Mitigation Action Plan

for the

Palisades-Goshen Transmission Line Reconstruction Project

DOE/EA-1591

Summary

This Mitigation Action Plan (MAP) is part of the Finding of No Significant Impact (FONSI) for the Palisades-Goshen Transmission Line Reconstruction Project. The project involves reconstruction of the existing Palisades-Goshen 115-kV transmission line, which extends from Palisades Dam in eastern Idaho approximately 52 miles west to the Goshen Substation south of Idaho Falls, Idaho.

This MAP is for the Proposed Action and includes all integral elements and commitments made in the Environmental Assessment (EA) to mitigate any potential adverse environmental impacts. No impacts reached the level to be considered significant even without these mitigation measures.

BPA and its contractor are responsible for implementation of mitigation measures during various phases of the project. A BPA contractor will remove and rebuild the transmission line. To ensure that 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 their responsibilities during construction and post-construction.

If you have general questions about the project, contact the Project Manager, Mark Korsness, at 360-619-6326. If you have any questions about the MAP, contact the Project Environmental Lead, Nancy Wittpenn, at 503-230-3297 or the Regional Environmental Specialist, Fred Walasavage at 541-980-2503. This MAP may be amended if revisions are needed due to new information or if there are any major project changes.

Consultation Related To Mitigation Measures

BPA has consulted with the U.S. Fish and Wildlife Service (USFWS) and NOAA Fisheries under Section 7 of the Endangered Species Act. No impacts to federally listed threatened or endangered species are expected.

For this project, BPA has undertaken the Section 106 consultation process with the Idaho State Historic Preservation Office (SHPO), the Advisory Council on Historic Preservation, and the affected Native American Tribes. In addition, the Blackfeet Tribe, the Duck Valley–Shoshone Paiute Tribes, the Nez Perce Tribe, the Shoshone Bannock Tribe, and the Northwestern Band of the Shoshone Nation were consulted. Letters were sent to these Tribes on May 14, 2007, introducing the project and notifying the Tribes of public meetings. On July 11, 2007, a letter was sent to the Tribes initiating consultation under Section 106.

A technical meeting was held with the Shoshone Bannock Tribe on May 30, 2007, at Fort Hall Reservation. The Tribe was notified before the cultural resource survey took place in summer 2007. On January 25, 2008, the cultural resource survey report was sent to the SHPO for review and concurrence, and to the Tribes for review. Section 3.10, Cultural Resources, in Chapter 3 of the EA describes historic and cultural resources that were found along the new and existing right-of-way (ROW) and access roads. It also includes BPA's determinations of effect for each site and recommendations for treatment of several sites. Determinations were coordinated with the Caribou-Targhee National Forest (C-TNF) and Bureau of Land Management (BLM) archaeologists before the report was sent to SHPO and the Tribes for review. BPA received SHPO concurrence on the project on April 30, 2008. No comments were received from the Tribes.

BPA's project Determination of Effect for National Register of Historic Places (NRHP)-eligible sites is found in Section 3.10. The SHPO recommends complete avoidance of all sites eligible for listing on the NRHP. Since complete avoidance is not possible for all sites, mitigation measures will be implemented for affected sites.

BPA has applied for Section 404 permits for one culvert and one ford crossing of Taylor Creek. BPA will comply with all federal requirements for impacts to waters of the U.S.

Mitigation Measures

The mitigation measures in the following Mitigation Action Plan table have been identified to reduce potential impacts from the project.

Mitigation Action Plan Table

Environmental Resource	Mitigation
Vegetation	• Restrict construction activities to the area needed to work effectively to complete the project. • Continue ongoing weed control efforts on the ROW. Presently, BPA contracts with the C-TNF, Bonneville and Bingham counties to control weeds along the ROW. These arrangements would continue after construction is complete. On public lands, chemicals and methods used would be approved by a Forest Officer or the BLM. • Coordinate with land management agencies and private landowners to determine the scale of weed control necessary after construction. Monitoring and weed control would continue, for the life of the line. • Implement procedures outlined in BPA's Transmission System Vegetation Management Program Record of Decision (BPA 2000) to address weed problems in subsequent maintenance activities. • Seed all disturbed areas as soon as possible with certified weed-free seed to stabilize the sites. On the C-TNF, a seed mixture approved by the Forest Officer would be used. On BLM and Bureau of Reclamation lands, a seed mixture approved by the BLM botanist would be used. Within big game winter range, the seed mix would be consistent with C-TNF or BLM winter range objectives. Crested wheatgrass, intermediate wheatgrass, smooth brome, and orchard grass would not be used as part of any seed mix for disturbed lands. • To reduce habitat loss and disturbance of high quality shrub-steppe habitat from structures 20/4 to 25/3, reduce blading and gravelling to a width of 8 feet to 9 feet instead of the usual 14 feet to 16 feet. Construction equipment needing a wider travel route would drive over the existing vegetation on designated and well-marked access routes to reduce disturbance and potential weed infestation. Counterpoise lines in this area would be installed using a narrow-width trencher to minimize disturbance. • Adopt and implement any mitigation for impacts to waters of the United States and wetlands that are identified by the Army Corps of Engineers (ACOE) through the Section 404 permitting process for the Proposed Action. • Avoid clearing of mapped aspen stands when possible. • Avoid clearing of mapped sagebrush habitat along the ROW west of the C-TNF to the fullest extent possible. • Avoid replacing existing structures or developing new roads in National Wetland Inventory (NWI) wetlands or observed wet or riparian areas. • Work with the C-TNF to relocate existing structures and portions of access roads outside of NWI wetlands or observed wet or riparian areas. • Where practical, salvage weed-free topsoil and replace it on the finished cut and fill areas to promote vegetation regrowth. This would promote regrowth from the native seed bank in the topsoil.

Environmental Resource	Mitigation
	• Place 50-foot sections of jack fence in the vicinity of structures 20/4 and 21/8 to discourage off-highway vehicles (OHVs) from accessing the ROW access road in these areas of high quality shrub/steppe vegetation. This fence would be removed by the Forest Service in the future after disturbed areas are reseeded and vegetation is re-established along the access road. • Block public access to the existing user-created road near structure 18/6 by installing a pipe gate located about 600 from Fall Creek to reduce ongoing resource damage.
Wildlife	• Place bird flight diverters on the new line where it crosses the SFSR to increase visibility of the line for bald eagles, trumpeter swans, and other birds. Diverters would be installed from structure 8/4 to structure 8/9. • Design and construct transmission lines as described in Avian Power Line Interaction Committee (2005 and 2006) so that perching or nesting raptors and other large birds cannot be electrocuted or injured by making accidental contact between phases or phase and ground. • Line and road construction will be avoided in the vicinity of structure 4/9 to avoid disturbing an occupied osprey nest until chicks have fledged in late August. • Where possible, remove tall growing vegetation only between September 1 and March 1 to avoid conflicts with provisions of the Migratory Bird Treaty Act. Where possible, remove trees for construction or maintenance only between September 1 and October 15. • Construct access road improvements in this area as late into the spring as possible to reduce potential impacts to nesting sharp-tailed grouse and greater sage-grouse in the area's upper reaches of the C-TNF from the vicinity of structure 19/7 to the west edge of the C-TNF near structure 22/6, and to reduce disturbance of any leks that may exist and also to reduce possible nest destruction. • If active sage-grouse or sharp-tailed grouse leks are identified within 0.6 mile of the ROW, do not conduct activities including inspections, maintenance, and related human activities from 6 PM to 9 AM from March 15 to May 1 to avoid disturbance to lekking birds. • Place 50-foot sections of jack fence in the vicinity of structures 20/4 and 21/8 to discourage OHVs from accessing the ROW access road in these areas of high quality habitat. This fence would be removed by the USFS in the future after the disturbed areas are reseeded and vegetation is re-established along the access road. • Minimize runoff from construction sites by using standard erosion control Best Management Practices (BMPs) and provisions of the Eastern Washington Stormwater Management Manual. BPA's Contractor would maintain BMPs until reseeding is successful. If this success is achieved during the contract period, the Contractor would remove and dispose of the BMP. If seeding is not established,

Environmental Resource	Mitigation
	the Contractor would inspect and maintain BMPs until the end of the Contract period. At that time the care of the BMP (along with any inspection reports and records) would become the responsibility of BPA.
Geology and Soils	• Prepare and implement a Storm Water Pollution Prevention Plan. • Where practical, save topsoil removed for structure replacement and new access road (spur road) construction and use on site for restoration activities, to promote regrowth from the native seed bank in the topsoil. • Cover exposed piles of soil (or use other erosion control measures) if there is a threat of rain, to reduce erosion potential. • Limit grubbing to the area around structure sites to lessen the impact on the roots of low-growing vegetation, so they may resprout. • Minimize vegetation clearing at sides of access roads to 3 feet or less, where possible, to minimize impacts to adjacent areas of native vegetation. • Install sediment barriers, where needed, and other suitable erosion and runoff control devices prior to ground-disturbing activities at construction sites to minimize off-site sediment movement. • Leave erosion and sediment control devices in place and monitor their effectiveness until all disturbed sites are revegetated and erosion potential has returned to pre-project conditions. • Retain existing low-growing vegetation where possible to prevent sediment movement offsite. • Design access roads to control runoff and prevent erosion by using low grades, out sloping, intercepting dips, water bars, and ditch-outs as needed to minimize erosion. • Re-vegetate or seed all disturbed areas with a native plant/grass seed mixture suited to the site, to promote revegetation that would hold soil in place. • Break up compacted soils where necessary by tilling or scarifying before reseeding. • Monitor reseeding efforts for adequate growth. Implement contingency measures as necessary. • New and reconstructed access roads constructed to remove existing structures from structure 1/2 to 2/7 would be ripped, recontoured, and seeded. Depending on safety issues, roads from structure 1/6 to 2/3 may only be ripped and seeded.
Water Resources and Fisheries	• Install a properly sized, pipe arch, bottomless crossing structure to replace the undersized culvert at the SFSR Road (Forest Service road #076) crossing of Squaw Creek. The structure would be designed to accommodate flood flows and provide for fish passage. The new crossing structure would be purchased by BPA and installed by Bonneville County road crew in cooperation with the Forest

Environmental Resource	Mitigation
	Service. The Forest Service would coordinate permit requirements with the Army Corps of Engineers. • Relocate the access road on FS road #079 from 2 feet to 10 feet away from Squaw Creek for up to 1,200 feet in mile 9. • Install sediment barriers and other suitable erosion and runoff control devices where needed prior to ground-disturbing activities at construction sites to minimize off-site sediment movement. • Rock new and existing access roads where needed to prevent erosion and rutting. • Minimize grading, clearing, or other construction work in wetlands or riparian corridors. Do not permit use of these areas for construction staging, equipment or materials storage, fueling of vehicles, or related activities. • Design any new culvert construction or replacement to meet flow requirements, protect fluvial integrity, and protect aquatic species of concern as identified in the C-TNF Forest Plan. • Develop and implement a Spill Prevention, Control, and Countermeasure Plan to minimize the potential for spills of fuels, oils, or other potentially hazardous materials to reach the seasonal perched water table or surface water bodies. • Keep vehicles and equipment in good working order to prevent oil and fuel leaks. • Do not withdraw water (for dust control or other purposes) from Fall Creek or other streams or rivers for any construction-related or dust suppression activities without proper authorization from the Forest Service or BLM and the State of Idaho.
Air Quality	• Use water trucks on an as-needed basis to minimize dust, especially on C-TNF and county roads. • Gravel or rock access roads before line reconstruction to minimize dust. • Drive all construction vehicles at low speeds (15 mph) on access roads to minimize dust. • Keep off-road vehicles in good running condition to minimize emissions. • To minimize dust, reseed and revegetate the disturbed areas (Forest Service, BLM, and private) to minimize exposed soil prone to erosion.
Recreation	• Send an information letter to the project mailing list regarding the upcoming construction activities and schedule. • Request that the C-TNF post project information on its web site. • Specify that the construction contractor use downward-directed shielded construction lighting for nighttime emergency equipment/vehicle repair, should

Environmental Resource	Mitigation
	this occur. Lights should meet federal, state, and local requirements for safety and security of workers and the public. • Place 50-foot sections of jack fence in the vicinity of structures 20/4 and 21/8 to discourage OHVs from accessing the ROW access road in these areas of high quality shrub/steppe vegetation. This fence would be removed by the Forest Service in the future after disturbed areas are reseeded and vegetation is re-established along the access road.
Land Use	• Coordinate with affected landowners for permission to enter their land, and negotiate appropriate agreements with landowners to obtain ROW easements. • If the land use of a parcel would continue to be adversely affected by the proposed structure locations, consider modifying their locations, if feasible, to reduce the effects on the parcel's existing land use. • If crops would be damaged, if crops could not be planted, or if Conservation Reserve Program (CRP) payments are reduced because of project construction, appropriate compensation would be provided to the affected farmers.
Cultural Resources	• Place filter fabric and sterile rock on 250 feet of a spur access road in order to protect site CH-5. • Flag and monitor culturally sensitive areas so that these areas may be avoided by project personnel. • Place filter fabric and sterile rock on 200 feet of the ROW road to protect CH-13. • If previously undiscovered cultural resources, either archaeological or historical materials, are discovered during construction activities, stop all construction work immediately and notify appropriate BPA personnel, the Idaho SHPO, and the Tribes. • Stop construction in the area immediately should human remains and/or burials be encountered. Secure the area, placing it off limits for anyone but authorized personnel and immediately notify proper law enforcement, BPA archeologist, the Idaho SHPO, and the Tribes. • Prevent unauthorized collection of cultural materials by ensuring a professional archaeologist and tribal monitor are present during any excavation within known sites. • BPA archaeologists will provide a briefing to construction crews regarding protocols to be used in the event that cultural material is discovered during construction. • BPA will provide a follow-up letter report documenting monitoring results.

Environmental Resource	Mitigation
Visual Quality	• If nighttime emergency repair of equipment or vehicles becomes necessary, illumination that meets federal, state, and local worker safety regulations would be required. To the extent possible, the nighttime lighting would be erected pointing toward the center of the site where activities are occurring, and would be shielded. Task-specific lighting would be used to the extent practical while complying with worker safety regulations. • Install non-specular conductor and ceramic insulators. • Locate structures in the same general location as the existing structures to the extent practicable, and except where sensitive resources need to be avoided. • Use COR-TEN cross arms if available from the manufacturer.
Public Health and Safety	• Prior to starting construction, require the contractor to prepare and maintain a safety plan in compliance with State of Idaho, BLM, Reclamation, and C-TNF requirements. This plan would detail how to manage hazardous materials such as fuel, and how to respond to emergency situations. It would be kept onsite at all times. • During construction, require the contractors to hold crew safety meetings at the start of each workday to review potential safety issues and concerns. • At the end of each workday, require the contractor and subcontractors to secure the site to protect equipment and the general public. • Train employees as necessary, in structure climbing, cardiopulmonary resuscitation, first aid, rescue techniques, and safety equipment inspection. • To minimize the risk of fire, fuel all highway-authorized vehicles offsite. Fueling of construction equipment would be done in accordance with regulated construction practices and state and federal laws. • Comply with all fire safety laws, rules, and regulations of the State of Idaho, BLM, Reclamation, and the Forest Service. The contractor will be required to prepare a Fire Prevention and Suppression Plan that would meet BPA, local authority, and land manager requirements. • Provide notice to the public of construction activities. • Remain on established access roads during construction activities. • Keep vegetation cleared to avoid contact with transmission lines. • During construction, follow BPA specifications for grounding fences and other objects on and near the ROW. • Ensure transmission towers minimize electric and magnetic fields (EMF), corona and electric field through implementation of standard BPA design and construction practices. All BPA lines are designed and constructed in accordance with the National Electrical Safety Code (NESC). NESC specifies the minimum allowable distance between the lines and the ground or other objects. These

Environmental Resource	Mitigation
	requirements determine the edge of the ROW and the height of the line, that is, the closest point that houses, other buildings, and vehicles are allowed to the line. • Ground fences and other metal structures on and near the ROW during construction to limit the potential for nuisance shocks. BPA provides a free booklet that describes safety precautions for people who live or work near transmission lines.
Transportation and Traffic	• Use water trucks on an as-needed basis to minimize dust, especially on C-TNF and county roads. • If water is used, locate the water storage areas directly adjacent to or in proximity to the existing ROW to minimize the impact of the water trucks on public roads. • Do not withdraw water (for dust control or other purposes) from Fall Creek or other streams, etc. • Leave at least one lane of traffic open at all road crossings. • Maintain emergency vehicle access at all road crossings. • Place and maintain flaggers, signs, barricades, guard rails, safety fences, and signals at locations where construction traffic would enter US 26 and along the SFSR and Fall Creek roads, as required by county, state, and federal regulations and ROW and permit conditions. • Repair all existing roads used for access, if necessary, after line reconstruction.
Noise	• Use mufflers on all equipment with exhaust. • Conduct noise-generating construction activities within 1,000 feet of residential structures only during normal day time hours (that is, between 7 a.m. and 7 p.m.). • Restore radio or television reception to a quality as good as or better than before the project, if the rebuilt transmission lines were found to be the source of interference.