands with geotextile fabric and remove all fill in compliance with applicable permits. • Remove trees cut in wetland areas. • Vegetate disturbed wetland and buffer areas with appropriate native plant species and follow specific revegetation guidelines in permits. • Monitor disturbed wetlands for weed invasion and control in accordance with BPA's *Transmission System Vegetation Management Program Final Environmental Impact Statement* (BPA 2000). • Construct permanent access roads with adequate cross culverts or other methods to maintain the existing hydrologic regime.
Floodplains	• Minimize erosion, sedimentation, and soil compaction by conducting as much work as possible during the dry season when streamflow, rainfall, and runoff are low. • Delineate construction limits as specified in the stormwater pollution prevention plan, using sediment fence or straw wattles or similar erosion and stormwater control Best Management Practices (BMPs) to eliminate discharge into floodplains. • Identify the locations of 100-year floodplains on project maps for contractors and restrict tensioning sites to areas outside floodplains, where possible. • Locate all staging areas at least 200 feet from Federal Emergency Management Agency-designated floodplains. • Inspect and maintain access roads, culverts, and other facilities after construction to ensure proper function and nominal erosion levels.

Environmental Resource	Mitigation
Visual Quality	• Schedule all construction work during daylight hours to avoid noise and the use of nighttime illumination of work areas. • Use non-reflective conductors and insulators on all replacement structures. Treat tower steel on the two new lattice towers to reduce reflectivity. • Avoid storing construction equipment and supplies on residential streets or access roads directly adjacent to residential property, to the greatest extent possible. • Incorporate BMPs for the control of erosion and dust associated with construction of access roads to minimize permanent visual impacts on nearby residential viewers. • Reseed disturbed, non-farmed areas once construction is complete using a predominantly native seed mix or a seed mix agreed upon with landowners. Periodically inspect reseeded sites to verify adequate growth. If necessary, implement contingency measures to ensure adequate growth and vegetation cover. • Locate construction staging areas away from sensitive viewers as much as possible. • Require contractors to maintain clean construction sites.
Air Quality	• Use water trucks or other dust control measures to control dust during construction. • Keep construction vehicles at low speeds (15 miles per hour) on unpaved access roads to minimize dust. • Keep all vehicle engines in good operating condition to minimize exhaust emissions. • Implement vehicle idling and equipment emissions measures.
Socioeconomics and Public Services	• Distribute a schedule of construction activities to all potentially affected landowners. • Coordinate with local farmers and landowners to minimize potential construction-related disruptions. • Compensate landowners for the value of commercial crops damaged or destroyed by construction activities. • Coordinate the routing and scheduling of construction traffic with Washington State Department of Transportation and county road staff.
Cultural Resources	• Restrict work areas to avoid disturbance to seven cultural resource sites. Employ an archaeological monitor at four of the sites to further ensure impacts are avoided. • Stop all activities in the vicinity of the find if ground-disturbing activities reveal any cultural materials (e.g., structural remains, Euroamerican artifacts, or Native American artifacts) per BPA's Inadvertent Discovery Procedure for projects. Notify the BPA archaeologist, the Washington Department of Archaeology and Historic Preservation (DAHP), and affected tribes immediately. • Stop operations immediately within 200 feet of the find if human remains, suspected human remains, or any items suspected to be related to a human burial (i.e., funerary items, sacred objects, or objects of cultural patrimony) are encountered during project construction. Secure the area around the discovery and immediately contact the Lincoln or Spokane County Sheriff, the BPA archaeologist, the State Historic Preservation Officer (SHPO), and the affected tribes.

Environmental Resource	Mitigation
Noise Public Health, and Safety	• Locate equipment as far away as is practical from noise-sensitive uses. • Require all construction equipment powered by gasoline or diesel engines to have sound-control devices that are at least as effective as those originally provided by the manufacturer. • Require all equipment to be operated and maintained to minimize noise generation. • Prohibit gasoline or diesel engines from having unmuffled exhaust. • Prepare and maintain a safety plan that would detail how to manage hazardous materials such as fuel, and how to respond to emergency situations. This plan, prepared prior to the start of construction, would be kept on site at all times. • Hold crew safety meetings at the start of each workday to review potential safety issues and concerns. • Secure the site at the end of each workday, as much as possible, to protect equipment and the general public. • Comply with all fire safety laws, rules, and regulations of the State of Washington and prepare a fire prevention and suppression plan to meet BPA, local authority, and land manager requirements. • Construct and operate the new transmission line to comply with the National Electric Safety Code. • Notify the BPA Contracting Officer's Technical Representative immediately if a hazardous material is discovered that could pose an immediate threat to human health or the environment and stop work in that area until the site is properly cleaned up. • Ground fences and other metal structures on and near the transmission line corridor during construction to limit the potential for shocks.
Climate Change	• Implement vehicle idling and equipment emissions measures. • Encourage carpooling and the use of shuttle vans among construction workers to minimize construction-related traffic and associated emissions. • Locate staging areas as close to construction sites as practicable to minimize driving distances between staging areas and construction sites. • Locate staging areas in previously disturbed or graveled areas to minimize soil and vegetation disturbance where practicable. • Encourage the use of the proper size of equipment for the job to maximize energy efficiency. • Use alternative fuels for generators at construction sites, such as propane or solar, or use electrical power where practicable. • Reduce electricity use in the construction office by using compact fluorescent bulbs and turning off computers and other electronic equipment every night. • Recycle or salvage non-hazardous construction and demolition debris where practicable. • Use local rock sources for road construction.