Categorical Exclusion Determination

Bonneville Power Administration
Department of Energy

Proposed Action: VHF Radio System Upgrades, East-Central Puget Sound Region

Project No.: P01237

Project Manager: Molly Kovaka, TEP-CSB-2

Location: King and Snohomish Counties, Washington

Categorical Exclusion Applied (from Subpart D, 10 C.F.R. Part 1021): B1.19 Microwave, meteorological, and radio towers

Description of the Proposed Action: BPA proposes to upgrade its VHF radio system in King and Snohomish counties, Washington. The upgrades would include a new Deer Creek Radio Station, the addition of equipment and towers at BPA's existing Monroe Substation and Maloney Ridge Radio Station, and the establishment of a microwave beam path between radio sites. The upgrades would help replace BPA's aging VHF radio system with a simple, modern radio system with improved voice coverage for remote field personnel.

The **Deer Creek Radio Station** would be located in a new communications building that would be located adjacent to existing private communication facilities on Washington Department of Natural Resources (DNR) land. King County (WA) Puget Sound Emergency Radio Network (PSERN) would build the radio station and BPA would lease a portion of the building. The radio building would be approximately 20-feet by 35-feet, two stories tall, and would house the BPA-standard requirements for new radio stations, including: a wall-separated engine generator room, an HVAC system, battery racks, and an array of equipment and associated racks. The radio equipment would be connected to the respective antennas via coaxial cable for the VHF components and waveguide (polyethylene-encased copper tubing) for the microwave component. BPA would install two six-foot-diameter shielded drum-style microwave dish antennas at the 100-foot height on the 125-foot-tall tower installed by PSERN. One would be directed at Monroe Substation to the west-northwest and one at Maloney Ridge radio station to the southeast. Two three-inch-diameter, 20-foot-tall whip-style VHF antennas would be placed on the tower – one at or near the top, and one near the middle. An ice bridge (metal frame supporting horizontal radio cable) would be installed between the building and tower.

A paved area would hold two 2,000 gallon propane fuel tanks to power the engine generator(s) during AC commercial power failures. The entire footprint would be fenced, and all equipment would be grounded to a ground mat installed about 18 inches below the final surface. In addition, a retaining wall may be needed along the west and south perimeter—it would be up to 312 feet in length, and extend approximately three feet in depth below the ground surface

The Deer Creek facility would require removal of about 0.4 acres of forest vegetation including immature Douglas fir, red cedar, and western hemlock. This would entail removing about 90 trees in the densely stocked, small-stature stand in which 74 feet is the maximum tree height, and 13 inches is the maximum diameter at breast height (DBH).

At the existing 32-acre **Monroe Substation** facility, BPA would install a lattice-steel tower within the paved area near the control house. The new 120-foot tall tower would replace a 69-foot-tall tower in-situ and would require excavation of an approximate 30-foot-square area for the lattice-steel tower footings. Two VHF whip antennas would be installed at the top and middle of the tower, and one microwave shielded dish antenna would be placed at the 117-foot height. An ice bridge would be installed from the tower to the control house exterior wall, and a new 18-inch by 26-inch port cut in the wall to accommodate the radio transmission lines. All equipment would be grounded to the existing mat where possible; there could be grounding mat repair or replacement in spots as needed.

The **Maloney Ridge Radio Station** is an existing facility at which BPA shares facilities with other entities within the U.S. Forest Service Skykomish Ranger District in the Mt. Baker-Snoqualmie National Forest. BPA would modify its current telecommunications room at Maloney Ridge by moving a wall, reinforcing the floor, and installing a battery rack. A wall-mounted HVAC system would be installed and the entry doorway moved. Adjacent to existing ports, a 16-inch by 18-inch port would be cut through the wall to accommodate radio transmission lines for the new antennas: one six-foot diameter microwave, and two VHF, antennas. Old antennas and internal radio equipment would be removed once the new system is operational.

In addition, two 15-mile long **microwave antenna-to-antenna beam paths** would be established for the transmittal of radio data: one path from the Maloney Ridge Radio Station to Deer Creek Radio Station, and one from Deer Creek Radio Station to Monroe. The beam paths need to be clear of obstructions in order for the radio communications to work reliably. At this time, two large Douglas fir trees that are located within the beam path have been identified for removal—they are within 150 feet of the Monroe Substation on BPA land. Averaging 147 feet in height, and 35 inches in DBH, the trees would be felled in a manner to avoid collateral damage to vegetation and breeding birds of concern. The beam paths would need to be monitored for possible future tree grow-in and other obstructions over its lifetime.

Findings: In accordance with Section 1021.410(b) of the Department of Energy's (DOE) National Environmental Policy Act (NEPA) Regulations (57 FR 15144, Apr. 24, 1992, as amended at 61 FR 36221-36243, July 9, 1996; 61 FR 64608, Dec. 6, 1996, 76 FR 63764, Nov. 14, 2011), BPA has determined that the proposed action:

(1) fits within a class of actions listed in Appendix B of 10 CFR 1021, Subpart D (see attached Environmental Checklist);
(2) does not present any extraordinary circumstances that may affect the significance of the environmental effects of the proposal; and
(3) has not been segmented to meet the definition of a categorical exclusion.

Based on these determinations, BPA finds that the proposed action is categorically excluded from further NEPA review.

/s/ Michael J. O'Connell
Michael J. O'Connell
Environmental Protection Specialist

Concur:

/s/ Stacy L. Mason Date: *March 9, 2018*
Stacy L. Mason
NEPA Compliance Officer

Attachment(s): Environmental Checklist

Categorical Exclusion Environmental Checklist

This checklist documents environmental considerations for the proposed project and explains why the project would not have the potential to cause significant impacts on environmentally sensitive resources and would meet other integral elements of the applied categorical exclusion.

Proposed Action: VHF Radio System Upgrades, East-Central Puget Sound Region

Project Site Description

Deer Creek Radio Station development would be about 2,000 feet above sea level in WA DNR-managed timber lands of Snohomish County, and 1,300 feet away from Deer Creek. There was a recent timber harvest just over 600 feet to the east; another harvest is planned, expanding the previous cut area boundary.
Monroe Substation is a 32-acre facility bordering the Skykomish River Valley (popularly known as Sky Valley) and within 2500 feet of Woods Creek, an anadromous stream.
Maloney Ridge Radio Station is an existing BPA shared radio station on USFS land above the town of Skykomish, WA. It is in marbled murrelet and northern spotted owl critical habitat.
The microwave beampaths between sites traverse forest land, agricultural land, and residential areas.

Evaluation of Potential Impacts to Environmental Resources

Environmental Resource Impacts	No Potential for Significance	No Potential for Significance, with Conditions
1. **Historic and Cultural Resources**	☑	☐

Explanation: The BPA archeologist determined that the project at all three sites would not have potential to affect historic properties or cultural resources. Consultation under the National Historic Preservation Act (NHPA) on the full King County PSERN project at DCRS by that entity's consultant was completed March 11, 2017 as part of the project's Federal Communication Commission (FCC) application. The WA State Historic Preservation Office (SHPO) concurred with the County's determination of no effect on historic properties. Tribes were also consulted through an automated system administered by the FCC, and there were no follow-ups by two tribes that initially indicated interest (Eastern Shoshone Tribe, Blackfeet Nation). There were no responses or no interest, save for inadvertent discovery protection caveats, from the remaining tribes: the Muckleshoot Indian Tribe; the Sauk Suiattle Indian Tribe; the Stillaguamish Tribe; the Suquamish Tribe; the Tulalip Tribes of the Tulalip Reservation; the Upper Skagit Tribe; the Yakama Nation; and the Snoqualmie Tribe.

2. **Geology and Soils**	☐	☑

Explanation: About 0.4 acres of land would be disturbed at Deer Creek; about half of this area would be excavated to about 18 inches for the grounding mat; topsoil here would be converted to impervious surfaces, but it would be unlikely that bedrock would be encountered. There would be 18 feet or more excavated depth in the three tower anchor locations, and ten feet of depth for a 175-square-foot tower mat foundation. If bedrock were encountered under the paved surface at the tower install at Monroe Substation, the additional drilling of bedrock would be adjacent to the existing disturbance for the current tower. There would only be minimal soil excavation at the Maloney Ridge yard to connect equipment to the grounding mat. The excavated materials at all sites would be used where possible for backfill and disposed of properly where it could not serve as reliable fill material, and Best Management Practices (BMPs) applicable to soil preservation would be utilized to the extent feasible.

Mitigations

- ✓ Use excavated material where possible as backfill
- ✓ Implement an appropriate Stormwater Pollution Prevention Plan to Washington State Department of

Ecology standards or better

3. **Plants** (including federal/state special-status species) ☑ ☐

Explanation: The removal of two large Douglas fir trees near Monroe Substation would have no potential for a significant effect to area's vegetation since they are part of a 75-acre tree stand. The trees to be removed are located interior to the western stand edge by about 85 feet and would therefore not contribute to stand size reduction or edge increase.

The 90 or so trees that would be removed at Deer Creek are densely stocked and small in stature, offering limited structure and diversity for potential nesters and foragers.

No vegetation would be disturbed at Maloney Ridge.

4. **Wildlife** (including federal/state special-status species and habitats) ☐ ☑

Explanation: There are a total of eight USFWS ESA-listed threatened or endangered wildlife species that could occur over the range of sites under this project. As detailed in an internal BPA ESA No Effect Memo of March 2018, the species would not be adversely affected by the actions across the three sites.

Additionally, at Deer Creek, the WA DNR land here is covered by a Habitat Conservation Plan (HCP) approved by USFWS. The work would be consistent with allowable projects under the HCP and therefore there is no USFWS consultation required of BPA under Section 7 of the ESA. The peregrine falcon and golden eagle are WA special status species that have nesting presences in a cliff area about one mile away. At this distance, the project would not disturb the species' breeding activity.

At Maloney Ridge, the work required would be mainly inside the communication building, with some work on the outdoor tower and surrounding ground inside the station fence. There is another project planned at Maloney Ridge around the same time that would install a 120-foot-tall tower and expand the station yard. The USFS biologist saw no potential for that project to impact ESA-listed species and recommended the project proceed without timing restrictions. The bald eagle, a WA state species of concern, is present in the vicinity but would not be affected by work inside a developed radio station.

The mature tree removals near Monroe Substation would not impact the ESA-listed species in the area because the removal would be timed to avoid general avian nesting periods, and the methods employed would limit disturbance to the surrounding habitat. If timing restrictions cannot be met, a qualified biologist would survey the trees for nesting species listed under the Migratory Bird Treaty Act (MBTA). There are no records of WA state species of concern in the vicinity of proposed actions at the site.

Mitigations

- ✓ Time tree removals near Monroe Substation to avoid avian nesting periods, or survey the trees for potential MBTA species if removals are to be done in their nesting periods. Delay cutting as needed to allow fledging.
- ✓ Fell trees near Monroe utilizing low-impact methods to surrounding vegetation and soils

5. **Water Bodies, Floodplains, and Fish** (including federal/state special-status species and ESUs) ☑ ☐

Explanation: The proposed project would not affect fish or their habitat, water bodies in general, or floodplains. The two individual tree removals near Monroe Substation would not impact soil stability because roots would remain in place and their location is buffered by 600 wooded linear feet to the nearest stream that could harbor anadromous fish species of concern. The Deer Creek radio station site is about 1,300 feet (mainly forested) from the water body, Deer Creek, and 1.2 miles upstream from the migration runs-bearing reach of Deer Creek for Pink, Coho and Chinook Salmon, and the rearing reach of Coho Salmon. The canopy area removal at the Deer Creek radio site (0.4 acres) would be controlled with BMP precautions to off-site impacts. There is no work outside of the radio station at Maloney Ridge.

6. **Wetlands** ☑ ☐

Explanation: The work would be located in sloped upland areas in the cases of Deer Creek and Maloney Ridge at which there are no high elevation wetlands. At Monroe Substation, there are no apparent wetlands in the work area, though there are wetlands dispersed in the area of the substation. The trees that would be removed are on a gentle slope.

7. **Groundwater and Aquifers** ☑ ☐

Explanation: It is expected that groundwater would not be encountered at the Deer Creek excavation location per an internal BPA geotechnical study of September 2016. Standard BMPs would prevent adverse impacts if groundwater or an aquifer if present at the new tower installation at Monroe Substation.

8. **Land Use and Specially Designated Areas** ☑ ☐

Explanation: Monroe Substation and Maloney Ridge are existing facilities with BPA infrastructure that host current operations and maintenance activities. The tree removal at Monroe Substation on BPA property would not constitute an unusual land use here: recent logging has been carried out on an adjacent parcel within 1,000 feet. The development of a currently wooded area at Deer Creek is also consistent with existing land uses there: the site would abut an existing radio station, and logging has been, and will continue to be, carried out in close proximity to the development.

9. **Visual Quality** ☑ ☐

Explanation: Deer Creek could be visible to the town of Big Bend, WA, though this is over two miles west of the planned development and would therefore not impact scenic vistas from inhabited areas. The development here would also be surrounded by much larger intensive land uses like clear-cut logging. The changes at Maloney Ridge would be consistent with current appearances so that visual quality would not change. The 51-foot-taller radio tower at Monroe Substation would be more visible from the adjacent road and some dispersed inhabited areas close-in to the substation, but would be consistent with the transmission line lattice towers nearby including one at 100-feet in height.

10. **Air Quality** ☑ ☐

Explanation: There could be decreases in air quality at the Deer Creek work area with the heavy equipment exhaust and increased dust from construction traffic on the gravel road. Because of the localized and temporary nature of the decreases, there is no potential for significant reductions in air quality.

11. **Noise** ☑ ☐

Explanation: Only localized and temporary increases in man-made noise would be expected with construction work. Maloney Ridge would see noise levels consistent with, or somewhat greater than, regular operations and maintenance for short durations. Monroe Substation noise would rise above normal operations and maintenance levels when the tower foundation would be excavated. Deer Creek noise would be consistent with that of a busy construction site with heavy machinery. All sites are relatively remote from human habitation or daily use, and activities would be scheduled for normal working hours. Wildlife could alter normal activities without potential for significant effect, and recreational users may be in hearing distance to work at times, but there is only transient use expected near these sites.

12. **Human Health and Safety** ☑ ☐

Explanation: Minor exposure of asbestos or lead could occur with the described work. When work would be contracted, the contractor would have a current certified Class III Competent Person for asbestos operations and maintenance, and apply BPA-approved mitigation measures when cutting/drilling through potentially lead- or asbestos-containing materials. When the work would be performed by BPA personnel, BPA Work Standards and the Safety and Health Program Handbook for such hazards would be followed.

VLA batteries would be coupled with hydrogen detectors to monitor levels of the gas inside communications

buildings. VLA and VRLA batteries would be handled in replacement procedures. Workers would take all necessary handling precautions to prevent spill or leakage. Evident spills or leaks would be neutralized using standard measures. Old batteries would be packed and shipped according to BPA Pollution Prevention and Abatement requirements.

Overall, the project would help BPA meet its goals of safe facilities maintenance and operations and uninterrupted power transmission.

Evaluation of Other Integral Elements

The proposed project would also meet conditions that are integral elements of the categorical exclusion. The project would not:

☑ Threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders.

Explanation, if necessary:

☑ Require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators) that are not otherwise categorically excluded.

Explanation, if necessary:

☑ Disturb hazardous substances, pollutants, contaminants, or CERCLA excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases.

Explanation, if necessary:

☑ Involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those of the Department of Agriculture, the Environmental Protection Agency, and the National Institutes of Health.

Explanation, if necessary:

Landowner Notification, Involvement, or Coordination

Description: BPA has coordinated with the PSERN group from King County, WA to develop plans at Deer Creek and negotiate leasing terms with the WA DNR. At Maloney Ridge, BPA has coordinated with the Maloney Ridge Electronic Users Association (MREUA) users group to clear all planned activities with the USFS. Monroe Substation sites are fully owned by BPA and all access is via public or BPA-owned property.

Based on the foregoing, this proposed project does not have the potential to cause significant impacts to any environmentally sensitive resource.

Signed: */s/ Michael J. O'Connell* Date: *March 9, 2018*
Michael J. O'Connell, ECT-4