Kalispell-Kerr Transmission Line Rebuild Project

Finding of No Significant Impact and Floodplain and Wetland Statement of Findings

DEPARTMENT OF ENERGY
Bonneville Power Administration
DOE/EA-1961
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Summary

Bonneville Power Administration (BPA) announces its environmental findings for the Kalispell-Kerr Transmission Line Rebuild Project. The project involves rebuilding the Kalispell-Kerr transmission line, which runs from Kalispell to Polson, Montana. The existing 41-mile-long 115-kilovolt (kV) transmission line is aging, and BPA proposes to replace its wood-pole structures and other line components and improve its road system that provides access to the line.

BPA has prepared an environmental assessment (EA) evaluating the Proposed Action and the No Action Alternative. Based on the analysis in the EA, BPA has determined that the Proposed Action is not a major federal action significantly affecting the quality of the human environment, within the meaning of the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [USC] 4321 *et seq.*). Therefore, the preparation of an environmental impact statement (EIS) is not required and BPA is issuing this Finding of No Significant Impact (FONSI) for the Proposed Action. The Proposed Action is not the type of action that normally requires preparation of an EIS and is not without precedent.

The comments received on the Draft EA and responses to those comments are included in the Final EA. The Final EA also identifies changes made to the Draft EA.

Attached is a Mitigation Action Plan that lists all the mitigation measures that BPA and its contractors are committed to implementing. The FONSI also includes a statement of findings on how the Proposed Action impacts wetlands and floodplains. Impacts to wetlands and floodplains would be avoided where possible and minimized by the mitigation measures included in the EA and Mitigation Action Plan where there is no practicable alternative.

Public Availability

BPA will mail this FONSI directly to individuals who previously requested it, a notification of availability will be mailed to other potentially affected parties, and the Final EA and FONSI will be posted on the project webpage at www.bpa.gov/goto/KalispellKerr

Proposed Action

Under the Proposed Action, BPA would remove and replace 354 of the existing 359 wood-pole transmission line structures (including components such as cross-arms, insulators, dampers, and guy wires), replace the existing conductors, and install a combination fiber optic cable-ground wire (optical ground wire) with counterpoise for the entire length of the transmission line. The project would also include improvements to the access road system (including improving or reconstructing existing roads, constructing new roads, installing temporary roads, obtaining access rights, and replacing or installing culverts, fords, and entrance gates); removal of some trees and vegetation within and along the right-of-way and access roads; establishment of temporary staging areas, material storage sites, and tensioning sites; and revegetation of areas disturbed by construction activities.

Construction is expected to take two construction seasons, starting in spring 2017, and the rebuilt line would be energized by winter 2018. Details of the Proposed Action are presented in Chapter 2 of the EA.

No Action Alternative

Under the No Action Alternative, BPA would not rebuild the transmission line, add optical ground wire, upgrade access roads, or acquire necessary easements as a single coordinated project. BPA would continue to operate and maintain the existing transmission line in its current condition, replacing aged and rotting structures as they deteriorate, and maintaining access roads. The overall scale and scope of the repairs done under the No Action Alternative would be similar to what is described under the Proposed Action. However, improvements would be done on a piecemeal basis, as the need arises, rather than in a coordinated manner. This would result in fewer cost efficiencies and more service disruption. Additionally, BPA would be unable to address more comprehensive and beneficial improvements such as access road work to improve water runoff, decreasing unauthorized use of access roads through gate installation, and improving passage for fish and other aquatic organisms by replacing existing culverts with larger diameter culverts.

Significance of Potential Impacts of the Proposed Action

To determine whether the Proposed Action has the potential to cause significant environmental effects, the potential impacts on human and natural resources were evaluated and presented in Chapter 3 of the EA. To evaluate potential impacts, four impact levels were used—high, moderate, low, and no impact. These impact levels are based on the considerations of context and intensity defined in Council on Environmental Quality regulations (40 Code of Federal Regulations [CFR] 1508.27). High impacts could be considered significant impacts, if not mitigated, while moderate and low impacts are not. The Proposed Action would have no significant impacts.

The following discussion summarizes the reasons the Proposed Action's potential impacts would not be significant.

Land Use and Recreation

Impacts to land use and recreation would be low.

- All structure replacement activities would occur within the existing transmission line right-of-way.
- Most transmission structures would be replaced in the same locations, and most road work would be within existing road beds.
- The acquisition of approximately 9 miles of new easements required for access roads would be negotiated with willing landowners, ownership of these areas would remain with the existing owner, and the 9 miles of new easements would be distributed throughout the entire length of the right-of-way.
- Of the 7.1 acres of permanent access road improvements through agricultural lands, only about 0.7 acre would be associated with new road construction. New road easements in agricultural areas could disrupt agricultural operations periodically during transmission line maintenance, but there would be no permanent conversion of productive agricultural fields to other uses.
- Wherever possible, BPA would schedule construction to reduce potential effects on agricultural fields, preferably after harvest. BPA would compensate landowners for damage to crops at an appropriate market value.
- The 10 acres of forestry land that would be permanently impacted (including tree removal) would be distributed throughout the nearly 240 acres of forestry land crossed by the project (and not concentrated in one area), would have a negligible reduction in potential timber harvest, and would not preclude timber harvest in areas outside of the existing right-of-way.
- BPA may compensate individual landowners for trees removed on a case-by-case basis, depending on the terms of BPA's easements.
- Of the 27 acres of undeveloped open space and 6 acres of residential land that would be affected due new or improvement of existing permanent access roads, a majority of the acreage would be used for widening existing roads, not construction of new roads. Access roads would have a low level of use, and impacts would not preclude use of the areas as open space or residential land.
- There is no formal recreation use in the project area, so the number of recreationists affected would be low. Permanent and temporary impacts to recreation would primarily be associated with visual and sound impacts. Additional access for recreation is not expected since all new roads would have gated access.
- There would be no long-term impacts on transportation. Temporary impacts would include a short-term increase in traffic on local roads, as well as on U.S. Highway 93, relative to the typical amount of traffic carried under existing conditions and would result in a minimal effect on overall traffic.

Geology and Soils

Impacts to geology and soils would be low to moderate.

- BPA would incorporate features such as water bars, ditch relief culverts, and drain dips into the road design to reduce potential for erosion and landslides.
- Trees would be removed in single locations or small patches to avoid exposing large areas of bare soil. Stumps and slash would be left in place to minimize soil erosion and landslides while vegetation becomes reestablished.
- Disturbance would be dispersed throughout the right-of-way and would not occur in one area or all at one time.
- Mitigation measures (e.g., sediment barriers, reseeding disturbed areas, and conducting construction activities during the dry season) would minimize potential erosion and compaction impacts to soils and geology during and following construction.

Vegetation

Impacts to vegetation would be low.

- Most of the acreage that would be permanently impacted is low quality grassland/agricultural vegetation.
- The removal of an estimated 1,450 trees would occur along the edge between forested areas and the existing cleared transmission line right-of-way and spread over about 23 miles of the line. Tree removal is not expected to substantially alter the native forest communities found in the transmission line and access road rights-of-way.
- BPA also performed surveys for Spalding's campion in July 2016 using information on potential additional suitable habitat identified through discussions with the MNHP. No Spalding's campion were identified during the surveys.
- Mitigation measures (e.g., return temporarily disturbed areas to the original contours and conduct site restoration and reseeding as soon as practicable following construction) would help reestablish vegetation in disturbed areas.
- Because noxious weeds are already widespread in the transmission line and access road rights-of-way, there would be only minimal impact on native vegetation from new invasions of noxious weeds from project-related activities, and mitigation measures would help limit spread of existing noxious weed infestations (e.g., cleaning construction vehicles to remove seeds, installing weed wash/blow stations at selected locations within the project area, applying herbicides to control occurrences of Priority 1B species, and identifying and avoiding noxious weed infestations).

Wildlife

Impacts to wildlife would be low for habitat alterations and moderate for noise and activity levels.

- Common wildlife species could be impacted during construction through habitat and nesting disturbances and possible injury or death of smaller species that remain in the area; however, most impacts would be temporary and limited to specific structure locations for short durations.
- Common wildlife species are highly mobile and changes to their habitat would be minimal when compared to the habitat adjacent to the transmission right-of-way and access roads.
- Most birds and wildlife in the project area are relatively common, and loss of individuals would not affect the regional population. Habitat affected by tree removal is generally considered low quality, and vegetation removal would occur in small areas scattered along the entire right-of-way such that alteration of local foraging movement and long-range migration is not expected.
- BPA would require its contractor to either conduct preconstruction nesting bird surveys and avoid removing vegetation in areas where nesting birds are found until after the young have fledged or perform vegetation removal outside of the nesting season.
- Potential habitat modifications due to noxious weed infestations would be minimized through mitigation measures to control the spread of noxious weeds.
- Where technically feasible, bird diverters would be installed on the optical ground wire where the transmission line crosses high bird use areas, minimizing potential bird-line collisions.
- Special-status wildlife species are highly mobile and there are large amounts of similar habitats adjacent to the project area that could be used during the temporary construction activities. Habitat that would be affected by construction is generally considered low quality.
- Incident mortality would be minimized through implementation of mitigation measures and would not affect regional populations.
- Habitat for the ESA-listed grizzly bear is generally low quality, and density of grizzly bears is low in the area.
- Canada lynx have not been documented in the project area, and habitat in the project area is low quality.

Wetlands and Floodplains

Impacts would be low to wetlands and floodplains.

- Overall permanent and temporary disturbance in wetlands would be small (<0.5 acre).
- Temporary impacts to wetlands (about 1.5 acres due to structure replacement and road work) would be minimized with mitigation measures—working in the dry season if possible,

flagging wetland boundaries, using wetland mats or low ground pressure equipment, reseeding disturbed areas, and monitoring disturbed areas for re-establishment of perennial vegetation.

- Erosion control measures during construction would lessen potential sedimentation to wetlands adjacent to work areas.
- The underground portions of wood poles placed in wetlands and floodplains (most would be placed in the same holes from which they were removed) would be contained in multi-layer barrier wraps to help prevent potential leaching of the preservative material into surrounding areas.
- There would be a net decrease of one structure placed within wetlands.
- The amount of net new fill in floodplains (approximately 750 cubic yards) required by the Proposed Action, would be small in comparison with the size of the floodplain, would not alter flood flows, and would result in a negligible decrease in flood storage capacity.
- Structure replacement work areas and access road widths would be reduced where practical in wetlands to reduce disturbance.

Water Resources and Fish

Impacts to streams would be low and impacts to fish would be low.

- There would be no permanent impacts to streams from structure replacement.
- New gravel roads constructed for the project would be dispersed throughout the project area; therefore, vegetation clearing and ground compaction would not be concentrated around any one water body.
- New culverts would include outfall protection that does not currently exist, would be embedded in the stream channel, and would be sized at least 1.5 times the active channel width to minimize noticeable upstream and downstream effects and maintain or improve fish passage and fish access to upstream aquatic habitats.
- The majority of the project impacts on streams and water quality would be localized and temporary and are not expected to affect stream hydraulic and hydrologic functions, result in water quality parameters being exceeded, or affect groundwater recharge.
- Erosion control measures would minimize or eliminate the delivery of sediments from construction activities into nearby streams, mitigation measures would reduce the risk and extent of accidental oil or fuel spills, and the project would not be expected to contribute to impaired water quality or inhibit any water quality recovery efforts on streams crossed by the transmission line.
- The small (approximately 3 acres) amount of permanent disturbance to riparian habitat would be distributed across 13 streams and is unlikely to increase stream temperatures.

- New or improved access roads would be constructed with compacted gravel surfaces, drainage dips, culverts, or water bars so the potential for long-term surface erosion to nearby streams would be minimized.
- The aquatic noise and vibration disturbance generated by the removal and replacement of structures within 100 feet of fish-bearing streams would be temporary and would not exceed background ambient underwater noise levels.
- In-water work for culvert and stream crossing improvements would be implemented with mitigation measures (construction timing restrictions, fish salvage, diverting stream flow, isolating work areas, on-site biologist, etc.), to minimize short-term turbidity and direct construction-related impacts to fish.

Visual Quality

Impacts to visual quality would be low.

- Project activities would occur in areas where the landscape is already altered, replaced structures would appear nearly identical to the existing structures (with some potential increases in height of 10 to 15 feet), and access roads would be short in length (generally ranging from 200–800 feet), narrow in width, and mostly within the existing network of forest roads in the area.
- Because specific work areas would be small (less than 1 acre) compared to the scale of the landscape, visual impacts associated with construction work would appear subordinate to the landscape and only a limited number of viewers would likely observe construction activities at each work site.
- The dispersed removal of trees would not substantially change the existing visual environment.
- The Proposed Action would not introduce new sources of light or glare.

Air Quality and Climate Change

Impacts to air quality and climate change would be low.

- Air quality impacts would be localized and temporary in nature and would not result in violations of air quality standards.
- Mitigation measures (e.g., use of water trucks to control dust during construction and turning off construction equipment during prolonged periods of non-use) would minimize impacts to air quality.
- Construction vehicle emissions for the entire 14-month construction period would result in an estimated 4,900 metric tons of carbon dioxide equivalent emissions. This amount is far below the U.S. Environmental Protection Agency mandatory reporting threshold of 25,000 metric tons for large emission sources.

- The loss of greenhouse gas sequestration potential is small. An estimated 10 acres of trees would be removed (distributed across 23 miles of transmission line ROW) that would have had the potential to sequester approximately 2,600 metric tons of carbon dioxide if all trees reached full maturity. This estimate is conservative because most trees that would be removed are not at full maturity and many trees would not have reached full maturity through natural attrition or other human-related disturbances.

Socioeconomics and Public Services

There would be no-to-low impacts to socioeconomics and public services. There would be no disproportionate adverse effects to environmental justice populations.

- The Proposed Action would not cause any permanent population changes in Flathead and Lake Counties.
- The scale of BPA's acquisition of access road easements compared to the total tax base for Flathead and Lake County would not result in a measureable change for either Flathead or Lake County.
- Property owners who would be affected by new access road easement acquisition would be compensated.
- Communities and public services would experience minimal impacts during construction because access to all properties would be maintained during construction, and local agencies, residences, and businesses near the transmission line would be notified of upcoming construction activities and potential disruptions.
- Some local procurement of equipment and spending by construction workers could temporarily benefit the economy in communities near the transmission line during construction.
- The Proposed Action would not displace or otherwise hinder the ability of any agency or organization to provide public services to communities near the project area.

Cultural Resources

Impacts to cultural resources would be low to no.

- The structures and access roads would be sited to avoid areas that are likely to contain cultural and historic resources, so maintenance of the structures or access roads should not affect known resources.
- The Proposed Action would not modify the Kalispell, Elmo, or Kerr substations and have no effect on the Flathead Lake Fish Hatchery or underground wooden pipeline.
- The four historic debris/trash scatters, springboard-notched cut tree stumps, prehistoric isolate (stone tool), and rock cairn identified during the surveys are located in areas that would not be affected by construction activities. Four of the five linear rock wall features, are located in areas that would not be affected by construction activities. The fifth rock wall would be affected by improvement of a road segment; however, the feature is likely not eligible for inclusion in the National Register of Historic Places.
- Rebuilding the Kalispell-Kerr transmission line would not adversely affect the characteristics that make the transmission line eligible for listing in the National Register of Historic Places.
- If ground-disturbing activities cause an inadvertent discovery of cultural resources, all activities near the find would be stopped per BPA's Inadvertent Discovery Procedure. The BPA archaeologist, Montana State Historic Preservation Office, and affected Tribes would be notified immediately.
- BPA would continue to work with CSKT on cultural resource management within the APE.

Noise, Public Health, and Safety

Impacts to noise, public health, and safety would be low.

- Noise impacts from construction would temporarily contribute to similar existing machinery noise from regular agricultural practices, be limited to daytime hours, and only last for a few days at any one location.
- There would be no introduction of corona noise because the transmission line would remain at 115 kV.
- There are no known occurrences of hazardous materials or reported contamination within the transmission line right-of-way, and implementation of spill prevention and response measures would avoid, minimize, or mitigate potential impacts to public health and safety.
- All of the new structures installed as part of the Proposed Action would meet BPA's current standards and specifications for wood poles, which exceed the Western Wood Preservers Institute BMPs for the use of pentachlorophenol (PCP)-treated wood in aquatic environments. Barrier wraps would be installed on structures within wetlands, within 50 feet of streams and wetlands, and within floodplains to prevent wood preservatives from contacting soil, surface water, and ground water.

- The line's operating voltage would remain the same as the existing line. No changes to the electromagnetic field levels in the vicinity of the transmission line would occur, except in a few isolated cases where the field levels would decrease slightly due to raising of structure heights and conductor-to-ground clearances..
- New, properly installed connecting hardware would reduce potential safety risks associated with aging hardware.

Floodplain and Wetland Statement of Findings

In accordance with the Department of Energy's NEPA implementing regulations and compliance with Floodplain and Wetland Environmental Review Requirements (10 CFR Part 1021 and 1022), BPA assessed the project's potential impacts to floodplains and wetlands (see Section 3.6 of the EA), considered alternatives to avoid impacts, and identified measures to mitigate adverse effects.

About 0.32 acre of floodplain that could not be avoided would be permanently impacted by road development; the road work may decrease flood-storage capacity and would not alter the course of floodwaters.

About 0.4 acre of wetlands that could not be avoided would be permanently impacted as a result of the wood pole replacements and access road work. Impacts would be minimized by using existing road systems, where possible; narrowing road widths and structure work areas in wetlands; re-routing access roads around wetlands where practicable; complying with conditions in the US Army Corps of Engineers Section 404 Authorization; and purchasing compensatory mitigation from the Montana In-Lieu Fee program.

Additional measures that would be taken to minimize potential impacts to floodplains and wetlands include working in the dry season, if possible; flagging wetland boundaries; using wetland mats or low ground pressure equipment; implementing erosion control measures; using multi-layer barrier wraps on wood poles placed in wetlands, within 50 feet of wetlands and streams and within floodplains to help prevent potential leaching of PCP; depositing and stabilizing excess soils in upland areas outside of wetlands; and reseeding disturbed areas.

Determination

Based on the information in the EA, as summarized here, BPA determines that the Proposed Action is not a major federal action significantly affecting the quality of the human environment within the meaning of NEPA (42 USC 4321 *et seq.*). Therefore, an EIS will not be prepared and BPA is issuing this FONSI for the Proposed Action.

Issued in Portland, Oregon

/s/ F. Lorraine Bodi December 20, 2016

F. Lorraine Bodi
Vice President
Environment, Fish and Wildlife

Date

Kalispell-Kerr Transmission Line Rebuild Project

Mitigation Action Plan

Bonneville Power Administration
DOE/EA-1961
December 2016

Summary

This Mitigation Action Plan is part of the Finding of No Significant Impact for the Kalispell-Kerr Transmission Line Rebuild Project. The project would rebuild the aging 41-mile-long 115-kilovolt (kV) Kalispell-Kerr transmission line in Flathead and Lake Counties, Montana.

This mitigation action plan is for the Proposed Action and includes all of the integral elements and commitments made in the environmental assessment (EA) to mitigate potential adverse environmental impacts.

BPA and its contractor are responsible for implementing the mitigation measures during various phases of project construction. Relevant portions of this mitigation action plan will be included in the construction contract specifications, which will obligate the contractor to implement the mitigation measures identified that relate to contractor responsibilities during and after construction.

If you have any general questions about the project, contact the Project Manager, Amanda Williams: toll-free telephone 800-622-4519, direct telephone 360-619-6634, or e-mail amloran@bpa.gov.

If you have questions about the mitigation action plan, contact the BPA lead for the environmental review, Justin Moffett: toll-free telephone 800-282-3713, direct telephone 503-230-3233, or e-mail jtmoffett@bpa.gov.

If you have questions about the mitigation action plan during implementation, contact the BPA environmental lead for project implementation, Aaron Siemers: toll-free telephone 800-282-3713, direct telephone 503-230-3079, or e-mail acsiemers@bpa.gov.

This mitigation action plan may be amended if revisions are needed due to new information or if there are project adjustments.

Mitigation Measures

Minimization and mitigation measures identified to reduce potential impacts associated with the Proposed Action are provided in the Mitigation Action Plan Table.

Mitigation Action Plan Table

Minimization and Mitigation Measure	Implementation
Land Ownership, Use, Recreation, and Transportation	
LAND-1: Follow standard construction BMPs to limit noise, dust, and construction work hours when adjacent to residential land uses.	During construction (Contractor)
LAND-2: Provide a construction schedule to all potentially affected landowners along the right-of-way.	Before and during construction (BPA)
LAND-3: Maintain existing access to residences and other areas during construction.	During construction (Contractor)
LAND-4: Schedule construction to minimize the potential for crop damage to the extent possible.	Before construction (Contractor/BPA)
LAND-5: Except for the new road construction and temporary access roads, limit construction activities to the existing right-of-way and easements to minimize impacts on crops.	During construction (Contractor)
LAND-6: Coordinate with individual landowners to ensure that new or temporary access roads, gates, and construction and maintenance activities would minimize disruptions to agricultural and commercial operations.	Before construction (BPA)
LAND-7: Notify landowners before starting construction in agricultural fields.	Before construction (BPA)
LAND-8: Compensate landowners for the value of commercial crops or property damaged by construction activities as appropriate.	After construction (BPA)
LAND-9: Coordinate with local agencies to avoid construction activities that could conflict with their own construction activities.	Before construction (BPA)
LAND-10: Restore compacted cropland soils as close as possible to pre-construction conditions. Break-up compacted soils in non-cropland where necessary by ripping, tilling, or scarifying before seeding.	During construction (Contractor)
Geology and Soils	
GEO-1: Avoid and minimize construction on steep or unstable slopes, if possible.	Before and during construction (BPA – avoid/Contractor – minimize)
GEO-2: Contact BPA geotechnical specialists if geotechnical issues, such as new landslides, arise during construction.	During construction (Contractor)
GEO-3: Conduct construction activities during the dry season (between June 1 and November 1), as much as possible, to minimize erosion and soil compaction.	During construction (Contractor)
GEO-4: Develop and implement a Stormwater Pollution Prevention Plan (SWPPP) to prevent stormwater contamination, control sedimentation and erosion, protect surface water and wetlands, and preserve the integrity of the roadway prism.	Before and during construction (Contractor – develop and implement SWPPP)
GEO-5: Design temporary and permanent access roads to control runoff and prevent erosion by using drain dips, ditch relief culverts, water bars, etc., or a combination of these methods.	Before construction (BPA)
GEO-6: Retain existing low-growing vegetation where possible, and minimize the use of clearing/grubbing to preserve the roots of these plants.	During construction (Contractor)

MINIMIZATION AND MITIGATION MEASURE	IMPLEMENTATION
GEO-7: Reseed disturbed areas with native grasses and forbs (or landowner-requested species, as appropriate), using appropriate seed mixes, application rates, methods, and timing for the site conditions as soon as practicable following the completion of construction. Monitor revegetation and site restoration work for adequate growth; implement contingency measures as necessary.	After construction (BPA – monitor revegetation growth/Contractor – reseeding and contingency measures)
GEO-8: Leave erosion and sediment control devices in place until all disturbed sites are revegetated and erosion potential has returned to pre-construction conditions.	After construction (BPA – monitor revegetation and erosion potential/Contractor – remove sediment control devises)
GEO-9: Locate material storage and temporary staging areas in flat, previously disturbed or graveled sites outside of sensitive areas to minimize soil and vegetation disturbance, where practicable.	Before construction (Contractor)
GEO-10: Use containment vessels, absorbent materials, or other removable impervious materials to contain leaching of preservatives and hazardous material leaks.	During construction (Contractor)
Vegetation	
VEG-1: Use stakes, flagging, fencing, or signs to identify sensitive areas (e.g., wetlands or riparian areas, native vegetation areas between mile 27 and 28) prior to construction so that construction crews can avoid unintentional impacts on vegetation.	Before construction (Contractor with direction from BPA)
VEG-2: Clearly mark trees identified for removal and tree removal disturbance limits, and identify staging areas.	Before construction (Contractor)
VEG-3: Use existing road systems, where practicable, to access structure locations.	Before, during, and after construction (Contractor and BPA)
VEG-4: Minimize the construction area to the extent practicable within native plant communities and sensitive habitats to prevent the expansion of invasive weed species.	During construction (Contractor)
VEG-5: Avoid locating temporary access roads and overland travel routes in high-quality areas within wetlands, native plant communities, and riparian areas.	Before construction (BPA)
VEG-6: Locate staging areas in disturbed or common habitat types (e.g., pasture land, unused industrial areas, or timber harvest sites).	During construction (Contractor)
VEG-7: Clearly mark the location of unknown campion species on maps and in the field, and avoid any construction work in these areas.	Before and during construction (BPA/Contractor)
VEG-8: Return temporarily disturbed areas to the original (pre-construction) contours and conduct site restoration as soon as practicable following construction.	After construction (Contractor)
VEG-9: Inspect seeded sites to verify adequate growth and implement contingency measures as needed.	After construction (BPA – inspection/Contractor – implement contingency measures)
VEG-10: Implement measures to minimize the spread of noxious weeds in agricultural lands and areas of intact native vegetation (e.g., line miles 27 and 28), including cleaning vehicles before entering construction areas, installation and use of weed wash/blow stations at selected locations within the project area, and application of herbicides to control occurrences of Priority 1B species (rush skeleton weed).	During construction (Contractor)

MINIMIZATION AND MITIGATION MEASURE	IMPLEMENTATION
VEG-11: Identify weed infestations at construction sites in agricultural lands and native vegetation locations, and avoid these areas as much as practicable during construction.	Before and during construction (BPA – identify/Contractor – avoid)
VEG-12: Use weed-free straw, hydromulch, or similar ground cover for erosion control during construction and restoration activities in areas that cannot be immediately revegetated.	During and after construction (Contactor)
Wildlife	
WILD-1: Prepare and implement Spill Prevention and Response Procedures (SPRP). In the event of a spill, immediately contain the spill, eliminate the source, and deploy appropriate measures to clean and dispose of spilled materials in accordance with the SPRP and federal, state, and local regulations.	Before and during construction (Contractor)
WILD-2: Implement any potential additional avoidance or minimization measures for protection of ESA-listed species identified through consultation with the USFWS.	Before and during construction (Contractor)
WILD-3: Avoid disruptive construction activities within 660 feet (USFWS 2007) of active bald eagle nests during the nesting period (January 1 to August 31).	During construction (Contractor)
WILD-4: For all species other than bald eagles, if vegetation removal occurs during the nesting season (March 15-August 31), conduct nesting bird pre-construction surveys prior to vegetation removal and avoid removal of vegetation with active nests until fledging has been completed.	Before construction (Contractor)
WILD-5: Conduct pre-construction assessment with construction contractor to identify opportunities to avoid snag and large tree removal to the extent possible.	Before construction (BPA and Contractor)
WILD-6: If acceptable to the landowner, not a fire risk, and otherwise appropriate, leave small portions of cut and felled trees in uplands as additional habitat/structure for wildlife.	During construction (BPA – landowner coordination/Contractor – leave trees)
WILD-7: Where not a hazard to other resources (recreational users, roads, structures, etc.) and where trees would not re-sprout, top, trim, or girdle danger trees to create snags where practicable.	During construction (Contractor)
WILD-8: Ensure that all equipment has standard sound-control devices and spark arrestors.	Before and during construction (Contractor)
WILD-9: Store food items and garbage in vehicles or bear-proof containers and remove from the work areas daily.	During construction (Contractor)
WILD-10: Conduct noise-generating construction activities only during normal daytime hours (i.e., between 7:00 a.m. and 7:00 p.m.) to the extent possible.	During construction (Contractor)
WILD-11: Work with Montana Fish, Wildlife, & Parks (MTFWP) to replace the nesting platform within line mile 5 at a suitable location outside of the right-of-way.	Before construction (BPA – agency coordination/Contractor – move nesting platform)
Wetlands and Floodplains	
WET-1: Avoid construction within wetlands where possible. Avoid using wetlands for construction staging, equipment or materials storage, or fueling of vehicles.	During construction (Contractor)
WET-2: Avoid and minimize wetland impacts where possible by re-routing access roads, decreasing road width, or only crossing wetlands during the dry season.	Before and during construction (BPA and Contractor)

MINIMIZATION AND MITIGATION MEASURE	IMPLEMENTATION
WET-3: Obtain and comply with applicable federal, state, and tribal permits for all work in wetlands and streams.	Before and during construction (BPA – obtain permits/Contractor – comply with permits)
WET-4: Deposit and stabilize excess soil in upland areas outside of wetlands, floodplains, or other sensitive habitats.	During construction (Contractor)
WET-5: Remove temporary road materials (mats, fill, geotextile fabric) and revegetate temporary road areas.	After construction (Contractor)
WET-6: Revegetate all temporary disturbance areas within wetlands with an appropriate seed mix. Monitor revegetation and site restoration work for adequate growth; implement contingency measures as necessary.	After construction (Contractor – revegetate and implement contingency measures/BPA – monitor revegetation)
WET-7: If necessary for weed control near wetlands, use herbicides in accordance with BPA's *Transmission System Vegetation Management Program Final Environmental Impact Statement/Record of Decision* (BPA 2000) to limit impacts on water quality.	During and after construction (Contractor)
WET-8: Avoid construction within floodplains where possible.	Before and during construction (BPA – design/ Contractor – avoid)
Water Resources and Fish	
WAT-1: Inspect and maintain tanks containing oil, fuel, or chemicals for drips or leaks to prevent spills onto the ground or into water bodies.	During construction (Contractor)
WAT-2: Store, refuel, maintain, and repair equipment on impervious surfaces away from all natural or manmade drainages and water bodies including streams, wetlands, ditches, catch basins, ponds, and culverts.	During construction (Contractor)
FISH-1: Design and construct access road culverts at a minimum of 1.5 times the active channel width.	Before and during construction (BPA – design/Contractor – construct)
FISH-2: Conduct all construction activities in fish-bearing streams during the low-flow season (late summer through winter) or when intermittent streams are dry.	During construction (Contractor)
FISH-3: For areas where in-water work is necessary, isolate work areas and use turbidity curtains, sandbag barriers, or other measures to prevent sediment-laden water from exiting the work area.	During construction (Contractor)
FISH-4: Reduce erosion at non-culverted stream crossings by installing drive-through fords and rolling dips.	During construction (Contractor)
FISH-5: Implement any potential additional avoidance or minimization measures for the protection of ESA-listed species identified through informal consultation with the USFWS.	Before / during construction (Contractor)
FISH-6: Convey streamflow around isolated work areas to maintain a downstream water supply and ensure that downstream water quality remains the same as locations upstream of the work area.	During construction (Contractor)
FISH-7: Conduct fish salvage activities to remove fish from isolated in-water work areas. All work would be done by qualified biologists in coordination with state and federal resource management agencies.	During construction (Contractor)
Visual Resources	
VIS-1: Maintain clean construction sites and regularly remove debris.	During construction (Contractor)
Air Quality and Climate Change	
AIR-1: Use water trucks to control dust during construction.	During construction (Contractor)

MINIMIZATION AND MITIGATION MEASURE	IMPLEMENTATION
AIR-2: Keep all vehicles in good operating condition to minimize exhaust emissions.	During construction (Contractor)
AIR-3: Turn off construction equipment during prolonged periods of non-use.	During construction (Contractor)
AIR-4: Drive vehicles at low speeds (less than 5 miles per hour) on access roads and within the BPA right-of-way to minimize dust during high dust conditions.	During construction (Contractor)
AIR-5: Locate staging areas as close to construction sites as practicable to minimize driving distances between staging areas and construction sites.	During construction (Contractor)
AIR-6: Locate staging areas in previously disturbed or graveled areas to minimize soil and vegetation disturbance where practicable.	During construction (Contractor)
AIR-7: Encourage the use of the proper size of equipment for the job to maximize energy efficiency.	During construction (Contractor)
AIR-8: Recycle or salvage non-hazardous construction and demolition debris where practicable.	After construction (Contractor)
AIR-9: Dispose of wood poles in the local area where practicable.	After construction (Contractor)
AIR-10: Use local rock sources for road construction where practicable.	During construction (Contractor)
Socioeconomics and Public Services	
SOC-1: Follow fire safety procedures (e.g., properly functioning spark arrestors, carry hand tools and extinguishers, emergency response plans, etc.) and coordinate with local fire departments to minimize wildfire risk.	During construction (Contractor)
Cultural Resources	
CULT-1: If ground-disturbing activities cause an inadvertent discovery, all activities near the find would be stopped per BPA's Inadvertent Discovery Procedure. Inadvertent discoveries can include human remains, structural remains, Native American artifacts, or Euroamerican artifacts that were previously unknown. The BPA archaeologist, Montana State Historic Preservation Office (SHPO), and affected Tribes would be notified immediately.	During construction (Contractor)
CULT-2: Operations would stop immediately within 200 feet of the inadvertent discovery of 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. The area would be secured around the discovery and local law enforcement, the BPA archaeologist, the Montana SHPO, and affected Tribes would be contacted immediately.	During construction (Contractor)
CULT-3: Explain cultural resource-related mitigation measures to construction contractors and inspectors, including field marking for avoidance, during preconstruction meetings. Depict cultural sites as sensitive areas to avoid in construction documents, on construction maps, and in the field.	Before and during construction (BPA & Contractor)
Noise, Public Health, and Safety	
NPHS-1: Dispose of creosote-treated wood (poles, cross-arms, etc.) in accordance with federal and state laws.	During and after construction (Contractor)
NPHS-2: Do not use contaminated soil as backfill or spread around new structures in wetlands, floodplains, or shallow groundwater areas.	During construction (Contractor)
NPHS-3: Maintain appropriate spill containment and cleanup materials in construction equipment, in staging areas, and at work sites.	During construction (Contractor)

MINIMIZATION AND MITIGATION MEASURE	IMPLEMENTATION
NPHS-4: Use pumps, funnels, and absorbent pads for all equipment fueling operations.	During construction (Contractor)
NPHS-5: Ensure that specification for wood poles exceeds the Western Wood Preservers Institute BMPs for the use of pentachlorophenol-treated wood in aquatic environments.	Before construction (BPA)
NPHS-6: Install barrier wraps on structures within wetlands, within 50 feet of wetlands and streams, and within floodplains.	During construction (Contractor)
References: Bonneville Power Administration (BPA) 2000. *Transmission System Vegetation Management Program Final Environmental Impact Statement/Record of Decision* U.S. Fish and Wildlife Service (USFWS). 2007. National Bald Eagle Management Guidelines. Available online: http://www.fws.gov/northeast/ecologicalservices/eaglenationalguide.html.	