BONNEVILLE POWER ADMINISTRATION

BUREAU OF LAND MANAGEMENT

RADIO SYSTEM UPGRADES AT WILLOW CREEK SUMMIT AND WINDY DEVIL ANNEX

Environmental Assessment

June 2021

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1.0 Purpose and Need for Action

Bonneville Power Administration (BPA)[1] proposes to upgrade its communication system as part of the Radio System Upgrades at Willow Creek Summit and Windy Devil Annex Project (the "Project") in Custer County, Idaho. Specifically, BPA proposes to construct two communication stations on public lands managed by the Bureau of Land Management (BLM)-Challis Field Office (BLM-Challis) and the U.S. Forest Service (USFS) Salmon-Challis National Forest (SCNF) Lost River Ranger District. BPA is proposing the construction of the new stations to improve the reliability and integrity of the ***very high frequency (VHF)***[2] radio system for BPA mobile radio users in the vicinity of BPA transmission lines in the area. The Project would involve reconstructing and grading existing roads, extending existing ***alternating current (AC)*** power lines, and developing the communication stations that would include equipment buildings, lattice steel antenna towers, and propane tanks.

BPA and BLM have prepared this environmental assessment (EA) pursuant to the National Environmental Policy Act (NEPA) (40 CFR [Code of Federal Regulations] 1500-1508), to assess the potential impacts of this proposal on the environment. This chapter of the EA further describes the need for action that has led to the proposal, identifies the purposes (i.e., goals) that BPA is attempting to achieve while meeting the need, and summarizes the EA public scoping process.

The USFS has determined that the project as proposed at its Windy Devil Annex site comprises a USFS action (permitting the additional development of the existing Windy Devil Communication Site) that does not have the potential to significantly affect the environment. As such, USFS is analyzing project effects through a Categorical Exclusion documentation process. BPA is analyzing the effects of its action at Windy Devil (developing a new radio station) in tandem with the expansion development of the Willow Creek Summit Communication Site.

1.1 Background

BPA owns and operates about 15,000 circuit miles of high-voltage transmission lines that move high-voltage power from generation facilities to users throughout the region. The Federal Columbia River Transmission System Act directs BPA to construct improvements, additions, and replacements to its transmission system that are necessary to maintain electrical stability and reliability, as well as to provide service to BPA's customers (16 United States Code [U.S.C.] 838b(b–d)). BPA's communication system directly supports the operation and maintenance of the Federal Columbia River Transmission System.

BPA's Antelope-Round Valley 230-***kilovolt (kV)*** transmission corridor, and its associated transmission lines and access roads, are located between the towns of Challis, Idaho (to the north) and Arco, Idaho (to the south). BPA field personnel servicing the facilities in the area rely on the BPA VHF radio system to communicate with each other in the field and to communicate with the BPA control centers.

[1] A list of acronyms used in this document is included in Appendix A.
[2] Terms defined in the glossary (Appendix A) are shown in ***bold, italicized*** typeface the first time the word is used.

The communication stations[3] currently supporting radio voice communication for the area are located at two high elevation sites: Grouse Peak Communication Station (Grouse Peak) at the northern edge of the transmission corridor and Windy Devil Communication Station (Windy Devil) at the midway point of the corridor. Additionally, the Lost River Substation at the southern end of the corridor acts as the location where voice data is sent to one of the two BPA control centers via a ***microwave*** antenna (referred to as a ***backhaul*** point). See Figure 1-1 for a Project Vicinity Map.

[3] For the purposes of the EA, the new communication stations will be referred to by the respective official agency communication site name, shortened to Willow Creek Summit and Windy Devil Annex; for its own VHF system planning purposes, BPA has named them Chilly and Black Daisy, respectively.

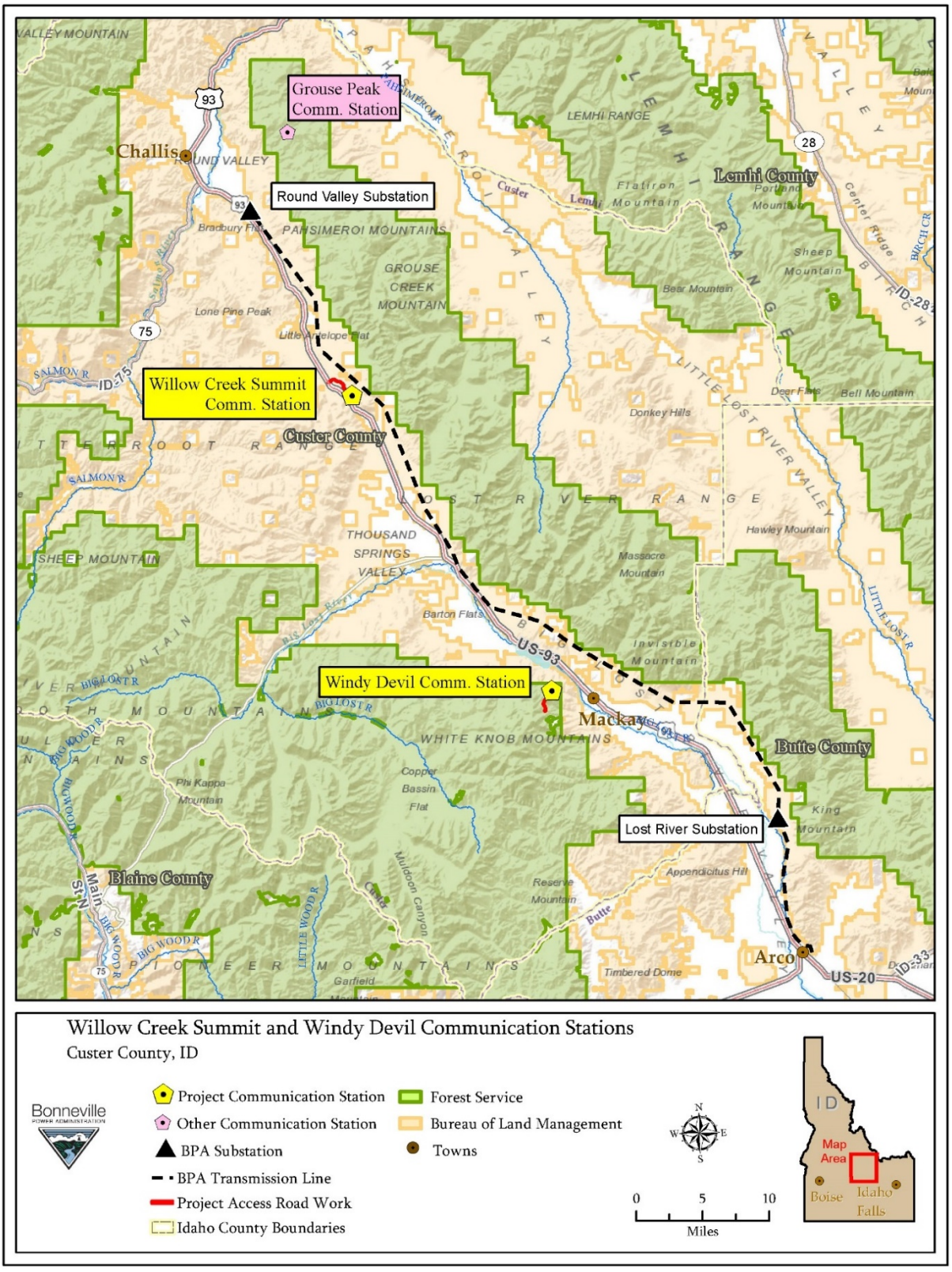

Figure 1-1. Project Vicinity Map. Communication stations and associated features of the Project with reference population centers.

1.2 BPA's Purpose and Need for Action

Purposes are the goals to be achieved while meeting the need for the Project. BPA has identified the following purposes that will be used to evaluate Project alternatives:

- Ensure that the communication system standards developed by the North American Electric Reliability Corporation (NERC) are met;
- Continue to meet BPA's contractual and statutory obligations;
- Minimize impacts on the human and natural environments; and
- Demonstrate cost-effectiveness.

BPA needs to upgrade its VHF radio system in the vicinity of Custer County, Idaho, which is part of the BPA Idaho Falls VHF Region, because current infrastructure is outdated and insufficient to meet current NERC standards. Upgrades to the radio communication system would allow BPA to maintain consistent and reliable signals for the BPA communications network, which is essential for the safety and reliability of BPA's power transmission system. The BPA communication system provides for real-time voice communication between BPA control centers that monitor and regulate the Federal Columbia River Transmission System and the BPA field crews working in the region. The communication network allows for critical information exchange during maintenance and emergencies to enable safe and timely maintenance and ***outage*** responses.

The existing Windy Devil facility cannot accommodate the needed communication system upgrades, so BPA would build a new facility at an adjacent location to Windy Devil: the Windy Devil Annex Communication Station (Windy Devil Annex). The ***line-of-sight*** radio microwave ***beam-path*** between the new Windy Devil Annex location and the existing Grouse Peak facility would be obstructed due to the terrain; therefore, BPA would also need to construct a new communication station with line-of-sight to these two endpoints.

The existing communication station at Willow Creek Summit Communication Site is owned and operated by Custer Telephone Cooperative, Incorporated (CTCI) and has line-of-sight to Grouse Peak and Windy Devil Annex. The station cannot, however, accommodate BPA's needed communication system upgrades, so CTCI would build a new facility, in which BPA would be a tenant, at the existing communication site. The new facility, Willow Creek Summit Communication Station (hereinafter, just "Willow Creek Summit"), would serve as an intermediate microwave location that would have line-of-sight to both the new Windy Devil Annex and to the existing Grouse Peak facility.

BPA needs to maintain VHF radio as the means of communication in the field because VHF systems grant the ability for field crews to communicate from most locations in the vicinity of BPA transmission line corridors, where other communication methods (such as cellular or satellite telephone) may not have the consistent coverage needed to ensure safe and timely transmission maintenance and emergency response.

1.3 BLM's Purpose and Need for Action

The purpose and need for the federal action is established by BLM's responsibility under Section 501(a)(4) of the Federal Land Policy and Management Act of 1976, as amended (43 U.S.C. 1761), which provides authority for the Secretary of the Interior, in their discretion, to grant rights-of-way on lands under its jurisdiction according to regulations at 43 CFR 2802.10.

BLM-Challis needs to respond to an application submitted December 8, 2017 by CTCI requesting an amendment to their existing Willow Creek Summit Communication Site lease (BLM lease IDI-9900). The amendment would allow the addition to and modification of the facilities and infrastructure of the site to co-locate BPA, install a fiber-optic communication line, and expand for potential other future tenants.

1.4 Conformance with the Applicable BLM Land Use Plan

The Project is within the area identified in the following BLM Land Use Plan: Challis Resource Management Plan (RMP), as amended (BLM 1999).

Challis RMP Amendments include:

- Record of Decision for Implementation of a Wind Energy Development Program and Associated Land Use Plan Amendments (Wind Energy Amendment; BLM 2005)
- Record of Decision and RMP Amendments for Geothermal Leasing in the Western United States (Geothermal Amendment; BLM 2008b)
- Idaho and Southwestern Montana Greater Sage-Grouse Approved Resource Management Plan Amendment (ARMPA; BLM 2015)

The alternatives analyzed in this EA are in conformance with the goals and objectives outlined in the Challis RMP, specifically:

> *Land Tenure and Access: Goal 3, page 35: Consider public needs for use authorizations, such as ROWs, leases, permits, and withdrawals. And, [c]ontinue to authorize the following communications sites…: Willow Creek Summit…*

The lease amendment would allow a small expansion to benefit public needs: CTCI is a publicly owned telephone cooperative providing rural cellular coverage and BPA is an electricity ratepayer-funded agency maintaining its electric transmission reliability in the region.

The ARMPA and Record of Decision (ROD) were signed on September 21, 2015. The ARMPA provided a layered management approach that offers the highest level of protection for greater sage-grouse in the most valuable habitat. Land use allocations in the ARMPA limit or eliminate new surface disturbance in Priority Habitat Management Areas and Important Habitat Management Areas, while minimizing disturbance in General Habitat Management Areas.

The Proposed Action would be in conformance with the ARMPA (BLM 2015) per the analysis of BLM's Idaho Greater Sage-Grouse Implementation Plan Conformance Review document (March 19, 2021) that is contained in Appendix B. Section 3.3 of this EA describes the greater sage-grouse habitat found within the proposed Project Area, the environmental consequences of Project implementation, and the proposed ***mitigation*** measures.

The Proposed Action has also been determined to be in conformance with the terms and conditions of the applicable BLM Land Use Plan Amendments, as required by 43 CFR 1610.5.

1.5 Relationship to Statutes, Regulations or Other Plans

The project applications to BLM and USFS were made in accordance with Title V of the Federal Land Policy and Management Act of 1976 as amended (43 U.S.C. 1761) and the regulations found in 43 CFR 2800:

- The National Historic Preservation Act (NHPA) of 1966, as amended (with regulations under 36 CFR Part 800); and
- The Fort Bridger Treaty of 1868 (15 Stat. 673).

1.6 Scoping, Issues, and Decisions to be Made

1.6.1 Scoping

To help determine the issues to be addressed in this EA, BPA and BLM conducted public scoping. On February 8, 2019, the agencies sent a scoping letter to contacts potentially interested in or affected by the proposed Project that included landowners, public interest groups, and local governments. The public scoping letter sought public input for the Project and contained a list of preliminary issues, which was posted on BPA's Project website (www.bpa.gov/goto/WillowCreekWindyDevil).

BPA determined that three American Indian tribes (Tribes) have a potential interest in the Project: the Coeur d'Alene Tribe, Nez Perce Tribe, and Shoshone-Bannock Tribes of the Fort Hall Reservation. BPA requested comments from the Tribes on the Project as well as on potential ***cultural resources*** to help shape the field investigations.

1.6.2 Scoping Comments

Three public scoping comments were received and are posted on the Project website. Comments were received on the following topics:

- **Wildlife:** Two commenters expressed concern about the potential impacts on greater sage-grouse and their habitat, requesting that BPA and BLM implement measures to avoid and mitigate impacts. One commenter explicitly requested analysis and results of greater sage-grouse pertinent to the Idaho Plan (Office of the Governor 2015); another suggested measures to avoid impacts to pygmy rabbit, migratory birds, and bats.
- **Noxious Weeds:** Two commenters requested that BPA address the potential impacts of ***noxious weeds*** to the Project Area and as threats to greater sage-grouse habitat.
- **Visibility:** One commenter requested that the Windy Devil Annex station be unlit to eliminate obtrusive night illumination to valley residents.

The scoping comments are addressed in the appropriate sections of this EA, as applicable.

1.6.3 Issues

Through the scoping process, the federal land management resource specialists, including the BLM interdisciplinary team and USFS specialists, identified the following issues concerning the Proposed Action:

- Vegetation removal;
- Soil disturbance;
- Loss or disturbance of greater sage-grouse habitat; and
- Noxious and invasive weeds.

1.6.4 BLM Decision to be Made

The BLM-Challis Field Manager is the Authorized Officer responsible for decisions regarding BLM-managed public lands within the proposed Project Area. Here, the decision would be whether or not to issue an amended lease as proposed, allowing the construction, operation, and maintenance of the described communication facilities on BLM-administered lands, or with modifications; including mitigation, terms, and conditions. The EA will provide information for the BLM Authorized Officer to make an informed decision regarding actions proposed in the EA. Based on the results of the NEPA analysis, the Authorized Officer will issue a determination of the significance of the environmental effects and whether or not an environmental impact statement (EIS) would be required.

2.0 Proposed Action and Alternatives

2.1 Proposed Action

Under the Proposed Action, BPA would upgrade its VHF two-way radio coverage in the Idaho Falls VHF Radio Region of its transmission infrastructure territory. Two communication stations would be developed under this plan: the Willow Creek Summit on BLM-managed land in BLM-Challis and the Windy Devil Annex on USFS-managed land in the Lost River Ranger District of the SCNF. For Willow Creek Summit, BPA is partnering with CTCI to develop a new communication station near the existing CTCI communication station at Willow Creek Summit. The BLM would issue a short term (3-year) right-of-way grant to CTCI for construction of the new communication station. In addition, BLM would grant an amendment to the current CTCI 30-year right-of-way lease for the operation and maintenance of new facilities at an operating communication site. BPA would be a tenant of the newly built facility, entering into a sublease under CTCI. BPA would build its communication building and its steel conduit bridge connecting the building equipment to the new CTCI-built communication tower; BPA would also install its own propane tanks and connect to the local power feed. For Windy Devil, BPA would solely develop the new communication station. USFS would issue a Special Use Permit to allow development and operation and maintenance of the Windy Devil Annex for 30-years.

2.1.1 BPA Communication System

BPA initiated a program to upgrade its VHF radio system territory-wide. The program's purposes include modernizing the technology, reinforcing or expanding field radio coverage, and improving overall system reliability. The upgrades at Willow Creek Summit and Windy Devil Annex are a key part of the BPA Idaho Falls VHF Region and would ensure better radio transmission throughout this service area.

The current and foreseen radio traffic by BPA users in the Project's vicinity is related to operations and maintenance of BPA 230-kV lines of the Antelope-Round Valley corridor: Antelope-Lost River No. 1, Lost River-Spar Canyon No. 1, and Spar Canyon-Round Valley No. 1. While the VHF signal coverage in this area is currently sufficient, the aging VHF ***repeater*** radios need to be replaced under the upgrade program. The current backhaul ***circuit*** that relays voice data north to south from the repeater at Grouse Peak (see Figure 1-1) to Windy Devil and on to Lost River Substation could not accommodate expansion of the circuit ***bandwidth*** that is required for the new VHF radios.

BPA needs to maintain VHF radio as the default means of communication in the field (as opposed to other telecommunication options, such as cellular or satellite telephone) because VHF systems grant the ability to create and maintain a customized area of signal coverage. The VHF system also allows all users in a region to hear and participate in calls (the "all-informed" feature of VHF radio talk) to and from dispatch, guarding against errors in grid operation due to miscommunication. The system uses a government band frequency, so BPA is not competing with commercial carriers for bandwidth. Typical commercial cellular telephone network coverage does not extend to many of the remote locations of the BPA service area. Satellite phones would also be an unreliable method to communicate to dispatch because the technology requires the user to have a view of the southern horizon – again, a condition often

unmet in BPA's service area because of terrain. There is also no "all-informed" check against errors in cellular or satellite phone usage.

BPA's VHF system dispatchers have responsibilities that include issuing electrical clearances on the BPA transmission system to enable workers to safely maintain and repair equipment. To work safely on most high voltage electrical equipment, a temporary power outage is required to stop the flow of electricity. Outages can be scheduled in order to perform regular maintenance activities. However, outages are sometimes unscheduled, as when a tree contacts a transmission line and interrupts power transmission. It is essential that field staff and dispatchers communicate about the status of outages during maintenance and emergency situations to ensure timely restoration of power and to prevent worker injury or death. Figure 2-1 is a conceptual snapshot of the VHF radio communication process at BPA.

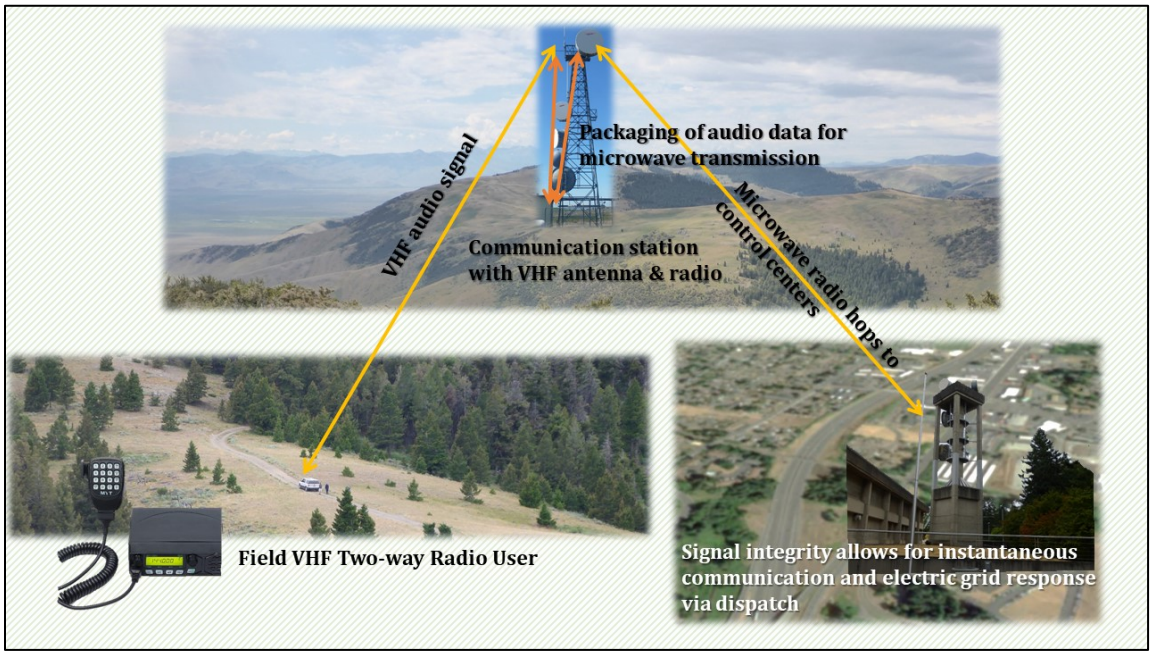

Figure 2-1. Concepts in VHF Radio System Operation

2.1.2 Communication Stations

2.1.2.1 Willow Creek Summit

At Willow Creek Summit (NE ¼ Sec 33, Twp. 11N, R. 21E), the Project would expand the existing communication station owned and operated by CTCI. The existing CTCI 12-foot by 20-foot building and 30-foot-tall communication tower would remain on site and would continue to be used by CTCI. The new facility would include an approximately 35-foot by 24-foot communication building and a partitioned approximately 24-foot-square generator building to house the BPA radio operation systems and provide space for other future tenants. The buildings would be composed of pre-poured concrete with stone aggregate finish and sloped, seamless roofs. It would contain a communications room (digital ***microwave radios***, VHF repeater radios, communications racks, ***channel banks***, and a fuse panel would be among the various electronic equipment needed for the VHF system) and a room containing a 50-kilowatt

generator for power backup in the event of loss of the primary electrical service. The communication tower, buildings, and other facilities would be unlit. See Table 2-1 for a summary of Project features. See Figure C1-1, Appendix C-1 for an example of a CTCI communication station.

Table 2-1. Summary of Project Features for the Willow Creek Summit Communication Station

Project Feature	Description
Area of Facility	0.5 acres
Building Size	Two buildings 35-feet x 24-feet and 24-feet by 24-feet
Color	BLM-Challis recommended from BLM Standard Environmental Colors chart*
Tower Height	100 feet
Tower Foundation	30 feet x 30 feet
Antennas	Two gray VHF whip-style, 20-feet-tall; one at top- and one mid-point Two gray shield-encased microwave, up to 10-feet in diameter; locations to be determined
Propane Tanks	Two 3,000-gallon tanks (~38-feet by 7-feet each) One 1,000-gallon tank (~16-feet by 3-feet) One existing 1,000-gallon tank; All white in color
Staging Areas	Three staging areas. 120 feet x 320 feet (0.9 acres) 150 feet x 80 feet (0.3 acres) 150 feet x 80 feet (0.3 acres)
*Source: BLM 2013.	

Outside the building, a 30-foot-square concrete tower foundation with a 100-foot-tall steel lattice tower would be constructed. Two 3,000-gallon propane tanks would be installed on a new concrete pad that would measure approximately 24 feet by 20 feet. Adjacent to this, a 1,000-gallon propane tank would be installed on two concrete footings measuring 4 feet wide by 2 feet deep by 2 feet long. The existing 1,000-gallon propane tank would remain in service and may be moved to a location near the new tanks. The propane tanks would be located at least 25 feet from the communication building and radio tower. The propane would power the generator if backup power were needed. The facility would have a graded and graveled entrance from the existing access road, and a small graveled parking/turnaround area. The gravel would be weed-free, a color that closely matches the existing site and would be obtained from a BLM-approved aggregate site. Fill material, if needed, would be primarily from materials excavated on site. The new facility would occupy an area of approximately 0.5 acres and would not be fenced. Buildings, ***conduit***, and any other project features that can be painted would be painted a BLM-Challis recommended color from the Standard Environmental Colors chart (BLM 2013).

Willow Creek Summit would be constructed and operated in accordance with the guidance and policies established in the Willow Creek Summit Communication Site Management Plan (BLM 2018). See Figure C2-1, Appendix C-2 for a map of the Willow Creek Summit Project features.

Electrical Service

An underground electrical spur line would be installed to provide power to the new communication station. The spur line would begin at the existing Lost River Electric Cooperative, Inc. above-ground electrical power line that provides service to the existing CTCI facility. The underground spur line would run approximately 220 feet to the proposed, new Willow Creek Summit, mainly along the existing access road in the westerly direction until reaching the new facilities at which point it would head south across the graveled surface to connect at the communications building. Lost River Electric Cooperative, Inc. would install the spur line in a 3-foot-deep trench with a 2.5-foot-wide surface disturbance area, place an approximately 2-inch-diameter protective plastic ***conduit*** containing the electric power line in the trench, and then close the trench. If the line is to traverse ungraveled areas due to unexpected conditions, the closed trench would be revegetated with a BLM-approved seed mix. All electrical wiring and grounding would meet the most current National Electric Code (NEC) and applicable state and local codes at the time of construction.

Access Road

To access Willow Creek Summit, CTCI proposes to use the access road to the existing communication station at the site. From Highway 93, access is via 0.3 miles of Sheep Creek Road (BLM Road 228), then 2.7 miles up Willow Creek Summit Road. The current alignment of the road would not be changed, and no work except for staging (see discussion on ***staging areas*** below) would be anticipated to take place outside of the road's prism. In some areas of the road, the addition of gravel could be required to provide stability and traction for construction equipment. If needed, gravel would be obtained from an existing BLM-approved aggregate site. The gravel would be weed-free and of a color that closely matches the existing road bed.

The amended Willow Creek Summit right-of-way lease would include the right to use the 3 miles of existing access road from Highway 93 to the proposed Willow Creek Communication Station. CTCI and BPA would not be permitted to expand the road beyond its current prism and width; and drainage and upgrades would need to be individually agreed upon with BLM. Use of the road by BPA and CTCI would increase during construction of the Project. Use of the road during operations is not expected to noticeably increase over existing operation levels because non-emergency maintenance or inspection would typically take place not more than four times per year. Site access for maintenance would be by one or two four-wheel-drive passenger vehicles (pickups or sport-utility). Public use of the road is expected to remain unchanged. See Figure C2-2, Appendix C-2 showing the access roads to Willow Creek Summit.

Fiber Optic Line

A new fiber optic line would be connected at an existing fiber junction box on the west side of Highway 93, approximately 2,500 feet to the north of the intersection of Highway 93 and Sheep Creek Road. The fiber optic line and its conduit would be embedded by a bulldozer with a conduit-laying attachment following a plow-equipped bulldozer that would rip up to a 4-inch-wide trench, about 48 inches deep along the approximately 2.8 miles of road sections. The fiber optic line would then be extended under the highway using directional boring. Along the remainder of the access roads, Sheep Creek Road and the Willow Creek Summit Road the fiber optic line would be about 36 inches deep. The installation along the

road edges of the fiber optic line would create an approximately 18-inch-wide ground surface disturbance centered on the cut; the outer bulldozer track would crush vegetation up to 5 feet outside the road prism for a total temporary vegetation disturbance of approximately 1.7 acres by the fiber installation.

The fiber optic line would be installed along the north side of the access road from Highway 93 to the communication station or if conditions necessitate, crossing to the south side of the access road or within the road tracks. On Willow Creek Summit Road, approximately 1.5 miles from Sheep Creek Road, the fiber optic line would detour 0.15 miles to the east away from the road. The fiber optic line would then head south for 0.15 miles and rejoin Willow Creek Summit Road. The trench would be back-filled and the disturbed ground surface revegetated with a BLM-approved seed mix. Crushed vegetation outside the road prism would be allowed to rehabilitate naturally.

Staging Areas

Three temporary staging areas would be required for the construction of Willow Creek. One staging area would be northeast of the intersection of Highway 93 and Sheep Creek Road within a previously disturbed staging site. This staging area would be about 120 feet wide by 320 feet long (0.9 acres). The second staging area would be located at approximately 1.4-miles from Sheep Creek Road on Willow Creek Summit Road. This staging area would be 150 feet long by 80 feet wide (0.3 acres). The third staging area would be at the existing communication station partly on previously disturbed land and partly on fringing natural vegetation and would be approximately 150 feet long by 80 feet wide (0.3 acres). No vegetation would be removed for staging; equipment and materials would be placed on top of existing vegetation.

Microwave Beam Path

Microwave radio waves travel in narrow beams confined to a line-of-sight path from one antenna to the other. In regard to this Project, the line-of-sight path would extend 27 miles between the proposed Willow Creek Summit Communication Station to the proposed Windy Devil Annex Communication Station. The line of sight between antennas would have to be kept free from obstacles. The planned beam-path corridors at Willow Creek Summit Communication Station do not support vegetation types that would grow to a height that could interfere with the beam path.

Vegetation and Tree Removal

To build the Willow Creek communication station, curl-leaf mountain mahogany (*Cercocarpus ledifolius*) trees, sage brush, and grasses would need to be removed. In addition, a 30-foot buffer around the communication building, radio tower, and propane tanks would have to be cleared of vegetation for fire protection. In total, about 0.5 acres of mountain mahogany, sage brush, and native and ***non-native*** grasses would be permanently removed. Allowing for construction equipment movement and staging, an additional 0.1 acres of perimeter vegetation could be broken or crushed during site preparation and facility construction for a total project impact at the radio station site of approximately 0.6 acres. This perimeter vegetation damage would be considered temporary and would be allowed to regrow to the fire protection buffer edge.

2.1.2.2 Windy Devil Annex

The Windy Devil Annex site (SW ¼ Sec 24, Twp. 7N, R. 23E) would include the construction of a new communication station facility approximately 1,600 feet southwest of the current Windy Devil Communication Site where BPA is a tenant. The existing building and tower are at capacity, and expansion at the existing site is not feasible. The new communication station would accommodate a change from the existing ultra-high frequency radios to microwave radios for the backhaul upgrades and add capacity for potential future communications to support the power transmission system in the area.

The new Windy Devil Annex communication station would be built by BPA, occupy approximately 0.5 acres, and would not be fenced. The facility would include a 1,000-square-foot communication building to house BPA radio operations. The building would be concrete masonry unit block veneer with a standing-seam, pitched metal roof. See Figure C1-2 in Appendix C-1 for an example of a typical BPA-built communication station. The building would contain a communications room with digital microwave radios, VHF repeater radios, communications racks, channel banks, and a fuse panel, among the equipment needed for the VHF system. An adjacent room would contain a 50-kilowatt generator. Outside the building, a 30-foot-square concrete tower foundation with a 100-foot-tall steel lattice tower would be constructed. The facility would have a graded and graveled entrance from the existing access road, and a small, graveled parking/turnaround area. To provide fuel to the generator, the facility would have two, 2,000-gallon propane tanks installed on two concrete footings measuring 4 feet wide by 2 feet deep by 2 feet long. The propane tanks would be located at least 25 feet from the communication building and radio tower. The communication tower, buildings, and other facilities would be unlit. See Table 2-2 for a summary of Windy Devil Annex Project features. See Figure C2-3 in Appendix C-2 for a map of the Windy Devil Communication Station site layout. The Windy Devil Annex would be constructed and operated in accordance with the guidance and policies established in the Windy Devil Communication Site Management Plan (SCNF 2011).

Table 2-2. Summary of Project Features for the Windy Devil Annex Communication Station

Project Feature	Description
Area of Facility	0.5 acres
Building Size	1,000 square feet
Tower Height	100 feet
Antennas	Two gray VHF whip-style, 20-feet-tall, one at top- and one mid-point Two gray shield-encased microwave, up to 10-feet in diameter at locations to be determined
Tower Foundation	30 feet x 30 feet
Propane Tanks	Two 2,000-gallon tanks, white in color
Access Road	Widening of turn radius resulting in 0.4 acres of disturbance.
Staging Areas	One staging area, 300 feet x 30 feet (0.4 acres)

Electrical Service

An underground electrical spur line would be installed to provide power to the new communication station. The spur line would begin at the transformer at the existing communication station to the north. The line would be buried in the existing gravel road for approximately 1,600 feet. Lost River Electric Cooperative would install the spur line in a narrow 3-foot-deep trench with a 2.5-foot-wide surface disturbance area, place an approximately 2-inch-diameter protective plastic conduit containing the electric power line in the trench; and then close the trench. In ungraveled areas, the closed trench would be revegetated with a USFS-approved seed mix. All electrical wiring and grounding would meet the most current NEC and applicable state and local codes at the time of construction.

Access Road

To access Windy Devil Annex, BPA proposes to use the access road to the existing Windy Devil site. Access begins at the SCNF boundary west of Mackay, on Mine Hill Road. From Mine Hill Road, travel is west-northwest on Forest Road 207. This approximately 1.8-mile-long segment of Forest Road 207 would not be improved. After about 1.8 miles, BPA would improve portions of Forest Road 207 and Forest Road 211to the proposed Windy Devil site. The new Special Use Permit would allow BPA to upgrade, use, and maintain these two roads for construction and operation of the communication station. Construction of Windy Devil would require grading and vegetation crushing or breaking at several locations along both Forest Roads 207 and 211. Some ancillary vegetation crushing and surface disturbance for equipment maneuvering would occur where needed. Road grading could require gravel to provide stability, clearance, and traction for construction equipment. Appended gravel would be brought to the site from a USFS-approved rock source. Figures C2-4 and C2-5 in Appendix C-2 showing access and road improvements to the Windy Devil Annex Communication Station.

A short section of Road 211, where there is a tight hairpin turn, would have to be widened to a 50-foot inside-turn-radius to allow access to the site by construction equipment resulting in about 0.4 acres of disturbance. The road would be widened outside the existing road prism and some cutting, and filling would occur. Some trees and shrubs would be removed, cut up, and left on site.

Staging Area

One temporary staging area would be required for the construction of the Windy Devil Annex Communication Station. The staging area would be located directly opposite the communication station site on the east side of Road 211 (see Figure C2-3, Appendix C-2). The staging area would be about 300 feet long by 60 feet wide (0.4 acre). No vegetation would be removed; equipment and materials would be placed on top of existing vegetation.

Microwave Beam Path

The line-of-sight path to a future terminus at Lost River Substation from Windy Devil could have the potential to be obstructed by existing and future tree growth within 800 feet to the east of the proposed communication station. Therefore, removal of several trees in this area to maintain the line-of-sight path to the Lost River substation may be necessary at a future date. The beam path to Willow Creek Summit would be unobstructed indefinitely due to the steep drop off to the north of the Windy Devil site.

Vegetation and Tree Removal

To build the Windy Devil Communication Station approximately 0.5 acres of land would have to be permanently cleared of small conifer trees, sage brush, and grasses.

2.1.3 Construction

This section applies to the construction of both the Willow Creek Summit and the Windy Devil Annex communication stations. Any differences in the construction process between the sites or timing of the construction is described below.

2.1.3.1 Access Roads

If feasible, large equipment such as excavators and backhoes needed at each site would make one trip to the site and remain until the construction is finished. Utility trucks/pickup trucks would make several trips per day to the Project Area. Cement truck trips would be needed to haul the cement for the building foundation, and the tower and propane tank pads.

2.1.3.2 Vegetation Removal and Site Grading

Vegetation would initially be removed by hand cutting trees and brush with chain saws. A ***track hoe*** may be used to remove stumps and other material where needed. Site grading would be accomplished through a combination of cut and fill actions using a bulldozer. The excavated material would be reused to grade around the new facilities as much as practicable. After construction, gravel would be placed around the foundations to stabilize the soil. In ungraveled areas, disturbed land would be restored to the natural grade with the use of native soil as supply and quality dictate and would be revegetated using a BLM- and USFS-approved seed mix.

2.1.3.3 Foundations and Tower Pads

Foundations for the communication station buildings would be excavated to a depth of 3 feet below the ground surface. Steel reinforcing would be placed in the excavations and concrete would be poured. Tower pads would be 30-feet-square and would be 3 feet deep and would have steel reinforcing. The propane tanks would be installed on two reinforced concrete footings measuring 4 feet wide by 2 feet deep by 2 feet long for each tank.

2.1.3.4 Buildings

Buildings would be prefabricated concrete or steel structures that would be either assembled on site or brought to the site pre-assembled and set on foundations. Following completion of the building, interior components described above would be installed on site.

2.1.3.5 Tower and Equipment

Towers would be delivered to staging areas in pieces. Construction crews would assemble the towers in sections that would then be delivered to the communication station site and lifted into place with a crane. Sections would be bolted together by crews climbing the tower or in bucket trucks. Communication equipment would be bolted to the towers by construction crews climbing the tower or in bucket trucks.

2.1.3.6 Construction Work Force

Construction of foundations, building, tower and equipment would involve up to eight individuals working at any one time. For the Willow Creek Summit effort, workers would likely lodge in either Mackay or Challis, Idaho, and would commute to the site daily. For the Windy Devil Annex effort, workers would likely lodge in Mackay. Temporary sanitation during construction activities would consist of portable toilets located at each communication station and their staging areas. A subcontractor would provide the sanitary facilities and provide a scheduled removal of waste using a vacuum truck and disposal in accordance with the sanitary system subcontractor's permits.

2.1.3.7 Construction Schedule.

If the Proposed Action is implemented, construction would occur over a 2-year period. Willow Creek Summit would be constructed between July 15 and December 15 of each year. Windy Devil Annex would be constructed between July 15 and March 15 of each year.

2.1.4 Operations

During routine operations, vehicle access would be needed to reach each communication station for periodic inspections and maintenance. Each communication station would be visited up to four times each year for maintenance, and propane would be delivered once each year. Other unscheduled trips to each communication station would occur as needed for possible emergencies like equipment failures. Access roads would be repaired, as needed, but would not be graded routinely. Regular pruning of vegetation would occur within 30 feet of the communication stations for fire protection. The beam path would need to be kept clear of vegetation and as a result, trees would be pruned or removed as needed.

2.1.5 Reclamation

If the communication stations were no longer needed, the areas would be reclaimed to their condition prior to construction by removing all structures, concrete and gravel pads, access driveways, electrical vaults, and other items associated with the site uses. Manufactured debris would be cleared from the surface and the area would be treated to ensure reasonable soil stabilization and revegetation with similar typical local materials. BLM and USFS would not require restoration of access roads; they would be left as-is. Additional details would be contained in a reclamation plan that would be a condition of the grants and permits from BLM and USFS.

2.1.6 Design Features, Mitigation Measures, and Best Management Practices

Design features, mitigation measures, and ***best management practices (BMPs)*** have been identified for the Proposed Action. Some of these measures are design features that have been incorporated into the original design of the proposed Project, as well as BMPs that are typically used by BPA. Other measures were identified as a result of the NEPA process and are intended to reduce or eliminate potential impacts from the Proposed Action on resources discussed in this EA. Design features, mitigation measures, and BMPs are listed in Appendix D.

2.2 No Action Alternative

Under the No Action Alternative, CTCI would not expand the existing Willow Creek Summit Communications Site with new radio station and tower facilities, and BPA would not construct the Windy Devil Annex Communication Station. Because construction activities associated with the proposed Project would not occur, it would be necessary to periodically conduct routine and emergency maintenance at the existing Windy Devil communication station to ensure it continues to function within the larger BPA communications network.

The equipment would continue to be outdated, and the reliability and safety concerns that prompted the proposal for action would persist. BPA would not be able to meet NERC communication system standards. Because BPA would not have reliable communications between field staff and dispatch and would not be able to meet their contractual and statutory obligations (see Chapter 1, section 1.2), BPA would need to seek alternative communications solutions.

At this time, no alternative development options are known to the EA preparers or to BPA technical staff. If the No Action Alternative is selected, project planning would need to be re-initiated in order to accomplish the goal of the Radio System Upgrades at Willow Creek Summit and Windy Devil Annex: modernize to a more reliable system to process voice data originating from transmission system field personnel in mountainous terrain, and continue to meet NERC standards. It is assumed two new locations would need to be identified and vetted for radio station development.

2.3 Alternatives Considered but Eliminated

In early planning with the BLM, several alternative configurations were considered to reduce the amount of mountain mahogany that would need to be removed for the construction and operation of the Willow Creek Summit Communication Station. However, based on design constraints of the communication station and site topography, possible alternative layouts would not result in reduction of the amount of mountain mahogany that would need to be removed, and additional configurations were not carried forward for further analysis.

The installation of bird perch deterrents on the new communication tower at Willow Creek Summit was considered to reduce raptors and other predatory birds from using the tower as a perch for hunting greater sage-grouse. However, installing the perch deterrents would require a change in the design of the communication station. A larger tower pad would be needed because the tower would need an expanded footprint to support greater mass and the anticipated ice loading stresses from the substantial increase in surface area. Because workers could not safely climb the larger tower, more graveled space adjacent to the tower would be required to allow access by bucket trucks for construction and all tower maintenance above head height.

With perch deterrents installed, the layout of this option would require partitioning the station to both sides of the access road to limit total vegetation clearing to approximately the same amount required under the Proposed Action. However, the terrain on the north side of the site would require an increase in the total area needing to be leveled by cut and fill or imported fill. Propane lines would need to cross under the access road, thus adding a risk to infrastructure from vehicle and road activities. Personnel safety near the tower could be compromised by the presence of falling perch deterrents broken from ice

loading or from fastener failure, or from the added ice itself breaking off. Lastly, review of the most current literature from the Avian Powerline Interaction Committee (APLIC 2015) indicates that perch deterrents are not reliable in preventing birds from perching on transmission and communication towers. Because of these reasons, perch deterrents were eliminated from further consideration.

2.4 Comparison of Alternatives

Table 2-3 compares the Proposed Action and the No Action Alternative by the purposes of the Project described in Section 1.2.

Table 2-3. Comparison of the Proposed Action and No Action Alternative by Project Purpose

Purpose of Project	Proposed Action	No Action Alternative
Ensure that the communication system standards developed by NERC are met.	The Proposed Action would result in upgrades to BPA's VHF radio system in the Idaho Falls Service Area to meet current NERC standards. Upgrades would maintain consistent and reliable communications signals for the BPA communications network, which is essential for the safety and reliability of BPA's power transmission system.	The equipment would continue to be outdated, and the reliability and safety concerns that prompted the proposal for action would persist. BPA would not be able to meet NERC communication system standards.
Continue to meet BPA's contractual and statutory obligations.	Building the communication stations would be more reliable than the existing communication system and, therefore, allow BPA to continue to meet contractual and statutory obligations to its customers.	BPA would continue to have reliability concerns in communications between field staff and dispatch and would be at risk of not being able to fully meet their contractual and statutory obligations (see Chapter 1, Section 1.2).
Minimize impacts on the human and natural environments.	The environmental impacts due to building the Willow Creek Summit and Windy Devil communication stations would be minimized by designing the Proposed Action to avoid sensitive resources where possible, and by mitigation measures and best management practices (See Appendix D) where avoidance is not possible.	The No Action Alternative would not have the effects of the Proposed Action during construction and operation. BPA would be forced to seek alternative communications solutions.

Purpose of Project	Proposed Action	No Action Alternative
Demonstrate cost-effectiveness.	Overall, the Proposed Action is estimated to cost about $485,000 for Willow Creek Summit and $2,100,000 to $3,500,000 for Windy Devil in construction costs (both material and labor).	The No Action Alternative would still require the expenditure of funds to periodically conduct routine and emergency maintenance at the existing Windy Devil communication station. The rate of maintenance spending would likely increase as aging structures fail at increasing rates.

3.0 Affected Environment and Environmental Consequences

This chapter includes a description of the affected environment (present condition) for each human and natural resource and an analysis of the potential effects on these resources from the Proposed Action and the No Action Alternative. The affected environment provides a baseline for analyzing environmental effects of the alternatives. The effects[4] are the known and predicted effects from implementation of the actions, limited to the identified issues. Direct effects are those caused by the action and occurring at the same time and place. Indirect effects are those caused by the action but occurring later or in a different location. For the analyses of the alternatives, direct and indirect effects are not separated out but discussed together. Cumulative effects result from the incremental impact of the action when added to other ongoing and reasonably foreseeable future actions. Reasonably foreseeable future actions are those for which there are existing decisions, funding, formal proposals, or those which are highly probable, based on known opportunities or trends.

Mitigation measures and BMPs that would lessen or avoid impacts on the environment have been developed and are presented in Appendix D. Based on the analysis in this EA, the effects on specific resources are characterized as high, moderate, low, or no effect. In addition, beneficial effects are noted where appropriate. Duration of impacts is considered as:

- Temporary impacts occur during Project construction and persist for less than or equal to 2-years.
- Short-term impacts persist up to 5-years after construction is complete.
- Long-term impacts persist for more than 5-years after construction.
- Permanent impacts persist for the life of the Project.

The BPA with BLM (and SCNF in a consulting capacity) made a determination of which resources are potentially present and if they would be affected by the proposed Project. The resources potentially present in the Project Area that would be affected by the proposed Project include soils, vegetation, wildlife, visual resources, cultural resources, and noise. Several resources were either not present or were present but would not be impacted by the Project and are not considered further in Chapter 3.

Routine operations of the proposed Project post-construction would have negligible impacts on resources over the life of the Project and are not considered further in Chapter 3. Facility removal during reclamation of the proposed Project after its lifespan would have similar impacts on resources as presented in Chapter 3. Roads would have no additional impacts since they would be left as-is, and full reclamation of the previously disturbed areas from the Project facilities would enhance the Project location compared to existing conditions resulting in negligible impacts. Operations and reclamation effects are thus not considered further in Chapter 3.

[4] Shortly before this Draft EA was issued for public review, the Council on Environmental Quality (CEQ) published a final rule updating its NEPA implementing regulations, including revisions to the definition of effects (i.e., impacts) and repealing the definition of cumulative effects. The new CEQ NEPA regulations are available at https://ceq.doe.gov/laws-regulations/regulations.html. CEQ indicated that its new regulations are effective as of September 14, 2020, and apply to any NEPA process begun after that effective date (CEQ Memorandum for Heads of Federal Departments and Agencies, July 16, 2020.). Because the EA for the Radio System Upgrades at Willow Creek Summit and Windy Devil Annex was begun before the effective date of the new CEQ NEPA regulations, this EA was prepared consistent with the pre-revision NEPA regulations.

Table 3-1 provides a list of resources potentially present in the Project Area and indication of presence, absence, or not impacted by the Project.

Table 3-1. Resources Potentially Present in the Project Area and Indication of Presence, Absence, or Not Impacted by the Project

Resource	Status	Rationale
Soils	Present, Impacted	Impacts are further disclosed under Environmental Consequences
General Vegetation	Present, Impacted	Impacts are further disclosed under Environmental Consequences
Threatened, Endangered, and Sensitive Plant Species	Present, Impacted	Impacts are further disclosed under Environmental Consequences
Noxious Plant Species	Present, Impacted	Impacts are further disclosed under Environmental Consequences
General Wildlife	Present, Impacted	Impacts are further disclosed under Environmental Consequences
Threatened, Endangered, and Sensitive Wildlife Species	Present, Impacted	Impacts are further disclosed under Environmental Consequences
Migratory Birds	Present, Impacted	Impacts are further disclosed under Environmental Consequences
Visual Resources	Present, Impacted	Impacts are further disclosed under Environmental Consequences.
Cultural Resources	Present, Impacted	Impacts are further disclosed under Environmental Consequences
Noise	Present, Impacted	Impacts are further disclosed under Environmental Consequences.
Tribal Treaty Rights and Interests	Present, Not Impacted	The Project Area is located on unoccupied federal lands within the Coeur d'Alene Tribe and the Nez Perce Tribe's areas of interest, and the Shoshone-Bannock Tribes of the Fort Hall Reservation aboriginal territory. Therefore, tribal treaty rights, as defined, are applicable to the Project Area. The current condition and nature of affected resources associated with these tribal rights and interests are not impacted by this proposed Project. There would be no changes in land status or access associated with the Project and the Project Area would retain its unoccupied federal land status. Therefore, the Coeur d'Alene Tribe, the Nez Perce Tribe, and the Shoshone-Bannock Tribes' right to access the lands for treaty and traditional uses would be unaffected.
Land Use	Present, Not Impacted	See Rangelands, Traffic and Transportation, and Recreation below.

Resource	Status	Rationale
Areas of Critical Environmental Concern (ACECs)	Not Present,	There are no designated ACECs in the Project Area or within 5-miles of the Project.
Rangelands (Livestock/Grazing)	Present, Not Impacted	The Project would not modify current grazing allotments at Willow Creek Summit (Mountain Spring Allotment) or Windy Devil (Copper Basin Grazing Allotment). As a result of the Proposed Action 0.5-acres of rangeland at Willow Creek and 0.5-acres of rangeland at Windy Devil would be lost from each of the allotments. The loss of 0.5-acres of rangeland vegetation would not modify the current number of ***animal unit months*** at Willow Creek or at Windy Devil. The Project would have no effect on current cattle movement through the area because there are no gates or fencing proposed. Noise and activity from construction may temporarily displace livestock; however, the effects would be temporary and localized, affecting a small portion of each allotment.
Traffic and Transportation	Present, Not Impacted	At Willow Creek, the resulting temporary increase in construction-related traffic would represent a slight increase in daily traffic volume. Highway 93 near the turn to Sheep Creek Road averages approximately 710 vehicles per day (ITD 2019) and could easily accommodate the temporary traffic increase during the 5-month construction window. Traffic volume numbers are not available for Sheep Creek Road or Willow Creek Summit Road. Use of these primitive, native surfaced roads is expected to be very low. At Windy Devil, the resulting temporary increase in construction related traffic would represent a slight increase in daily traffic volume. Main Street in Mackay averages approximately 140 vehicles per day (ITD 2019) and could easily accommodate the temporary traffic increase during the 8-month construction window. Traffic volume numbers are not available for Smelter Road, Mine Hill Road, Forest Road 207, or Forest Road 211.
Recreational Use	Present, Not Impacted	During construction, access roads would have increased traffic and would result in short-term increases in noise and dust that may detract from the enjoyment of some recreational uses in or near Willow Creek and Windy Devil areas. The low number of construction vehicles would not likely affect hunters or other recreationists in either area. Access road improvements would not create improved transportation for motorists and recreational users and would not expand recreational opportunities in or near the Willow Creek and Windy Devil areas. At the Windy Devil site, transportation of construction equipment and facility components to the site could result in short-term delays (1-2 hours) to recreationists using Mine Hill Road and Forest Service Road 207. During construction, the portion of Forest Service Road 207 that would be improved would likely be closed

Resource	Status	Rationale
		to the public during construction. Construction effects to recreational users would be local, temporary, and limited in duration.
Mineral Resources	Present, Not Impacted	The Project would not involve the extraction of any mineral resource. The Project would not prevent the access to or extraction of any known mineral resource.
Water Quality	Present, Not Impacted	**Surface Water** Neither Willow Creek nor Windy Devil cross National Hydrologic Dataset (NHD) streams. There would be no effects to surface water because the proposed communication station sites are not located near surface water. **Ground Water** Ground disturbances from construction would not affect groundwater quality because there is no known direct connectivity to groundwater resources, and the proposed construction does not call for deep excavations that would directly reach potential groundwater resources in the area. Chemicals or other pollutants from the construction would be managed according to a Spill Prevention, Containment, and Countermeasures Plan (see the design features, mitigation measures, and BMPs listed in Appendix D) which would substantially decrease the risk of a spill occurring within the work areas.
Air Quality	Present, Not Impacted	Idaho Department of Environmental Quality (IDEQ) does not monitor for particulate matter in Custer County (IDEQ 2019). Willow Creek and Windy Devil are not within or near to non-attainment areas (IDEQ 2019). Construction equipment used for Willow Creek and Windy Devil would increase local emissions of criteria pollutants described below during the estimated 6 months of construction. The particulate matter would increase due to work on roads, travel on unpaved surfaces, and other soil disturbance which creates dust. Although construction could increase dust and particulate levels temporarily and in local areas, those areas would be watered to suppress dust. The use of heavy equipment during construction could cause temporary increases in carbon monoxide, carbon dioxide (CO_2), sulfur oxides, oxides of nitrogen, and volatile organic hydrocarbons. The increase in vehicle emissions from construction equipment would be temporary and in local work areas, with the first month anticipated to have the heaviest emissions overall when road work is occurring and would change on a daily or weekly basis as structures are built. The increase in vehicle and

Resource	Status	Rationale
		equipment emissions would be small and comparable to current emission levels found in surrounding areas.
Greenhouse Gases (GHGs)	Present, Not Impacted	The U.S. Environmental Protection Agency (EPA) mandatory reporting threshold for large sources of GHGs is 25,000 metric tons of carbon dioxide equivalent (CO_2e) emitted annually (EPA 2019), which is approximately the same amount of CO_2e generated by 4,400 passenger vehicles per year. The estimated GHG emissions from construction and operation activities would produce less than 100 metric tons of total CO_2e, which would not meet EPA's reportable GHG threshold.
Native American Religious Concerns	Present, Not Impacted	Tribal Consultation with Shoshone Bannock Tribes of the Fort Hall Reservation, and the Coeur d'Alene, and Nez Perce Tribes did not indicate any impacts to religious practices.
Socioeconomics	Present, Not Impacted	The Project would not alter the current economic and social values in the area.
Environmental Justice	Present, Not Impacted	The Project would not disproportionately affect any environmental justice populations. Any effects that the Project would have would be felt equally between all populations living within and in the vicinity of the Project Area.
Public Services and Public Health and Safety	Present, Not Impacted	Increased truck traffic would cause minimal traffic delays for public services using U.S. Route 93. Construction-related traffic would not disrupt the ability of police, fire, and medical emergency services personnel to respond to emergencies. Local and regional medical facilities would continue to treat minor injuries that may occur during construction without interfering with their ability to serve the larger community. Construction worker commutes would not cause measurable traffic delays or affect bus routes for the local school districts.
Fish	Not Present	There are no streams in the Project Area.

3.1 Soils

3.1.1 Affected Environment

Soils at Willow Creek Summit consist of 13.6 acres of Paint-Pahsimeroi-Leadore and 26.5 acres of Zer-Nurkey-Gany-Cryolls. Soils at Windy Devil Annex consist of 43.2 acres of Zeelnot-Skibo-Nitchly-Meegernot-Gany-Adek. All soils are Group B soils having moderate infiltration rate when thoroughly wet, consist of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture, and a moderate rate of water transmission. The Natural Resources Conservation Service describes these soils as having moderate permeability, which may indicate a moderate to high soil ***erosion*** hazard (NRCS 2019).

3.1.2 Environmental Consequences

3.1.2.1 Willow Creek Summit and Windy Devil Annex

At the Willow Creek Summit site and Windy Devil Annex, soils would be compacted in the staging areas and along access road work areas. Where there would be ground disturbance associated with excavation for the fiber optic line and the communication buildings and associated structures, soils would be susceptible to erosion until the areas are stabilized and revegetated. One cut and fill operation to widen Forest Road 211 for Project access would result in an exposed cut face that would make soils susceptible to erosion until revegetated. Except for the communication buildings and associated structures themselves, all disturbances would be temporary in nature and after construction, those disturbances would be revegetated using a BLM- and USFS-approved seed mix. During construction where road improvements would occur, proper drainage features would be incorporated to minimize the amount of soil erosion that could occur.

Soil disturbance would expose soils to erosion from rain and wind that could occur during construction or after construction before vegetation can reestablish (typically 3-5 years while vegetation becomes established and aids in soil retention). Compaction and rutting from heavy equipment degrades soil structure by reducing the pore space needed to retain moisture and promote gas exchange in soils; however, this would be limited through the implementation of BMPs identified as design features in Appendix D. BMPs to decrease the potential for erosion include preparation of a Stormwater Pollution Prevention Plan (SWPPP), revegetation of disturbed areas, and graveling areas around the buildings.

If the Proposed Action is implemented, the design features, mitigation measures, and BMPs listed in Appendix D, would help reduce effects on soils. At Willow Creek Summit, about 0.5 acres of soil would be temporarily disturbed by the Project for the fiber-optic line installation and electric utility service connection line and about 0.5 acres would be permanently covered by structures or other impervious surfaces at the communication station. At Windy Devil Annex, about 0.8 acres of soil would be permanently covered by structures (0.5 acres) or converted to the access road (0.3 acres), and 0.1 acres temporarily disturbed by access road construction. Overall, with the small quantity of disturbance in combination with the design features, mitigation measures, and BMPs that would further minimize impacts to soils, the Project would have a moderate impact on soil resources in the short term and a low impact on soil resources in the long term.

3.1.2.2 No Action Alternative

Under the No Action Alternative, the two communication stations, access road upgrades, fiber optic line, staging areas, and other associated effects would not be constructed and the associated soil disturbance from the Project would not occur. Use of the existing roads to access the current communication stations to conduct routine and emergency maintenance would continue to have low effects on soils.

3.2 Vegetation

3.2.1 Affected Environment

General Vegetation

An ***ecoregion*** is a large area with a distinct combination of climate, soils, and landforms. These environmental features influence which plants and animals live in the area. The Project is located in the Beaverhead Mountains ecological section of the Middle Rockies-Blue Mountains Ecoregion (Idaho Fish and Game [IDFG] 2017a). The Willow Creek Summit site is located between 6,600 and 8,200 feet in elevation and the Windy Devil Annex site is located between 7,600 and 7,800 feet in elevation. USGS (2011) maps both sites as being in a mosaic of Inter-Mountain Basins Montane Sagebrush and Middle Rocky Mountain Montane Douglas-fir Forest and Woodland ecological systems.

The vegetation types at the Willow Creek Summit site include sagebrush-steppe and curl-leaf mountain mahogany (*Cercocarpus ledifolius*) woodlands with some Douglas-fir (*Pseudotsuga menziesii*). Some shrub species identified include three tip sagebrush (*Artemisia tripartita*), black sagebrush (*Artemisia nova*), mountain snowberry (*Symphoricarpos oreophilus*), rubber rabbitbrush (*Ericameria nauseosa*), and green rabbitbrush (*Chrysothamnus viscidiflorus*). Herbaceous species identified include bluebunch wheatgrass (*Pseudoroegneria spicata*), Idaho fescue (*Festuca idahoensis*), Sandberg's bluegrass (*Poa secunda*), arrowleaf balsamroot (*Balsamorhiza sagittate*), western yarrow (*Achillea millefolium*), blue flax (*Linum perenne*), winterfat (*Krascheninnikovia lanata*), death camas (*Toxicoscordion venenosum*), aster, and lupine (BLM 2018).

Field surveys at Windy Devil Annex identified the dominant vegetation types to be sagebrush-steppe and Douglas-fir (*Pseudotsuga menziesii*) forests with some Rocky Mountain juniper (*Juniperus scopulorum*) present. Some shrub species identified include serviceberry (*Amelanchier alnifolia*), mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana*), low sagebrush (*Artemisia arbuscula* ssp. *arbuscula*), black sagebrush (*Artemisia nova*), mountain snowberry (*Symphoricarpos oreophilus*), chokecherry (*Prunus virginiana*), and snowbrush ceanothus (*Ceanothus velutinus*). Herbaceous species identified include bluebunch wheatgrass (*Pseudoroegneria spicata*), Sandberg bluegrass (*Poa secunda*), Idaho fescue (*Festuca idahoensis*) arrowleaf balsamroot (*Balsamorhiza sagittata*), tapertip hawksbeard (*Crepis acuminate*), silver lupine (*Lupinus argenteus*), matroot penstemon (*Penstemon radicosus*), rosy pussytoes (*Antennaria rosea*), long-leaf phlox (*Phlox longivolia*), paintbrush (*Castilleja* spp.), and Wheeler's bluegrass (*Poa wheeleri*) (Mancuso Botanical Services 2017).

Threatened, Endangered, and Sensitive Plants

Threatened, endangered, and sensitive (TES) plants include those listed under the Endangered Species Act (ESA) as threatened, endangered, or species proposed for listing under the ESA[5], species that are candidates

[5] On January 20, and January 25 of 2021, the ESA lists for the project areas were refreshed after new information was received on whitebark pine and North American wolverine. The USFWS has proposed listing whitebark pine as Threatened in light of the species' trends, and has withdrawn the proposed rule to list North American Wolverine as Threatened. The new and previous USFWS ESA lists for the communication sites are in Appendix G.

for listing under the ESA, BLM sensitive species, and USFS sensitive species. Surveys were performed for the Project to document TES plant species (Mancuso Botanical Services 2017, and BLM 2018).

No TES plants were identified at the Willow Creek Summit site during TES plant surveys (BLM 2018), but one non-reproducing sapling five-needle pine tree that could potentially be a whitebark pine (*Pinus albicaulis)* or a limber pine (*Pinus flexilis*) was observed during the invasive plant species survey (Tetra Tech 2019). No reproducing (trees with cones) individuals were observed in the vicinity of the sapling, prohibiting positive field identification of the pine. Both whitebark pine and limber pine are five-needle pine trees that could occur in the area and positive identification requires cones. At the time of the field survey, whitebark pine was a BLM sensitive plant and candidate for listing under the ESA but is now proposed for listing as Threatened, while limber pine is not a TES plant.

Two TES plants were identified at the Windy Devil Annex site, Welsh's buckwheat (*Eriogonum capistratum* var. *welshii*) (Mancuso Botanical Services 2017) and whitebark pine. Most (a minimum count of 452 individuals) of the Welsh's buckwheat were found at the existing Windy Devil communication site. Three outlying individuals of Welsh's buckwheat were observed at the proposed Windy Devil Annex communication site (Mancuso Botanical Services 2017). Also, about 10 individual whitebark (or limber) pines were observed along the access road in two different locations at the Windy Devil site during a site visit. Table 3-2 further documents the TES plants observed at the Windy Devil Annex site, along with range-wide occurrence information.

Table 3-2. Special-Status Plant Species Documented at Windy Devil Annex

Scientific Name	Common Name	Idaho Natural Heritage Program (2017) Rank	Federal Status	Individuals Observed	Description of Observation	Rangewide Occurrence
Eriogonum capistratum var. *welshii*	Welsh's buckwheat	S2	BLM SEN Type 2, USFS SEN	Approximately 500	One occurrence included a population with most plants occurring at the existing Windy Devil communication site (at least 452 individuals). Two small outlying patches were observed at the proposed communication site (3 individuals) (Mancuso Botanical Services 2017).	Known from three counties in Idaho (Butte, Custer, and Lemhi; NatureServe 2020). Three occurrences, other than the occurrence at the Windy Devil site, within 7 miles of Windy Devil (Idaho Natural Heritage Program 2017).
Pinus albicaulis	Whitebark pine	S3	ESA Proposed Threatened, BLM SEN Type 2, USFS SEN	Approximately 10	Individuals were observed along the access road in two different locations during a September 2018 BPA and USFS project team site visit.	Known from seven western states and two western states in Canada (NatureServe 2020). Occupies approximately 325,000 acres within the Salmon-Challis National Forest (USDA 2018).

Idaho Natural Heritage Program Rank: S2 = State Rank Imperiled because of rarity or because other factors demonstrably make it very vulnerable to extinction. S3 = State Rank Rare or uncommon but not imperiled.

Federal Status: BLM SEN Type 2 = BLM Idaho Sensitive, Rangewide/Globally Imperiled Species-High Endangerment. Species that have a high likelihood of being Federally listed in the foreseeable future due to their global rarity and significant endangerment factors. Species also include; U.S. Fish and Wildlife Service (USFWS) Proposed and Candidate species, ESA species delisted during the past 5 years, ESA Experimental Non-essential species, and ESA Proposed Critical Habitat.

USFS SEN = USFS Region 4 Sensitive, those species identified by a Regional Forester for which population viability is a concern, as evidenced by: a) Significant current or predicted downward trends in population numbers or density, or b) Significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution.

Noxious Weeds

Invasive and non-native species at Willow Creek Summit and Windy Devil Annex include noxious and invasive weeds. Invasive plant species are non-native species that can cause adverse economic, environmental, and ecological effects on the habitats they invade and are capable of outcompeting native plant species. Idaho Code designated 67 species of noxious weeds (Title 22, Chapter 24, Noxious Weeds). The state administrative rules place each noxious weed species into one of four categories (Idaho Administrative Procedures Act 02, Title 06, Chapter 22, Noxious Weed Rules). Each category has specific management requirements associated with detection, control, and containment of the given species. These include the following categories:

- **Statewide Prohibited General** – All plants, plant parts, and subtaxa of listed genera are prohibited in Idaho.
- **Early Detection and Rapid Response** – Plants in this category must be reported to the Idaho State Department of Agriculture within 10 days of observation. Eradication must begin in the same season in which the weed is found.
- **Statewide Control** – Plants in this category may already exist in some parts of the state. In some areas of the state, control or eradication may be possible, and a plan must be established that will reduce population levels within 5 years.
- **Statewide Containment** – Plants in this category already exist in the state. New or small infestations can be reduced or eliminated, while established populations may be managed as determined by the local weed control authority.

Both Willow Creek Summit and Windy Devil Annex are within the Custer County Cooperative Weed Management Area. Thirty out of the 67 weeds considered "noxious" under the Idaho Code are found within Custer County (Custer Cooperative Weed Management Area 2019). An undesirable plant survey (non-native invasive plant species and noxious weeds) of Willow Creek Summit and Windy Devil Annex included all anticipated areas of Project disturbance, including the existing and proposed access roads to each of two the existing communication stations, proposed station construction zones, and staging areas.

The Project-specific survey identified one Idaho-listed noxious weed at Willow Creek Summit: spotted knapweed (*Centaurea maculosa*). Spotted knapweed is on the statewide containment list and was found in five occurrences at Willow Creek Summit. The largest occurrence was observed adjacent to State Highway 93 at the junction with Sheep Creek Road, with additional occurrences along the proposed fiber optic line, along the access road, and near the existing communication site. Fifteen other undesirable plant species, all non-native species and potentially invasive, were also observed at the Willow Creek (Tetra Tech 2019, BLM 2018). Common dandelion (*Taraxacum officinale*) was the most common undesirable species observed and was scattered along the access road (Tetra Tech 2019). Other non-natives were particularly common at the junction between the State Highway 93 and Sheep Creek Road.

Three Idaho-listed noxious weeds were observed at Windy Devil Annex: Canada thistle (*Cirsium arvense*) (Tetra Tech 2019), musk thistle (*Carduus nutans*) and rush skeletonweed (*Chondrilla juncea*) (Mancuso Botanical Services 2017). Canada thistle is also on the statewide containment list; it was observed at one location along the access road (Tetra Tech 2019). Musk thistle and rush skeletonweed

were observed adjacent to areas of proposed disturbance. Musk thistle is on the statewide control list, while rush skeletonweed is on the statewide containment list. Two small patches of musk thistle were found at the Windy Devil Annex, but it is likely that additional patches occur nearby. Scattered patches of musk thistle were observed along Forest Road #207 (the Rio Grande Canyon Road) between Mackay and the Windy Devil Annex, indicating this species is at least somewhat established in the general area. The solitary rush skeletonweed plant found at the Windy Devil site was pulled out by the survey crew, but additional individuals may occur in nearby areas.

Thirteen other undesirable plant species, all non-native species and potentially invasive, were also observed at Windy Devil Annex (Tetra Tech 2019, Mancuso Botanical Services 2017). Common dandelion was the most common undesirable species observed and was scattered along the access road (Tetra Tech 2019). Table 3-3 includes noxious weeds and Table 3-4 includes other undesirable plant species observed during Project-specific field surveys (Tetra Tech 2019, Mancuso Botanical Services 2017, BLM 2018).

Table 3-3. Noxious Weeds Located at Willow Creek Summit and Windy Devil Annex

Scientific Name	Common Name	Category	Occurrences	Approximate Individuals
Willow Creek Summit				
Centaurea maculosa	Spotted knapweed	Noxious – Statewide Containment	5	1,000
Windy Devil Annex				
Carduus nutans	Musk thistle	Noxious – Statewide Control	2	50
Cirsium arvense	Canada thistle	Noxious – Statewide Containment	1	50
Chondrilla juncea	Rush skeletonweed	Noxious – Statewide Containment	1	1

Table 3-4. Non-native, Potentially Invasive Plants Located at Willow Creek Summit and Windy Devil Annex

Scientific Name	Common Name	Category
Willow Creek Summit		
Agropyron cristatum	Crested wheatgrass	Non-native
Alyssum desertorum	Desert alyssum	Non-native
Bassia scoparia	Kochia	Non-native
Bromus arvensis	Field brome	Non-native
Bromus inermis	Smooth brome	Non-native
Bromus tectorum	Cheatgrass	Non-native
Chorispora tenella	Blue mustard	Non-native
Cirsium vulgare	Bull thistle	Non-native

Scientific Name	Common Name	Category
Descurainia sophia	Herb sophia	Non-native
Lactuca serriola	Prickly lettuce	Non-native
Lepidium perfoliatum	Clasping pepperweed	Non-native
Medicago lupulina	Black medic	Non-native
Melilotus officinalis	Sweetclover	Non-native
Salsola tragus	Russian thistle	Non-native
Taraxacum officinale	Common dandelion	Non-native
Windy Devil Annex		
Agropyron cristatum	Crested wheatgrass	Non-native
Alyssum desertorum	Desert alyssum	Non-native
Bromus inermis	Smooth brome	Non-native
Bromus tectorum	Cheatgrass	Non-native
Chorispora tenella	Blue mustard	Non-native
Descurainia sophia	Herb sophia	Non-native
Lactuca serriola	Prickly lettuce	Non-native
Lappula squarrosa	European stickseed	Non-native
Poa pratensis	Kentucky bluegrass	Non-native
Malcomia africana	African mustard	Non-native
Polygonum aviculare	Prostrate knotweed	Non-native
Salsola tragus	Russian thistle, tumbleweed	Non-native
Taraxacum officinale	Common dandelion	Non-native

3.2.2 Environmental Consequences

3.2.2.1 Willow Creek Summit and Windy Devil Annex

General Vegetation

At the Willow Creek Summit site and Windy Devil Annex, vegetation would be removed and disturbed from crushing and root damage. Where there would be ground disturbance associated with excavation and grading for the communication buildings and associated structures, vegetation would be permanently removed. Installation of the fiber optic line would primarily crush vegetation, although some vegetation would be uprooted during the process. Use of staging areas would primarily crush vegetation. Except for the communication buildings, associated structures, and road re-alignment elements, all disturbances would be temporary in nature and once construction was complete, those disturbances would be revegetated using a BLM- and USFS-approved seed mix. A summary of impacts to vegetation communities at Willow Creek Summit and Windy Devil are presented in Tables 3-5 and 3-6, respectively.

Table 3-5. Impacts to Vegetation Communities at Willow Creek Summit

Vegetation Community	Temporary Impacts (acres)	Permanent Impacts (acres)
Mountain mahogany	0.3 (FO, CS, SA)	0.5 (CS)
Sagebrush-steppe	2.4 (FO, CS, SA)	0
Native and non-native grasses	0.6 (SA)	0
Total	**3.3**	**0.5**

Where impacts are apportioned to: FO = Fiber Optic; CS = Communication Station; and SA = Staging Area.

Table 3-6. Impacts to Vegetation Communities at Windy Devil Annex

Vegetation Community	Temporary Impacts (acres)	Permanent Impacts (acres)
Douglas-fir forest	0.1 (AR)	0.3 (AR)
Sagebrush-steppe	0.3 (SA)	0.3 (CS)
Sagebrush-steppe and Douglas-fir mosaic.	0.1 (SA)	0.2 (CS)
Total	**0.5**	**0.8**

Where impacts are apportioned to: AR = Access Road; CS = Communication Station; and SA = Staging Area.

The duration of effects on vegetation would depend on the type and amount of vegetation affected and the rate at which vegetation would regenerate after construction. Temporary disturbance to sagebrush shrubs, mahogany woodlands, and Douglas-fir forests would include cutting at the ground level and crushing by construction equipment. These impacts would be long-term in duration since those vegetation communities can require decades to recover. Temporary disturbances to herbaceous vegetation communities would be of a short-term duration since grass and forbs can typically recover in three to five years. Permanent removal associated with the communication site infrastructure at both locations and road widening at the Windy Devil site would be a long-term duration for the life of the Project. Removal of trees in the stations' beam paths is not anticipated because of facility design measures that account for maximum likely tree growth in the respective beam paths.

If the Proposed Action is implemented, the design features, mitigation measures, and BMPs listed in Appendix D would help reduce effects on vegetation. With implementation of these design features, mitigation measures, and BMPs, effects on vegetation would be low to moderate in the short term and low in the long term.

Threatened, Endangered, and Sensitive Plants

The potential whitebark pine located at Willow Creek Summit site is located off the existing access road where no improvements are proposed and would not be directly affected. At the Windy Devil site, up to two potential whitebark pine trees that were identified near the proposed location of cut and fill along Forest Road #211 would be removed. A single potential whitebark pine sapling would be removed during construction of the communication buildings and associated structures. Whitebark pine suffers from several key threats, including white pine blister rust, climate change, and past and ongoing fire suppression (USFWS 2016). The Project would not substantially contribute to these key threats and would not be detrimental to the local population. As stated in Table 3-2, there is approximately 325,000 acres of whitebark pine forest in the Salmon-Challis NF.

The Project would disturb habitat occupied by Welsh's buckwheat at the Windy Devil site. Project construction traffic and utility trenching would most likely remove three outlying individuals and affect individuals in the larger population located adjacent to the existing communication station. After completion of construction, these areas would be revegetated with native plant species, which would allow buckwheat to recolonize the disturbance areas.

The general and specific design features, mitigation measures, and BMPs listed in Appendix D would help reduce effects on Welsh's buckwheat by keeping equipment on the existing access road and south of the existing towers, not grading the access road, and contacting the district prior to construction to help determine if further flag and avoidance measures for Welsh's buckwheat should be included. Considering these design features, mitigation measures and BMPs, effects on Welsh's buckwheat, would be moderate in the short term and low in the long term since the buckwheat would likely recolonize the disturbance areas. Effects on whitebark pine would be low in the short term and low in the long term. Clear identification of individual five-needle pines will be attempted prior to construction and they will be preserved if they can be while also accomplishing the goals of the project. If some or all three require full removal, this would ***not jeopardize the continued existence of the species.***

Noxious Weeds

Construction activities would disturb areas where noxious weeds and invasive and non-native plant species occur. While re-vegetation in disturbed areas would help minimize further spread of these species, windblown or vehicle-carried seed from these species may infest newly disturbed and exposed areas of soil. The four known noxious weed species (spotted knapweed, Canada thistle, musk thistle, and rush skeletonweed) and the most common of the non-native species (common dandelion) all reproduce by seed, while rush skeleton weed can also reproduce vegetatively by creeping roots. Both rush skeletonweed and Canada thistle can also reproduce vegetatively from root fragments (Invasive Species of Idaho 2019). Because invasive and noxious weeds occur where construction activities would take place, particularly along access roads, disturbance could encourage dispersal and spread. However, with the design features and mitigation measures to control weeds, such as minimizing unnecessary ground disturbance, flagging known weed populations to be avoided during construction, and cleaning vehicles prior to moving equipment to the site, the Project is not expected to contribute substantially to the propagation of these species.

Due to the relatively few and relatively contained non-native invasive plant species and noxious weed occurrences along with the design features, mitigation measures, and BMPs, effects of invasive and non-native species would be low to moderate in the short term and low in the long term.

3.2.2.2 No Action Alternative

General Vegetation

Under the No Action Alternative, the two communication stations, access road upgrades, fiber optic line, staging areas, and other associated effects would not be constructed and the associated vegetation disturbance from the project would not occur. Use of the existing roads to access the current communication stations to conduct routine and emergency maintenance would continue to have low effects on vegetation due to dust and potential spread of invasive species.

Threatened, Endangered, and Sensitive Plants

Under the No Action Alternative, the two communication stations, access road upgrades, fiber optic line, staging areas, and other associated effects would not be constructed and the associated impacts to general vegetation and TES plants from the Project would not occur. Use of the existing roads to access the current communication stations to conduct routine and emergency maintenance would continue to have low effects on Welsh's buckwheat and whitebark pine including dust and potential introduction of invasive species.

Noxious Weeds

Under the No Action Alternative, the two communication stations, access road upgrades, fiber optic line, staging areas, and other associated effects of the Project from invasive, non-native species would not occur. Use of the existing roads to access the current communication stations to conduct routine and emergency maintenance would continue to potentially spread non-native invasive plant species and noxious weeds, by maintenance vehicles providing a source of transport and delivery of seeds for these species.

3.3 Wildlife

3.3.1 Affected Environment

3.3.1.1 General Wildlife

Wildlife habitat types found in the Project include sagebrush-steppe, mountain mahogany woodland (found at Willow Creek only), and Douglas-fir forest.

Sagebrush-steppe habitat supports species such as pronghorn (*Antilocapra americana*), badger (*Taxidea taxus*), coyote (*Canis latrans*), black-tailed jackrabbit (*Lepus californicus*), red-tailed hawk (*Buteo jamaicensis*), northern harrier (*Circus cyaneus*), Brewer's sparrow (*Spizella breweri*), horned lark (*Eremophila alpestris*), gopher snake (*Pituophis catenifer*), and sagebrush lizard (*Sceloporus graciosus*).

Mountain mahogany provides the following: important winter cover and forage for wild ungulates like elk (*Cervus elaphus nelsoni*) and mule deer (*Odocoileus hemionus*); an important foraging source for small mammals; and nesting sites for dusky grouse (*Dendragapus obscurus*), dusky flycatchers (*Empidonax oberholseri*), rock wrens (*Salpinctes obsoletus*), and American kestrels (*Falco sparverius*).

Douglas-fir forest provides habitat for species such as elk, mule deer, mountain lion (*Puma concolor*), osprey (*Pandion haliaetus*), Cooper's hawk (*Accipiter cooperii*), northern saw-whet owl (*Aegolius acadicus*), red-breasted nuthatch (*Sitta canadensis*), woodpeckers, and Clark's nutcracker (*Nucifraga Columbiana*).

Willow Creek Summit is in elk winter range as designated by the BLM Challis Field Office. Winter range for a species is determined by BLM when, "a population or portion of a population of animals use the suitable habitat within this range annually, but in substantial numbers during the winter" (BLM 1999). The Challis Resource Management Plan (BLM 1999) prohibits motorized vehicle travel from December 16 to April 30 on both Sheep Creek Road and Willow Creek Summit Road as a conservation measure. Windy Devil Annex is not in designated winter range for elk or other species.

3.3.1.2 Threatened, Endangered, and Sensitive Animals

TES animals include those listed under the ESA as threatened or endangered, species proposed for listing under the ESA, species that are candidates for listing under the ESA, BLM sensitive species, USFS sensitive, and USFS management indicator species. The Project would have no effect on aquatic resources; therefore, only terrestrial TES animals are analyzed. The habitat in the affected environment for TES animals is the same as that described in Section 3.3.1.1 above.

On June 7, 2018 and June 24, 2019, Official Species Lists were obtained for the Windy Devil and Willow Creek project areas, respectively, from the USFWS Idaho Fish and Wildlife Office via the USFWS website, Information for Planning and Consultation (IPaC). The IPAC search of the localized project areas at each site resulted in the identification of two species as potentially present: North American wolverine (*Gulo gulo luscus*)[6] - Proposed Threatened, and whitebark pine - Candidate. New lists were obtained for the communication site project areas after the status updates to whitebark pine (now proposed threatened) and North American wolverine (proposal to list threatened withdrawn) in January of 2021 (see Appendix G).

Canada lynx is a SCNF Sensitive Species, though SCNF is considered unoccupied, secondary lynx habitat (see BE, Appendix E). Canada Lynx Linkage Areas for Northern Rockies Lynx Amendment Area (USFS 2003) bisect the project area, with a potential lynx movement corridor. Located about 5 miles to the southeast of Willow Creek Summit, and about 19 miles northwest of Windy Devil Annex. According to the Interagency Lynx Biology Team (2013), linkage areas should be protected from development or encroachment.

Please refer to the Biological Evaluation (BE) for Windy Devil Annex for a description of habitat requirements and potential occurrence of TES animals at that site (Appendix E). At Windy Devil, Townsend's big-eared bat was identified as the only TES species potentially occurring and being affected.

Table 3-7 includes TES animals for Willow Creek and their general habitat requirements and potential occurrence. The following TES animals have the potential to occur at Willow Creek: Brewer's sparrow, burrowing owl, ferruginous hawk, golden eagle, greater sage-grouse, green-tailed towhee, loggerhead shrike, sage thrasher, short-eared owl, gray wolf, and Piute ground squirrel.

[6] On October 13, 2020 the USFWS gave notice via the Federal Register (proposed rule 85 FR 64618) to withdraw the proposed rule to list North American wolverine as threatened.

Table 3-7. Idaho BLM Sensitive Type 2 Terrestrial Animals of the Challis Field Office

Common Name	Scientific Name	General Habitat Requirements	Potential to Occur at Willow Creek Site
Birds			
Bald eagle	*Haliaeetus leucocephalus*	Large trees for perching and nesting near fish-bearing waterbodies.	**Unlikely**. Site does not offer typical nesting, roosting and/or foraging habitat. Nearest observations are approximately 20 miles away near Mackay Reservoir and the Big Lost River (IDFG 2017b).
Brewer's sparrow	*Spizella breweri*	This species is a sagebrush obligate and prefers large patches of sagebrush with little fragmentation and low disturbance.	**Likely**. Sagebrush-steppe vegetation types occur at the site and along its access road.
Burrowing owl	*Athene cunicularia*	Breeds in open grasslands, prairies, farmlands, and steppes. Forages in short-grass, pastures, and disturbed landscapes. Uses mammal burrows as nesting sites.	**Likely.** Sagebrush-steppe vegetation types occur at the site and along its access road. The site is unlikely to support the species at the summit due to rocky soils not conducive to the presence of burrowing mammals; more likely to be found at lower elevations of the access road. Known occurrence more than 5 miles from the site (IDFG 2017b).
Ferruginous hawk	*Buteo regalis*	Inhabits flat and rolling terrain in grassland or shrub-steppe habitat. Typically avoids high elevation areas.	**Likely.** The site is unlikely to support the species at the summit; would be more likely to find this species at lower elevation portions of the access road.
Flammulated owl	*Otus flammeolus*	Occurs in mid-elevation forests with a significant yellow pine component mixed with Douglas fir or dry Douglas fir stands that approximate the structure of mature ponderosa pine. Cavity nester. Mahogany vegetation type supports flammulated owl foraging during migration.	**Unlikely**. Site does not offer typical breeding habitat. May occur in mahogany during migration.
Golden eagle	*Aquila chrysaetos*	Breeds in open and semi-open shrublands, grasslands, and coniferous forests primarily in canyon and rimrock terrain. Forages in open habitat, particularly in shrub habitat.	**Likely.** While typical cliff and rimrock nesting habitat is absent, foraging habitat is present and multiple observations have been recorded within 5 miles of the site (IDFG 2017b).

Common Name	Scientific Name	General Habitat Requirements	Potential to Occur at Willow Creek Site
Greater sage-grouse	*Centrocercus urophasianus*	Sagebrush-obligate species requiring large tracts of intact, connected sagebrush to meet seasonal habitat requirements.	**Likely.** The site is within a sage-grouse PHMA (BLM 2019b) and IDFG has multiple records of radio-tagged sage-grouse within 5 miles of the site (IDFG unpublished data).
Green-tailed towhee	*Pipilo chlorurus*	Prefers shrub-steppe, thickets, and riparian scrub in Idaho, especially sagebrush dominated openings. May be considered an edge species in some habitats, such as shrub-steppe, where they can often be found between sagebrush and other shrubby habitats, especially mountain mahogany.	**Likely.** Sagebrush-steppe and mahogany vegetation types occur at the site.
Lewis' woodpecker	*Melanerpes lewis*	Common in burned ponderosa pine and Douglas-fir forests. Prefers open ponderosa pine at high elevations and open riparian forests (cottonwood) at lower elevations.	**Unlikely.** Preferred habitat is absent from the site.
Loggerhead shrike	*Lanius ludovicianus*	Breeds in a wide variety of open habitats including native and non-native grasslands, sage scrub, and other areas with a scattering of bushes and trees and bare ground.	**Likely.** Sagebrush-steppe vegetation type supports this species.
Long-billed curlew	*Numenius americanus*	Large, open, and contiguous grasslands for nesting. Nesting areas are generally flat or slightly rolling.	**Unlikely.** The site does not provide typical nesting habitat for this species. Abundant nesting habitat is found in Thousand Springs Valley approximately 5 miles south where multiple observations are known (IDFG 2017b).
Northern goshawk	*Accipiter gentilis*	Conifer and mixed wood forests, with canopy openings. Needs large trees for nesting.	**Unlikely.** The site does not provide habitat typical of this species.
Olive-sided flycatcher	*Contopus cooperi*	Breeds in mid- to high-elevation mixed conifer forests along edges and openings.	**Unlikely.** The site does not provide habitat typical of this species.
Sagebrush sparrow (formerly sage sparrow)	*Artemisiospiza nevadensis (*formerly *Amphispiza belli)*	Widespread breeder in shrub-steppe habitat in semi-open habitat. Usually breeds below 5,500 feet.	**Unlikely.** While sagebrush-steppe vegetation types occur at the site, the elevation at the site is higher than typically found. Modeled distribution and known observations are associated

Common Name	Scientific Name	General Habitat Requirements	Potential to Occur at Willow Creek Site
			with the Snake River Plain and areas to the south (IDFG 2017a).
Sage thrasher	*Oreoscoptes montanus*	Sagebrush-obligate species dependent on large patches of sagebrush for successful breeding. Nest most commonly in big sagebrush and three-tip sagebrush and occasionally low sagebrush and rabbitbrush. Occasionally found in mahogany woodlands.	**Likely.** Breeding habitat is available for this species along the access road. Less likely to occur at the summit in mahogany vegetation type.
Short-eared owl	*Asio flammeus*	Associated with open landscapes such as marshes, shrub-steppe, grasslands, and ag lands.	**Likely.** The site is unlikely to support the species at the summit; would be more likely to find this species at lower elevation portions of the access road.
Trumpeter swan	*Cygnus buccinator*	Nest on islands in wetlands that are undisturbed and impounded with slow shallow water.	**Unlikely.** Nesting habitat does not occur at the site. Known observations near Mackay Reservoir (IDFG 2017b).
Willow flycatcher	*Empidonax traillii*	Breeds in shrubby areas with standing water or along streams, also at woodland edges and brushy thickets.	**Unlikely.** The site does not provide habitat typical of this species.
Invertebrates			
Idaho point-headed grasshopper	*Acrolophitus pulchellus*	Xeric shrub-dominated habitat. In Custer County, sagebrush-steppe and foothill grasslands. Maximum elevation threshold for this species is at or near 2,100 meters (Waterbury 2010).	**Unlikely.** Species known from the Cedar Creek Bar area northwest of Mackay, ID (Waterbury 2010). Site elevation is above elevation threshold, except for the lowest portion of the access road.
Mammals			
Big brown bat	*Eptesicus fuscus*	Roosts in structures, mines, bridges, but also in caves and crevices. Hibernates in caves, mines, and buildings.	**Unlikely.** The site does not provide preferred habitat for this species.
Bighorn sheep	*Ovis canadensis spp.*	Mesic to xeric, alpine to desert grasslands or shrub-steppe in mountains, foothills, or river canyons.	**Unlikely.** The site is not within an IDFG bighorn sheep population management unit. The Lost River Population Management Unit east of Willow Creek Summit in the Lost River Range (IDFG 2010).

Common Name	Scientific Name	General Habitat Requirements	Potential to Occur at Willow Creek Site
Fisher	*Marte pennant*	Typically found in dense forested habitat with structural components that support prey species and provides for fisher denning and resting sites (downed wood, large diameter snags and logs).	**Unlikely.** No denning, resting, or foraging habitat is available at the site.
Gray wolf	*Canis lupus*	Habitat generalist tied to presence of ungulate prey species. Den sites are typically secluded in forested habitat and away from human activity.	**Likely.** Arentson wolf pack known area of use overlaps with the site (IDFG 2015).
Hoary bat	*Lasiurus cinereus*	Highly associated with forested habitats, require large trees with open understory such as is found in old growth stands. Forages along water courses, impoundments, ponds, above forest canopy, and over meadows.	**Unlikely.** Preferred roosting habitat is absent from the site and the site lacks any streams or wetlands for foraging.
Little brown bat	*Myotis lucifugus*	Most commonly associated with open water in forested landscapes. Can also occur in shrub-steppe, cliffs, and urban areas. Emerging adults of aquatic invertebrates are preferred prey.	**Unlikely.** The site does not provide preferred habitat for this species.
Long-eared myotis	*Myotis evotis*	Ponderosa pine woodland is the most common habitat type used.	**Unlikely.** The site does not provide preferred habitat for this species.
Long-legged myotis	*Myotis volans*	Typical habitat is montane or subalpine forest, ponderosa pine woodland, and montane shrubs with willows or well-watered stands of sagebrush.	**Unlikely.** The site does not provide preferred habitat for this species.
Pallid bat	*Antrozous pallidus*	Found in dry, open habitat. Prefer grassland, shrub-steppe, and dry forest ecotones for foraging. Found in rocky river canyons and cliffs near water.	**Unlikely.** The site does not provide preferred habitat for this species.
Piute ground squirrel	*Urocitellus mollis*	Prefers areas with native shrubs, especially winterfat and sagebrush.	**Likely.** Potential habitat occurs in the lower elevations of the access road.

Common Name	Scientific Name	General Habitat Requirements	Potential to Occur at Willow Creek Site
Pygmy rabbit	*Brachylagus idahoensis*	Sagebrush obligate species. Big sagebrush is preferred, in deep, stable, and loamy soils suitable for burrowing.	**Unlikely.** Sagebrush-steppe vegetation types occur at the site and along its access road; however, big sagebrush species are absent. The site is unlikely to support the species at the summit due to rocky soils not conducive to the presence of burrowing mammals. Known occurrence within half a mile (IDFG 2017b).
Silver-haired bat	*Lasionycteris noctivagans*	Primarily occupy forested habitat with clusters of large trees with snags adjacent to lakes, ponds, and streams for foraging.	**Unlikely.** The site does not provide preferred habitat for this species.
Townsend's big-eared bat	*Corynorhinus townsendii*	Caves and cave-like structures are strongly preferred for roosting, such as found in old mining districts. Usually forages near water.	**Unlikely.** The site does not provide preferred habitat for this species.
Western small-footed myotis	*Myotis ciliolabrum*	Roosts in semiarid habitats and coniferous forests in cliff and rock crevices, caves, and mines. Forages in riparian areas, along cliffs and rocky slopes.	**Unlikely.** Foraging habitat is available on site.
Wolverine	*Gulo luscus*	High elevation alpine areas in Idaho; select cold areas that receive enough precipitation to maintain deep persistent snow late into the warm season.	**Unlikely.** The site does not provide preferred habitat for this species.
Yuma myotis	*Myotis yumaensis*	Can be found in a variety of habitats, but always close to standing water.	**Unlikely.** The site does not provide preferred habitat for this species.

Brewer's Sparrow, Loggerhead Shrike, and Sage Thrasher

Brewer's sparrow and sage thrasher are sagebrush obligate species that need large patches of sagebrush for successful reproduction. Sage thrasher is also occasionally found in mahogany. Loggerhead shrike also uses sagebrush-steppe habitat, but also uses grasslands and other open habitat.

Green-tailed Towhee

Prefers shrub-steppe, thickets, and riparian scrub in Idaho, especially sagebrush dominated openings. This species may be considered an edge species in some habitats, such as shrub-steppe, where they can often be found between sagebrush and other shrubby habitats, especially mountain mahogany.

Burrowing Owl, Ferruginous Hawk, Golden Eagle, and Short-eared Owl

No ferruginous hawk or golden eagle nest have been identified near the Project. Burrowing owl is unlikely to nest in the Project footprint except for the access road at the lowest elevation due to soils at Willow Creek Summit being rocky and not conducive to burrowing mammals. Short-eared owls typically nest in open areas that support an abundance of prey items (such as voles and mice). The Willow Creek Summit site is not preferred nesting habitat for short-eared owl as the rocky soils are unlikely to support abundant prey species. The access road at lower elevations is a disturbed site where the grass is typically trampled and does not provide the cover typically needed for short-eared owl nesting. Preconstruction nest surveys would confirm the absence of these species' nests, as described in Appendix D.

Greater Sage-Grouse

For greater sage-grouse, the BLM Record of Decision for the Idaho and Southwestern Montana Greater Sage-Grouse ARMPA designates sage-grouse habitat management areas within the Challis Field Office (BLM 2015). The Willow Creek Summit site is in a Priority Habitat Management Area (PHMA) in the Mountain Valleys Conservation Area. Sage-grouse population declines in the Mountain Valleys Conservation Area has tripped a population hard trigger. The population hard trigger is defined as a twenty percent decline in male lek attendance compared to baseline per the ARMPA. The Windy Devil Annex site is outside of sage-grouse habitat management areas. PHMAs are BLM-administered lands identified as having the highest value to maintaining sustainable sage-grouse populations. These areas include breeding, late brood-rearing, winter concentration areas, and migration or connectivity corridors.

Gray Wolf

The Arentson wolf pack territory includes Willow Creek Summit (IDFG 2015). Wolf den sites are typically secluded in forested habitat and away from human activity. Wolves are habitat generalists tied to the presence of ungulate prey species.

Piute Ground Squirrel

Piute ground squirrel prefers areas with native shrubs, especially winterfat and sagebrush. Potential habitat for this species exists in the lower elevations of the access road at Willow Creek Summit.

Townsend's Big-eared Bat

Townsend's big-eared bat has been observed from the Cossack Tunnel in the Rio Grande Canyon approximately two miles from the Windy Devil Annex site (IDFG 2017b). They will roost in caves, mine shafts, rock outcrops, lava tubes and occasionally buildings. This species favors foraging in riparian areas and will occasionally forage in more open habitats (Fellers and Pierson 2002). This species typically forages within 2 miles (3.2 km) of its roost site (Fellers and Pierson 2002).

3.3.1.3 Migratory Birds

Both proposed communication station sites are located in Bird Conservation Region 10 – Northern Rockies (USFWS 2008). The USFWS lists 22 birds of conservation concern in the Northern Rockies. This includes bald eagle, Swainson's hawk (*Buteo swainsoni*), ferruginous hawk, peregrine falcon (*Falco peregrinus*), upland sandpiper (*Baratramia longicauda*), long-billed curlew, yellow-billed cuckoo, flammulated owl, black swift (*Cypseloides niger*), calliope hummingbird (*Selasphorus calliope*), Lewis' woodpecker, Williamson's sapsucker (*Sphyrapicus thyroideus*), white-headed woodpecker (*Picoides albolarvatus*), olive-sided flycatcher, willow flycatcher, loggerhead shrike, sage thrasher, Brewer's sparrow, sage sparrow, McCown's longspur (*Rhynchophanes mccownii*), black rosy-finch (*Leucosticte atrata*), and Cassin's finch (*Haemorhous cassinii*).

3.3.2 Environmental Consequences

3.3.2.1 Willow Creek Summit and Windy Devil Annex

General Wildlife

Effects to wildlife would include removal of habitat, potential incidental mortality from collisions with construction equipment, and temporary displacement due to increased noise and human presence during construction activities.

Construction at both sites would cause temporary noise and increased human activity over existing conditions. This would likely result in some short-term behavior modifications by wildlife, such as avoidance of areas disturbed by construction equipment. Construction activities could displace individuals using the area during the construction window. This would be short-term and animals could resume using the area around the site within several weeks after construction is completed.

Construction would result in temporary habitat loss or modification due to crushing or removal of vegetation in areas that will be revegetated (such as staging areas). Revegetation would establish an herbaceous habitat type. In grassland habitat, these temporary disturbances would result in a short-term impact to the habitat through reduced cover and foraging opportunities. In habitats like sagebrush steppe and Douglas-fir, temporary disturbances would result in a long-term impact on habitat due to the length of time it takes for sagebrush and Douglas fir trees to naturally reestablish. Permanent habitat loss would occur where permanent Project facilities are placed. Acres of temporary and permanent impacts by habitat type are included in Table 3-5 and Table 3-6 in Section 3.2.2. These impacts would be negligible relative to the amount of remaining habitat on the landscape to support existing wildlife populations.

Construction activities would not occur during the winter range closure period at Willow Creek Summit. Wintering elk would not be disturbed. The permanent loss of about 0.5 acre of mahogany (see Section 3.2) would reduce the amount of winter browse and cover available to wintering elk; however, the small amount of mahogany removed relative to the overall quantity of mahogany available in the area would not be expected to affect the ability of the Willow Creek Summit to support wintering elk.

If the Proposed Action is implemented, the design features, mitigation measures, and BMPs listed in Appendix D would help reduce effects on wildlife. With implementation of these design features,

mitigation measures, and BMPs, effects on wildlife would be low to moderate in the short term and low in the long term.

Threatened, Endangered, and Sensitive Animals

Please refer to the Biological Evaluation (BE) for Windy Devil Annex for an analysis of TES animals at that site (Appendix E). Please refer to the No Effect Determination for Willow Creek Summit for an analysis of ESA listed, proposed, and candidate animals at that site (Appendix F). The recent (late 2020) USFWS ESA listing updates, which included withdrawal of the proposal to list the North American wolverine as threatened, does not change the determination that the Project would have no effect to ESA-listed and proposed animals.

Effects to BLM sensitive and USFS sensitive and Management Indicator Species (MIS) animals would be like those discussed for wildlife in Section 3.3.2.1, in terms of removal of habitat, potential incidental mortality from collisions with construction equipment, and temporary displacement due to construction activities. If the Proposed Action is implemented, the design features, mitigation measures, and BMPs listed in Appendix D would help reduce effects on TES animals through revegetation of temporarily impacted areas, noxious weed control to limit habitat degradation, application of speed limits that reduces the likelihood of wildlife/vehicle collisions, and efforts to avoid a Project-related wildfire. Considering these BMPs and design features, effects on TES animals, would be low in the short term and low in the long term.

Brewer's Sparrow, Loggerhead Shrike, and Sage Thrasher

Removal of sagebrush-steppe habitat would reduce nesting and foraging habitat for these species; however, the amount of habitat permanently removed (about 0.2 acres) would be negligible when considered against the amount of sagebrush-steppe habitat available on the landscape. Since Project construction would occur during the nesting season, pre-construction clearance surveys would be performed to identify active nests if vegetation cannot be removed prior to nesting. Effects to nesting birds would be avoided or minimized if active nests are identified. The potential for bird collisions with communication towers is discussed in the *Migratory Birds* section below; the Project would adhere to the USFWS recommended BMPs for communication towers (Appendix D, Table D-1) that are designed to avoid and minimize adverse effects to migratory birds.

Green-tailed Towhee

Removal of mountain mahogany habitat would reduce nesting and foraging habitat for these species and removal of sagebrush-steppe would reduce foraging habitat; however, the amount of habitat removed (0.6 acres mountain mahogany and 0.2 acres sagebrush-step) would be negligible when considered against the amount of habitat available on the landscape. Since Project construction would occur during the nesting season, pre-construction clearance surveys would be performed to identify active nests and efforts would be made to avoid and minimize effects to the nesting individuals if active nests are identified. The potential for bird collisions with communication towers is discussed in the *Migratory Birds* section below; the Project would adhere to the USFWS recommended BMPs for communication towers that are designed to avoid and minimize adverse effects to migratory birds.

Burrowing Owl, Ferruginous Hawk, Golden Eagle, and Short-eared Owl

While the Willow Creek Summit site lacks typical nesting habitat for these species, there is potential for each to occur during foraging and/or migratory movements. These species could all be subject to noise and visual disturbance from construction activities that could result in temporary displacement during foraging.

The potential for bird collisions with communication towers is discussed in the *Migratory Birds* section below; the Project would adhere to the USFWS recommended BMPs for communication towers that are designed to avoid and minimize adverse effects to migratory birds.

Canada Lynx

The project would have no measurable effect on the lynx linkage corridor described by the USFS (2003). The traffic increase along Highway 93 – the main artery that is intersected by the linkage route – that would occur with construction would be negligible.

Greater Sage-Grouse

Per the BLM Challis RMP, Goal 3 for Land Tenure and Access is to consider public needs for use authorizations, such as rights-of-way, leases, permits, and withdrawal. Goal 3 provides direction to continue to authorize the Willow Creek Summit Communication Site. The BLM ARMPA provides management direction (MD-SSS-31) to co-locate new infrastructure and states that communication sites should be installed within or adjacent to existing authorized equipment/ facilities or within a communication site boundary as designated in the Communication Site Plan. The BLM ARMPA provides additional management direction (MD-LR-1) regarding utility corridors and communication sites that existing designated corridors will remain open in all habitat management areas (BLM 2015).

The ARMPA provides guidance to avoid human disturbances in PHMA and considers communication sites as contributing to habitat degradation (BLM 2015). However, colocation of the proposed Willow Creek communication facility with the existing facility follows guidance in the Challis RMP and ARMPA. Because a population hard trigger has already been activated in the Mountain Valleys Conservation Area, the BLM has initiated the adaptive management guidance in the ARMPA which includes review of residual effects and application of avoidance and minimization measures. In January of 2021, the Idaho Office of Species Conservation (OSC) and IDFG determined (OSC, pers. comm., January 26, 2021) that implementation of the Proposed Action as described should compensate for the Project impacts that translate to 0.5 ‘debits’ to PHMA area as calculated by the IDFG Habitat Quantification Tool (HQT) (State of Idaho 2019). See Appendix H for the HQT output for the Project at Willow Creek Summit. Appendix D details the draft proposal to mitigate these debits. The BLM-Challis has performed a sage-grouse conformance review for this Project, including its sage-grouse specific design features, construction and compensatory mitigation measures, and BMPs and found it would be in conformance with the ARMPA (Appendix B).

Direct mortality impacts to greater sage-grouse are unlikely to occur during construction because it is timed to occur outside of lekking season, and the species would otherwise be likely to avoid the area due to construction activity. The Willow Creek Summit site would not affect greater sage-grouse breeding as the nearest greater sage-grouse ***lek*** is 4.6 miles south of the site (IDFG 2019). Effects from habitat loss

would be minor given that the 2.4 acres of sagebrush steppe (see Table 3-5) habitat to be disturbed would be temporary and given that the Project at Willow Creek Summit would be implemented on, or immediately adjacent to, an existing access road and communication site that are already affecting habitat functionality for greater sage-grouse. Additionally, compensatory mitigation planned would help offset the negative effects of habitat disturbance (see Appendix B, and Appendix H). Habitat degradation could occur through the introduction and spread of noxious weeds and invasive plants and by providing perching opportunities for corvids and ravens that prey on sage-grouse. However, these effects would be avoided or minimized by implementation of design features, mitigation measures, and BMPs such as weed control (Appendix D).

Gray Wolf

Habitat disturbance would not affect wolf denning habitat and the activities at Willow Creek Summit would not affect elk herds (a prey species) that winter there (Section 3.3.1.1). Activities at Willow Creek Summit are expected to have no effect on gray wolves.

Piute Ground Squirrel

Piute ground squirrels would be most likely to occur at the lower elevation staging area and along the access road to Willow Creek Summit. If present, there would be a potential collision risk from the temporary increase in vehicle traffic associated with construction activities. Heavy equipment and vehicle use could cause burrow collapse should burrows be located in routes of travel. Habitat loss would have a negligible effect on this species as foraging habitat is abundant in the immediate vicinity and low-level disturbance areas would be reseeded to after project construction. Overall, due to the limited area where the ground squirrel is present and the implementation of the design measures and BMPs such as revegetation and speed limits, identified in Appendix D, the Project is anticipated to have no to low effect on Piute ground squirrels.

Townsend's Big-eared Bat and Other Bats

All BLM sensitive bats are identified as being unlikely to occur at the Willow Creek Summit site due to a lack of caves and cliffs for roosting and a lack of ***riparian*** areas, ***wetlands***, and other water features typically associated with foraging habitat. However, some individuals could occasionally roost in the conifer forests on the northeast slopes of Willow Creek Summit and occasionally forage away from water sources in the open habitat at Willow Creek Summit.

Construction vehicles would be accessing Forest Road #207 via the road that goes up Rio Grande Canyon where the Cossack Tunnel is located. The Windy Devil Annex site is within typical foraging distance for Townsend's big-eared bats and other bats, so there is a potential for collision with vehicles during the construction period and with the tower during operation. Given the relatively small amount of habitat loss, prey abundance is not expected to be affected. Construction and operation of the Project would not disturb the roost site, which is the primary threat to the Townsend's big-eared bat (IDFG 2017a).

Effects from the Project would be limited to short-term impacts to individual Townsend's big-eared or other bats that encounter construction activities or long-term impacts associated with a new, permanent man-made structure on the landscape that acts as a potential collision risk during foraging excursions.

Migratory Birds

Construction at both sites would cause temporary noise and increased human activity over existing conditions. This would likely result in some short-term behavior modifications by migratory birds, such as avoidance of areas disturbed by construction equipment. Construction activities would be planned, where possible, to occur outside of primary bird nesting season. If construction activities must occur during the primary bird nesting season, a nest clearance survey would be conducted (BLM 2020). Construction activities could displace individuals using the area during the construction window. This displacement would be short term, and migratory birds could resume using the area around the site within several weeks after construction is completed.

Studies have shown that migratory birds collide with communication towers, resulting in an estimated annual mortality of more than 10,000 birds in the Northern Rockies (Longcore et al. 2012). Most studies are documenting mortalities associated with tall towers (>197 feet in height) whose design includes guy wires and safety lighting, all of which increase the collision risk to birds. The Project proposes shorter towers (100 feet tall) designed without guy wires or tower lighting. It is expected that this tower design would greatly reduce the likelihood of migratory bird mortalities compared to the taller, guyed, and lighted towers. However, it should not be assumed that these short towers would have no impact on bird populations (Manville 2005).

If the Proposed Action is implemented, the design features, mitigation measures, and BMPs listed in Appendix D would help reduce effects on migratory birds by minimizing ground disturbance, reseeding with native seed mixes, and controlling noxious weeds. The Proposed Action would adopt the USFWS Recommended Best Practices for Communication Tower Design, Siting, Construction, Operation, Maintenance, and Decommissioning (USFWS 2018) that still allow the Project to meet the purpose and need while reducing the risk of bird mortality. This generally includes collocating towers, reducing vegetation disturbance and performing vegetation clearance outside of the nesting season, and avoiding take of migratory birds. See Table D-1 (Appendix D) for a response to each USFWS measure. The Project is defined by the need for new facilities at the existing sites, while most co-location measures would be followed, the use of the existing towers would not accomplish the purpose of the Project. In all, however, considering the BMPs and design features to be implemented, effects on migratory birds would be low in the short term and medium in the long term.

3.3.2.2 No Action Alternative

General Wildlife

Under the No Action Alternative, the two communication stations, access road upgrades, fiber optic line, staging areas, and other associated effects from the Project on wildlife would not occur. The potential risk of avian and bat collision with the existing towers would continue and human use of the existing roads to access the current communication stations to conduct routine and emergency maintenance would continue and would have low effects on wildlife, including TES animals and migratory birds.

3.4 Visual Resources

Visual resources are the visible natural and built physical features on a landscape. Prominent visual resources within the Project Area include ***rangeland***, mountains, transmission lines, highway, and rural

residences. Likely viewer groups include motorists on nearby Highway 93, recreational users on the BLM and USFS land, ranchers tending allotments, and local residents.

Several sources of data informed the analysis of potential impacts of the Project on scenic resources, including: Geographic Information System (GIS)-based ***viewshed*** models, field visits, and review of Google Earth imagery.

Viewshed analyses were conducted to analyze potential visibility of the Project within a 5-mile radius of each of the proposed communication stations. These bare earth viewsheds illustrate a worst-case scenario of visibility because they do not account for the screening opportunities offered by vegetation, which can be substantial in a forest setting. Computerized methods were used to identify areas from which the communication station might be visible. This was done by creating a digital elevation model of the area based on United States Geological Survey terrain data and using the visibility function within the computer model Viewshed Analysis for ArcGIS™ Spatial Analyst.

Each of the proposed communication stations has an existing communication station adjacent to it. The viewshed analysis modeled the potential visibility of the proposed communication stations and compared it to the visibility of the existing communication stations. This allowed for a determination of the increased level of visibility from the proposed communication stations over the existing communication stations.

3.4.1 Affected Environment

3.4.1.1 Willow Creek Summit

Willow Creek Summit is located within a large block of land in Federal ownership managed by the BLM, Challis Field Office. The location for the proposed Project is in a designated Visual Resources Management (VRM) Class II area (BLM 1999). The area is managed for visual resources per VRM Class II objectives (BLM 1986). The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

Dominant scenic attributes of the Willow Creek Summit area include vast views over the upper Big Lost River Valley to the south, upper Warm Springs Creek drainage to the north, the Lost River Mountains to the east and the Salmon River Mountains to the West, all of which contribute to the high-quality scenery of the area. Willow Creek Summit overlooks small communities and the rural town of Challis, Idaho. Two-lane U.S. Route 93 runs in a north-south direction on the west side of Willow Creek Summit, approximately 0.5 miles in distance at its closest point. A number of gravel and native surface secondary roads are located through the surrounding area.

The landscape at Willow Creek Summit includes the existing CTCI communication facility (Figures C1-3 and C1-4, Appendix C-1). The existing facility contains a 12-foot by 20-foot building, a 30-foot-tall lattice tower with attached communication equipment, propane tank, wood pole transmission line, and gravel access road. Texture of the landscape are a mix of rounded hills with low growing vegetation, some brushy vegetation, occasional small rocky outcrops, and talus slopes. Vegetation is dominated by

mountain mahogany, low sage and grassland. Color is light green in spring and summer, brown and tan in fall and winter, and occasionally snow covered in the winter season. Views are partially contained by vegetation but with patchy views of distant landscapes.

The analysis area for the proposed Project is characterized as a broad valley that supports rangeland with few rural homes on the valley floor, rolling hills, alluvial fans, dramatic, steep high mountains, talus slopes, jagged rock faces, and mountain peaks. Textures of the landscape are a mix of rolling hillslopes with short vegetation with conifer trees growing on north-facing slopes and there are rough, patchy rock formations on the mountains. Colors vary by season with vegetation rich and vibrant green in spring and tan and brown in the fall. Winter brings snowcapped peaks with snow occasionally reaching the valley floor. The surrounding mountain slopes are gray and brown rock. Vegetation includes short sagebrush, grassland, stands of mountain mahogany, and conifer trees on north facing slopes. Views are open and vast.

Within the 5-mile analysis area, development includes the existing communication facility, U.S. Route 93, secondary gravel roads, a rural homesite and outbuildings, a few irrigated fields, single pole transmission lines, and a Lost River Electric substation. The landscape has an overall natural-appearing landscape character.

The scenic quality of the existing landscape of the Willow Creek Summit area is considered high (Class A) as shown in Table 3-8. Viewers in the vicinity of Willow Creek Summit area are primarily recreators hiking, driving, hunting, viewing scenery or wildlife, and travelers on Highway 93. Viewers would be both stationary and transient.

Table 3-8. Willow Creek Summit Scenic Quality Rating: Pre-Project

Landform (1 to 5)	Vegetation (0 to 5)	Water (1 to 5)	Color (1 to 5)	Adjacent Scenery (0 to 5)	Scarcity (1 to 5+)	Cultural Modification (-4 to 2)	Total Score
5	3	1	5	5	3	0	22 (A)

3.4.1.2 Windy Devil Annex

The Windy Devil Annex Communication Station is located on federally-managed land, administered by the SCNF. Because of its location within USFS-administered lands, this resource was evaluated using methods adapted from the USFS Scenery Management System (USFS 1995). The site is within the Mackay Front Management Area (#18). This management area emphasizes protection of visual quality on slopes facing Highway 93 (USFS 1987). The SCNF has classified the area within and surrounding the Wind Devil site as Partial Retention. The objectives of the Partial Retention are for management activities remain visually subordinate to the characteristic landscape. Activities may repeat form, line, color, or texture common to the characteristic landscape but changes in their qualities of size, amount, intensity, direction, pattern, etc., remain visually subordinate to the characteristic landscape. Activities may also introduce form, line, color, or texture which are found infrequently or not at all in the characteristic landscape, but they should remain subordinate to the visual strength of the characteristic landscape.

Dominant scenic attributes of the Windy Devil Annex area include vast views over the Big Lost River Valley to the north and to the south, the Lost River Mountains to the east and the foothills and some peaks of the White Knob Mountains to the west and southwest all of which contribute to the high-quality scenery of the area. The Windy Devil Annex site overlooks the town of Mackay to the southwest and Mackay Reservoir to the northeast. Two-lane U.S. Route 93 runs in a north-south direction through the middle of the valley. A number of gravel and native surface secondary roads are located throughout the surrounding area.

The landscape at Windy Devil includes the existing communication facility (Figures C1-5 and C1-6, Appendix C-1). The existing communication facility includes four communication buildings, three lattice towers ranging in height from 30 to 80 feet with attached communication equipment, three propane tanks, concreate pads and graveled access road. Color complexity comprises light and dark browns, dark greens and olives, and dark and light grays from the road surface. In the fall grasses turn yellow and in the winter the area is snow-covered. Textures are smooth from the road surface to fine and medium from the grasses and coarse and rough from the conifer vegetation. Human development in the landscape primarily includes the existing communication facility and gravel access roads.

The analysis area for the proposed Project is characterized as a broad valley that supports rangeland with rural homes, irrigated agriculture the valley floor, rolling hills, alluvial fans, dramatic, steep high mountains, talus slopes, jagged rock faces, and mountain peaks that add height and size to the landscape. Textures are medium with rough, patchy rock formations on the mountains. Colors vary by season with vegetation rich and vibrant green in spring and tan and brown in the fall. Winter brings snowcapped peaks with snow occasionally reaching the valley floor. The surrounding mountain slopes are gray and brown rock. Vegetation includes short sagebrush, grassland, and conifer trees on north facing slopes and cotton wood riparian forest along the Big Lost River on the valley floor. Views are open and vast to the north, east, and south; but enclosed to the west. The area provides a scenic background view as seen from the main travel roads; U.S. Route 93, the Trail Creek Road, and the East Fork of the Big Lost River Road.

Within the 5-mile analysis area, development includes the existing Windy Devil communication facility, U.S. Route 93, the town of Mackay, agriculture, rural home sites, secondary gravel roads, and a wooden H-frame transmission line. In addition, the historic White Knob Mining District is in the southern portion of the analysis area and contains many historic mining structures, equipment, mine entrances, roads, and waste rock dumps. The landscape has an overall natural-appearing landscape character except for the area in and surrounding the town of Mackay.

3.4.2 Environmental Consequences

3.4.2.1 Willow Creek Summit

The BLM did not establish Key Observation Points (KOP) for the visual resource analysis at Willow Creek Summit. The analysis was conducted using a desk-top viewshed analysis to determine which areas of the Project would be most viable to the greatest density of viewers. A field visit to Willow Creek Summit and the surrounding area was conducted to assess the visibility of the Project, document textures and colors, and collect example photographs.

At Willow Creek Summit, the shape and smooth texture of the 100-foot tower would introduce weak contrast against the surrounding steep to rolling hills and valley walls, and rough texture of the rock. The gray tower and white microwave dishes would introduce medium contrast against the brown gray, and tan color in the fall and green and gray color in the spring and weak contrast against the soft snow-covered slopes in the winter. For viewers who see the towers against the skyline (i.e., skylined), the contrast would be strong against the sky and surrounding landscape.

Due to the broad, expansive nature of the landscape, the proposed Project would be visible from up to 5 miles or more. A bare earth viewshed analysis was created that shows the visibility of the existing communication facility and the proposed Project within the 5-mile radius analysis area (Figures C3-1 and C3-2, Appendix C-3). The viewshed analysis indicates that both the existing communication facility and the proposed Project would be visible to viewers traveling north and south on Highway 93, from hikers at the summit of Dicky Peak to the southeast, to viewers driving southeast on lower Spar Canyon Road and Gooseberry Creek Road. Without taking into account vegetative screening, the proposed 100-foot tower would be visible from about 10 percent more of the analysis area than the existing communication facility at the Willow Creek Summit Site (Table 3-9).

Table 3-9. Percent Visibility Within the Willow Creek Analysis Area*

Visibility	Acres	% of 5-mile Analysis Area
Existing 30-foot Radio Tower		
Visible	20,655.6	41.1%
Not Visible	29,609.3	58.9%
Total	50,264.9	100.0%
Proposed 100-foot Radio Tower		
Visible	25,589.5	50.9%
Not Visible	24,676.1	49.1%
Total	50,265.6	100.0%
* Bare earth analysis		

The overall scenic quality of the Willow Creek Summit area would not be expected to change as a result of the proposed Project. Under the BLM Scenic Quality Rating System, the score for color would be reduced by two points in the localized area of Willow Creek Summit due to the clearing of vegetation, new buildings, propane tanks and the 100-foot tower. For these same reasons the 'cultural modification' criteria would be reduced by one point (Table 3-10). This localized impact would not affect the majority of the Willow Creek Summit analysis area, as the proposed Project would be small in scale compared to the broad and vast nature of the landscape.

Table 3-10. Willow Creek Summit Scenic Quality Rating: Post-Project

Landform (1 to 5)	Vegetation (0 to 5)	Water (1 to 5)	Color (1 to 5)	Adjacent Scenery (0 to 5)	Scarcity (1 to 5+)	Cultural Modification (-4 to 2)	Total Score
5	3	1	3	5	3	-1	19 (A)

Although the proposed Project would not change the scenic quality of the analysis area as a whole, it would not be in conformance with the VRM Class II objectives established for the Willow Creek Summit area. The proposed Project would introduce new form, line, color, and texture from that found in the predominant natural features of the existing landscape. That said, the existing communication facility at Willow Creek Summit contains many of the same elements as the proposed Project but at a smaller scale (a 30-foot tower versus a 100-foot tower), It could be argued that the existing communication facility has already altered the form, line, color, and texture of the landscape at the Willow Creek Summit Site and that introduction of a similar, although larger facility, would not result in additional impacts to the scenic quality at the local level. This is because: the buildings would be painted to blend with the background, and would have low, seamless roofs that would not be as visible due to decreased height; brightly colored propane tanks (in order to reduce solar heat absorption) would be screened by fencing painted a background color; and to the extent necessary to reduce impacts on visuals, larger rocks that are dislodged would be set in place with their previously exposed and weathered surfaces facing up to maintain low brightness. See Appendix D for more details on these and other mitigations and design features to reduce effects on visual resources.

If the Proposed Action is implemented, the 100-foot tower would rise above the surrounding vegetation and could attract the attention of the casual observer in the area. It could also introduce line and texture when skylined from a larger area than the existing facility. Considering the design features, mitigation measures, and BMPs, effects on visual resources would be medium in the short term and medium in the long term.

3.4.2.2 Windy Devil Annex

The primary objectives of the Windy Devil Communications Site Management Plan related to visual resources are to maintain visual resource objectives by requiring design standards that are unobtrusive and by utilizing earth tone colors and non-reflective surface material consistent with the standards in the Land and Resource Management Plan (USFS 2011).

Due to the broad, expansive nature of the landscape, the Windy Devil Annex would be visible from up to 5 miles or more. A bare earth viewshed analysis was created that shows the visibility of the existing communication facility and the proposed Windy Devil Annex within the 5-mile radius analysis area (Figures C3-3 and C3-4, Appendix C-3). The viewshed analysis indicates that both the existing communication facility and the proposed Windy Devil Annex would be visible to viewers traveling north and south on US-Route 93, to campers and boaters on northern portion of Mackay Reservoir, and to residents and visitors in the town of Mackay. The proposed 100-foot tower in the Annex location would be visible from about 12 percent less of the analysis area than the existing communication facility at the Windy Devil Annex (Table 3-11).

Table 3-11. Percent Visibility Within the Windy Devil Annex Analysis Area*

Visibility	Acres	% of 5-mile Analysis Area
Existing 80-foot Radio Tower		
Visible	20,248.9	40.3%
Not Visible	30,016.7	59.7%
Total	50,265.6	100.0%
Proposed 100-foot Radio Tower		
Visible	14,216.2	28.3%
Not Visible	36,049.4	71.7%
Total	50,265.6	100.0%

* Bare earth analysis

Two SCNF-approved observation points were used to assist in evaluating the effects that the proposed Project may have on visual resources (scenery). These observation points are from: 1) the north end of Mackay Reservoir, a popular recreation feature in the Mackay area (which is adjacent to Highway 93, the main travel route through the area), and 2) Sammy's Restaurant and Gas Station in the town of Mackay (Figure C3-5, Appendix C-3).

Observation Point 1. Mackay Reservoir North End

From Mackay Reservoir, the proposed communication site would not be readily noticeable to the casual observer. The landscape, in particular the colors (greys, tans, greens and browns) and forms (trees) in the area of the Windy Devil Annex would absorb the visibility of the 100-foot-tall communications tower, from this distance. The site would remain visually subordinate to the landscape being viewed. The form, line, color and texture of the existing landscape would remain after completion of the proposed Project.

Observation Point 2. Sammy's Restaurant

From Sammy's Restaurant, the proposed Windy Devil Annex would not be readily noticeable to the casual observer. The landscape, in particular the colors (greys, tans, greens and browns) and forms (trees) in the area of the Windy Devil Annex will absorb the visibility of the 100-foot–tall communications tower, from this distance. The site would remain visually subordinate to the landscape being viewed. The form, line, color and texture of the existing landscape would remain after completion of the proposed Project.

Views of the Windy Devil Annex from the primary travel corridor in the area, Highway 93 would be transitory. Travelers heading south on Highway 93 in the area of Mackay Reservoir would be driving an average speed of travel (55 to 65 miles per hour). At this speed, it is expected that the casual observer would not notice the Windy Devil Annex.

Foreground and Middle Ground Views

The Windy Devil Annex would be visible in the immediate foreground (0 feet to 300 feet) views and foreground (300 feet to 0.5 mile) views and in some cases where there is not vegetation or topographical screening, in middle ground (0.5 mile to 4 miles) views. The landscape would appear slightly altered with the communication station and its associated structures; however, the Windy Devil Annex would not be the focal point or dominate the landscape. The line, form and texture of the Windy Devil Annex would contrast moderately with the surrounding landscape at the scale. The color would contrast slightly from the surrounding landscape but the infrastructure would utilize neutral (greys, browns, tans, etc.) colors.

The Windy Devil Annex would slightly alter the appearance of the landscape from foreground and middle ground views. From observation points and the primary travel corridor (background views) where most people are likely to be at any given time, the Windy Devil Annex would not alter the appearance of the landscape. The Project would be consistent with the Challis National Forest Plan (1987) visual quality objective of partial retention for the area where the Windy Devil Annex would be built. The landscape may appear slightly altered after construction of the communication site but any noticeable deviation would remain visibly subordinate to the landscape. Effects on scenic quality, would be low in the short term and low in the long term.

3.4.2.3 No Action Alternative

Under the No Action Alternative, the two communication stations, access road upgrades, fiber optic line, staging areas, and other associated effects from the Project on visual resources would not occur. Use of the existing roads to access the current communication stations to conduct routine and emergency maintenance would continue to have low effects on visual resources.

3.5 Cultural Resources

3.5.1 Affected Environment

3.5.1.1 Willow Creek Summit

A cultural resources inventory, consisting of background review, literature search, and field surveys, was conducted within the proposed Willow Creek Summit Communication Station site, access road, and along the proposed fiber trench route (Homan and Perkins 2020). Based on the results of the background research, two previously recorded linear cultural resources were documented. The field survey identified the following eight resources, with two of the resources being eligible and potentially eligible for listing in the National Register of Historic Places (National Register):

- A previously recorded linear cultural resource, 10CR1818 is historic U.S. Highway 93, a paved two-lane highway which remains in use today. The resource has previously been determined as potentially eligible for listing in the National Register.
- A previously recorded linear cultural resource, 10CR2223 is known as the Blackfoot to Challis Stage Road, an unpaved primitive roadway. The resource was previously determined not eligible for listing in the National Register. The resource was not relocated during the cultural field survey.

- One newly recorded resource is a precontact lithic scatter (Temp Site AH-05) consisting of precontact-period lithic artifacts. The site is recommended as eligible for listing in the National Register as it has the potential to yield additional information important to the region. Three newly recorded historic refuse scatters (Temp Sites AH-01, AH-02, and AH-06), dating between the 1920s-1970s, consists of rusted tin cans, can lids and as well as having some glass, porcelain and metal fragments. These historic refuse scatters do not have the qualities required for listing in the National Register and are recommended as not eligible for listing in the National Register.
- Two newly recorded ***isolated finds*** (Temp Sites AH-03 and AH-04) are precontact-period resources consisting of a single lithic flake and a single Projectile point artifact. The isolated finds do not have the qualities required for listing in the National Register and are recommended as not eligible for listing in the National Register.

3.5.1.2 Windy Devil Annex

A cultural resources inventory, consisting of background research and field survey, was conducted within the Windy Devil Annex site, access road, and along the proposed electric power and fiber trench route (Homan and Perkins 2020). Based on the results of the background research, one previously recorded and one newly recorded linear cultural resource was documented. The field survey verified the following resource:

- A previously recorded historic cultural resource, 10CR1978, Horseshoe Mine and Taylor Homestead, consists of structures related to the Taylor residence and mining structures and shafts, tailings, roads, dumps and historic refuse scattered about the site boundaries. The resource has previously been determined eligible for listing in the National Register.
- A newly recorded historic cultural resource, AH-07, Forest Service Road 211 (Forest Service Site No. CH-0996), is a dirt road whose current alignment has been in use since 1960 with some portions dating to older road alignments (circa 1920s-1940s). The road is a surface feature that does not possess the qualities for it to be listed in the National Register and it is recommended as not eligible for listing in the National Register.

3.5.2 Environmental Consequences

3.5.2.1 Willow Creek Summit

Trenching conduit underneath linear cultural resource, 10CR1818 (U.S. Highway 93), which crosses through the proposed trench route, would not adversely affect the site and would not remove the characteristics that make the roadway eligible for listing in the National Register. Impacts on this site would be none-to-low because the conduit would be underground and would not physically impact the linear cultural resource which is above-ground.

Cultural site Temp Site AH-05 (precontact lithic scatter) that is recommended eligible for listing in the National Register is located in and around the dirt access road leading to Willow Creek Summit. The proposed fiber conduit trench route has been redesigned and rerouted around this cultural resource as to avoid adverse effects. To avoid temporary impacts to the site, vehicles would not be parked along the access road, within site boundaries, and no staging would occur along the access road within site boundaries. The site would be flagged and marked as an avoidance area prior to construction activities

and a cultural monitor would be present for the proposed fiber trenching activities within the vicinity of the site. No staging or access road improvements would take place within the site and vehicle traffic would be limited to the existing access road prism. Impacts to the site would be none-to-low with cultural monitoring during construction to ensure implementation of avoidance measures.

Construction activities could result in disturbance to unknown cultural resources through accidental discovery depending on the extent of the resources and their proximity to structures and access roads. Use of design features, mitigation measures, and BMPs (Appendix D) would ensure that any previously undiscovered resources found would be managed properly and would minimize any inadvertent disturbance or destruction of cultural resources from the Proposed Action. Considering the design features, mitigation measures, and BMPs, effects on cultural resources, would be low in the short term and low in the long term.

3.5.2.2 Windy Devil Annex

Historic cultural resource, 10CR1978 (Horseshoe Mine and Taylor Homestead), determined eligible for listing in the National Register is located around two Forest Service access roads which lead to the proposed Windy Devil Annex location. No proposed roadwork or staging would occur within site boundaries. The site would be marked on construction documents and maps as a sensitive 'avoidance' area, and as needed would be marked in the field by a cultural monitor. Impacts on this site would be none-to-low.

Construction activities could result in disturbance to unknown cultural resources through accidental discovery depending on the extent of the resources and their proximity to structures and access roads. Use of design features, mitigation measures, and BMPs (Appendix D) would ensure that any previously undiscovered resources found would be managed properly and would minimize any inadvertent disturbance or destruction of cultural resources from the Proposed Action. Considering the design features, mitigation measures, and BMPs, effects on cultural resources, would be low in the short term and low in the long term.

3.5.2.3 No Action Alternative

Under the No Action Alternative, impacts from ongoing maintenance and emergency repairs could potentially include ground disturbance of cultural resources. Impacts from continued routine maintenance of the existing radio site, access roads, and fiber conduit and/or emergency repairs could range from none-to-low, depending on the level and amount of disturbance, the location of the disturbance, and the eligibility of the cultural resource for listing in the National Register.

3.6 Socioeconomics

3.6.1 Affected Environment

The population in Custer County is estimated to be 4,280 as of July 2018, which is less that 1 percent (.24 percent) of the state of Idaho's estimated population of 1,754,208. The county had a negative-growth population trend of -1.8 percent between 2010 and 2018. Population density is about one person per square mile of Custer County's land base (0.87 per square mile) (U.S. Census Bureau 2019).

Approximately 42 percent of housing units (1,346 out of 3,196) are estimated to be vacant in Custer County. This estimated vacancy rate is substantially higher than that for Idaho at 13.1 percent (U.S. Census Bureau 2019).

The leading industries in Custer County in 2016 were accommodation and food services (18 percent), agriculture/mining/fishing and hunting (17 percent), retail trade (15 percent), arts, entertainment, and recreation (10 percent), and health care and social assistance (10 percent). Retail trade provided 24 percent of overall employment in the county (U.S. Census Bureau 2019). Median household income in 2017 was estimated at $37,976 in Custer County, which is below the statewide median income of $50,985 (U.S. Census Bureau 2019).

The demographics estimates for Custer County, as of 2019, are 96 percent White, 4.7 percent Hispanic or Latino, 2.2 percent Two or More Races, and less than 1 percent Black or African American, American Indian and Alaska Native, Asian or Native Hawaiian and Other Pacific Islander (U.S. Census Bureau 2020).

3.6.2 Environmental Consequences

3.6.2.1 Willow Creek Summit and Windy Devil Annex

During peak construction, one work crew with up to eight workers would work at Willow Creek Summit site and one work crew with up to eight workers would work at Windy Devil Annex site during the same construction window. Depending on where the construction contractor is based, the majority of the construction workers would likely commute to work from areas 7 to 25 miles away; all within Custer County. For the Willow Creek Summit Communication Station, workers would likely lodge in either Mackay or Challis, Idaho, and would commute to the site daily. For the Windy Devil Annex Communication Station, workers would likely lodge in Mackay. If local contractors are used, it is likely that nearly all workers would commute. As workers would be from Custer County, there would be no impact on minority populations.

If construction workers are from out of the area, they would require temporary lodging nearby during construction. In 2017, there were 1,346 vacant housing units available within Custer County. Additionally, temporary housing accommodations, including hotels, are available in the town of Challis approximately 21 miles north of the Willow Creek Summit Site and the town of Mackay approximately 5 miles east from Windy Devil Annex site.

If local construction workers are used to complete the work, it is likely that all construction workers would commute daily and there would be no effect on local population growth or housing. The low number of construction workers coming from outside the area would be temporary and distributed throughout the county so there would likely be minimal impact on population in Custer County. Because there is available nearby housing and a low number of construction workers would likely use the accommodations, there would likely be a temporary, low impact to housing.

There were an average of 77 construction jobs in Custer County in 2016 (U.S. Census Bureau 2019a). Project construction at Willow Creek Summit and Windy Devil would employ up to eight workers at each site during the construction period lasting 5 to 6 months. If local construction workers are hired to

complete the work this would result in an increase of 21 percent in the number of construction jobs in Custer County. This increase in construction jobs would be temporary, lasting only for the 5 to 6 month construction window, and would have a minimal long-term effect on the number of available jobs, employment rate, and low-income levels in Custer County.

Project costs, including environmental review, design and engineering, and construction are estimated at $485,000 for Willow Creek Summit and $2,100,000 to $3,500,000 for Windy Devil. The Proposed Action would stimulate the rural Custer County economy during construction through payroll, material purchases in the area, and related direct or indirect "multiplier effects" that represent additional economic activity generated from the initial Project expenditure. An estimated 5 to 10 percent of total Project costs would involve local purchases of fuel, vehicle parts, and other goods and services in Custer County.

The operation and maintenance of the communication stations would not result in the creation of new jobs or services in Custer County. CTCI would not need additional workers to conduct inspection or maintenance at the Willow Creek Summit Communication Station. BPA would not need additional workers to conduct inspection or maintenance at the Windy Devil Annex Communication Station.

Effects on socioeconomics, would be beneficially low in the short term and none in the long term.

3.6.2.2 No Action Alternative

Under the No Action Alternative, there would be no beneficial socioeconomic impacts from temporary employment, purchases of local goods and services, and temporary housing from construction workers or activities. Overall, the No Action Alternative would have no effect on socioeconomics, environmental justice populations, and public services.

3.7 Noise

3.7.1 Affected Environment

Noise is defined as loud, unwanted, or unexpected sound that disrupts normal human activities or diminishes the quality of the human environment. Audible noise is measured in ***decibels (dBA)*** on the ***A-weighted decibel scale***, which describes sound that corresponds to human perception. In general, continuous exposure to dBA above 80 can cause damage to human hearing. Table 3-12 below contains examples of common activities and the associated noise level in dBA.

Table 3-12. Common Activities and Associated Noise Levels

Noise Source	Noise Level (dBA)
Loud live band music	110
Truck from 50 feet away	80
Gas lawnmower from 100 feet away	70
Normal indoor conversation	60
Moderate rainfall on vegetation	50
Refrigerator	40
Bedroom at night	25

Existing noise at both Willow Creek Summit and Windy Devil communication stations consist of environmental noise including wind, rustling of trees and grasses, and other naturally occurring sounds. In addition, both proposed sites have existing communication stations. These existing communication stations have generators that occasionally run to provide backup power to the facilities or during regularly scheduled testing of the equipment. The noise level produced by these generators when running is not known, but it could be considered "loud". Individuals within 500-feet or more of the generators during operation would certainly hear them.

3.7.2 Environmental Consequences

3.7.2.1 Willow Creek Summit and Windy Devil Annex

Construction would cause temporary and intermittent noise as construction progresses. Noise from heavy equipment and truck traffic and increased worker trips would temporarily add to existing noise on local roads and highways but would not cause a substantial increase in average traffic noise levels. Construction would occur during a typical working hour range, thereby limiting construction noise to daytime.

Non-motorized recreators seeking a quiet experience would not likely choose to recreate near the construction activities. Construction that occurs within 500-feet of non-motorized recreators could diminish their experience.

Table 3-13 below considers noise levels caused by typical construction equipment that could be used during construction of the communication stations. Noise levels at 50-feet from a construction site would range from 80 to 89 dBA. Temporary noise produced by construction equipment would decrease with distance from the site.

Table 3-13. Typical Construction Noise Levels

Type of Equipment	Maximum Noise Level (dBA at 50 feet)
Backhoe	80
Bulldozer	85
Heavy Truck	88
Road Grader	85
Combined Equipment	89

Both the Willow Creek Summit and Windy Devil Annex Communication Stations would have generators for backup power. It cannot be predicted how often or how long power would be lost to these sites, however, CTCI and BPA would conduct monthly testing of the generator equipment. Testing activities would result in the generators being run for approximately 1-hour, once each month. The noise level produced by these generators when running is not known, but it could be considered "loud". Individuals within 500-feet or more of the generators during operation would certainly hear them.

If the Proposed Action is implemented, the design features, mitigation measures, and BMPs listed in Appendix D would help reduce effects of noise by limiting hours of construction and using mufflers on the equipment including the generators to lower noise levels. Considering these design features, mitigation measures and BMPs, effects of noise would be moderate in the short term and low in the long term.

3.7.2.2 No Action Alternative

Under the No Action Alternative, there would be no construction noise and no noise generated from the backup generators at the proposed Willow Creek Summit and Windy Devil site. The existing backup generators at each of these sites would continue to generate noise.

3.8 Cumulative Effects Analysis

Cumulative impacts are the impacts on the environment that result from the incremental impact of the Proposed Action when added to other past, present, and reasonably foreseeable future actions, regardless of which agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor, but collectively significant actions taking place over a period of time.

This section of the EA describes existing development from past actions, as well as present and reasonably foreseeable future development within Custer County.

The Council on Environmental Quality (CEQ) issued cumulative impact guidance, which states "environmental analysis required under NEPA is forward looking … review of past actions is required only to the extent this review informs agency decision making regarding the proposed action" (CEQ 2005). Use of information on the effects of a past action may be useful in two ways: one is for consideration of the cumulative effects from the proposed action; and second, as a basis for identifying direct and indirect effects. The guidance also states that "[g]enerally, agencies can conduct an adequate cumulative effects analysis by focusing on the current aggregate effects of past actions without delving into the historical details of individual past actions" (CEQ 2005).

The nature and extent of existing development from past actions near the proposed Project is in the Affected Environment sections for each environmental resource. In general, development began to occur in southern and central Idaho during the mid-19th century with permanent Euro-American settlement with increased mining. With the arrival of settlers came increased demands for food, which led to increased cattle grazing and sheepherding in the area. In addition to ranching, settlers also grew crops. Most of the area near the Proposed Action has continued to be grazed and farmed since the early 20th century. A network of local, state, and county roads exists in the area, which has facilitated increased land access and further development. Typical development in the vicinity has been mining, agriculture, grazing, rural residences.

The existing Willow Creek Summit Communication Station was installed in 1982 and has been in continuous operation since. The existing Windy Devil Communication Station was installed in 1990 and has been in continuous operation since. Additions and upgrades were made at the Windy Devil site in 1993, 1999, 2001 and 2011.

3.8.1 Current and Reasonably Foreseeable Future Actions

Current actions are those projects, developments, and other actions that are currently underway, either because they are under construction or are occurring on an ongoing basis. Reasonably foreseeable future actions include those actions formally proposed or planned, or highly likely to occur based on available information. BPA and BLM consulted with numerous sources, including local, state, and federal agencies, to get information about any current and potential future development near the Project. The following describes these current and reasonably foreseeable future actions. BPA would continue to perform maintenance on the Spar Canyon–Round Valley transmission line. This may include helicopter patrols every few months, as well as a ground patrol once per year. Transmission line maintenance crews would replace or repair damaged equipment. Crews would control vegetation, which may include mowing around towers and cutting tall-growing vegetation within BPA's existing right-of-way. CTCI would continue maintenance activities at the existing Willow Creek Summit Communication Station and at other communication facilities in the analysis area.

3.8.1.1 Federal Land Management Agency Projects

BLM-Challis and USFS currently do not have future Projects planned within the analysis area, however, current land use management and other authorized activities would continue. Grazing by permittees under existing allotments would continue, which primarily occurs during the summer seasons throughout much of the BLM- and USFS-managed lands. Federal land and resource management plans would continue to manage land use, and trail- and travel-management plans would continue to manage public access for transportation and recreation opportunities.

3.8.1.2 Cumulative Impact Analysis

The Project, in combination with past, present, and reasonably foreseeable future actions, could potentially result in cumulative impacts on the natural, physical, and socioeconomic resources described in Sections 3.1 through 3.7 above. The effects remaining after avoidance and minimization measures are the effects that could contribute to cumulative impacts. The following analysis describes these potential cumulative impacts from the remaining effects of the Proposed Action, organized by resource topic. Topics are presented in the order that they were previously presented in this chapter.

3.8.2 Soils

Past and present erosion, compaction, and decreased soil productivity has occurred and continues to occur in the area from natural weathering processes, continued livestock grazing, and from utility infrastructure and roads. These soil disturbances and loss, in addition to the combined 1.3-acres of soil conversion by the proposed Project at the two sites, would likely continue as these activities continue in the Project Area and throughout the analysis area. The mitigation measures described in Appendix D, would reduce soil compaction and erosion during construction of the Project. Based on the analysis above, the Project would have a low cumulative impact on soils.

3.8.3 Vegetation

Livestock grazing, mining, road and utility construction and operation, recreation, and disturbance from the existing communication stations have altered the native vegetation in the analysis area. Additionally, these past and present land uses spread invasive, non-native plants including noxious weeds. When combined with past, present, and reasonably foreseeable vegetation-altering activities, there would be a low cumulative impact on vegetation communities from the Project in the analysis area including temporary removal and disturbance resulting in revegetated communities, which would be minimized by the mitigation measures outlined in Appendix D. Based on the analysis above, the Project would have a low cumulative impact on vegetation.

3.8.4 Threatened, Endangered, and Sensitive Plants

Past and present development activities such as livestock grazing, mining, roads, and disturbance from the existing communication stations have altered the Welsh's buckwheat and whitebark pine habitat in the analysis area. Additionally, these past and present land uses spread invasive, non-native plants including noxious weeds. When combined with past, present, and reasonably foreseeable vegetation-altering activities, there would be a low cumulative impact on Welsh's buckwheat and whitebark pine habitat from the project in the analysis area including removal and disturbance of an occurrence of Welsh's buckwheat and removal of up to two whitebark pine trees. Impacts would be minimized by the mitigation measures outlined in Appendix D. Based on the analysis above, the Project would have a low to moderate cumulative impact on Welsh's buckwheat and low cumulative impact on whitebark pine.

3.8.5 Invasive, Non-Native Species

Past and present development activities such as livestock grazing, mining, roads, and disturbance from the existing communication stations have introduced and spread invasive, non-native species including noxious weeds in the analysis area. When combined with past, present, and reasonably foreseeable vegetation-altering activities, there would be a low cumulative impact from the Project including the potential spread of existing invasive, non-native species and noxious weeds. Impacts would be minimized by the mitigation measures outlined in Appendix D. Based on the analysis above, the Project would have a low cumulative impact and potential to spread invasive, non-native species.

3.8.6 Wildlife

Past and present development and activities such as grazing, mining, road and utility construction and operation, land development, recreation, and agriculture have impacted wildlife and habitat in the area. Of these, only grazing, roads, utility construction activities, and recreation could affect wildlife in the analysis areas. Impacts on wildlife from the proposed Project would primarily result from removal of habitat, potential incidental mortality from collisions with construction equipment, and temporary displacement due to construction activities. Project impacts would be minimized by the mitigation measures outlined in Appendix D. Based on the analysis above, the cumulative impacts on wildlife from the Project would be low.

3.8.7 Threatened, Endangered, and Sensitive Animals

Cumulative effects to BLM sensitive and USFS sensitive and MIS animals would be like those discussed for wildlife in Section 3.3.2.1 above, in terms of removal of habitat, potential incidental mortality from collisions with construction equipment, and temporary displacement due to construction activities and collision with the communication towers. Construction of above ground structures such as fences and building could result in an increased risk of collision with these features by sensitive birds and bats. Based on the analysis above, the cumulative impacts from the Project on TES species would be low.

3.8.8 Migratory Birds

Cumulative impacts to migratory birds would be similar to those described in Threatened, Endangered, and Sensitive Animals above.

3.8.9 Visual Resources

Visual resources in the analysis area have changed over time due to past and present development, although current views are not expected to change much in the foreseeable future. Visual impacts from the proposed Project would be long-term and would result in permanent change in visual quality, but impacts would be small and local in nature. A viewshed analysis of the existing and proposed communication towers at Willow Creek Summit results in a combined visible area within the 5-mile analysis area of 25,651 acres or 51 percent (Figure C3-6, Appendix C-3). A similar analysis at Windy Devil results in a combined visible area within the 5-mile analysis area of 21,763 acres or 43 percent (Figure C3-7, Appendix C-3). Because of the permanent changes in visual quality from the proposed Project are at the local level, cumulative impact of the proposed Project when combined with other activities in the area on visual quality would be moderate.

3.8.10 Cultural Resources

Past and present actions that likely impacted cultural resources include, access road construction, highway construction, communication site construction, and recreational use practices. Like the Proposed Action, other reasonably foreseeable future projects in the Project corridor including activities have the potential to disturb previously undiscovered cultural resources. Because the Proposed Action occurs in previously disturbed context (i.e., existing radio site construction and access roads), and with the use of BMPs and mitigations (Appendix D) that would be instituted, cumulative impacts on cultural resources are anticipated to be low.

3.8.11 Socioeconomic Resources

Past and present population growth, housing development, agriculture and mining activities, and public service operations have occurred in the analysis area. Growth and development trends are expected to continue, but there are no large developments planned in the near future. The Proposed Action would likely not result in any changes in population. Also, there is ample housing available (e.g., motels) to accommodate construction workers. In addition, because the Proposed Action would not be expected to

disproportionately affect any low-income or minority populations, there would be no cumulative impact on environmental justice populations. For these reasons, coupled with the temporary and local nature of these activities, the Project would have a low cumulative impact on socioeconomics, environmental justice populations, and public services.

3.8.12 Noise

Existing sources of noise generation would continue to occur within the analysis area. The proposed generators for emergency power back up when combined with the existing generators at the existing communication stations would result in a doubling of the noise level. The timing and duration of the generators needing to run for emergency power back up cannot be predicted. It can also not be predicted if both generators at each communication site would require emergency power back up at the same time. Monthly testing of the generators could be planned to occur concurrently reducing the duration of noise generation to a single event. While the two generators running concurrently would double the noise output level, it would only occur once each month. For these reasons, coupled with the temporary (1 hour per month) and local nature of the noise generation, the Project would have low cumulative impacts as a result of noise generation.

4.0 Environmental Consultation Review and Permit Requirements

This chapter addresses statutes, implementing regulations, and executive orders applicable to the Proposed Action. BPA and BLM will send this EA to tribes, federal agencies, state agencies, and state and local governments as part of the consultation process for the Proposed Action. Persons, tribes, and agencies who will receive the EA are included in the list in Chapter 5, Persons, Tribes, and Agencies Receiving the EA.

4.1 National Environmental Policy Act

BPA and BLM prepared this EA pursuant to regulations implementing NEPA (42 U.S.C. 4321 *et seq.*), which require federal agencies to assess, consider, and disclose the impacts that their actions may have on the environment before making decisions or taking actions[7]. NEPA requires preparation of an EIS for major federal actions significantly affecting the quality of the human environment. BPA and BLM prepared this EA to determine if the Proposed Action would cause significant environmental impacts that would warrant preparation of an EIS, or whether it would be appropriate to prepare a Finding of No Significant Impact. BPA and BLM will consider the Proposed Action's potential environmental consequences and comments from agencies, tribes, and the public before making decisions regarding the Proposed Action.

4.2 Land Use and Recreation

4.2.1 Federal Land Policy and Management Act

The Federal Land Policy and Management Act (FLPMA; 43 U.S.C. 1701 *et seq.*) requires that the BLM manage public lands based on the principle of "multiple use and sustained yield," protecting environmental, ecological, recreational, and other values while also recognizing "the Nation's need for domestic sources of minerals, food, timber, and fiber from the public lands." FLPMA established a multiple-use mandate for management of federal lands, including energy generation and transmission facilities as outlined in 43 CFR 2800. FLPMA requires that BLM prepare land use plans providing broad-scale multiple-use direction for management of public lands. FLPMA also requires that all approved management actions conform to the goals and management direction contained in the applicable land use plan (43 CFR 1610.5-3).

FLPMA and its implementing regulations authorize BLM to issue right-of-way grants for facilities and systems, including transmission and distribution systems. Specifically, pursuant to 43 CFR 2801.2, BLM is directed to grant rights-of-ways and to control their use on public lands in a manner that: (a) protects the natural resources associated with public lands and adjacent lands, whether private or administered by a government entity; (b) prevents unnecessary and undue degradation of public lands; (c) promotes the use of rights-of-way in common, considering engineering and technological compatibility, national

[7] As discussed in the introduction to Chapter 3 of this EA, shortly before this Draft EA was issued for public review, CEQ published a final rule updating its NEPA implementing regulations. Because the EA for this project was begun before the effective date of the new CEQ NEPA regulations, this EA was prepared consistent with the pre-revision NEPA regulations.

security, and land use plans; and (d) coordinates, to the fullest extent possible, all BLM actions under the regulations in this part with state and local governments, interested individuals, and appropriate quasi-public entities. In fulfilling these obligations, the BLM decision maker may include terms, conditions, and stipulations which she or he determines to be in the public interest. BPA is coordinating with BLM to meet its requirements for crossing BLM-managed land and has submitted a request for amendment for their existing Willow Creek Summit Communication Site lease (BLM lease IDI-9900).

The subject application was made in accordance with Title V of the Federal Land Policy and Management Act of 1976 as amended (43 U.S.C. 1761) and the regulations found in 43 CFR 2800. These regulations would govern the granting of the right-of-way (if approved), determination of cost reimbursement, determination of the rental value, and the compliance and monitoring requirements. Right-of-way decisions become effective upon approval by the authorized officer (43 CFR 2801.10 (b)). Conformance with the applicable BLM Land Use Plan is addressed in Section 1.4.

The National Forest Management Act (NFMA) of 1976 (16 U.S.C. 1600 *et seq.*) requires that the USFS develop plans, set standards for timber sales, and create policies to regulate timber harvesting to protect national forests from permanent damage from excessive logging and clear cutting. The USFS is required to use a systematic and interdisciplinary approach to resource management. The NFMA requires USFS to provide for multiple use and sustained yield of the products and services obtained therefrom in accordance with the Multiple-Use, Sustained-Yield Act of 1960, and in particular, include coordination of outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness; and timber, watershed, wildlife and fish, and wilderness.

NFMA and its implementing regulations authorize USFS to provide Special Use Authorization as a permit that grants rights or privileges of occupancy and use subject to specified terms and conditions on National Forest land. The authorization is granted for a specific use of the land for a specific period of time.

4.2.2 State and Local Land Use Planning Framework

As an action proposed by federal agencies, BPA and BLM are generally not required to obtain state and local land use approvals or permits unless required by federal law. While Custer County has a regulatory framework for planning and zoning, no environmental provisions are applicable to the Proposed Action. The State of Idaho has no land use planning direction or environmental requirements except the SWPPP required during construction. BPA would, however, strive to meet or exceed the substantive standards and policies of state and local environmental regulations to the maximum extent practicable.

4.3 Vegetation, Fish, and Wildlife

4.3.1 Endangered Species Act

The ESA (16 U.S.C. 1531 *et seq*.) establishes a national program for the conservation of threatened and endangered species of fish, wildlife, and plants, and the preservation of the ecosystems upon which they depend. The USFWS administers the ESA for plants, wildlife, and freshwater species, and the National Marine Fisheries Service administers the ESA for marine and anadromous species. The ESA defines

procedures for listing species, designating ***critical habitat*** for listed species, and preparing recovery plans. It also specifies prohibited actions and exceptions.

Section 7(a) of the ESA requires federal agencies to ensure that the actions they authorize, fund, and carry out do not jeopardize the continued existence of endangered or threatened species or cause the destruction or adverse modification of their critical habitat. If a listed species or critical habitat may be present in an action area, Section 7(c) of the ESA and other federal regulations require that federal agencies prepare a Biological Assessment addressing the potential effects their actions have on endangered or threatened species and/or their critical habitat.

Based on existing data and field surveys, BPA, BLM, and the SCNF determined the Project would have no effect on ESA-listed species, and would be unlikely to jeopardize the continued existence of species proposed for listing. A BE was prepared for the Windy Devil Annex site (Appendix E) and a No Effect Determination was prepared for the Willow Creek Summit site (Appendix F). See Section 3.2 and 3.3 for additional information.

4.3.2 Fish and Wildlife Conservation Act and Fish and Wildlife Coordination Act

The Fish and Wildlife Conservation Act of 1980 (16 U.S.C. 2901 *et seq*.) encourages federal agencies to conserve and promote conservation of non-game fish and wildlife species and their habitats. In addition, the Fish and Wildlife Coordination Act (16 U.S.C. 661 *et seq*.) requires federal agencies undertaking projects affecting water resources to consult with the USFWS and the state agency responsible for fish and wildlife resources. BPA requested and received official lists of threatened and endangered species from the USFWS that could occur in the Project location (Consultation Code: 01EIFW00-2018-SLI-1417, Event Code: 01EIFW00-2018-E-02888; and Consultation Code: 01EIFW00-2018-SLI-1373, Event Code: 01EIFW00-2018-E-02873). During scoping for the Project, BPA received comments from the Idaho Department of Fish and Game and Idaho Office of Species Conservation regarding greater sage-grouse, pygmy rabbit, sensitive species, migratory birds and bats, and noxious weeds. This EA addresses all of the species included in the USFWS official species lists and the wildlife concerns identified by the State of Idaho through their scoping comments.

4.3.3 Migratory Bird Treaty Act and Executive Order 13186

The Migratory Bird Treaty Act (16 U.S.C. 703–712) implements the treaties and conventions between the U.S. and other countries, including Canada, Japan, Mexico, and the former Soviet Union, for the protection of migratory birds. Under the Act, taking, killing, or possessing migratory birds or their eggs or nests is unlawful. The Act classifies most species of birds as migratory, except for certain non-native bird species.

BPA (through the U.S. Department of Energy) and USFWS have a memorandum of understanding (MOU), which is in the process of being renewed, to address migratory bird conservation in accordance with Executive Order 13186 (*Responsibilities to Federal Agencies to Protect Migratory Birds*). This directs each federal agency taking actions that could negatively affect migratory bird populations to work with the USFWS to develop an agreement to conserve those birds (DOE and USFWS 2013). The MOU

addresses how both agencies can work cooperatively to address migratory bird conservation and includes specific measures to consider during Project planning and implementation.

The Proposed Action may affect migratory birds through displacement from habitat during construction. Mitigation measures to address potential effects on migratory birds are discussed in Appendix D. The Proposed Action would result in low effects on migratory birds from displacement from habitat. As discussed in the *Migratory Birds* section under Section 3.3.2.1, preconstruction surveys, if needed, would occur to determine the presence of nesting birds, and the control of noxious/invasive weed species would avoid degradation of migratory bird habitat.

4.3.4 Bald and Golden Eagle Protection Act

The Bald Eagle and Golden Eagle Protection Act of 1940 (16 U.S.C. 668-668d) prohibits the taking, or possessing of, and commerce in bald and golden eagles, with limited exceptions.

As discussed in Section 3.3, Table 3-7, the sites do not offer typical nesting roosting and/or foraging habitat and the nearest observations of bald or golden eagle nests are approximately 20 miles away. It is expected that there would be no effect on eagles.

4.3.5 Executive Order on Invasive Species

In February 1999, the President issued Executive Order 13112, Invasive Species. This order requires federal agencies to identify actions that affect the status of ***invasive species***, prevent the introduction of invasive species and control and monitor invasive species. With regard to invasive and noxious weeds, as discussed in Section 3.2.2.1, the Proposed Action would have a low effect on the spread of noxious/invasive species within the Project Area.

4.4 Water Resources and Water Quality

Neither Willow Creek Summit nor Windy Devil cross National Hydrography Dataset (NHD) streams. There would be no effects to surface water because the proposed communication station sites are not located near surface water. Ground disturbances from construction would not affect groundwater quality because there is no known direct connectivity to groundwater resources, and the proposed construction does not call for deep excavations that would directly reach potential groundwater resources in the area. The Project as proposed would have no effect on wetlands, waterbodies, or floodplains.

4.5 Air Quality

4.5.1 Clean Air Act

The Clean Air Act (42 U.S.C. 7401 *et seq*.) requires the U.S. Environmental Protection Agency (EPA) and individual states to ensure attainment of the National Ambient Air Quality Standards (NAAQS). In Idaho, EPA has delegated authority to the Idaho Department of Environmental Quality (IDEQ). Because the Proposed Action would occur in an area that is currently in attainment for the NAAQS and because no stationary sources of air emissions would occur, construction activities associated with the Proposed Action are exempt from IDEQ regulation.

4.6 Socioeconomics and Public Services

4.6.1 Executive Order 12898

In February 1994, the President released Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*, to federal agencies. This order states that federal agencies shall identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and ***low-income populations***.

BPA and BLM evaluated the Proposed Action for disproportionately high environmental effects on minority and low-income populations and identified none, as described in Table 3-1.

4.7 Cultural and Historic Resources

Several laws and regulations govern management of cultural resources. A cultural resource is an object, structure, building, site, or district that provides irreplaceable evidence of natural or human history of national, state, or local significance, such as national landmarks, archaeological sites, and properties listed or eligible for listing in the National Register. Cultural resource-related laws and regulations include:

- Antiquities Act of 1906 (16 U.S.C. 431–433)
- Historic Sites Act of 1935 (16 U.S.C. 461–467)
- NHPA of 1966 (54 U.S.C. 300101 et seq.), as amended
- Archaeological Data Preservation Act of 1974 (16 U.S.C. 469 a–c)
- Archaeological Resources Protection Act (ARPA) of 1979 (16 U.S.C. 470aa-mm), as amended
- Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 (25 U.S.C. 3001 et seq.)
- Executive Order 13007 – Indian Sacred Sites
- American Indian Religious Freedom Act of 1978 (42 U.S.C. 1996, 1996a)

BPA conducted field surveys to identify effects on cultural resources from the Proposed Action and requested input on cultural resources from the affected tribes. (see Section 3.5, Cultural Resources). Archeologists surveyed for cultural resources at the proposed radio communication sites and along the proposed areas for access road construction, as described in Section 3.5, Cultural Resources. As the lead agency for NHPA Section 106 compliance, BPA consulted with Idaho State Historic Preservation Office (SHPO) on the Project. After field and desktop study performed in coordination with BLM and USFS, BPA determined per §36 CFR 800.5(b), the implementation of the proposed undertaking would result in no adverse effect on historic properties. On April 2, 2020, SHPO concurred with this determination under the conditions developed by BPA that would avoid known historic properties. BLM staff subsequently consulted separately with the Shoshone Bannock Tribe, and was informed there were no further comments from the tribe regarding Section 106.

If, during construction, workers find previously unidentified cultural resources that the Proposed Action would adversely affect, BPA, BLM, and SCNF would follow all applicable procedures set forth in the NHPA, NAGPRA, and ARPA.

4.8 Noise, Public Health, and Safety

4.8.1 Maximum Environmental Noise Levels

The Noise Control Act of 1972 (42 U.S.C. 4901 *et seq*.) requires that federal agencies such as BPA comply with state and local noise requirements. Idaho does not regulate environmental noise caused by the Proposed Action. Custer County does not have regulations specific to noise control and the county zoning code does not address acceptable noise levels.

4.8.2 The Spill Prevention, Control, and Countermeasures Rule

The Spill Prevention, Control, and Countermeasures Rule (40 CFR 112), promulgated by EPA under authority established in the Clean Water Act and Executive Orders, prevents discharges of oil and oil-related materials from reaching navigable waters and adjoining shorelines. It applies to facilities with total above-ground oil storage capacity (not actual gallons on site) of greater than 1,320 gallons and facilities with below-ground storage capacity of 42,000 gallons. No storage of oil or oil-related materials is part of the Proposed Action.

4.9 Climate Change

Gases that absorb infrared radiation and prevent heat loss to space are called ***greenhouse gases (GHGs)***. Models predict that atmospheric concentrations of all GHGs will increase over the next century, but the extent and rate of change is difficult to predict, especially on a global scale. As a response to concerns over the predicted increase of global GHG levels, various federal and state mandates address the need to reduce GHG emissions, including the following:

- The Clean Air Act is a federal law that controls emissions from large generation sources such as power plants; limited regulation of GHG emission occurs through New Source Review permitting program.
- EPA issued the Final Mandatory Reporting of Greenhouse Gases Rule that requires reporting of GHG emissions from large sources. Under the rule, suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHGs must submit annual reports to the EPA (EPA, 2019e).
- Executive Orders 13423 and 13514 require federal agencies to measure, manage, and reduce GHG emissions by agency-defined target amounts and dates.

GHG emissions were calculated for activities that would produce GHG emissions as part of the Proposed Action. GHG emissions would be below EPA's mandatory reporting threshold.

4.10 Treaty Rights and Interests

The Fort Bridger Treaty of 1868 (15 Stat. 673) specifically reserves the rights of the Shoshone and Bannock Tribes to hunt, fish, gather, and exercise other traditional uses and practices on unoccupied federal lands, including public lands administered by the BLM Challis Field Office. The federal government has a federal trust responsibility to manage public lands to provide for the continued exercise of tribal treaty rights, consistent with management policies, on all unoccupied lands within their jurisdiction. Part of the federal trust responsibility entails conducting government-to-government consultation with Indian groups when a proposed Project has the potential to impact the exercise of treaty-reserved rights.

5.0 Consultation and Coordination

The following is a list of Tribes, agencies, and persons receiving the EA.

Tribes

Shoshone-Bannock Tribes

Federal Agencies

U.S Army Corps of Engineers

U.S. Department of Agriculture – Forest Service

U.S. Department of the Interior – Bureau of Land Management

U.S. Department of the Interior – U.S. Fish and Wildlife Service

State Agencies

Idaho Department of Environmental Quality

Idaho Department of Fish and Game

Idaho Office of Species Conservation

Idaho State Historic Preservation Office

Local Agencies

Custer County Planning and Zoning Department

Custer County Roads and Bridges Department

Custer County Commissioners

Public Interest Groups

Idaho Conservation League

Western Watersheds Project

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7.0 List of Preparers

Table 7-1. List of Preparers

Individual	Role/Title	Resources	Degree	Years of Experience
Tetra Tech				
Aaron English	Project Manager	NEPA lead author, Visual Resources, Noise	BS, Wildlife Biology	27
Suzy Cavanagh	Deputy Project Manager	Soils, Socioeconomic Resources	MS, Geology	25
Lisa Harloe	Botany	Vegetation, TES Plants, Noxious Weeds	BS, Biology	20
Matt Cambier	Wildlife	Wildlife, TES Animals, Migratory Birds	BS, Environmental Science	17
Scott Flinders	GIS	Data Calculations and Analysis, Maps, Figures	BA, Geography	14
David Gravender	Technical Editor	Document Formatting, QA/QC	MA, English	20

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APPENDICES

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APPENDIX A
GLOSSARY AND ACRONYMS

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Table A-1 Glossary

Term	Definition
Alternating Current (AC)	An electric current or voltage that reverses direction of flow periodically, as contrasted to direct current, and has alternately positive and negative values. Most electricity used in the U.S. today is alternating current.
Ambient noise	Background noise generated by existing noise sources in the surrounding area.
Animal Unit Months (AUM)	An AUM equals the amount of forage needed to sustain one cow/calf pair or five sheep for one month.
Area of Potential Effects (APE)	The portion of the project area in which the project may impact historic properties.
Average daily traffic	The average number of vehicles that pass a specific point going both directions over a 24-hour period.
A-weighted decibel scale	The scale used to measure and describe volume that corresponds to human perception.
Best management practices (BMPs)	Typically, state-of-the-art technology designed to prevent or reduce impacts. They represent physical, institutional, or strategic approaches to environmental problems.
Backhaul	Term describing the transmission of two-way radio voice data via microwave beam to the eventual dispatch point (one of two BPA control centers).
Bandwidth	A range of frequencies within a given band, in particular that used for transmitting a signal.
Beam path	Microwave radio waves travel in narrow beams confined to a line-of-sight path from one antenna to the other.
Conduit	Conduit is a tube used to protect and route electrical wiring in a building, structure, or underground
Critical habitat	As defined by the ESA, a specific geographic area(s) that is essential for the conservation of a threatened or endangered species and that may require special management and protection. Critical habitat may include an area that is not currently occupied by the species but that will be needed for its recovery
Cultural resources	a general term, not defined in federal law, which includes historic resources as well as a larger universe of resources including archaeological, Native American graves, and traditional uses.
Cumulative impacts	Impacts on the environment that result from the incremental impact of the Proposed Action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions
Decibel	Unit of measure for audible noise.

Term	Definition
Ecoregion	An area defined by its geology, physiography, vegetation, climate, soils, land use, wildlife, and hydrology.
Erosion	The movement of soil and surface sediments caused by wind or water.
Greenhouse gas	Chemical compounds that absorb and trap infrared radiation as heat (e.g., carbon dioxide, nitrous oxide, methane, and fluorinated gases)
Invasive species	A species that is not native to a specific location, and that has a tendency to spread to a degree believed to cause damage to the environment, human economy or human health
Isolated finds	An archeological find found away from others.
Lek	A lek is the name of an area where sage-grouse congregate in the spring. The males choose an area where their courtship display can be easily seen by females.
Line-of-Sight	The straight line from one point to another, used typically in describing a path of travel that is unimpeded between two endpoints that can each "see" the other point
Low-income population	A group of low-income residents who live in geographic proximity that could be disproportionately affected by a federal action
Microwave	In general usage, radio frequencies whose wavelengths are sufficiently short to exhibit some of the properties of light. Usually used in point-to-point communications because they are easily concentrated into a beam. Frequencies of 1,000 megahertz and up are usually considered to be microwave frequencies. The radio wave beam can deliver electrical energy over long distances. The radio wave beam can deliver electrical energy over long distances.
Microwave Radio	Microwave is a line-of-sight wireless communication technology that uses high frequency beams of radio waves to provide high speed wireless connections that can send and receive voice, video, and data information
Mitigation	measures that would reduce the impacts of the Proposed Action on a resource by reducing the impact, avoiding it completely, or compensating for the impact.
Non-native	A species that has been introduced and has acclimated to an area outside of its normal distribution range.
Noxious weeds	Nonnative plants that have been identified by state law as damaging to natural or human resources
Outage	The loss of electric power to an area caused by a natural or human disturbance to the electrical system.
Rangeland	Rangelands are grasslands, shrublands, woodlands, wetlands, and deserts that are grazed by domestic livestock or wild animals.

Term	Definition
Repeater	A station in between terminals of a microwave system that receives a signal from a distant station, and amplifies and transmits the signal to another distant station. Most repeaters do this in both directions simultaneously.
Riparian	Vegetation or habitat situated on the banks of rivers and streams.
Special status species	Plant or wildlife species that have been identified for protection and/or management under federal or state law.
Staging area	The area cleared and used to store and assemble materials and equipment
Very High Frequency (VHF)	The radio frequency electromagnetic waves ranging from 30 to 300 MHz with corresponding wavelengths ranging from 1 meter to tens of meters. VHF is widely used for FM broadcasting, television broadcasting, military and local mobile radio transmissions, traffic control long communications, radars, radio modems, as well as in marine and air navigation systems.
Viewshed	An area visible from a defined location
Water bar	A channel across the road surface that diverts surface water that would otherwise flow down the whole length of the road, used to prevent erosion on sloping roads, cleared paths through woodland, or other access ways by reducing flow length.
Wetland	For regulatory purposes, wetlands are defined by the U.S. Army Corps of Engineers and the Environmental Protection Agency as "areas where surface water or groundwater saturates the soils for sufficient duration during the growing season, and at a frequency to support vegetation adapted to saturated soil conditions" [Clean Water Act, 40 CFR 230.3](Environmental Laboratory 1977)

Table A-2. Acronyms

Acronym/Abbreviation	Definition
AC	alternating current
ACEC	Area of Critical Environmental Concern
ARMPA	Approved Resource Management Plan Amendment
ARPA	Archaeological Resources Protection Act
BE	Biological Evaluation
BLM	Bureau of Land Management
BLM-Challis	BLM Challis Field Office
BMPs	Best Management Practices
BPA	Bonneville Power Administration

Acronym/Abbreviation	Definition
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CTCI	Custer Telephone Cooperative, Incorporated
dBA	decibels on the A-weighted decibel scale
EA	environmental assessment
EIS	environmental impact statement
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FLPMA	Federal Land Policy and Management Act
GHGs	greenhouse gases
GIS	Geographic Information System
IDEQ	Idaho Department of Environmental Quality
KOP	Key Observation Point
kV	kilovolt
MIS	Management Indicator Species
MOU	memorandum of understanding
NAAQS	National Ambient Air Quality Standards
NAGRPA	Native American Graves Protection and Repatriation Act
National Register	National Register of Historic Places
NEC	National Electrical Code
NEPA	National Environmental Policy Act
NERC	National Electric Reliability Code
NFMA	National Forest Management Act
NHD	National Hydrography Dataset
NHPA	The National Historic Preservation Act
PHMA	Priority Habitat Management Areas
Project	Radio System Upgrades at Willow Creek Summit and Windy Devil Annex Project
RMP	Resource Management Plan
ROD	Record of Decision
SCNF	Salmon-Challis National Forest
SWPPP	Stormwater Pollution Prevention Plan
TES	threatened, endangered, and sensitive
U.S.C.	United States Code

Acronym/Abbreviation	Definition
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
VHF	Very high frequency
VRM	Visual Resources Management

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APPENDIX B
BLM SAGE GROUSE CONFORMANCE REVIEW

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Idaho Greater Sage-Grouse Implementation Plan Conformance Review (Field Office Version)

Project Point of Contact: Hannah Branz, Natural Resource Specialist	**Date**: 3/19/2021
Project Name: BPA Willow Creek Summit Communication Site	
Project Type: Infrastructure-Communication Site Collocation	
Location: T11N R21E NE ¼ Sec 33	
Which Alternative is Being Evaluated: Proposed Action	
Area of Impact: 0.6 acres	
Conservation Area: Mountain Valleys Conservation Area	
Habitat Designation: PHMA	
Have any Adaptive Management Triggers been engaged: Yes	
Is Project Within SFA: Yes	
Is Project Within a BSU: Yes	
Does the Proposed Project contribute towards the Disturbance Cap: Yes *(If the Answer is yes please use the other Conformance form and submit it to the State Office)*	
Percent Disturbance within BSU: 0.0000014%	**Percent Disturbance within Project Area:** 0.000098%
Allocation Avoid	

Please identify the Management Decisions that authorize the proposed project or otherwise appear applicable: *(This is focused on the management decisions that on a first read would generally apply to the project. However many of these on a closer read do not apply because of specific circumstances of the project. These are the MDs that would not apply and would require a brief rationale.)*

Management Decision Number	Apply?	Management Decision Text	Conformance Statement.
Goal SSS 2	Yes	Provide for the needs of GRSG and their habitat while also providing for resource uses in accordance with BLM's direction for multiple use and sustained yield as described in FLPMA.	The proposed action will follow all applicable management decisions and RDFs from the ARMPA. Although there will be a reduction of 0.6 acres of PHMA habitat, the project is providing for multiple use. The vegetation to be removed is in a mahogany community type with adjacent sagebrush that would unlikely be utilized by sage grouse (EA, Wildlife Environmental Consequences section).
MD SSS 29	Yes	New anthropogenic disturbances within PHMA (Idaho only): Anthropogenic Disturbance Screening Criteria. In order to avoid surface-disturbing activities in PHMA, priority will be given to development (including ROWs, fluid minerals and other mineral resources subject to applicable stipulations) outside of PHMA. When authorizing development in PHMA, priority will be given to development in non-habitat areas first and then in the least suitable habitat for GRSG. In addition to the PHMA and IHMA Anthropogenic Disturbance	Although the project is in PHMA, it will be co-located with an existing communication site/ROW. Additionally, the project area is in a mahogany community type with adjacent sagebrush that would unlikely be utilized by sage grouse. a. Although a population trigger has been tripped, this project is considered an amendment to an existing right-of-way: there would be "a short term (3-year) right-of-way grant to CTCI [Custer Telephone Cooperative, Incorporated] for

			Development Criteria (MD SSS 30), the following criteria must all be met in the project screening and assessment process: a. The population trend for the GRSG within the associated Conservation Area is stable or increasing over a three-year period and the population levels are not currently engaging the adaptive management triggers (this applies strictly to new authorizations; renewals and amendments of existing authorizations will not be subject to this criteria when it can be shown that long-term impacts from those renewals or amendments will be substantially the same as the existing development). b. The development with associated mitigation will not result in a net loss of GRSG Key habitat and mitigation will provide a net conservation benefit to the respective PHMA; c. The project and associated impacts will not result in a net loss of GRSG Key habitat or habitat fragmentation or other impacts causing a decline in the population of the species within the relevant Conservation Area (the project will be outside Key habitat in areas not meeting desired habitat conditions or the project will provide a benefit to habitat areas that are functioning in a limited way as habitat); d. The development cannot be reasonably accomplished outside of the PHMA; or can be either: 1) developed pursuant to a valid existing authorization; or 2) is co-located within the footprint of existing infrastructure (proposed actions will not increase the 2011 authorized footprint and associated impacts more than 50 percent, depending on industry practice). e. Development will be implemented adhering to the required design features (RDF) described in Appendix C; f. The project will not exceed the disturbance cap (MD SSS 27) g. The project has been reviewed by the State Implementation Team and recommended for consideration by the Idaho Governor.	construction of the new communication station…BLM would grant an amendment to the current CTCI 30-year right-of-way lease for operation and maintenance…BPA would be a tenant of the newly built facility." (EA, Proposed Action section). b. The project area is outside of GRSG Key Habitat and therefore will not result in a net loss of habitat. Although, the project will have a 0.5 acre debit as projected by the IDFG HQT which will be offset to obtain a net conservation gain. See "rationale or brief description of mitigation" section. c. The project area is outside of GRSG Key Habitat and therefore will not result in a net loss of habitat. See (b) above. d. This criteria is met as the development is co-located within the footprint of existing infrastructure e. The proposed action will be implemented in adherence of all applicable RDFs (see below). f. The proposed action will not exceed the disturbance cap. g. The project was submitted for public review during the scoping process. Initial project comments were received from IDFG on 3/4/2019 and from OSC on 3/8/2019. Cooperating agency status with OSC was established on 12/14/20 in accordance with MOU ID-SO-2019-2. BLM and BPA received additional comments from OSC on 12/22/2020 and incorporated them by 3/19/2021. A meeting between BLM, BPA, Tetra Tech, IDFG and OSC was held on 1/15/2021 where mitigation and NEPA documentation were discussed. IDFG ran the Habitat Quantification Tool on 1/26/2021 and a recommendation for mitigation was agreed upon by BLM, OSC, IDFG and project proponent (BPA; CTCI) during 2/18/2021 meeting.

	MD SSS 30	Yes	The following Anthropogenic Disturbance Development Criteria must be met in the screening and assessment process for proposals in PHMA and IHMA to discourage additional disturbance in PHMA and IHMA (as described in MD LR 2 and MD RE 1; applies to Idaho only): a. Through coordination with the USFWS and State of Idaho (as described in MD CC 1), it is determined that the project cannot be achieved, technically or economically, outside of this management area; and b. The project siting and/or design should best reduce cumulative impacts and/or impacts on GRSG and other high value natural, cultural, or societal resources; this may include colocation within the footprint for existing infrastructure, to the extent practicable; and c. The project results in a net conservation gain to GRSG Key habitat or with beneficial mitigation actions reduces habitat fragmentation or other threats within the Conservation Area; and d. The project design mitigates unavoidable impacts through appropriate compensatory mitigation; and e. Development will be implemented adhering to the RDFs described in Appendix C. f. The project will not exceed the disturbance cap (MD SSS 27).	The project design features allow for all of the Anthropogenic Disturbance Development Criteria to be met: a. The project site cannot be located outside of PHMA due to the requirements for a communication site and the need for co-location. See conformance statement for MD SSS 29 (g) for explanation of coordination. b. The project site is being co-located with existing infrastructure and RDFs are being implemented throughout the project design. c. The project will have a 0.5 acre debit as projected by the IDFG HQT which will be offset to obtain a net conservation gain. See "rationale or brief description of mitigation" section. d. See "c." above. e. All applicable RDFs will be incorporated into the project design where practicable. f. The project will not exceed the 3% disturbance cap. (EA, Proposed action, Wildlife Environmental Consequences sections; Appendix D).
	MD SSS 31	Yes	Co-locating new infrastructure within existing ROWs and maintaining and upgrading ROWs is preferred over the creation of new ROWs or the construction of new facilities in all management area. Colocation for various activities is defined as: - Communication Sites – The installation of new equipment/facilities on or within or adjacent to existing authorized equipment/facilities or within a communication site boundary as designated in the Communication Site Plan.	The proposed project area will be co-located with an existing communication site (EA, Proposed Action section)
	MD SSS 32	Yes	Incorporate RDFs as described in Appendix C in the development of project proposal implementation, reauthorizations or	The proposed action will follow all applicable management decisions and RDFs from the ARMPA (EA, Wildlife Environmental Consequences section).

MD SSS 33	Yes	Conduct implementation and project activities, including construction and short-term anthropogenic disturbances consistent with seasonal habitat restrictions described in Appendix C	Seasonal restrictions described in ARMPA Appendix C will be followed and are reflected in the RDFs (EA, 2.1.3 Proposed Action: Construction Schedule section; Appendix D).
MD SSS 35	No	In undertaking BLM management actions, and consistent with valid and existing rights and applicable law in authorizing third-party actions, the BLM will apply the lek buffer-distances identified in the USGS Report Conservation Buffer Distance Estimates for Greater Sage-Grouse – A Review (Open File Report 2014-1239) in accordance with Appendix B.	Using the most current IDFG lek map, the nearest lek to the proposed project area is 4.6 miles away which is outside of the 3.1 mile buffer for communication towers described in Appendix B of the ARMPA.
MD SSS 40	Yes	Monitor project construction areas for noxious weed and invasive species for at least 3 years, unless control is achieved earlier.	Invasive species will be monitored and treated following construction. (EA, Appendix D).
MD VEG 12	Yes	Require project proponent (projects described in MD SSS 27 and which are included in the anthropogenic disturbance cap evaluation) to ensure that noxious weeds and invasive species caused as a result of the project are treated to eliminate establishment on the disturbed project construction areas for at least 3 years and monitored and treated during the life of the project.	Vehicle washing is incorporated into the project BMPs. Additionally, invasive species will be monitored and treated following construction (EA, Appendix D).
Obj LR 1	Yes	Effects of infrastructure projects, including siting, will be minimized using the best available science, updated as monitoring information on current infrastructure projects becomes available.	The proposed action will follow all applicable management decisions and RDFs from the ARMPA (EA, Appendix D).
MD LR 2	No	PHMA: Designate and manage PHMA as ROW avoidance areas, consistent with MD SSS 29 and subject to RDFs and buffers (Appendices B and C). IHMA: Designate and manage IHMA as ROW avoidance areas, consistent with MD SSS 30 and subject to RDFs and buffers. GHMA (Idaho and Montana): Designate and manage GHMA as open with proposals subject to RDFs and buffers.	PHMA is designated as an avoidance area. Although the plan encourages moving projects out of PHMA, the proposal could move forward as it meets the requirements of MD SSS 29 and MD SSS 30 (see above).

Required Design Features that Seem Applicable:

RDF Number	Apply?	RDF Text	Conformance Statement.
RDF 2	No	No repeated or sustained behavioral disturbance (e.g., visual, noise over 10 dbA at lek, etc.) to lekking birds from 6:00 pm to	The project area is 4.6 miles from the nearest lek (EA, Wildlife Environmental Consequences section).

		9:00 am within 2 miles (3.2 km) of leks during the lekking season.	
RDF 3	No	Avoid mechanized anthropogenic disturbance, in nesting habitat during the nesting season when implementing: 1) fuels/vegetation/habitat restoration management projects, 2) infrastructure construction or maintenance, 3) geophysical exploration activities; 4) organized motorized recreational events.	Project construction would only occur from July 15-December 15 of each year which is outside of the sage grouse nesting season (EA, 2.1.3 Proposed Action: Construction Schedule section).
RDF 4	No	Avoid mechanized anthropogenic disturbance during the winter, in wintering areas when implementing: 1) fuels/vegetation/habitat restoration management projects, 2) infrastructure construction or maintenance, 3) geophysical exploration activities; 4) organized motorized recreational events.	Proposed project area is outside of sage grouse wintering habitat (GIS, Sage Grouse SUA Winter).
RDF 52	Yes	Where technically and financially feasible, bury distribution powerlines and communication lines within existing disturbance.	The proposed powerline would be a 220' buried spur off of an existing line. The entire length of the line is anticipated to be within a previously disturbed area or within the footprint of the proposed permanent disturbance. The proposed fiber optic line would be 2500' and adjacent to the existing access road. For 0.15 miles the fiber optic line would veer away from the road to avoid a sensitive site. All disturbed areas would be reseeded (EA, Proposed Action section).
RDF 53	Yes	Above-ground disturbance areas would be seeded with perennial vegetation as per vegetation management.	Disturbed areas would be seeded using a BLM approved seeding mix per the project BMPs (EA, Appendix D).
RDF 54	Yes	Place infrastructure in already disturbed locations where the habitat has not been fully restored.	The proposed project area will be co-located with an existing communication site. A portion of this existing site has previously been disturbed while up to 0.6 acres of vegetation will be removed (EA, Proposed Action section).
RDF 55	Yes	Cluster disturbances, operations (fracturing stimulation, liquids gathering, etc.) and facilities as close as possible.	The proposed project area will be co-located with an existing communication site (EA, Proposed Action section).
RDF 56	Yes	Co-locate linear facilities within one mile of existing linear facilities	The proposed fiber optic line will be co-located with an existing road (EA, Proposed Action).
RDF 58	Yes	Locate staging areas outside the Priority Habitat Management Areas to the extent possible.	Staging areas are unable to be located outside of PHMA. However, vegetation in staging areas will not be removed to the extent possible (EA, Appendix D).
RDF 61	No	Use free standing structures where possible, to limit the use of guy wires. Where guy wires	The proposed communication tour would be free-standing without the use

			are necessary and appropriate bird collision diverters would be used, if doing so would not cause a human safety risk.	of guy wires (EA, Wildlife Environmental Consequences section; Appendix D).
	RDF 63	Yes	Construction and development activities should conform to seasonal restrictions.	See above RDFs for conformance to seasonal restrictions (EA, 2.1.3 Proposed Action: Construction Schedule section; Appendix D).
	RDF 71	Yes	Control the spread and effects of non-native plant species (Gelbard and Belnap 2003, Bergquist et al. 2007, Evangelista et al. 2011). (E.g. by washing vehicles and equipment.)	Vehicle washing is incorporated into the project BMPs. Additionally, invasive species will be monitored and treated following construction (EA, Appendix D).
	RDF 80	No	Fit transmission towers with anti-perch devices (Lammers and Collopy 2007). 81.	Due to infrastructure worker safety as priority and thus need for larger footprint, perch deterrents will not be installed on the communication tower (EA, Alternatives Considered but Eliminated).
	RDF 88	Yes	Utilize existing roads, or realignments of existing routes to the extent possible.	Vehicles used during project implementation would stay on existing routes other than in construction and staging areas (EA, Appendix D).

Is Mitigation Required: Yes *(If the Answer is yes please use the other Conformance form and submit it to the State Office)*

Rationale or Brief Description of Mitigation: Although mitigation can not be required due to BLM IM-2019-018, mitigation was agreed upon by BLM, OSC, IDFG and project proponent (BPA; CTCI) during 2/18/2021 meeting. The current proposed mitigation is that the project proponent will purchase riparian plants for the Lower Goldburg Habitat Improvement project to offset the 0.5 acre debit projected by the IDFG HQT (EA, Appendix D).

Is the Project in Conformance with the Sage-grouse ARMPA (Sept 2015): Yes

Rationale: The proposed action will follow all applicable management decisions and RDFs. Additionally, co-location with an existing facility, lack of suitable sage grouse habitat, and adherence to seasonal habitat restrictions for construction activities allows for the proposed action to be in conformance.

Reviewer(s):	**Date:**

Additional Needs:

Conclusion:

APPENDIX C
PHOTOGRAPHS AND FIGURES

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APPENDIX C-1
EXAMPLE PHOTOGRAPHS

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Figure C1-1. Example CTCI Communication Station

Figure C1-2. Example of a Typical BPA Communication Station

Figure C1-3. Existing Custer Telephone Communication Facility at Willow Creek Summit Looking North

Figure C1-4. Existing Custer Telephone Communication Facility at Willow Creek Summit Looking South

Figure C1-5. Windy Devil Existing Communication Station

Figure C1-6. Windy Devil Existing Communication Station Overview

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APPENDIX C-2
PROJECT DESIGN FIGURES

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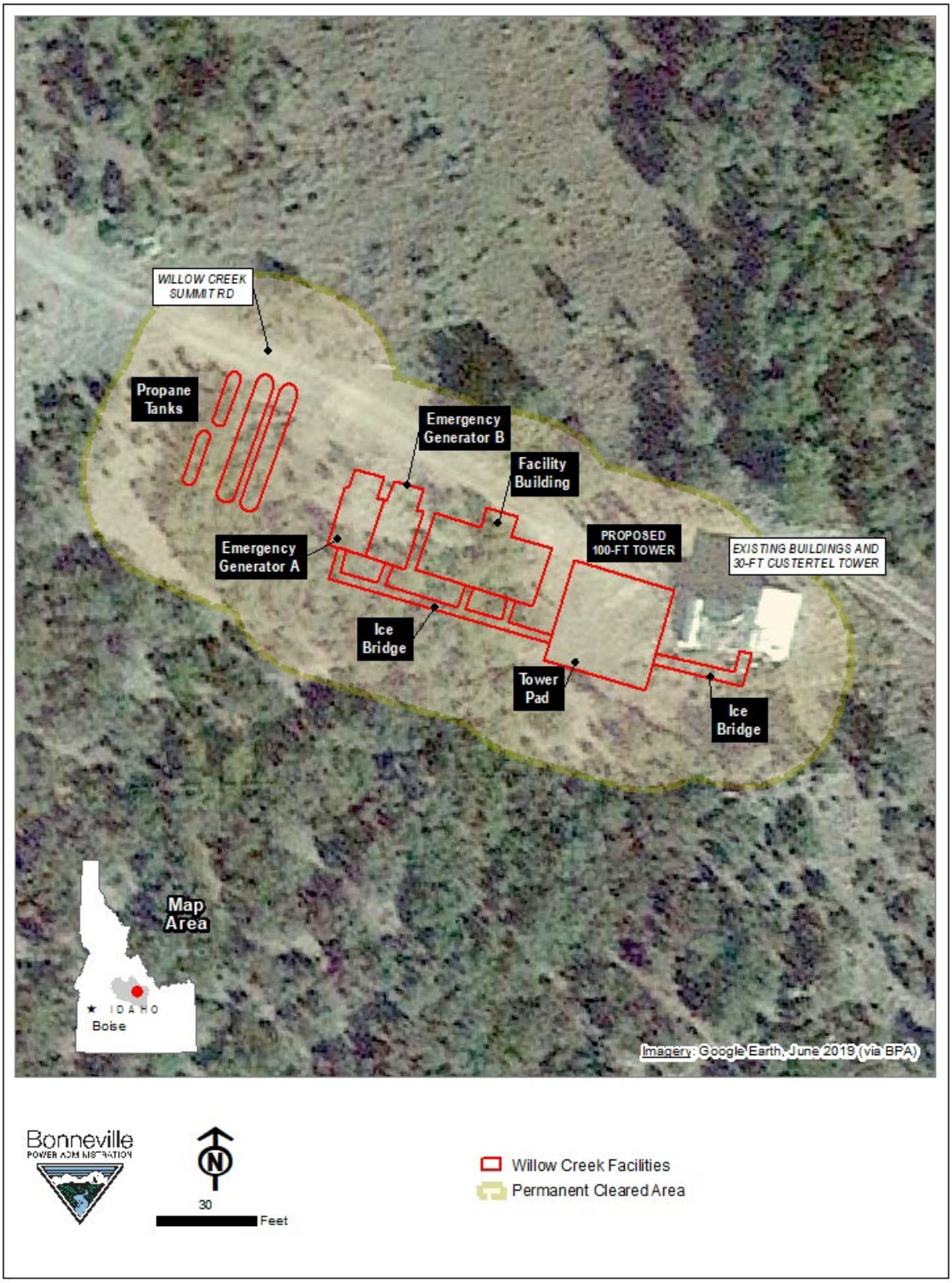

Figure C2-1. Willow Creek Summit Project Elements

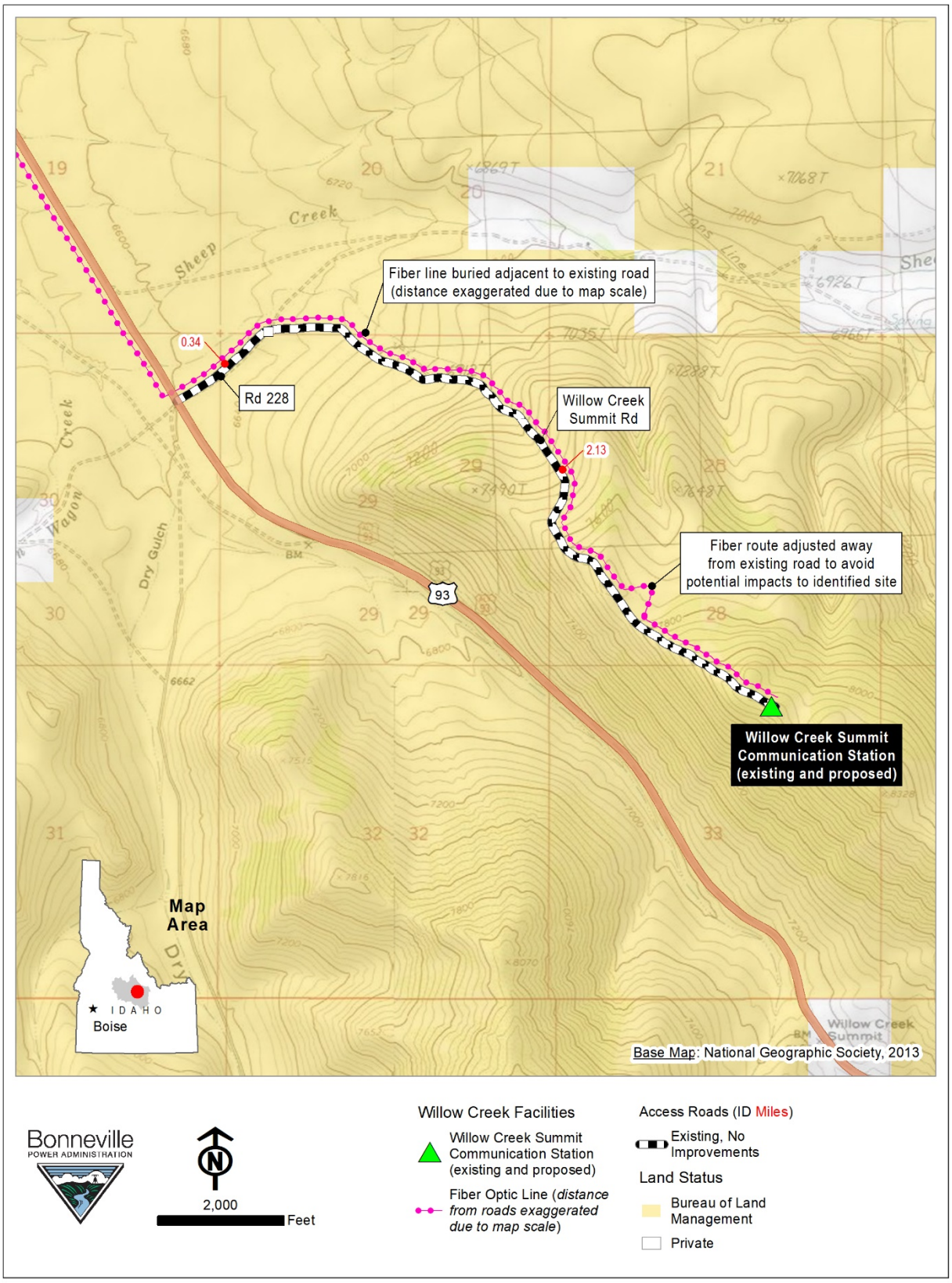

Figure C2-2. The Existing BLM Willow Creek Summit Road View Looking North

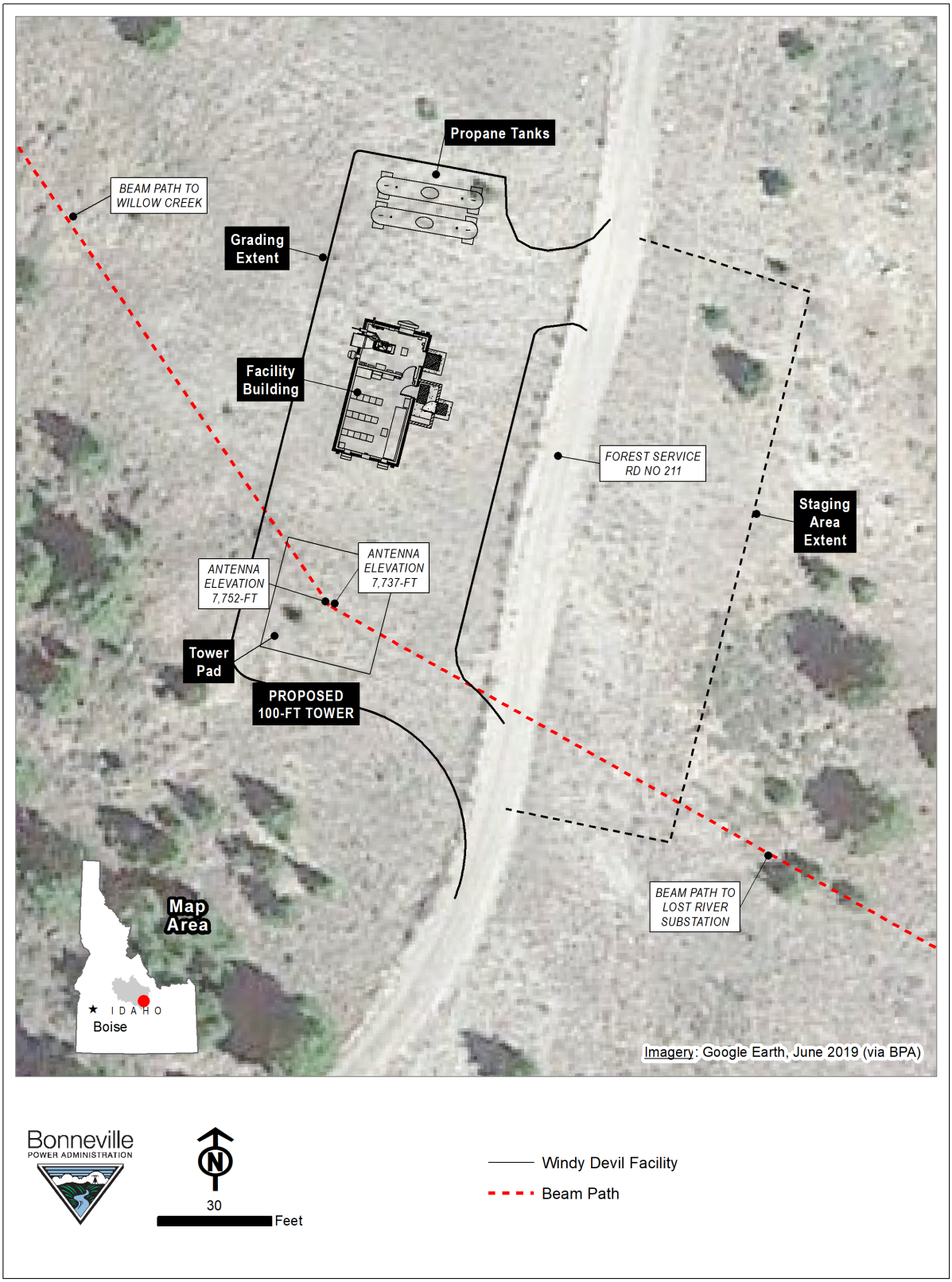

Figure C2-3. Windy Devil Project Elements

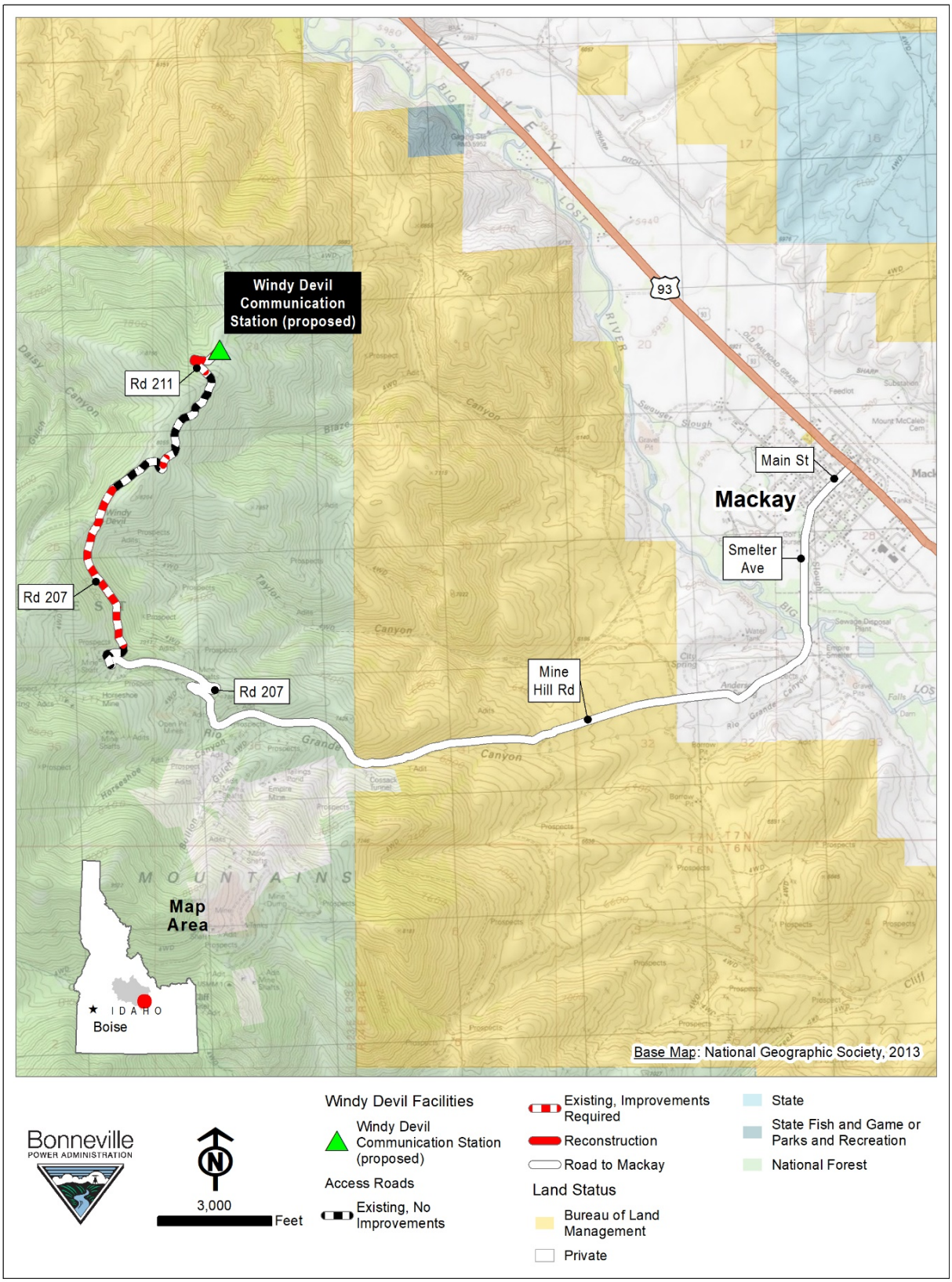

Figure C2-4. Access Roads to the Windy Devil Communication Station

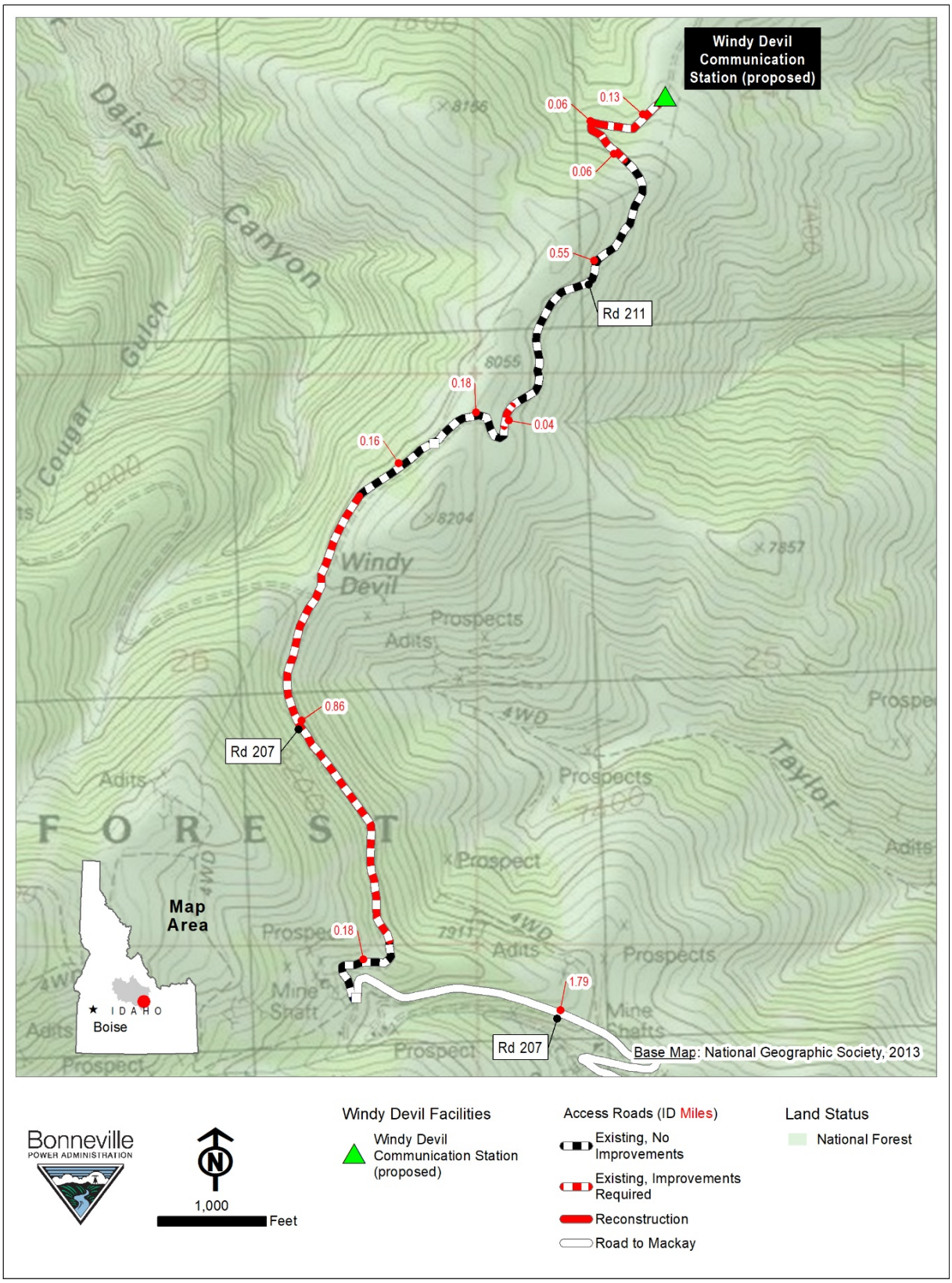

Figure C2-5. Windy Devil Communication Station Access Road Improvements

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APPENDIX C-3
VISUAL RESOURCE FIGURES

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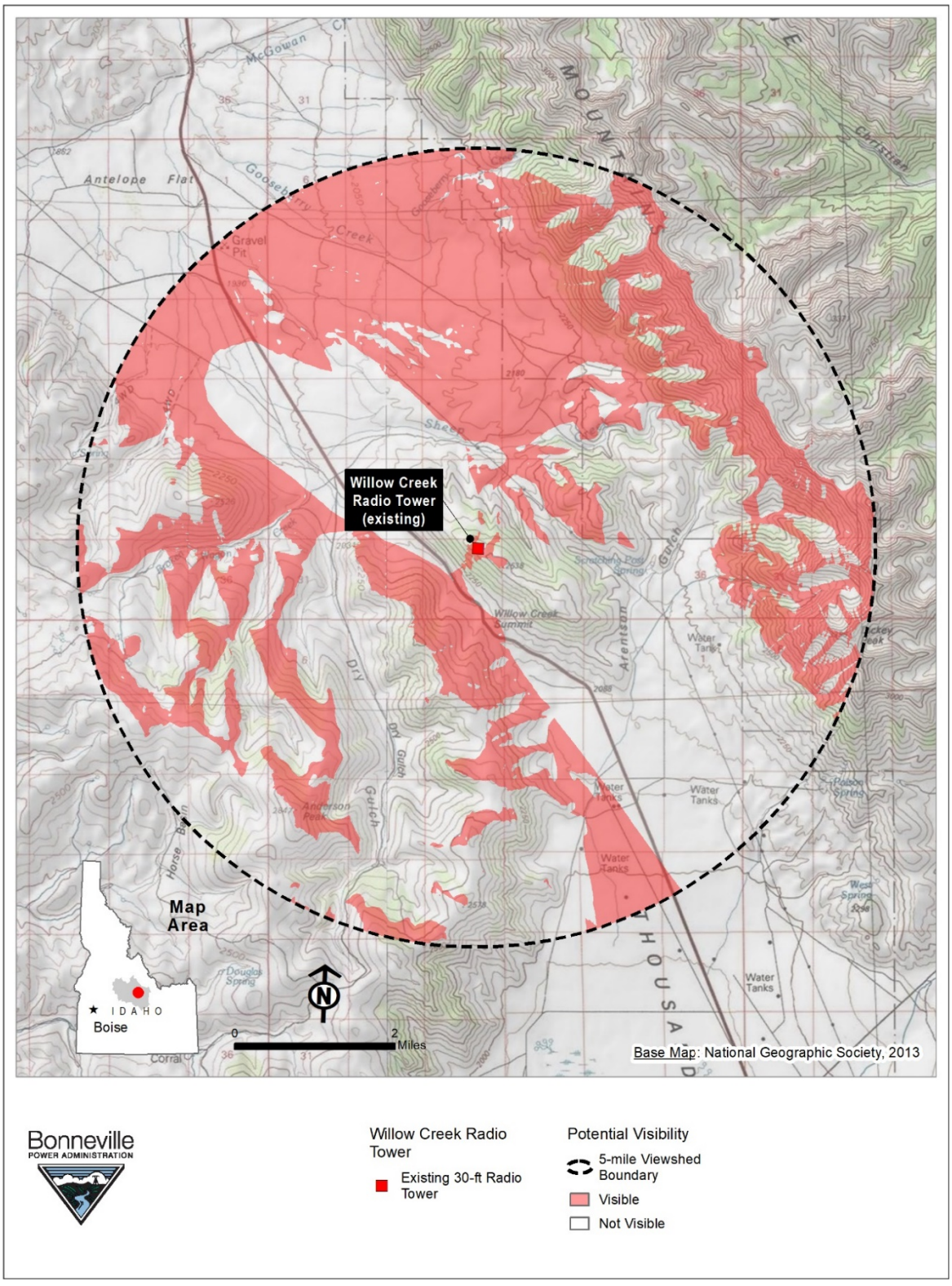

Figure C3-1. Viewshed of Existing Willow Creek Summit Communication Facility (Bare Earth Analysis)

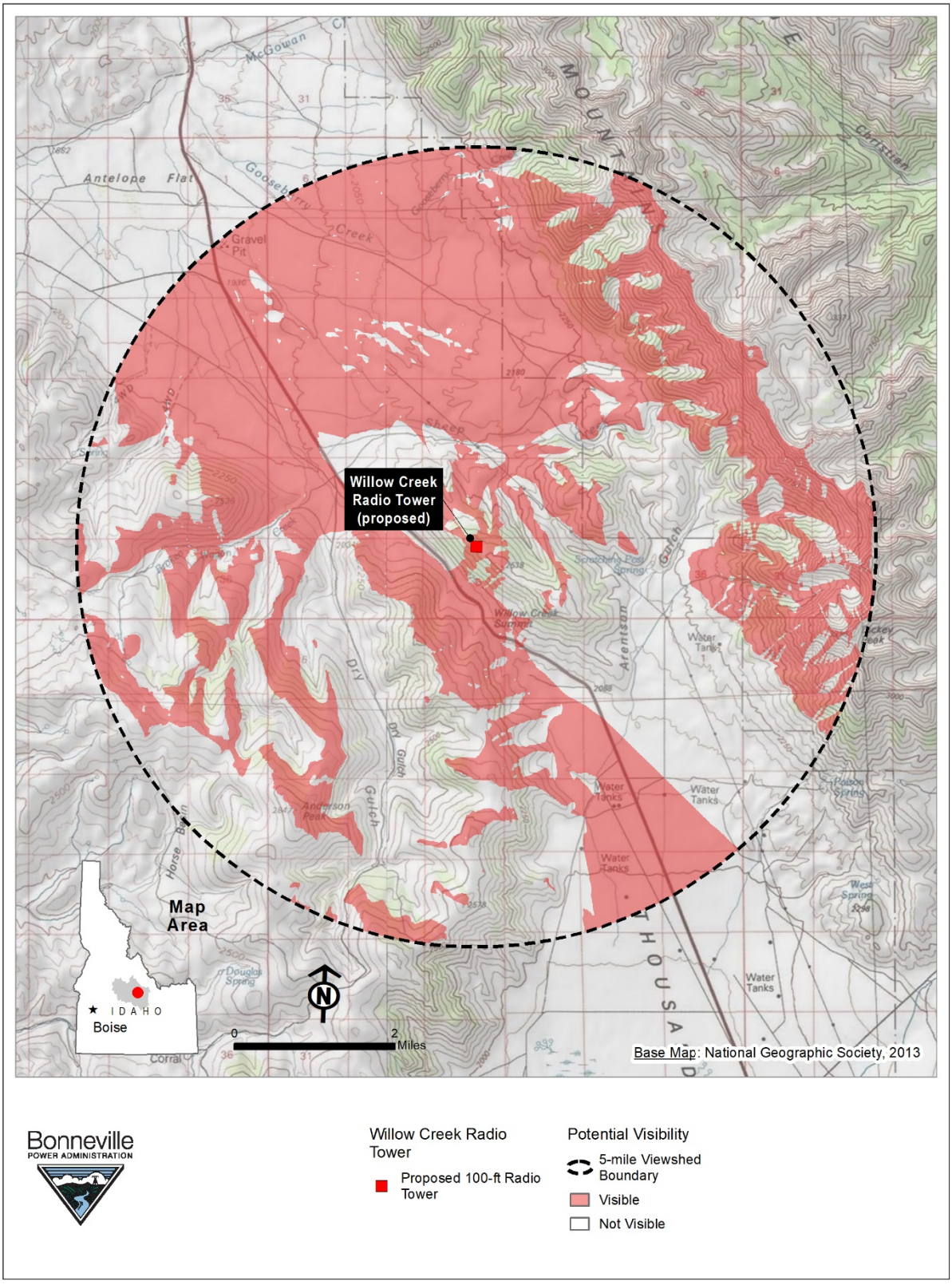

Figure C3-2. Viewshed of Proposed Willow Creek Summit Communication Station (Bare Earth Analysis)

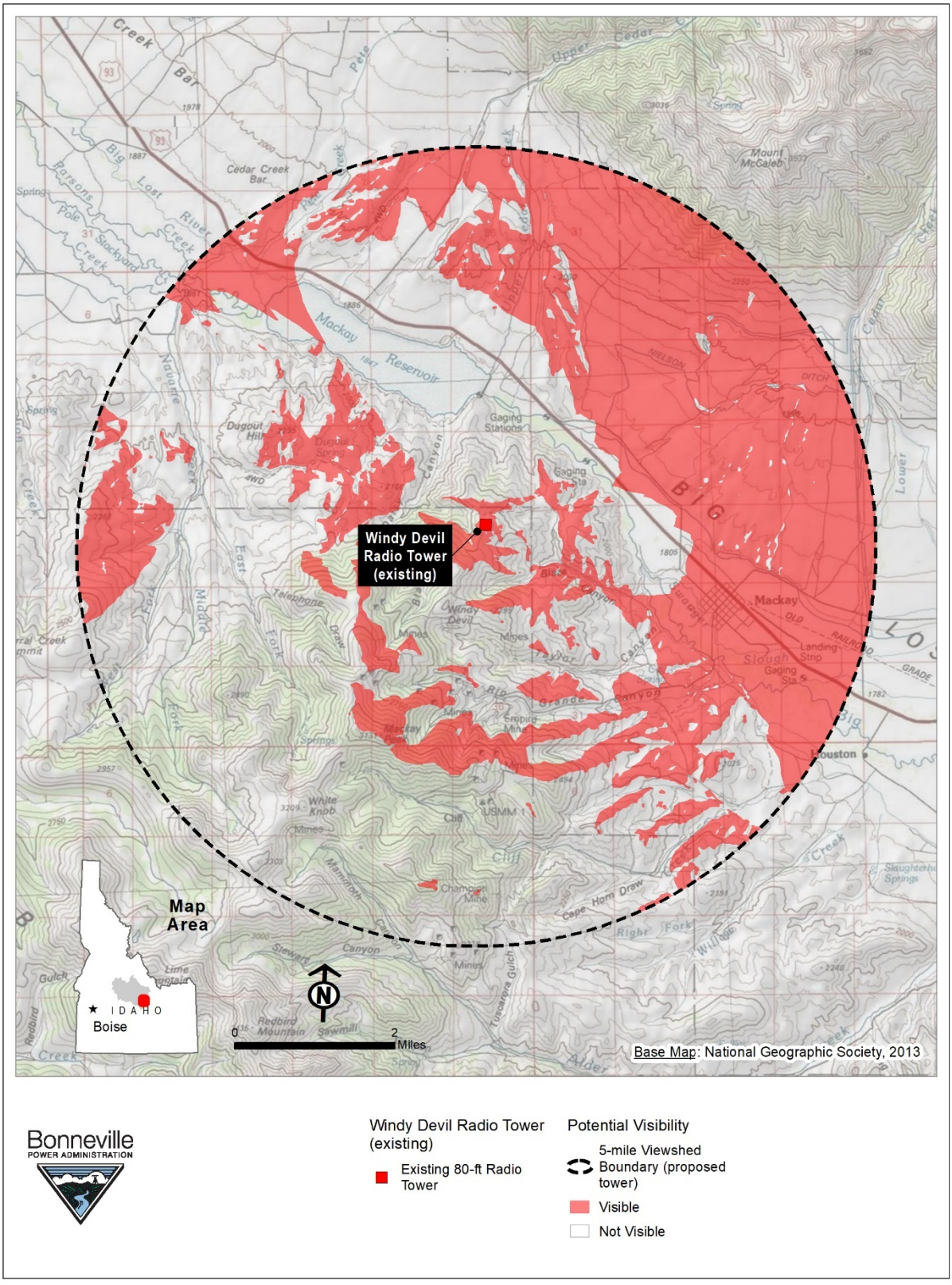

Figure C3-3. Viewshed of Existing Windy Devil Communication Facility (Bare Earth Analysis)

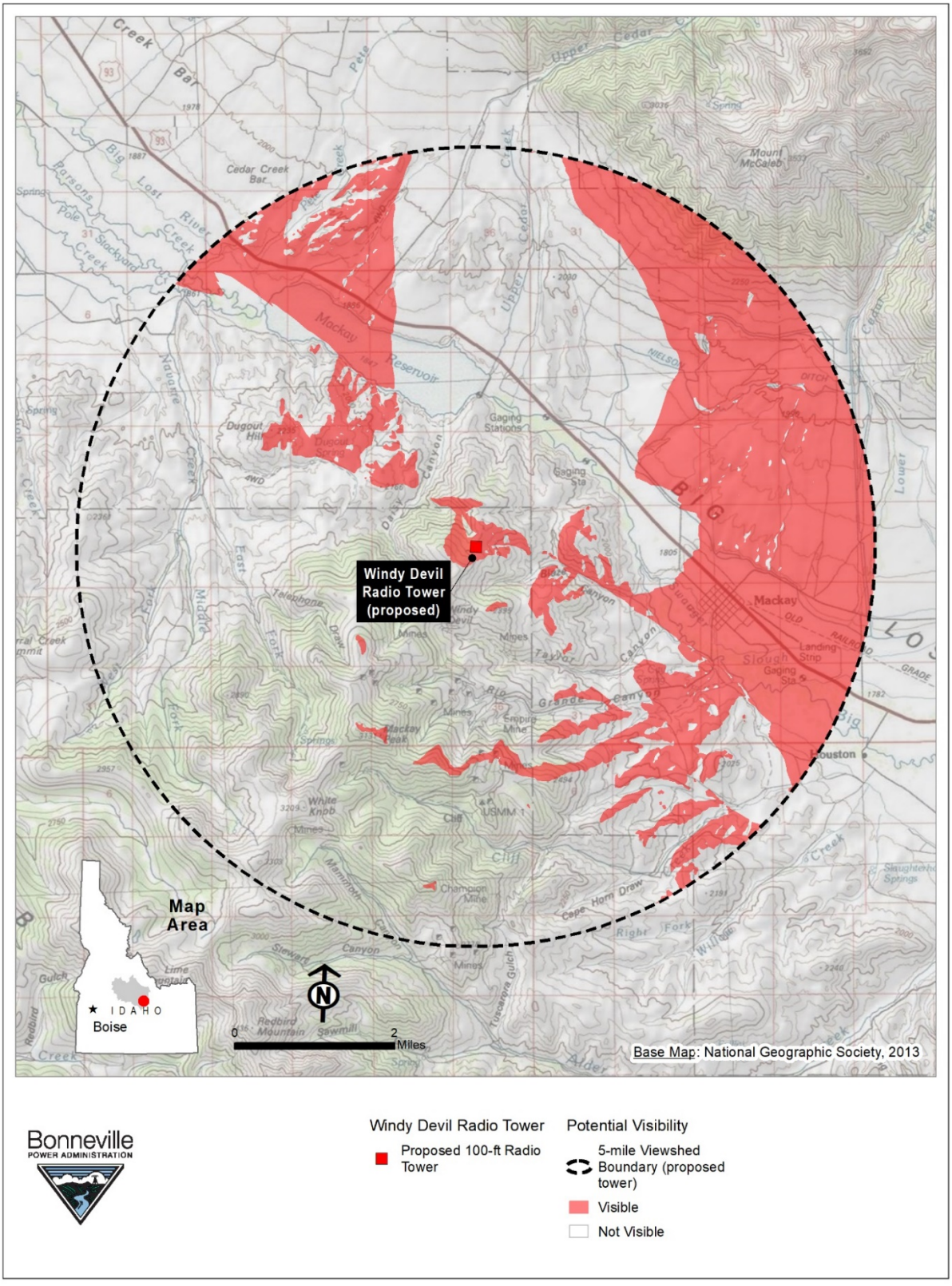

Figure C3-4. Viewshed of Proposed Windy Devil Annex Communication Station (Bare Earth Analysis)

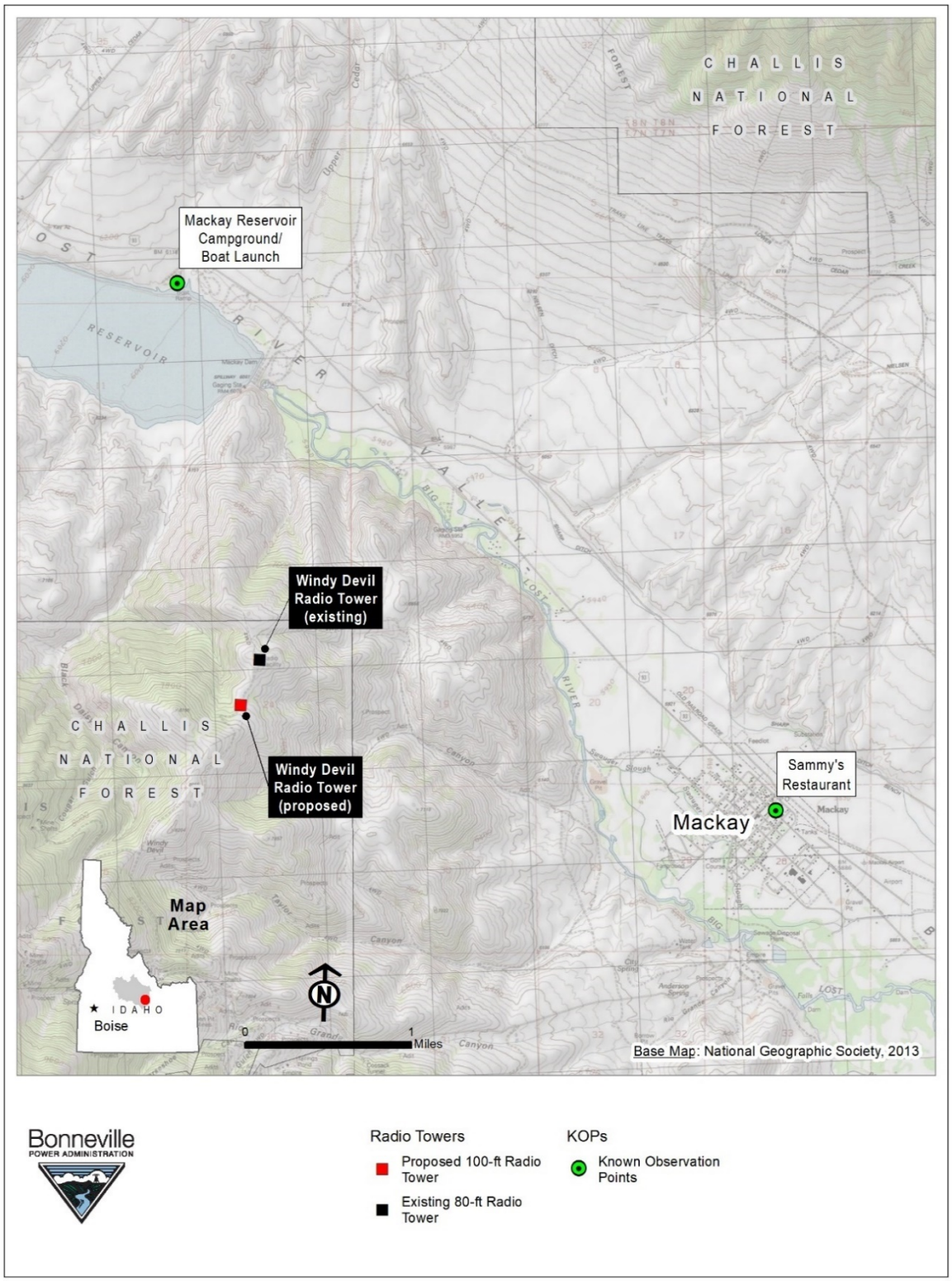

Figure C3-5. Known Observation Points (KOP) for the Windy Devil Annex Communication Station (Bare Earth Analysis)

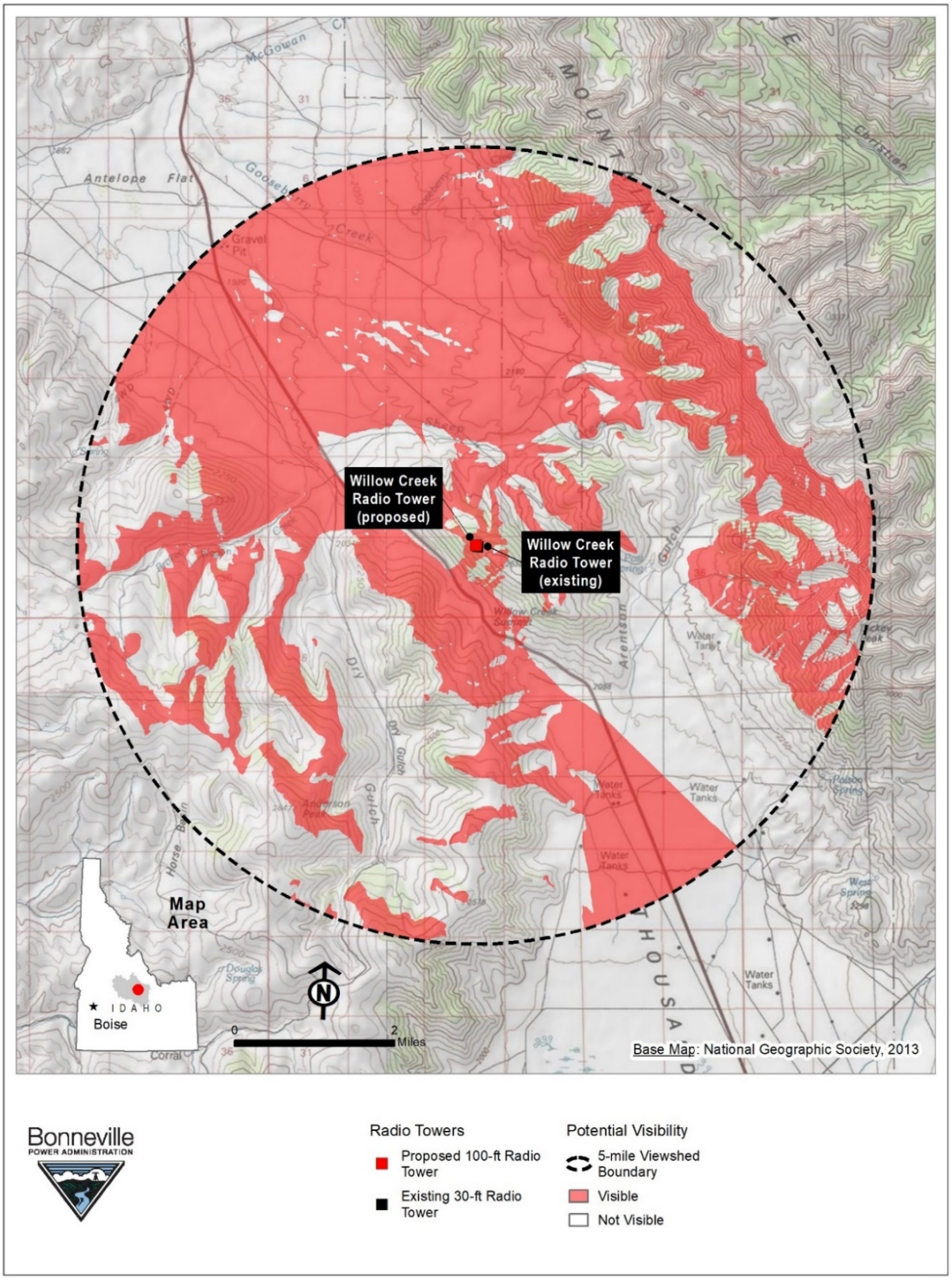

Figure C3-6. Willow Creek Summit Viewshed Proposed and Existing Communication Stations (Bare Earth Analysis)

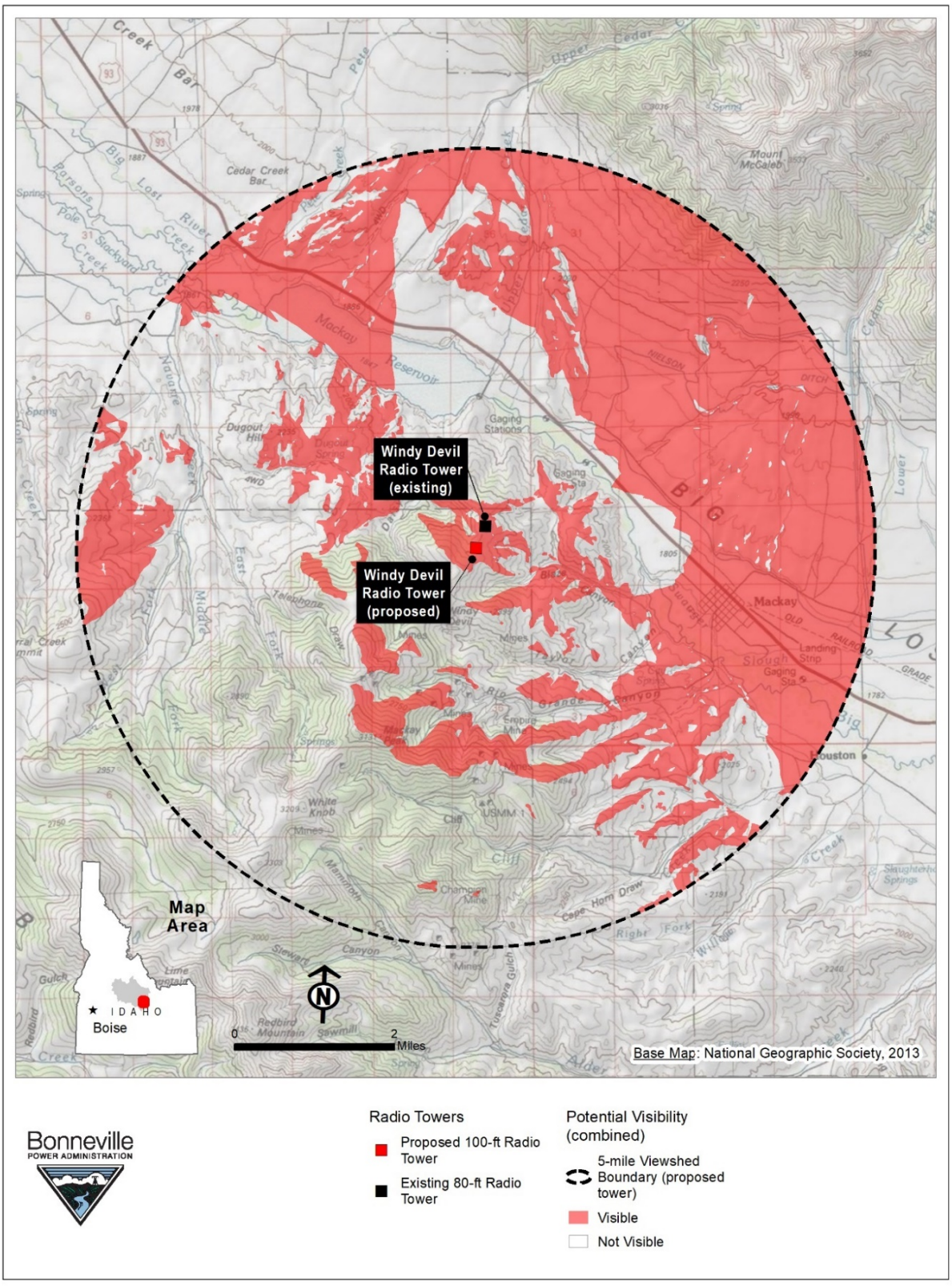

Figure C3-7. Windy Devil Viewshed Proposed and Existing Communication Stations (Bare Earth Analysis)

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APPENDIX D
BEST MANAGEMENT PRACTICES, DESIGN FEATURES AND MITIGATION MEASURES

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DESIGN FEATURES AND MITIGATION MEASURES SPECIFIC TO WILLOW CREEK SUMMIT

The following design features and mitigation measures would be adhered to at the Willow Creek Summit site:

Wildlife

- Elk winter range (which includes the entire Willow Creek site and access roads) would be closed to all vehicles and construction activities from December 15 to April 30. Right-of-way holders could request an exemption. Exemptions would be considered depending on snow depth, temperatures, animal conditions, and other factors.

Greater Sage Grouse

* An asterisk after any mitigation measure below denotes that measure would mitigate effects to greater sage grouse at the Willow Creek Summit project area in addition to mitigating other non-specific project effects. Some of these are redundant to the Required Design Features (RDF) for development in PHMA habitat as identified in the BLM Sage-Grouse Conformance Review (App. B). The Conformance Review should be considered the definitive source for specific greater sage-grouse mitigating RDFs.

Specific measures for greater sage-grouse not in the RDF list of the Conformance Review:

- Remove predatory bird nests from the communication tower when they are observed; obtain USFWS and IDFG permission beforehand

Greater Sage Grouse PHMA Compensatory Mitigation

- The Idaho OSC, IDFG, and the BLM-Idaho State Office are reviewing a proposal for compensatory mitigation drafted by BLM-Challis, BPA, and CTCI. As currently configured, CTCI would procure vegetation planting materials for a BLM habitat improvement project in the nearby Lower Goldburg Allotment that is entirely within greater sage-grouse Important Habitat Management Area (IHMA) currently being managed as PHMA because of population triggers being tripped in the Mountain Valleys assessment unit. The intent of the mitigation would be to improve greater sage-grouse late brood-rearing habitat.

Cultural Resources

- Locate equipment and material storage areas, and access roads to avoid known cultural resource sites and limit ground disturbances.
- Conduct archaeological monitoring in the vicinity of cultural site Temp Site AH-05 as well as the two cultural isolate sites, Temp Sites AH-03 and AH-04, as the two isolates are considered to be in an area of high archaeological potential for containing unidentified archaeological resources.
- Depict cultural site Temp Site AH-05 as a sensitive ‘avoidance’ area in construction documents, on construction maps, and in the field.

- Site boundaries would be marked by the cultural monitor for avoidance prior to construction and would be blocked by flagging to prevent disturbance to the site. Flagging would be removed by the cultural monitor upon completion of the proposed Project work.
- Follow BPA's Inadvertent Discovery Procedure, which requires that if an inadvertent discovery of cultural resources is made, stop all work in the vicinity would stop immediately and immediately notify the BPA archaeologist, BLM, State Historic Preservation Office, and affected Tribes, if applicable, would be notified immediately.

Vegetation

- Monitor project construction areas for noxious weed and invasive species for at least 3 years, unless control is achieved earlier. Following the recording and/or consultation with the BLM, BPA would be responsible for weed treatment within the area specified. All treatments would adhere to federal guidelines and regulations and ensure that BLM-approved chemicals are used.*

Visual Resources

- Paint the Willow Creek Summit Communication Station buildings, conduit, fencing, and any other project features that can be painted Covert Green from the Standard Environmental Colors chart (BLM 2008)

DESIGN FEATURES AND MITIGATION MEASURES SPECIFIC TO WINDY DEVIL

The following design features and mitigation measures would be adhered to at the Windy Devil site:

Cultural Resources

- Locate equipment and material storage areas, and access roads to avoid known cultural resource sites and limit ground disturbances.
- Depict cultural site 10CR1978 (Horseshoe Mine and Taylor Homestead site) as a sensitive 'avoidance' area in construction documents, on construction maps, and in the field.
- Follow BPA's Inadvertent Discovery Procedure, which requires that if an inadvertent discovery of cultural resources is made, stop all work in the vicinity would stop and immediately notify and the BPA archaeologist, USFS, State Historic Preservation Office, and affected Tribes, if applicable, would be notified immediately.

Vegetation

These mitigation measures are for Welsh's buckwheat and come from the Wind Devil Communication Site Management Plan (SCNF 2011):

- Keep equipment on the USFS road and existing access road until reaching the construction site to minimize impacts to individuals on the road edges.

- Do not grade the access road as this would eliminate the individuals in the road bed and put those on road edges at risk.
- Keep equipment to the south of the existing towers as Welsh's buckwheat has established around existing towers and structures.
- Contact the USFS Lost River Ranger District prior to the start of construction, so that the deciding official (district manager) can determine whether USFS personnel would need to be onsite to ensure minimal impact to this population or whether flagging or other means of identifying the sensitive plant would be necessary to reduce impacts.

DESIGN FEATURES AND MITIGATION MEASURES COMMON FOR BOTH WILLOW CREEK AND WINDY DEVIL

The following design features and mitigation measures would be adhered to for all project work:

Soils

- Control dust on roads during construction using water trucks or other USFS/BLM-approved method of dust control.
- Do not use petroleum-based products for dust abatement.
- Do not drain equipment oil or fuel onto the ground. Haul oil, fuel and other chemicals to an approved site for disposal. All fuel storage tanks must meet current fire department, federal, state and local government safety and hazardous materials requirements
- Inspect and maintain access roads after construction to ensure proper function and nominal erosion levels.

Vegetation

- Minimize or avoid unnecessary ground disturbance and clearing activities during construction of communication buildings and radio towers.*
- Flag all weed populations that need to be avoided during construction.*
- Inform contractors on how to identify noxious weed species that occur in the project areas and explain required actions to prevent their spread.*
- Do not drive over, or otherwise disturb areas outside the designated construction areas.*
- Store heavy construction equipment during construction within disturbance limits agreed to by BLM/USFS.*
- Staging areas would not be cleared of vegetation, equipment and supplies would be placed on top of vegetation where practicable.
- Store cleared vegetation next to the area from which it is stripped to avoid transporting soil-borne noxious weed seeds, roots, or rhizomes.*

- Ensure erosion control, sediment-barrier installations, or mulch distribution from the state-cleared sources are free of noxious weeds.*
- Ensure road fill materials are obtained from weed-free quarries.*
- Train contractors to avoid flagged or identified sensitive areas.
- Thoroughly clean all vehicles used in the construction, maintenance and operations of project prior to moving equipment across or onto BLM/USFS-managed lands. Use high-pressure washing or other effective method to clean the insides of bumpers, wheel wells, undercarriages, inside belly plates, excavating blades, buckets, tracks, rollers, drills, buckets, shovels, and any digging tools, etc., to remove potential weeds, seeds, and soil carrying weed propagules, and vegetative material.*
- Minimize the amount of bare soil created in areas where activities disturb or remove vegetation. Employ BLM/USFS-approved methods of soil stabilization to effectively control erosion and weeds. Gravel or equivalent mulch would be acceptable materials for placement along pads and roadways.
- Seed disturbed areas with certified seed of native species in the late fall to deter erosion and curtail the introductions of weeds. Obtain BLM/USFS staff approval for any seed mixture and dispersal method prior to purchase and implementation.*

Wildlife

- Conduct brush removal, tree trimming, grading, and any other ground-disturbing activities outside of the primary bird nesting season to the extent possible. For threatened, endangered, and sensitive (TES) species identified in this EA, the primary nesting season begins as early as March 7 (burrowing owl) and extends through August 15 (ferruginous hawk and golden eagle) (BLM 2020). If construction activities must occur during the primary bird nesting season, a nest clearance survey should be scheduled within 10 days prior to the planned disturbance. If an active nest is identified, coordination with appropriate agency personnel shall occur to determine measures to avoid or minimize impacts on the nesting bird, if appropriate.*
- Towers would be less than 199 feet above ground level. This height increases the mean free space between the top of the tower and average bird flight height, even in weather conditions with reduced cloud ceiling.
- Free standing towers such as lattice towers or monopole structures would be employed.*
- Do not install tower lighting; this is the preferred option if Federal Aviation Administration regulations and lighting standards permit.
- Security lighting for on-ground facilities, equipment, and infrastructure should be motion- or heat-sensitive, down-shielded, and of a minimum intensity to reduce nighttime bird attraction and eliminate constant nighttime illumination while still allowing safe nighttime access to the site.

- If birds are nesting on communication towers that require maintenance activities, contact the state natural resource protection agency and/or the United States Fish and Wildlife Service (USFWS) for permits, recommendations, and requirements.*
- Schedule construction and maintenance activities around the nesting and activity schedule of protected birds.*

Visual Resources

- Colors of the equipment shelter including the roof must be consistent with the surrounding area and the communications site plan and must be approved in advance by the BLM and the USFS.
- Paint the Willow Creek Summit Communication Station buildings, conduit, fencing, and any other project features that can be painted Covert Green from the Standard Environmental Colors chart (BLM 2008).
- Paint buildings a color to blend in with the background landform.
- Screen the propane tanks if required by BLM/USFS.
- The tower material must comply with the communications site plans. Use dark gray galvanized matte finish for all lattice structures. Finish should be specified and verified as non-reflective. Dish antennas on the lattice towers would be gray.
- Use surface-salvaged rock and brush on fill slopes and trench lines to soften the color and texture contrast. Where practicable, place salvaged large rocks so their previously exposed faces are up, to retain the look of the surrounding landscape. This would include fill slopes, the top of trenched utility lines, and the side of site access.
- Remove visually obtrusive erosion-control devices, such as silt fences, plastic ground cover, and straw bales, as soon as the area is stabilized following construction.

Noise

- Limit construction noise to daylight hours.*
- Operate and maintain all equipment to minimize noise generation and ensure engines have appropriate mufflers.*

Other

- Remove all trash from the sites and dispose of properly.
- Do not burn construction trash on public land.
- During construction, place signs (approved by the BLM/USFS) at each intersection along the access road letting the public know what hours and dates construction vehicles would be operating in the area.
- Do not allow radio frequency emissions from communication site to exceed the applicable public safety limits, as set by the Occupational Health and Safety Administration (OSHA) and the Federal Communications Commission (FCC).

- Coordinate the routing and scheduling of construction activity with Idaho Transportation Department, county road staff, and BLM as necessary.
- Post signs along roads to warn of construction activity, merging traffic, and temporary disruptions, as necessary.
- Prepare a Stormwater Pollution Prevention Plan (SWPPP) and an Erosion Control Plan (ECP) as determined by regulatory requirements addressing measures to reduce erosion and runoff and stabilize disturbed areas.
- Use mechanical barriers to erosion in disturbed areas as specified in the SWPPP or ECP.
- Implement a Spill Prevention, Control, and Countermeasure (SPCC) Plan that requires storage of fuel and other potential pollutants in a secure location away from washes. This plan must also ensure that spill containment and cleanup materials are readily available on site and restocked within 24 hours if used.
- Maintain vehicles and equipment in good working order to prevent oil and fuel leaks.
- Restrict refueling and servicing operations to locations where spilled material cannot enter ephemeral drainages.
- Do not use dust abatement additives or stabilization chemicals (typically magnesium chloride, calcium chloride salts, or lignosulfonate) within 25 feet of ephemeral drainages and when using, apply them so as to minimize the likelihood that they would enter drainages.
- Set a speed limit for construction vehicles on unpaved access roads of no greater than 25 miles per hour to minimize dust.
- Encourage carpooling and the use of shuttle vans among construction workers to minimize construction-related traffic and associated emissions.
- Turn off equipment engines when not in use to minimize exhaust emissions.
- Use local rock sources for construction where practicable to reduce transportation distances for construction materials.
- Use fire-prevention measures, such as an on-site fire trailer to prevent brush fires and the need for emergency response.
- Conduct crew safety meetings to start each workday to review potential safety issues and concerns.
- Conduct monthly meetings between BPA, CTCI, and the construction contractor to discuss safety concerns.
- Secure all equipment at the end of workdays to protect equipment and the general public.

Table D-1. USFWS Avoidance and Minimization Measures

This table lists the USFWS (2018) Recommended Best Practices for Communication Tower Design, Siting, Construction, Operation, Maintenance, and Decommissioning that would be applicable to the project.

Measure	Response
Siting and Construction of New Towers	
Communicate Project plans to nearest USFWS Field Office.	USFWS has been made aware of the Project through public scoping.
Co-locate communications equipment on existing towers or other structures	New towers are required; nearby existing towers are at capacity or unsuitable for project purposes.
All new towers should be sited to minimize environmental impacts to the maximum extent practicable.	The new tower would be co-located with the existing tower at Willow Creek Summit while the Windy Devil Annex tower would be located in a newly designated yard of the communication site. No new roads would be constructed, and utilities are already at the site, requiring trenching from existing transformers. Wetlands are not present.
Consider measures to reduce the risk of take of migratory birds.	Project actions do not intentionally take migratory birds. Construction activities are scheduled to occur during the migratory bird breeding season. Pre-construction nest-clearance surveys would be performed as needed (BLM 2020). Section 3.2.2 discusses measures to prevent invasive plant and noxious weed proliferation.
Tower designs should consider following the recommendations for tower height, guy wires, and lighting.	The Project adheres to these recommendations. The new towers would be 100 feet above ground level, the design would be a free-standing lattice tower, and the towers would be unlit.
Operation and Maintenance of All Towers	
Recommend that towers be unlit, when allowed by FAA regulations.	Towers would be unlit.
Recommend that other associated infrastructure be unlit.	Associated infrastructure would be unlit except when maintenance personnel are present.
Schedule vegetation removal and maintenance activities outside of the migratory bird peak breeding season.	Vegetation maintenance would occur outside the peak migratory bird breeding season.
If birds nest on the tower and maintenance of the tower is required, contact IDFG and/or USFWS to acquire any necessary permits, recommendations, or requirements.	BPA would contact IDFG and/or USFWS if a bird nest is found on the tower prior to taking action to remove the nest or perform maintenance activities.
Representatives from the USFWS or researchers should be allowed access to the site to evaluate bird use, conduct dead-bird searches, and conduct other research as necessary.	The communication site would be located on public land and would not be fenced.

Measure	Response
Decommissioning	
Towers should be removed from the site within 12 months of cessation of use, preferably sooner.	If the tower would no longer be in use it would be removed within the recommended timeframe.

APPENDIX E
BIOLOGICAL EVALUATION REPORT: PROPOSED COMMUNICATION FACILITY AT WINDY DEVIL

Note: the Biological Evaluation was prepared for and subsequently accepted by USFS prior to the ESA listing status upgrade of whitebark pine and the withdrawal of the threatened listing proposal for North American wolverine. The changes would not affect the results of the biological evaluation, but the phrasing of the determinations would change accordingly as follows.

Whitebark pine: The Project is ***not likely to jeopardize proposed species, or adversely modify proposed critical habitat*** (not 'may impact individuals but is not likely to cause a trend to federal listing or a loss of viability', page 20). Table 1 summaries included whitebark pine under both ESA, and SCNF Sensitive Species where there was a 'no impacts' determination based on specific SCNF conditions. This SCNF determination would not change based on the new Federal listing. A factual error has been found in Table 1 for the whitebark pine entry under SCNF Sensitive Plants: 'No' should be 'Yes' for the 'Known Occurrences Within 2.5 Miles of Analysis Area.' An estimation error was found in Section 4.3 'Whitebark Pine' in which two individuals were noted as being potentially impacted; there was another individual found at the communication station site. Other potential whitebark pine individuals were found at areas along the road that may be injured from brushing operations, or indirectly affected by environmental changes from the curve widening operation. It should be reiterated that there are no definitive identifications of individuals because of the lack of cones. These together would not affect the impact determination.

North American wolverine: There would continue to be no effects on the species from the project, however there is no USFS guidance offered on determination of effects for species not proposed for listing.

Also, note that there are errors pertaining to the description of the returned lists from USFWS on page 7. The referenced Species List for Custer County is not in the record and this statement is thought to be a relic from a previous project or area of concern. In addition to there being no record of this, the statement that grizzly bear would have been returned on a list for Custer County, Idaho is incorrect according to a discussion with the USFWS Idaho Fish and Wildlife Office (pers. comm., USFWS, March 12, 2021). Grizzly bear could occur in other areas of the SCNF, but is not likely to occur in the project vicinity or Custer County since the start of Project scoping and analysis in August of 2018.

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Biological Evaluation Report:
Proposed Communication Facility
At Windy Devil

Prepared for
Salmon-Challis National Forest
U.S. Forest Service

Prepared by
Bonneville Power Administration

Accepted July, 2019

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Acronyms and Abbreviations

BE	Biological Evaluation
BLM	Bureau of Land Management
BPA	Bonneville Power Administration
CS	communication stations
IDFG	Idaho Department of Fish and Game
MIS	Management Indicator Species
SCNF	Salmon-Challis National Forest
TEPS	threatened, endangered, proposed, or sensitive
TES	Threatened, endangered, or sensitive
USFS	United States Forest Service
USFWS	US Fish and Wildlife Service
VHF	very high frequency
WDP	western distinct population

1.0 Proposed Action

Bonneville Power Administration (BPA) is proposing to upgrade its very high frequency (VHF) two-way radio coverage in the Idaho Falls Radio Region of its transmission infrastructure territory. Two communication stations (CS) would be developed under the proposed action: the Willow Creek Summit CS on Bureau of Land Management (BLM) land in the Challis Field Office unit and the Windy Devil Annex CS (Windy Devil) on United States Forest Service (USFS) land in the Lost River Ranger District of the Salmon-Challis National Forest (SCNF).

The USFS would issue the BPA a Special Use Permit (10-year) for the operation and maintenance of the CS. In addition, the USFS would issue BPA a short term (3-year) construction agreement for construction activities.

This Biological Evaluation (BE) addresses the potential effects of the Windy Devil CS (Project) on threatened, endangered, proposed, or sensitive (TEPS) plant and wildlife species. Potential effects to Management Indicator Species (MIS) and migratory birds are also addressed in this BE.

1.1 Project Location

The Project is occurring within the Lost River Ranger District of the SCNF, in the Whiteknob Mountains of Custer County, in central Idaho. The Project is northeast of and below Mackay Peak at an elevation between 7,600 and 7,800 feet in the Upper Cedar Creek-Big Lost River and Lower Cedar Creek-Big Lost River watersheds. The Project is located in Section 24 of Township 7 North, Range 23 East (Boise Meridian), approximately three miles west of the town of Mackay on Highway 93. National Forest Road #207 and #211 are the access roads leading to the Project.

The dominant plant community is sagebrush (*Artemesia* spp) steppe, with lesser amounts of Douglas fir (*Pseudotsuga menziesii*) forest vegetation. Land use in the area includes cattle grazing, mining, recreational activities such as OHV riding, jeep travel, and hunting. Climate data from the town of Mackay shows the annual maximum average temperature of 56.1 Fahrenheit and the annual minimum average temperature of 27.7 Fahrenheit. July is the warmest month with high temperatures averaging 84.4 Fahrenheit and January is the coldest month with low temperatures averaging 5.6 Fahrenheit (WRCC 2019). Annual precipitation averages 9.5 inches.

1.2 Project Description

1.2.1 Communication Station

The Project would entail the construction of a new CS approximately 1,600 feet southwest of the existing Windy Devil CS in which BPA is a tenant. The proposed CS would be unfenced and would occupy an area of approximately 0.5 acre. It would include an approximately 1,000-square-foot communication building to house BPA radio operations. Outside the building, a 25-foot-square concrete tower foundation and an 80-foot-tall, unguyed, steel lattice tower would be constructed. The proposed CS would have a graded and graveled entrance from the existing access road, and a

small parking and turnaround area that would also be graveled. A generator inside the building would be fueled by a 2,000-gallon propane tank that would be installed on two concrete footings measuring 4 feet wide by 2 feet deep by 2 feet long. An underground electrical spur line would provide power to the proposed CS from the AC distribution line near existing CS. See Figure 1 for a map of the proposed Windy Devil CS.

1.2.2 Access Roads

BPA proposes to use approximately 1.2 miles of the existing SCNF Road #207 and 1.0 mile of Road #211. BPA's permit would include the right to upgrade, use, and maintain these two roads for construction and operation of the Project. Construction would require grading, gravel, and vegetation brushing at several locations along both roads; one location would require cut and fill. An additional 1.8 miles of Road #207 would be used to access the proposed CS, but no improvements would be necessary. See Figure 2 and Figure 3 for access roads and proposed location of construction improvements.

1.2.3 Staging Area

There would be one temporary staging area required for the construction of the proposed CS. The staging area would be located directly opposite the CS site on the east side of Road 211. The staging area would be about 300 feet long by 60 feet wide (0.4 acre).

1.2.4 Microwave Beam Path

Microwave radio waves travel in narrow beams confined to a line-of-sight path from one antenna to the other. The line of sight between antennas would have to be kept free of obstacles. The line-of-sight path to a future terminus at Lost River Substation (a BPA facility in its Idaho Falls Radio Region) would have the potential to be obstructed by existing and future tree growth. Therefore, tree removal to maintain the line-of-sight path to the Lost River Substation may be necessary at a future date.

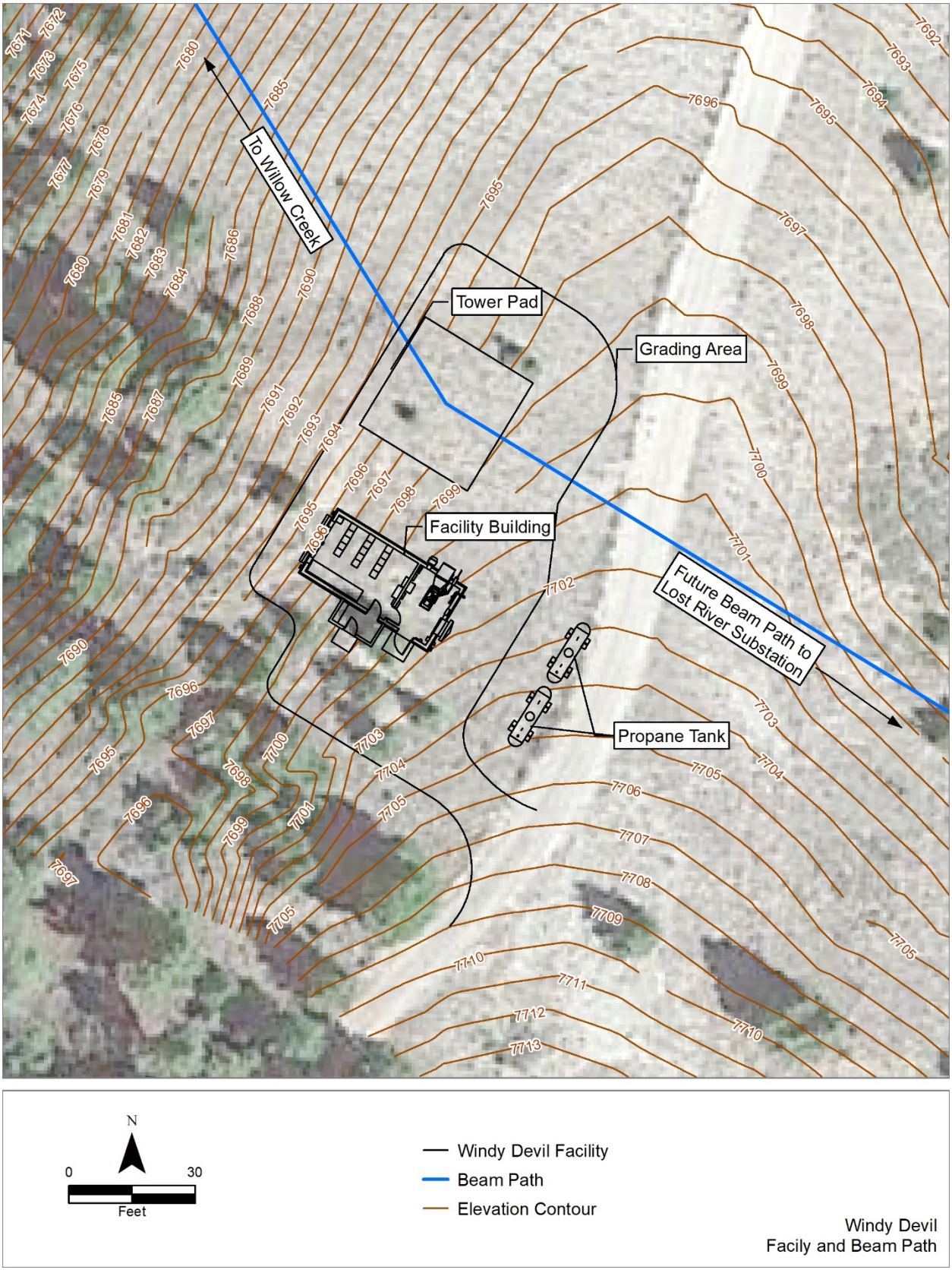

Figure 1. Project Elements

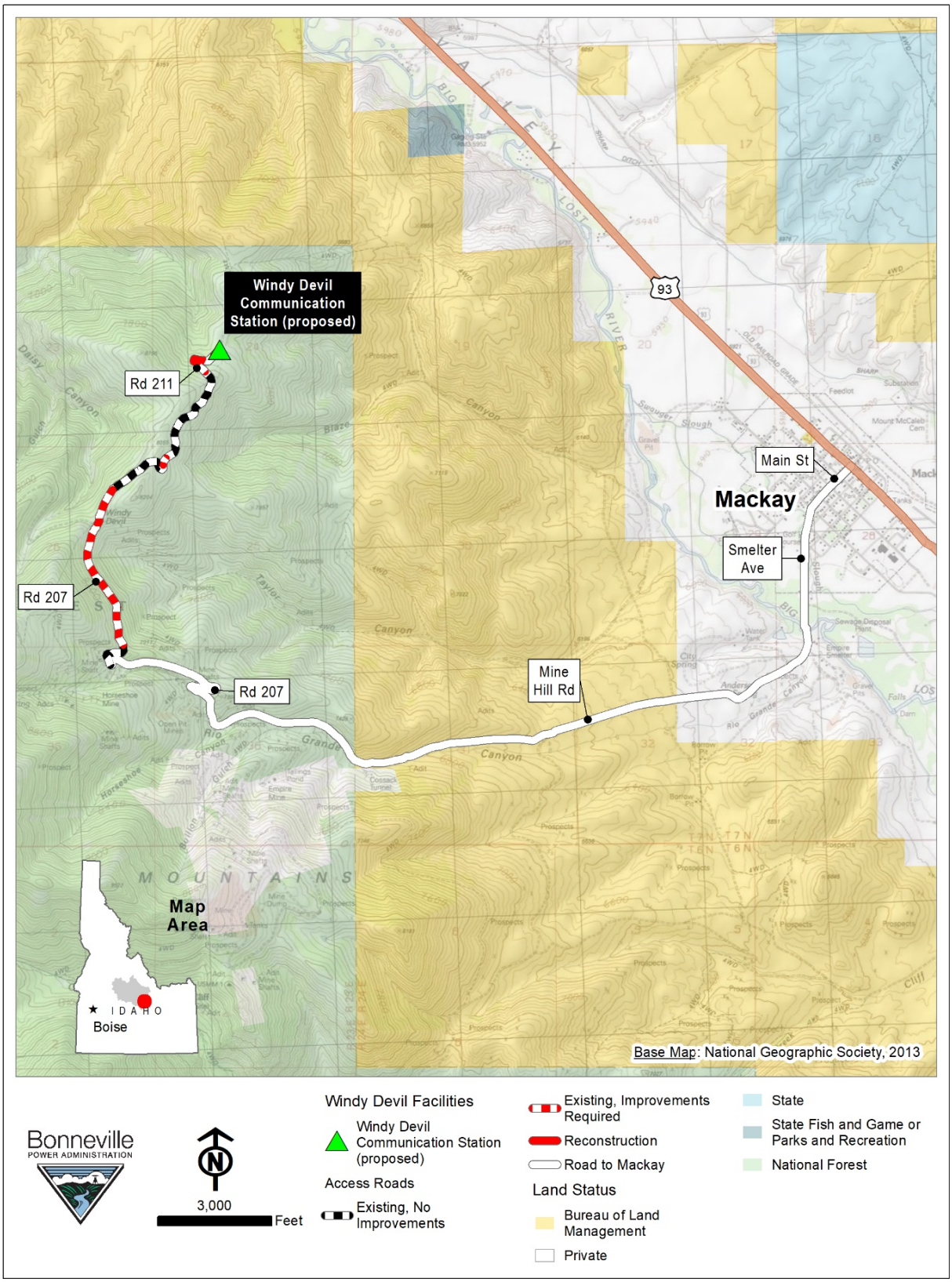

Figure 2. Access Roads to the Windy Devil Communication Station

Figure 3. Windy Devil Communication Station Access Road Improvements

1.3 Construction

Construction of the Project would occur over a 6-month period starting in the spring of 2020. Construction would be heaviest in the first month when the improvements to the existing roads would be done, the building and tower foundations would be excavated, and the concrete poured. If feasible, large equipment such as excavators and backhoes would make one trip to the site and remain until the construction is finished. Utility trucks and pickup trucks would make several trips a day. Cement truck trips would be needed to haul the cement for the building foundation and the tower and propane tank pads. Building and tower construction would take about 4 months, with another 2 months for post-construction electrical work and testing, which would include installing antennas and coaxial transmission cables on the tower, populating the buildings with electronic equipment, aligning microwave dishes, connecting the generator, and filling propane tanks. The exact dates for these activities would be coordinated with the SCNF.

1.4 Operation, Maintenance, and Reclamation

During routine operations, vehicular access would be needed for periodic inspections and maintenance. The Project would be visited twice each year for maintenance, and propane would be delivered once each year. Other unscheduled trips would occur as needed for possible equipment failures. Access roads would be repaired, as needed, but would not be graded routinely. The beam path would need to be kept clear of vegetation and as a result, trees would be pruned or removed as needed.

When BPA, or subsequent holders of the Special Use Permit abandon or relinquish their rights, the holder would reclaim the area to its condition prior to construction by removing all structures, concrete and gravel pads, access driveways, electrical vaults, and other items associated with the site uses. The holder would clear and clean manufactured debris from the surface and treat the area to ensure reasonable soil stabilization and revegetation with similar typical local materials. The SCNF would not require the holders to restore access roads; they would be left as-is. Additional details would be contained in a reclamation plan that would be a condition of the permit.

2.0 Field Review

BPA contracted a local botanist, Mike Mancuso, to conduct a botanical survey during the summer of 2017 (Mancuso Botanical Services 2017). Mr. Mancuso conducted field surveys from June 29, 2017 through July 1, 2017. In addition to the botanical survey, the analysis in this BE is based on photographs, observations, a review of documented occurrences of special-status species, a review of species' habitat requirements and current population status.

BPA contracted Tetra Tech to conduct an invasive species survey during the summer of 2019. Tetra Tech conducted field surveys on August 14, 2019. The survey included mapping of populations of weeds, photographs, and a review of Custer County weed lists.

3.0 Threatened, Endangered and Sensitive (TES) Species and Management Indicator Species (MIS)

On February 8, 2019, a fish biologist for the USFS prepared a specialist report that determined the Project would have "no effect" or "no impact" on TES fish species, "no effect" on designated or proposed critical habitat, and "will not adversely affect" Chinook Salmon Essential Fish Habitat (USFS 2019). Based on the specialist report, TES fish species and their habitat are not addressed further in this BE.

On May 24, 2019, a species list for Custer County, Idaho was obtained from the US Fish and Wildlife Service (USFWS). Three terrestrial species are listed under the Endangered Species Act (ESA) of 1973 in Custer County (and therefore the SCNF) as either threatened or endangered. The listed species are yellow-billed cuckoo (*Coccyzus americanus*), grizzly bear (*Ursus arctos horribillis*), and Canada lynx (*Lynx canadensis*). The North American wolverine (*Gulo gulo luscus*) is proposed for listing as threatened. Additionally, whitebark pine (*Pinus albicaulis*) is a candidate for listing.

MIS are important species that are considered to have similar habitat requirements as other groups of plants or animals (Challis National Forest Land and Resource Management Plan p.II-10). Their populations may be influenced by forest practices and land use decisions. The USFS maintains a list of MIS and sensitive species for each National Forest.

Sensitive species are those whose population viability is a concern due to:

- Significant current or predicted downward trends in numbers of animals, or
- Significant current or predicted downward trends in habitat capability that could reduce a species' existing distribution. (USDA 2014)

Table 1 shows the summary of effects to threatened, endangered, proposed, and candidate listed species for the SCNF and also lists the MIS and sensitive species designated for the SCNF. Some species are included on multiple lists and are repeated in Table 1 for each listing type. The analysis area includes the Project footprint plus a 2.5-mile buffer to perform a desktop review for the presence of suitable habitat and search records of known observations of each species. Shaded rows identify species analyzed in more detail in the BE. Non-shaded rows identify species whose analysis of effects is completed within the table.

Table 1. Summary of Effects of the Project to Species that Occur or are Likely to Occur on the Salmon-Challis National Forest

Species/Issue	General Habitat Requirements	Suitable Habitat in Analysis Area	Known Occurrences Within 2.5 Miles of Analysis Area	Determination/Level of Influence
ESA Threatened and Endangered				
Yellow-billed cuckoo (*Coccyzus americanus*)	Cottonwood and willow thickets in riparian and riverine areas at low to moderate elevation.	No	No	**No Effect**. There are no records of this species on the SCNF likely due to limited habitat (USFS 2018a). The Project will not affect large cottonwood galleries in riparian areas.
Grizzly bear (*Ursus arctos horribillis*)	Large home ranges encompassing diverse forests interspersed with moist meadows and grasslands in or near mountains.	No	No	**No Effect.** Bitterroot Grizzly Bear Nonessential Experimental Population Area is partially in the SCNF and is not within the Lost River Ranger District. Only one bear has been observed within the Bitteroot area in the last 60 years (USFS 2018a).
Canada lynx (*Lynx canadensis*)	Subalpine and boreal forests with complex forest structure.	No	No	**No Effect**. The SCNF is considered unoccupied, secondary lynx habitat due to: 1) a lack of verified non-transient observations in the last decade; 2) sporadic current and historical records, resulting in low historical abundance; and 3) no evidence of reproduction (USDI 2005). The SCNF has not identified any lynx analysis units within the Lost River Ranger District (USFS2018a). The recovery objective for unoccupied, secondary areas for lynx is to ensure that habitat remains available for occupancy and sufficient habitat is available to accommodate immigration and emigration between core areas and adjacent populations in Canada or secondary areas in the United States (USDI 2005). The Project will not affect the ability of the SCNF to provide sufficient habitat for lynx movements.
ESA Proposed				

Species/Issue	General Habitat Requirements	Suitable Habitat in Analysis Area	Known Occurrences Within 2.5 Miles of Analysis Area	Determination/Level of Influence
North American Wolverine (*Gulo gulo luscus*)	High elevation alpine areas in Idaho; select cold areas that receive enough precipitation to maintain deep persistent snow late into the warm season.	Yes	No	**No Effects**. See discussion.
ESA Candidate				
Pinus albicaulis (Whitebark pine)	Adapted to steep slopes and windy exposures in subalpine and alpine habitats. Typically associated with lodgepole pine (*P. contorta*), Englemann spruce (*Picea engelmannii*), and subalpine fir (*Abies lasiocarpa*)	Yes	Yes	**May Impact Individuals but Not Likely to Cause a Trend to Federal Listing or a Loss of Viability**. See Discussion.
SCNF Sensitive - Animals				
Bald eagle (*Haliaeetus leucocephalus*)	Within proximity of a water body for hunting. Needs large trees for nesting.	Yes	Yes	**No Impacts**. Mackay Reservoir and Big Lost River are within the analysis area and provide habitat for this species. However, the Project would not reduce or alter nesting, roosting and/or foraging habitat.
Bighorn sheep (*Ovis canadensis*)	Mesic to xeric, alpine to desert grasslands or shrub-steppe in mountains, foothills, or river canyons.	Yes	No	**No Impacts**. The analysis area is within the Pioneers Population Management Unit which does not support a persistent bighorn sheep population (IDFG 2010).
Boreal owl (*Aegolius funereus*)	Occur primarily in spruce-fir forest types as well as other conifer forests. Nest in cavities in older forests with complex structure.	Yes	No	**No Impacts**. No nesting habitat would be affected. No known observations from the Lost River Ranger District (USFS 2017).

Species/Issue	General Habitat Requirements	Suitable Habitat in Analysis Area	Known Occurrences Within 2.5 Miles of Analysis Area	Determination/Level of Influence
Columbia spotted frog (*Rana luteiventris*)	Found near permanent, quiet water such as marshy areas, streams, springs, and wet meadows.	Yes	No	**No Impacts**. Big Lost River system is within the analysis area and provides habitat for this species. However, the Project is contained within upland habitat and erosion and sediment control measures would eliminate potential impacts.
Common loon (*Gavia immer*)	Uses large rivers and lakes in Idaho during spring and fall migration.	Yes	Yes	**No Impacts**. Mackay Reservoir and Big Lost River are within the analysis area and provide stop-over habitat for this species. However, the Project is contained within upland habitat and would not affect migratory stop-over habitat.
Fisher (M*artes pennanti*)	Typically found in dense forested habitat with structural components that support prey species and provides for fisher denning and resting sites (downed wood, large diameter snags and logs).	Yes	No	**No Impacts**. No denning, resting, or foraging habitat would be affected because fisher are not known to occur in the Lost River Ranger District (USFS 2017).
Flammulated owl (*Otus flammeolus*)	Occurs in mid-elevation forests with a significant yellow pine component mixed with Douglas fir or dry Douglas fir stands that approximate the structure of mature ponderosa pine. Cavity nester.	Yes	No	**No Impacts**. No nesting habitat would be affected. No known observations from the Lost River Ranger District (USFS 2017).
Gray wolf (Rocky Mountain DPS) (*Canis lupus*)	Habitat generalist tied to presence of ungulate prey species. Den sites are typically secluded in forested habitat and away from human activity.	Yes	No	**No Impacts**. Antelope Creek wolf pack is in the Copper Basin (IDFG 2015) southwest of the analysis area and pack territory likely includes the analysis area. However, the Project would not affect foraging or denning habitat.
Great gray owl (*Strix nebulosa*)	In Idaho, nests in aspen, lodgepole pine, Douglas fir, and Engelmann spruce.	Yes	No	**No Impacts**. No nesting habitat would be affected. No known observations from the Lost River Ranger District (USFS 2017).

Species/Issue	General Habitat Requirements	Suitable Habitat in Analysis Area	Known Occurrences Within 2.5 Miles of Analysis Area	Determination/Level of Influence
Greater sage-grouse (*Centrocercus urophasianus*)	Sagebrush plains and foothills for mating and nesting. Higher elevations for brooding, rearing, and foraging.	Yes	Yes	**No Impacts**. The Project is outside of any Habitat Management Areas designated in either the state or federal sage-grouse plans. Known leks are more than 2 miles from the Project (IDFG 2019). The Project is at elevations above observed use by sage-grouse in the area (IDFG unpublished data). In addition, the presence of Douglas-fir forests significantly reduces the likely use of the Project area by this species.
Harlequin duck (*Histrionicus histrionicus*)	Nests along mountain streams on the ground, on cliffs, under creek bank overhangs, in cavities and logjams or under bushes or trees.	No	No	**No Impacts**. No habitat is present within the analysis area; species not known to occur in the Lost River Ranger District (USFS 2017).
Northern goshawk (*Accipiter gentiles*)	Conifer and mixed wood forests, with canopy openings. Needs large trees for nesting.	Yes	No	**No Impacts**. The Project would not reduce or alter mature to old forests with large trees, high canopy closure, sparse ground cover, and open understories. No known observations from the Lost River Ranger District (USFS 2017).
Peregrine falcon (*Falco peregrinus anatum*)	Cliff ledges for nesting and open areas associated with riparian/wetland features for foraging. Preferred nest sites are on dominant cliffs with heights exceeding 200 feet.	No	No	**No Impacts**. No nesting or foraging habitat would be affected; no nesting habitat within the analysis area.
Pygmy rabbit (*Brachylagus idahoensis*)	Require shrub-steppe habitat with deep, sandy soils suitable for burrowing. Select sites with greater cover, density, and height of sagebrush and with higher forb density than surrounding habitat.	No	No	**No Impacts**. Ridgetops where the Project occurs typically lack deep soils needed for burrowing.

Species/Issue	General Habitat Requirements	Suitable Habitat in Analysis Area	Known Occurrences Within 2.5 Miles of Analysis Area	Determination/Level of Influence
Spotted bat (*Euderma maculatum*)	Roosts in cracks and crevices in cliff habitat, forages over dry, open coniferous forest.	Yes	No	**No Impacts**. Observations on the SCNF are very few and are concentrated near the Middle Fork Salmon River. Despite active surveying of mine shafts on the Lost River Ranger District, this species has not been observed on the district (USFS 2017).
Three-toed woodpecker (*Picoides tridactylus*)	Found in spruce/fir and lodgepole pine forests, less frequently in mixed forests. Prefer recently burned areas and forests with old growth structural characteristics.	Yes	No	**No Impacts**. No suitable nesting or foraging habitat will be affected.
Townsend's western big-eared bat (*Corynorhinus townsendii*)	Roosts in caves, mine shafts, rock outcrops, lava tubes and buildings. Forage over tree canopies, wet meadows, and other areas of open water with riparian vegetation.	Yes	Yes	**May Impact Individuals but Not Likely to Cause a Trend to Federal Listing or a Loss of Viability**. See discussion
SCNF Sensitive - Plants				
Agoseris lackschewitzii (Pink agoseris)	Montane to subalpine, open, moist meadows.	No	No	**No Impacts**. This species does not occur on the Lost River Ranger District (USFS 2018b); not identified during Project-specific surveys (Mancuso Botanical Services 2017).
Astragalus amnis-amissi (Lost River milkvetch)	Ledges, crevices, and other outcrops on steep limestone cliffs, and talus along cliff bases; often in partial shade.	Yes	No	**No Impacts**. No suitable habitat present at Project site; not identified during Project-specific surveys (Mancuso Botanical Services 2017).
Astragalus aquilonius (Lemhi milkvetch)	Dry, gentle to often steep and unstable slopes, talus, washes, alluvial debris, and flats on gravelly and sandy, to ashy, or occasionally clayey soils; within the shrub-steppe vegetation zone.	No	No	**No Impacts**. No suitable habitat present; not identified during Project-specific surveys (Mancuso Botanical Services 2017).

Species/Issue	General Habitat Requirements	Suitable Habitat in Analysis Area	Known Occurrences Within 2.5 Miles of Analysis Area	Determination/Level of Influence
Astragalus deversifolius (Meadow milkvetch)	Moist soils in alkaline meadows with flat or hummocky topography supporting graminoid or medium height shrub vegetation.	No	No	**No Impacts**. This species is not known to occur on the SCNF (USFS 2018b); not identified during Project-specific surveys (Mancuso Botanical Services 2017).
Astragalus vexilliflexus var. *nubilus* (White Cloud milkvetch)	Dry, rocky, relatively sparsely vegetated high subalpine ridgecrests and upper slopes.	Yes	No	**No Impacts**. This species does not occur on the Lost River Ranger District (USFS 2018b); not identified during Project-specific surveys (Mancuso Botanical Services 2017).
Carex incurviformis (Seaside sedge)	Wet rock ledges and moist tundra in the alpine zone, 10,000 to 12,000-foot elevation.	No	No	**No Impacts**. This species is only known on the SCNF from one occurrence at the northern end of the Pioneer Mountains (USFS 2018b); not identified during Project-specific surveys (Mancuso Botanical Services 2017).
Collomia debilis var. *camporum* (Flexible alpine collomia)	Scree, talus, and rocky slopes.	No	No	**No Impacts**. This species does not occur on the Lost River Ranger District (USFS 2018b); not identified during Project-specific surveys (Mancuso Botanical Services 2017).
Cymopterus douglassii (Douglas' wavewing)	Rocky, exposed ridgelines to relatively stable pockets on steep scree slopes; carbonate substrates; alpine, to more often open, subalpine conifer woodlands, 9,000 to 10,900 feet eleveation.	No	No	**No Impacts**. This species is found in alpine habitat at higher elevation than what occurs at the Project.
Draba densifolia var. *apiculate* (Rockcress draba)	Open, moist, gravely to rocky soils in alpine meadows, talus, ridges.	No	No	**No Impacts**. This species is not known to occur on the SCNF (USFS 2018b); not identified during Project-specific surveys (Mancuso Botanical Services 2017).

Species/Issue	General Habitat Requirements	Suitable Habitat in Analysis Area	Known Occurrences Within 2.5 Miles of Analysis Area	Determination/Level of Influence
Draba trichocarpa (Stanley's whitlow-grass)	Open, sparsely vegetated granite rock outcrops and associated coarse sandy to gravelly residuum along upper slopes and ridges.	No	No	**No Impacts**. This species is not known to occur on the SCNF (USFS 2018b); not identified during Project-specific surveys (Mancuso Botanical Services 2017).
Eriogonum capistratum var. *welshii* (Welsh's buckwheat)	Primarily on dry, windswept, sparsely vegetated sites characterized by shallow, clay-rich soils; on either calcareous (mainly limestone) or Challis Volcanics substrates; generally on convex-shaped, gently sloping (but sometimes flat or steeper) sites; valley bottom alluvial fans and benches to foothill ridges and bluffs of the surrounding mountains.	Yes	Yes	**May Impact Individuals but Not Likely to Cause a Trend to Federal Listing or a Loss of Viability**. See discussion.
Eriogonum meledonum (Guardian buckwheat)	Open, sparsely vegetated granite rock outcrops and associated coarse sandy to gravelly residuum along upper slopes and ridges.	No	No	**No Impacts**. This species is not known to occur on the SCNF (USFS 2018b); not identified during Project-specific surveys (Mancuso Botanical Services 2017).
Lewisia sacajaweana (Sacajawea's bitterroot)	Montane to high subalpine, common near ridgecrests and upper slopes.	No	No	**No Impacts**. This species does not occur on the Lost River Ranger District (USFS 2018b); not identified during Project-specific surveys (Mancuso Botanical Services 2017).
Noccaea idahoensis var. *aileenia* (Idaho pennycress)	Rocky and gravelly soil from flats to steep slopes in valleys, or up into the subalpine and alpine zones.	No	No	**No Impacts**. This species does not occur on the Lost River Ranger District (USFS 2018b); not identified during Project-specific surveys (Mancuso Botanical Services 2017).
Oxytropis besseyi var. *salmonensis* (Challis crazyweed)	Sandy washes or open slopes of rocky volcanic soil with salt desert shrub species or sagebrush.	No	No	**No Impacts**. No suitable habitat present; not identified during Project-specific surveys (Mancuso Botanical Services 2017).

Species/Issue	General Habitat Requirements	Suitable Habitat in Analysis Area	Known Occurrences Within 2.5 Miles of Analysis Area	Determination/Level of Influence
Penstemon lemhiensis (Lemhi penstemon)	Occurs in a range of habitat from 3,200 to 8,100 feet in elevation.	No	No	**No Impacts**. This species does not occur on the Lost River Ranger District (USFS 2018b); not identified during Project-specific surveys (Mancuso Botanical Services 2017).
Physaria didymocarpa var. *lyrate* (Salmon twin bladderpod)	Rocky, sparsely vegetated, gentle to steep, often southerly-facing slopes.	No	No	**No Impacts**. This species does not occur on the Lost River Ranger District (USFS 2018b); not identified during Project-specific surveys (Mancuso Botanical Services 2017).
Pinus albicaulis (Whitebark pine)	Adapted to steep slopes and windy exposures in subalpine and alpine habitats. Typically associated with lodgepole pine (*P. contorta*), Englemann spruce (*Picea engelmannii*), and subalpine fir (*Abies lasiocarpa*)	Yes	No	**No Impacts**. Whitebark pine is known to occur in the analysis area at elevations higher than the Project; species not identified during Project-specific surveys (Mancuso Botanical Services 2017).
Poa abbreviata ssp. *Marshii* (Marsh's bluegrass)	Soil pockets in alpine scree, talus, or other rocky sites; known from scattered alpine peaks across the interior western United States.	No	No	**No Impacts**. No suitable habitat present; not identified during Project-specific surveys (Mancuso Botanical Services 2017).
Thelypodium repandum (Wavy-leaf thelypody)	Dry, sparsely vegetated, steep to occasionally gentler shaley scree slopes, typically in drainage bottoms with some level of natural soil disturbance due to slope instability; high bare ground cover of volcanic or metamorphic rock substrate.	No	No	**No Impacts**. This species does not occur on the Lost River Ranger District (USFS 2018b); not identified during Project-specific surveys (Mancuso Botanical Services 2017).
Xanthoparmelia idahoensis (Idaho range lichen)	Open, calcareous clay badland outcrops.	No	No	**No Impacts**. This species is not known to occur on the SCNF (USFS 2018b); not identified during Project-specific surveys (Mancuso Botanical Services 2017).

Species/Issue	General Habitat Requirements	Suitable Habitat in Analysis Area	Known Occurrences Within 2.5 Miles of Analysis Area	Determination/Level of Influence
SCNF Management Indicator Species				
Columbia spotted frog (*Rana luteiventris*)	Found near permanent, quiet water such as marshy areas, streams, springs, and wet meadows.	Yes	No	**Negligible**. Big Lost River system is within the analysis area and provides habitat for this species. However, the Project is contained within upland habitat and erosion and sediment control measures would eliminate potential impacts.
Greater sage-grouse (*Centrocercus urophasianus*)	Sagebrush plains and foothills for mating and nesting. Higher elevations for brooding, rearing, and foraging.	Yes	Yes	**Negligible**. The Project is outside of any Habitat Management Areas designated in either the state or federal sage-grouse plans. Known leks are more than 2 miles from the Project (IDFG 2019). The Project is at elevations above observed use by sage-grouse in the area (IDFG unpublished data). In addition, the presence of Douglas-fir forests significantly reduces the likely use of the Project by this species.
Pileated woodpecker (*Dryocopus pileatus*)	Associated with mature forests with large diameter snags for nesting.	Yes	No	**Negligible**. Would not reduce or alter nesting habitat.
Determinations are only required for listed and sensitive species. Determinations for threatened and endangered species include “no effect”, “not likely to adversely affect”, or “likely to adversely affect”. Determinations for proposed species include “no effects”, “not likely to jeopardize proposed species, or adversely modify proposed critical habitat”, or “likely to jeopardize proposed species, or adversely modify proposed critical habitat”. Determinations for sensitive species include "no impacts", "beneficial impacts", "may impact individuals but not likely to cause a trend to federal listing or a loss of viability", or "likely to result in a trend to federal listing or a loss of viability". Level of influence of the effects for management indicator species includes "negligible", "minor", "moderate", or "major”. Levels of influence are defined in the “Fish and Wildlife Resource Report”. (USFS 2016)				

4.0 Species Descriptions and Impact Analysis

4.1 Effects to Habitat Common to All Species

The Project Description above describes ground disturbing activities associated with the Project. The proposed CS location is in sagebrush-steppe and Douglas-fir habitat types (Mancuso Botanical Services 2017). The 0.5-acre disturbance associated with the proposed CS would occur in sagebrush-steppe habitat with some clearing of individual Douglas-fir trees likely. The area where cut and fill is required along SCNF Road #211 would occur in Douglas-fir habitat and would result in the removal of individual trees and mountain snowberry shrubs. Grading, gravel, and vegetation brushing at locations along SCNF Road #211 and #207 would occur in both sagebrush-steppe and Douglas-fir habitat but is expected to be limited to the road surface and immediate areas such that only grass, forbs, and shrubs are expected to be disturbed.

Habitat disturbance would be minimal and would not occur in unique or limited habitat types such as wetlands. The amount of habitat disturbed would be negligible when compared to the amount of sagebrush-steppe and Douglas-fir habitat available in the analysis area and the SCNF.

4.2 North American Wolverine

In August 2014, the USFWS withdrew the proposed rule to list the western distinct population segment (DPS) of wolverine as threatened (USFWS 2014). On April 4, 2016, the U.S. District Court for the District of Montana vacated the USFWS August 13, 2014 withdrawal of its proposed rule to list the distinct population segment of the North American wolverine. In October 2016, the USFWS released a statement that it is "reopening the public comment period on a proposed rule to list the North American wolverine as threatened under the ESA."

Wolverines are the largest terrestrial member of the mustelid family. They are generally solitary and territorial, with the ranges of opposite sexes overlapping (Banci 1994). Spatial separations of home ranges are more pronounced in the summer (Copeland 1996). In Idaho, the annual home ranges of adult females averaged 148 mi2 (384 km2). While accompanied by kits, home ranges were reduced 42%. Annual home ranges for adult males averaged 588 mi2 (1,522 km2). Population density was estimated to be one wolverine/76 mi2 (198 km2) (Copeland 1996).

Wolverines occupy a wide range of habitat types. The prominent characteristic of wolverine habitat appears to be absence of human presence and influence and an abundant prey base. In Idaho, wolverine seemed to prefer Douglas-fir forest types in the summer and lodgepole forest types in the winter. Higher elevation rock habitats were preferred in summer and avoided in winter. Lower elevation montane coniferous forests were utilized in the winter. In both summer and winter, northerly aspects were preferentially chosen (Copeland 1996). Natal den sites have been located in subalpine cirque areas on north facing talus slopes suggesting that this type of habitat is critical to wolverines in central Idaho (Copeland 1996). Natal den sites typically occur above 8,200 feet in areas that maintain persistent snow late into the season. Female wolverines are

very sensitive to disturbance during mid-February through May while they are searching for, establishing, and occupying their natal dens.

Copeland (et al. 2007) found that wolverine in central Idaho utilize an elevation band of 7,200 feet to 8,500 meters in whitebark pine, Douglas fir, and lodgepole pine cover types. Modeled habitat on the SCNF also included the limber pine and spruce/fir cover types in that elevation range. The analysis area is within modeled wolverine habitat (USFS 2018a).

Wolverines are opportunistic omnivores in the summer and scavengers in the winter. In Idaho, ungulates were the most common food item, regardless of season. Small mammals (rodents and lagomorphs), carnivores (marten, skunk, and black bear), vegetative material, birds, and insects also comprised their diet (Copeland 1996). Although most ungulates are eaten as carrion, wolverines are capable of killing, especially when snow or other situations make ungulates vulnerable. Berries, small mammals, sciurids, fish, and insect larvae are important to wolverine diets during snow free periods (Banci 1994).

The wolverine is known to occur on the SCNF throughout the year. They have been documented as occurring on all the Ranger Districts on the SCNF. During the winter of 2011/2012, Idaho Department of Fish and Game (IDFG) set up seven hair snare/camera stations and 20 hair snare stations. DNA was collected from 55 samples. Eleven of those samples were from wolverine and two unique genotypes (one male, one female) were identified. At photo stations, three unique wolverines were photo verified. A study conducted during 1992-1995 in an 8,000 km2 study area within the Salmon-Challis, Sawtooth, and Boise NFs roughly encompassing the Sawtooth Mountain area captured and put GPS transmitters on nineteen wolverines (Copeland 1996).

No wolverine occurrences have been recorded within the analysis area; however, three occurrences have been recorded within 20 miles of the analysis area (IDFG 2017a). These occurrences were recorded in 2004, 2012, and 2014; the 2004 and 2014 occurrences were logged by IDFG employees and include a snow track survey and incidental trapping report, both have a verification status of "trusted" (IDFG 2017a). Given these occurrences and the wide-ranging nature of the species, there is a potential for wolverine to occur within the analysis area.

The duration, extent, and magnitude of the effects of the Project are minor on the landscape when considering wolverine life history traits. Project activities would occur over a relatively short timeframe during the spring and summer (less than a year) and disturb less than one acre of sagebrush-steppe and Douglas-fir habitat. The Project is sited immediately adjacent to an area that has been previously developed with a similar CS. It is unlikely that a wolverine would encounter Project construction activities during that short timeframe. If a wolverine were to occur during Project construction, it would be able to easily avoid the activities. Loss of less than one acre of habitat associated with the Project would not affect wolverine foraging or breeding success. Operation and maintenance activities would be limited to twice a year vehicle trips to the CS which would be indiscernible from the existing levels of traffic from recreation and other sources. For these reasons, the Project would have **no effect** on the North American wolverine.

4.3 Whitebark Pine

Whitebark pine occupies approximately 325,000 acres within the SCNF on high-elevation sites, which are characterized by rocky, poorly developed soils, cold temperatures, and snowy, windswept exposures (USDA 2018).

Current threats to the overall health of whitebark pine forests on the SCNF include: white pine blister rust disease, mountain pine beetle outbreaks, altered frequency and intensity of fire; and effects from changes in climate (USDA 2018). These combined threats have led to the recent listing of whitebark pine as a Candidate Species under the ESA across its range.

Whitebark pine mix vegetation type class is mapped by the SCNF within the analysis area (USFS 2015), to the south and west of the Project above 8,000 feet in elevation. In September of 2018, BPA and USFS project team members visited the Project site. During this site visit, whitebark pine was observed in two places. Tetra Tech botanists confirmed the presence of whitebark pine during the 2019 invasive species survey.

The Project could potentially affect up to two whitebark pine trees that were identified near the proposed location of cut and fill along SCNF Road #211, through potential removal of the trees or by modifying their immediate habitat by removing nearby trees. The Project would not contribute to the threats identified for the species that resulted in its Candidate status. Therefore, the Project **may impact individuals but is not likely to cause a trend to federal listing or a loss of viability.**

4.4 Townsend's Big-Eared Bat

Townsend's big-eared bats are a non-migratory species that roost in colonies. The bats exhibit a high degree of site fidelity, returning year after year to the same maternity roost; however, the colony may utilize multiple roosts in a year. They will roost in caves, mine shafts, rock outcrops, lava tubes and occasionally buildings. Roosts, both maternity and hibernacula, are selected based on temperature, dimension, light quality, air flow, and humidity (ISCE 1995).

Townsend's big-eared bats forage over tree canopies, wet meadows and other areas of open water with riparian vegetation. While this species favors foraging in riparian areas, they will occasionally forage in more open habitats (Fellers and Pierson 2002). This species typically forages within 2 miles (3.2 km) of its roost site (Fellers and Pierson 2002). They have been observed gleaning insects from vegetation. The main prey item is moths, primarily noctuid, but they will also feed on beetles, flies and other flying insects (ISCE 1995).

Studies have found that native plants attract more Lepidoteria species than introduced plants (Tallamy and Shropshire 2009). This could have implications for prey availability in heavily infested areas.

Populations in Idaho appear to be stable (IDFG 2017b). There are records of this species occurring on the SCNF on the North Fork, Salmon-Cobalt, and Lost River Ranger Districts (ID CDC and NRIS FAUNA data). Townsend's big-eared bats have been observed from the Cossack Tunnel in the Rio Grande Canyon in the analysis area (IDFG 2017a).

The Cossack Tunnel is approximately two miles from the CS. Construction vehicles will be accessing SCNF Road #207 via the road that goes up Rio Grande Canyon where the Cossack Tunnel is located. Given that the Project is within typical foraging distance for this species, there is a potential for collision with vehicles during the construction period and with the tower during operation. The collision risk associated with the proposed tower would add cumulatively to the existing tower. Construction and operation of the Project would not disturb the roost site, which is the primary threat to the species (IDFG 2017b). Effects from the Project would be limited to individual bats that encounter construction activities or potentially collide with the tower during foraging excursions. Therefore, the Project **may impact individuals but is not likely to cause a trend to federal listing or a loss of viability.**

4.5 Welsh's Buckwheat

Welsh's buckwheat lies within some of the harshest habitat in Idaho. Known occurrences are located in the rain-shadow of the Lost River Range, White Knob Mountains, Boulder Mountains, and Pahsimeroi Mountains. Typical habitat is described as harsh, windswept sites characterized by shallow, unproductive, and xeric soils, which are derived from calcareous limestone or Challis Volcanics (USFS 2018b). Welsh's buckwheat is most vulnerable to unrestricted grazing, recreational uses, invasive species, and climate change (USFS 2018b).

Welsh's buckwheat was identified during Project-specific surveys (Mancuso Botanical Services 2017). Occurrences included a single population with most plants occurring in the vicinity of the existing CS with two small outlying patches at the proposed CS. Approximately 390 plants were estimated near the existing CS and 3 plants were estimated at the proposed CS (Mancuso Botanical Services 2017). This species occurs at low density at the Project.

Construction of the existing CS destroyed some habitat occupied by Welsh's buckwheat as did SCNF Road #211. The Project would again disturb habitat occupied by Welsh's buckwheat and add cumulatively to the effects from existing disturbance. The Project would most likely destroy the two small outlying patches of the plant and also affect the species adjacent to the existing CS through construction, construction traffic and trenching of utilities from the existing CS to the proposed CS. Non-native plant species are not currently affecting Welsh's buckwheat at the Project and implementation of the measures presented in Section 5 should minimize any spread of non-native plant species. Therefore, the Project **may impact individuals but is not likely to cause a trend to federal listing or a loss of viability.**

4.6 Migratory Bird Analysis

The Project is in Bird Conservation Region 10 – Northern Rockies (USFWS 2008). The USFWS lists 22 birds of conservation concern in the Northern Rockies. Studies have shown that migratory birds collide with communication towers, resulting in an estimated annual mortality of more than 10,000 birds in the Northern Rockies (Longcore et al. 2012). Most studies are documenting mortalities associated with tall towers (>60m) whose design includes guy wires and safety lighting, all of which increase the collision risk to birds. The Project proposes a short tower (80 feet tall) designed

without guy wires or tower lighting. It is expected that this tower design will greatly reduce the likelihood of migratory bird mortalities compared to the taller, guyed, and lighted towers. However, it should not be assumed that these short towers are not having an impact on bird populations (Manville 2005).

Table 2 addresses the USFWS (2018) Recommended Best Practices for Communication Tower Design, Siting, Construction, Operation, Maintenance, and Decommissioning.

Table 2. USFWS Avoidance and Minimization Measures

Measure	BPA Response
Siting and Construction of New Towers	
Communicate Project plans to nearest USFWS Field Office.	USFWS has been made aware of the Project through public scoping., web-based informal consultation and personal communication
Co-locate communications equipment on existing towers or other structures.	New tower is required, nearby existing towers are at capacity.
All new towers should be sited to minimize environmental impacts to the maximum extent practicable	Tower is co-located with existing tower. No new roads would be constructed and utilities are already at the site, requiring minimal trenching. Wetlands are not present.
Consider measures to reduce the risk of take of migratory birds.	Project actions do not intentionally take migratory birds. Construction activities are scheduled to occur during the migratory bird breeding season. Pre-construction nest-clearance surveys will be performed. Section VI discusses measures to prevent invasive plant and noxious weed proliferation.
Tower designs should consider follow recommendations for tower height, guy wires, and lighting.	The new tower will be 80 feet above ground level. The design is a free-standing lattice tower. There is no tower lighting proposed.
Operation and Maintenance of All Towers	
Recommend that towers be unlit, when allowed by FAA regulations.	Tower is unlit.
Recommend that other associated infrastructure be unlit.	Associated infrastructure will be unlit except when maintenance personnel are present.
Schedule vegetation removal and maintenance activities outside of the migratory bird peak breeding season.	Vegetation maintenance will occur outside the peak migratory bird breeding season.
If birds nest on the tower and maintenance of the tower is required, contact IDFG and/or USFWS to acquire any necessary permits, recommendations, or requirements.	BPA will contact IDFG and/or USFWS if a bird nest is found on the tower prior to taking action to remove the nest or perform maintenance activities.
Representatives from the USFWS or researchers should be allowed access to the site to evaluate bird use, conduct dead-bird searches, and conduct other research as necessary.	The communication site is on public land and is not fenced.
Decommissioning	
Towers should be removed from the site within 12 months of cessation of use, preferably sooner.	BPA has no schedule for decommissioning. If the tower is no longer in use it will be removed within the recommended timeframe.

5.0 Design Features and Mitigation Measures

5.1 Invasive and Noxious Weeds

Invasive plant species such as cheatgrass have been observed at the Project site; this and other species may establish and/or spread due to disturbance along and use of the roadways. The following methods would be used to prevent spreading or reinfestation of undesirable vegetation.

- All vehicles including transport equipment used in access, construction, maintenance and operations of project would be thoroughly cleaned prior to moving equipment across or onto USFS-managed lands. Washing and/or brushing equipment to remove material that can contain weed or other propagates helps insure equipment transported across or onto USFS-managed lands are free of weeds and weed seeds. High-pressure washing would be used to treat the insides of bumpers, wheel wells, undercarriages, inside belly plates, excavating blades, buckets, tracks, rollers, drills, buckets, shovels, and any digging tools, etc., to remove potential weeds, seeds, and soil carrying weed propagules, and vegetative material.
- In areas where activities disturb or remove vegetation, exposed soil would be minimized. A method of soil stabilization, approved by the USFS, would be employed to effectively control erosion and weeds. Gravel or equivalent mulch are acceptable materials to be placed along pads and roadways.
- BPA would be required to inform the USFS if noxious weed species are observed, to ensure the population is recorded and to decide on method of treatment. Following the recording and/or consultation with the USFS, BPA would be responsible for weed treatment within the area specified. All treatments would adhere to federal guidelines and regulations and ensure that USFS-approved chemicals are used.
- All disturbed areas would be seeded with native species in the late fall to deter erosion and curtail the introductions of weeds. Native varieties of certified seed would be used, and USFS staff would review and approve any seed mixture and dispersal method prior to purchase and implementation. Seeding would be evaluated after the second year's growth and repeated if necessary, as authorized by USFS staff.

5.2 Other

Other measures to reduce the potential for impact from the construction and operation of the proposed Windy Devil CS facility include:

- Minimize or avoid unnecessary ground disturbance and clearing activities during design and construction of communications buildings and radio towers.
- Do not drain equipment oil or fuel onto the ground. Haul oil, fuel and other chemicals to an approved site for disposal. All fuel storage tanks must meet current fire department, federal, state and local government safety and hazardous materials requirements.

- Remove all trash from the sites and dispose of properly.
- Do not burn construction trash on public land.

6.0 References

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APPENDIX F
NO EFFECT DETERMINATION FOR WILLOW CREEK SUMMIT COMMUNICATION STATION

As in the BE, there are errors in the following No Effect Determination Memo pertaining to the description of the returned lists from USFWS (page 1). The referenced Species List for Custer County is not in the record and this statement is thought to be a relic from a previous project or area of concern. In addition to there being no record of this, the statement that grizzly bear would have been returned on a list for Custer County, Idaho is incorrect according to a discussion with the USFWS Idaho Fish and Wildlife Office (pers. comm., USFWS, March 12, 2021). Grizzly bear could occur in other areas of the SCNF, but is not likely to occur in the project vicinity or Custer County since the start of Project scoping and analysis in August of 2018.

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MEMO

TO: Idaho BLM Challis Field Office Manager

FROM: Michael O'Connell

DATE: August 7, 2019

RE: No Effects Determination for ESA Threatened, Endangered, and Proposed Species, Willow Creek Summit Communication Station, BLM Challis Field Office, Idaho

Custer Telephone Cooperative, Inc. (CTCI) is requesting a 30-year right-of-way (ROW) lease for the operation and maintenance of a communication station (CS) on Bureau of Land Management (BLM) land at Willow Creek Summit in Custer County, Idaho. Bonneville Power Administration (BPA) is cooperating with CTCI to fully outfit the CS for BPA use as a sub-lessee. In addition, the BLM would issue CTCI a short-term (3-year) ROW grant to construct the CS. BPA and BLM are currently preparing their National Environmental Policy Act compliance documents to which this No Effects Determination memo acts as documentation for the project record for compliance with the Endangered Species Act of 1973 (ESA).

The Willow Creek Summit CS would entail the construction of an adjacent CS to an existing CS owned and operated by CTCI. The existing CTCI 12-foot by 20-foot building would remain on site and would continue to be used by CTCI. BPA would be a tenant of a new CS to be built by CTCI. The new CS would occupy an area of approximately 0.5 acre. It would include two adjoined 12-foot by 30-foot buildings (720 square feet) to house BPA radio operations and space for future tenants. The facility would not be fenced. Utilities would be trenched from the existing CS to the new CS. Access to the site would be provided by the existing Willow Creek Summit Road, the existing road alignment would not be modified but some areas would need additional gravel surface placement. A fiber-optic line would be trenched on the north side of the Willow Creek Summit Road from Highway 93 to the new CS. Two temporary staging areas would be required, one at a previously disturbed 0.9-acre staging area at the intersection of Highway 93 and the access road, and the second 0.3-acre staging area further up the access road toward the new CS. The Willow Creek CS would be constructed and operated in accordance with the guidance policies established in the Willow Creek Summit Communication Site Management Plan (BLM 2018).

On May 24, 2019, a species list for Custer County, Idaho was obtained from the US Fish and Wildlife Service (USFWS). Four species are listed under ESA in Custer County as either threatened or endangered. The listed species are yellow-billed cuckoo (*Coccyzus americanus*), bull trout (*Salvelinus confluentus*), grizzly bear (*Ursus arctos horribillis*), and Canada lynx (*Lynx canadensis*). The North American wolverine (*Gulo gulo luscus*) is proposed for listing as threatened. BPA requested an official species list from the USFWS in June of 2018 (Consultation Code 01EIFW00-2018-SLI-1373); the official species list included only the North American wolverine.

On August 8, 2018 a BLM survey documented vegetation communities along the access road and CS site. The access road is predominantly sagebrush-steppe habitat and the CS site is dominated by curl-leaf mountain mahogany (*Cerocarpus ledifolius*) with few understory species. Elevation ranges from 6,600 to 8,200 feet.

The North American wolverine occupies a wide range of habitat types, with preferred use of areas absent of human presence with an abundant prey base. Wolverines select areas to live with cold winters that receive enough snow to maintain a deep, persistent snowpack late into the spring. In Idaho, wolverine habitat is limited to high elevations, typically 6,888 feet to 8,528 feet, with natal den sites occurring above 8,200 feet, (75 FR 78030-78061, 78 FR 7861-7890), often in large contiguous tracts of coniferous forest habitat (Copeland et al. 2007) (Copeland 1996). A study in central Idaho found that wolverines prefer elevations above 7,200 feet (Copeland et al. 2007). In Idaho, wolverine summer habitat is primarily associated with high-elevation whitebark pine communities with steep slopes and course talus substrate (IDFG 2014).

Although elevations within the CS site overlap those of known use by wolverines, particularly at the upper portions of Willow Creek summit, summer use is unlikely because no whitebark pine communities occur. Moreover, the Willow Creek Summit does not sustain sufficient snowpack for denning and the elevation is below the typical threshold used for denning. Finally, no wolverine occurrences have been observed within 20 miles of the CS site (IDFG 2017).

For these reasons, we conclude that construction and operation of the Willow Creek Summit Communication Station will have **no effect** on the North American wolverine. "No effect" determinations do not require coordination with or approval from the USFWS under the ESA (16 U.S.C. 1531 et seq., as amended). Per BPA internal guidelines, a no effect determination memo submitted to the project file completes their ESA compliance (BPA 2011).

BPA. 2011. BPA's Endangered Species Act Compliance Flow Chart for Fish and Wildlife Projects. Available online at: https://www.bpa.gov/efw/Analysis/NEPADocuments/esa/ESAFlowChart_FW_10-20-11.pdf

BLM. 2018.Willow Creek Summit Communication Site Management Plan. Bureau of Land Management, Challis Field Office, Challis Idaho.

Copeland, J. P., 1996. Biology of the Wolverine in Central Idaho. Master's Thesis, Moscow, Idaho: University of Idaho.

Copeland, J. P. et al., 2007. Seasonal habitat associations of the wolverine in central Idaho. Journal of Wildlife Management, pp. 71(7):2201-2212.

IDFG, 2014. Management plan for the conservation of wolverines in Idaho, Boise, Idaho.

IDFG. 2017. Idaho Fish and Wildlife Information System Species Diversity Database. Idaho Natural Heritage Data. Accessed March 3, 2017.

APPENDIX G
OFFICIAL USFWS ESA SPECIES LISTS

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Idaho Fish And Wildlife Office
1387 South Vinnell Way, Suite 368
Boise, ID 83709-1657
Phone: (208) 378-5243 Fax: (208) 378-5262

In Reply Refer To: June 07, 2018
Consultation Code: 01EIFW00-2018-SLI-1417
Event Code: 01EIFW00-2018-E-02888
Project Name: Windy Devil Annex-BPA Radio Station Build

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

Please note: The IPaC module for producing a list of proposed and designated critical habitat is currently incomplete. At this time, we ask that you use the information given below to determine whether your action area falls within a county containing proposed/designated critical habitat for a specific species. If you find that your action falls within a listed county, use the associated links for that species to determine if your action area actually overlaps with the proposed or designated critical habitat.

Canada Lynx (*Lynx canadensis*) - *Designated February 24, 2009.*
Counties: Boundary County.

Federal Register Notice: http://www.gpo.gov/fdsys/pkg/FR-2009-02-25/pdf/E9-3512.pdf#page=1
Printable Maps:
http://www.fws.gov/mountain-prairie/species/mammals/lynx/criticalhabitat_files/

20081222_fedreg_unit3_draft.jpg
GIS Data: http://criticalhabitat.fws.gov/docs/crithab/zip/lunx_ch.zip
KML for Google Earth: (None Currently Available)

Selkirk Mountains Woodland Caribou (*Rangifer tarandus Caribou*) - *Proposed November 30, 2011.*
Counties: Bonner and Boundary Counties.

Federal Register Notice: http://www.fws.gov/idaho/home/2011-30451FINALR.pdf
Printable Maps: http://www.fws.gov/idaho/home/Map1_sub1_150.pdf
GIS Data: (None Currently Available)
KML for Google Earth: (None Currently Available)

Bull Trout (*Salvelinus confluentus*) - *Designated September 30, 2010.*
Counties: Adams, Benewah, Blaine, Boise, Bonner, Boundary, Butte, Camas, Clearwater, Custer, Elmore, Gem, Idaho, Kootenai, Lemhi, Lewis, Nez Perce, Owyhee, Shoshone, Valley, and Washington Counties.

Federal Register Notice: http://www.gpo.gov/fdsys/pkg/FR-2010-10-18/pdf/2010-25028.pdf#page=2
Printable Maps: http://www.fws.gov/pacific/bulltrout/CH2010_Maps.cfm#CHMaps
GIS Data: http://criticalhabitat.fws.gov/docs/crithab/zip/bulltrout.zip
KML for Google Earth: http://www.fws.gov/pacific/bulltrout/finalcrithab/BT_FCH_2010_KML.zip

Kootenai River White Sturgeon (*Acipenser transmontanus*) - *Designated July 9, 2008.*
Counties: Boundary County.

Federal Register Notice: http://www.gpo.gov/fdsys/pkg/FR-2008-07-09/pdf/E8-15134.pdf#page=1
Printable Maps: (None Currently Available)
GIS Data: http://criticalhabitat.fws.gov/docs/crithab/zip/fch_73fr39506_acit_2009.zip
KML for Google Earth: (None Currently Available)

Slickspot Peppergrass (*Lepidium papilliferum*) - Proposed May 10, 2011. Counties: Ada, Canyon, Elmore, Gem, Owyhee, and Payette Counties.

Federal Register Notice: http://www.gpo.gov/fdsys/pkg/FR-2011-10-26/pdf/2011-27727.pdf
Printable Maps: http://www.fws.gov/idaho/Lepidium.html
GIS Data: (None Currently Available)
KML for Google Earth: (None Currently Available)

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in

the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Idaho Fish And Wildlife Office
1387 South Vinnell Way, Suite 368
Boise, ID 83709-1657
(208) 378-5243

Project Summary

Consultation Code: 01EIFW00-2018-SLI-1417

Event Code: 01EIFW00-2018-E-02888

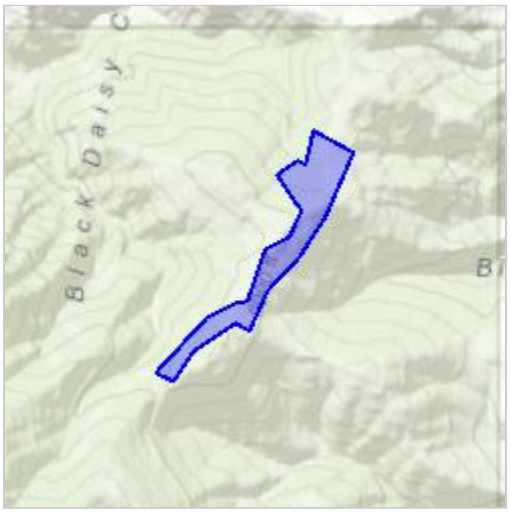
Project Name: Windy Devil Annex-BPA Radio Station Build

Project Type: Department of Energy Operations

Project Description: Bonneville Power Admin. (BPA) plans to construct a radio station and improve roads near the existing USFS Windy Devil Radio Station. A communication equipment building, large propane tanks, an 80-foot-tall steel lattice tower, and associated foundation pads and footings, would be developed 0.3 miles from the existing communication site, along the same access road (FS 211). The road would be improved in several spots, with one area requiring re-routing a hairpin curve.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/43.918292013546036N113.67906888995387W



Counties: Custer, ID

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
North American Wolverine *Gulo gulo luscus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5123	Proposed Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Idaho Fish And Wildlife Office
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In Reply Refer To: June 24, 2019
Consultation Code: 01EIFW00-2019-SLI-1390
Event Code: 01EIFW00-2019-E-02913
Project Name: Willow Creek Summit Radio Station Expansion (UPDATE)

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (https://ww.fws.gov/migratorybirds/pdf/management/eagleconservtionplanguidance.pdf). Additionally, wind energy projects should follow the wind energy guidelines (https://www.fws.gov/ecologica-servces/energy-develpment/wind/html) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: https://www.fws.ov/bidsbird-enthusiasts/threats-to-birds/collisions/communication-towers.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Idaho Fish And Wildlife Office
1387 South Vinnell Way, Suite 368
Boise, ID 83709-1657
(208) 378-5243

Project Summary

Consultation Code: 01EIFW00-2019-SLI-1390

Event Code: 01EIFW00-2019-E-02913

Project Name: Willow Creek Summit Radio Station Expansion (UPDATE)

Project Type: Department of Energy Operations

Project Description: Update of older version of same named project, with an extension of the fiber optic burial extended along the Highway 93 to an existing fiber vault.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/44.25432806777518N113.99048781292004W

Counties: Custer, ID

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
North American Wolverine *Gulo gulo luscus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5123	Proposed Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

MIGRATORY BIRD INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.
Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?
The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?
The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report
The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Wetlands

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER EMERGENT WETLAND

- PEM1C

RIVERINE

- R4SBC

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Idaho Fish And Wildlife Office
1387 South Vinnell Way, Suite 368
Boise, ID 83709-1657
Phone: (208) 378-5243 Fax: (208) 378-5262

In Reply Refer To: January 20, 2021
Consultation Code: 01EIFW00-2019-SLI-1390
Event Code: 01EIFW00-2021-E-01197
Project Name: Willow Creek Summit Radio Station Expansion (UPDATE)

Subject: Updated list of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (https://ww.fws.gov/migratorybirds/pdf/management/eagleconservtionplanguidance.pdf). Additionally, wind energy projects should follow the wind energy guidelines (https://www.fws.gov/ecologica-servces/energy-develpment/wind/html) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: https://www.fws.ov/bidsbird-enthusiasts/threats-to-birds/collisions/communication-towers.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Idaho Fish And Wildlife Office
1387 South Vinnell Way, Suite 368
Boise, ID 83709-1657
(208) 378-5243

Project Summary

Consultation Code: 01EIFW00-2019-SLI-1390
Event Code: 01EIFW00-2021-E-01197
Project Name: Willow Creek Summit Radio Station Expansion (UPDATE)
Project Type: Department of Energy Operations
Project Description: Update of older version of same named project, with an extension of the fiber optic burial extended along the Highway 93 to an existing fiber vault.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@44.25432806777518,-113.99048781292004,14z

Counties: Custer County, Idaho

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Conifers and Cycads

NAME	STATUS
Whitebark Pine *Pinus albicaulis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1748	Proposed Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

THERE ARE NO FWS MIGRATORY BIRDS OF CONCERN WITHIN THE VICINITY OF YOUR PROJECT AREA.

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?
The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects
For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical

Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report
The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Wetlands

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

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RIVERINE

- R4SBC

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Idaho Fish And Wildlife Office
1387 South Vinnell Way, Suite 368
Boise, ID 83709-1657
Phone: (208) 378-5243 Fax: (208) 378-5262

In Reply Refer To: January 25, 2021
Consultation Code: 01EIFW00-2018-SLI-1417
Event Code: 01EIFW00-2021-E-01244
Project Name: Windy Devil Annex-BPA Radio Station Build

Subject: Updated list of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

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(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

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http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (https://ww.fws.gov/migratorybirds/pdf/management/eagleconservtionplanguidance.pdf). Additionally, wind energy projects should follow the wind energy guidelines (https://www.fws.gov/ecologica-servces/energy-develpment/wind/html) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: https://www.fws.ov/bidsbird-enthusiasts/threats-to-birds/collisions/communication-towers.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

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1387 South Vinnell Way, Suite 368
Boise, ID 83709-1657
(208) 378-5243

Project Summary

Consultation Code: 01EIFW00-2018-SLI-1417
Event Code: 01EIFW00-2021-E-01244
Project Name: Windy Devil Annex-BPA Radio Station Build
Project Type:
Project Description: Bonneville Power Admin. (BPA) plans to construct a radio station and improve roads near the existing USFS Windy Devil Radio Station. A communication equipment building, large propane tanks, an 80-foot-tall steel lattice tower, and associated foundation pads and footings, would be developed 0.3 miles from the existing communication site, along the same access road (FS 211). The road would be improved in several spots, with one area requiring re-routing a hairpin curve.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.918292013546036,-113.67906888995387,14z

Counties: Custer County, Idaho

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Conifers and Cycads

NAME	STATUS
Whitebark Pine *Pinus albicaulis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1748	Proposed Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Cassin's Finch *Carpodacus cassinii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9462	Breeds May 15 to Jul 15

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

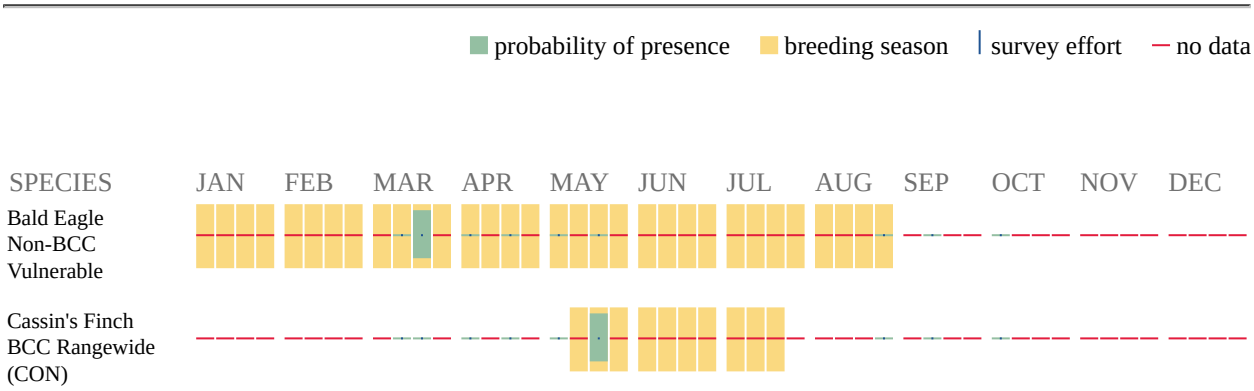
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (–)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

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occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

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Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

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3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can

implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

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For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

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If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report
The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Wetlands

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

APPENDIX H
IDAHO FISH AND GAME HABITAT QUANTIFICATION TOOL OUTPUT, WILLOW CREEK SUMMIT

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Project Name	
Willow Creek Summit	
Project contact name	Email address
Michael O'Connell (BPA), Bart Zwetzig (BLM)	

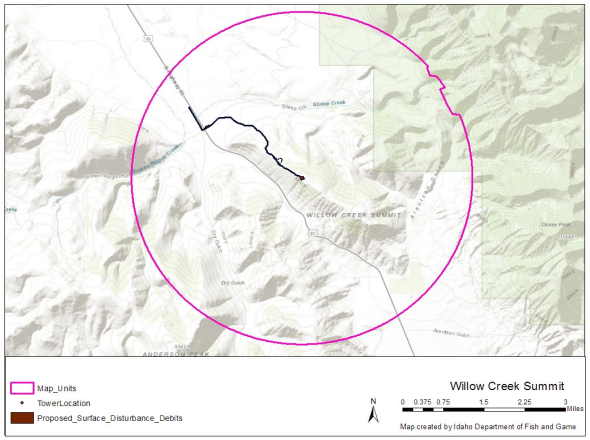
Contact Information for HQT Assessor	
Name	
Ann Moser, Idaho Department of Fish and Game	
Email address	Phone number
ann.moser@idfg.idaho.gov	208-287-2705

HQT Assessment Information		
Year of Assessment	Date completed	HQT Version Used
2021	January 25, 2021	1.0

Results Summary

0.5	Projected Debits
0.5	Permanent Debits

Acres Direct Impact	Permit End Date
14.9	
Acres Indirect Impact	Rehabilitation Date
19,516.5	

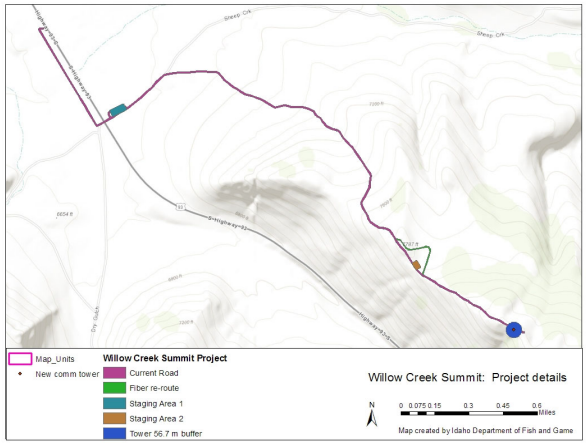


Project Result Details

CURRENT CONDITION				PROJECTED CONDITION				PERMANENT CONDITION					
Functional Acres	Overall Score	Local Scale Score	Site Scale Score	Functional Acres	Overall Score	Local Scale Score	Site Scale Score	Functional Acres	Overall Score	Local Scale Score	Site Scale Score	Landscape Importance Factor	Alternative Site Scale Score
949.7	5%	16%	0%	949.3	5%	16%	0%	949.3	5%	16%	0%	1.19	57%

Map Unit Summary

Map Unit ID (id #)	Veg Unit ID (id #)	Vegetation Unit Name (name)	Map Unit Area (acres)	Type of Proposed Disturbance (Disturbance Type)	Habitat Type (Mesic/ Upland)	Site Assessment Completed (True/False)	Date of Site Assessment (Date)	Field Assessment in Valid Window (True/False)	Site Score Source (SA/HPM)	Impact (pct. pt. change)	Projected Debits (Debits)	Permanent Debits (Debits)
1	1	HPM	19,516.5	Indirect	Upland	FALSE	#N/A	#N/A	HPM	0%	0.3	0.3
2	1	HPM	11.9	Direct_Permanent	Upland	FALSE	#N/A	#N/A	HPM	1%	0.2	0.2
3	1	HPM	3.0	Direct_Term_Reclaimed	Upland	FALSE	#N/A	#N/A	HPM	0%	0.0	0.0



Project is adding a new communication tower and associated facilities to an existing tower location.

Email communication from Michael O'Connell (BPA), January 22, 2021:
"I would be shooting for an overall 26-foot wide temporary disturbance along the existing road (the 41' is this 26' plus 15' existing road prism). Mainly the disturbance is limited to the north side of the road where the fiber would go right on the edge. While the construction specialist said plan on 8-feet of disturbance width, I bumped it to 16. Then, on the south side assume collateral veg crushing and rutting etc. so I added 10'.

On the fiber re-route, yes I think I buffered by 16' either side, so 9.75m.

To your direct questions:

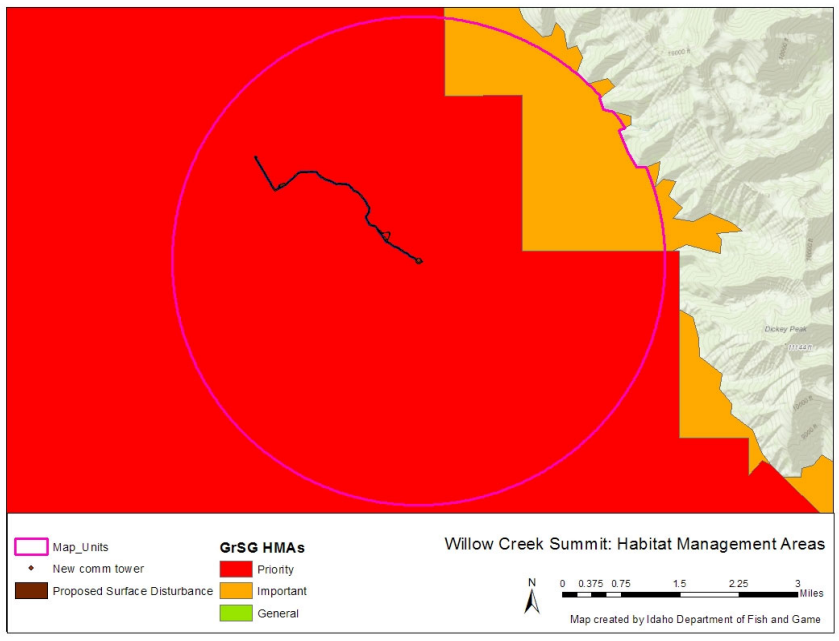
- The road is assumed to just need gravel application in various locations; Yes the fiber would be just on the edge of the existing road (with a potential for equipment rutting and veg crushing out to 8 to 16 feet on that side (the north side unless conditions necessitate entering the main prism or other edge for a stretch in worst case.
- The fiber re-route is an avoidance measure for known resources. I don't think any attempt is made to follow the triangle – only avoid the resource. Yes, it would be buried and the site rehabbed/re-vegged.
- Yes the staging areas would be rehabbed.
- For the tower, I'm attaching a map and the shapefile, please let me know if you need more info."

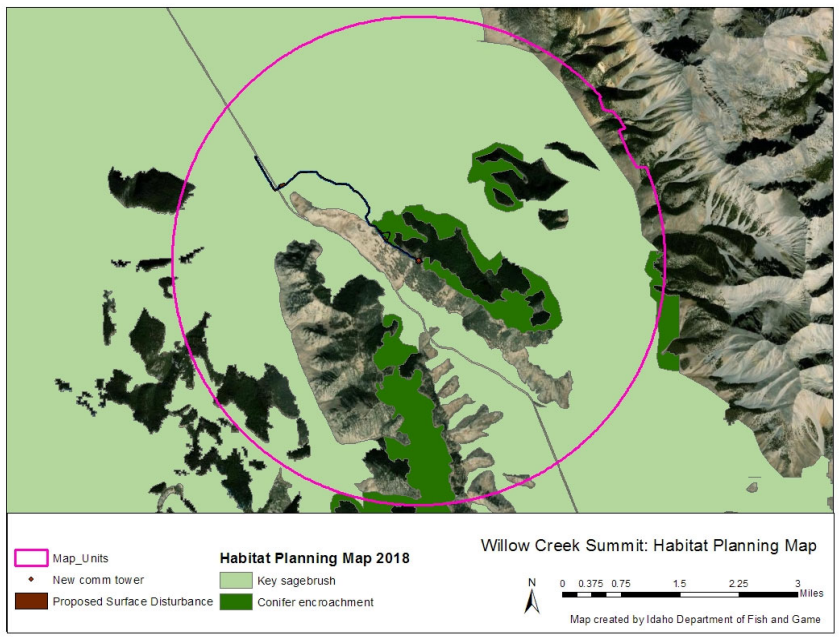
Analysis notes:

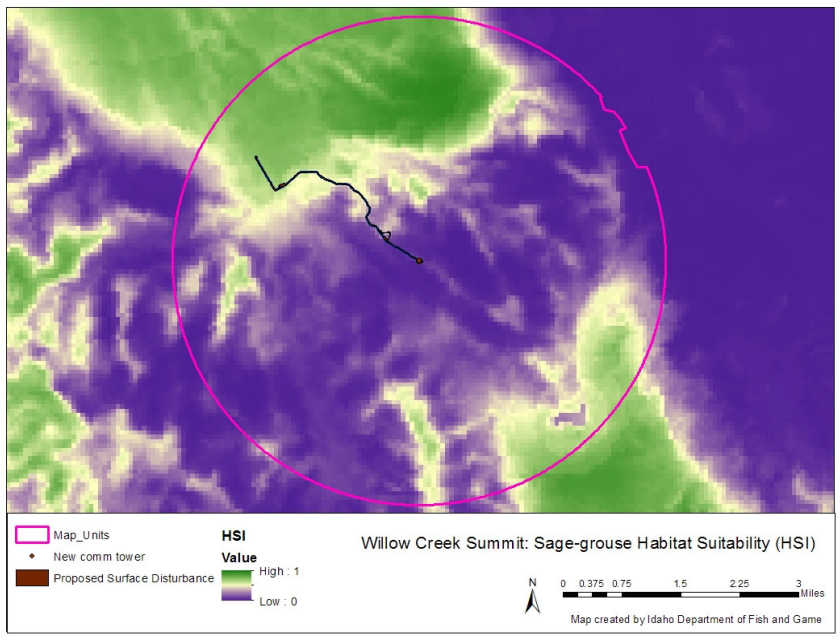
- Our HQT tool has built-in direct disturbance widths for different road types. Given the description above, I analyzed the existing road as a primitive road with an upgrade to a local road. In this case, there is no option for temporary disturbance adjacent to the road way. Given the vegetation crushing, I did not consider the disturbance to be temporary in this HQT run. This could be analyzed in better detail, if desired.

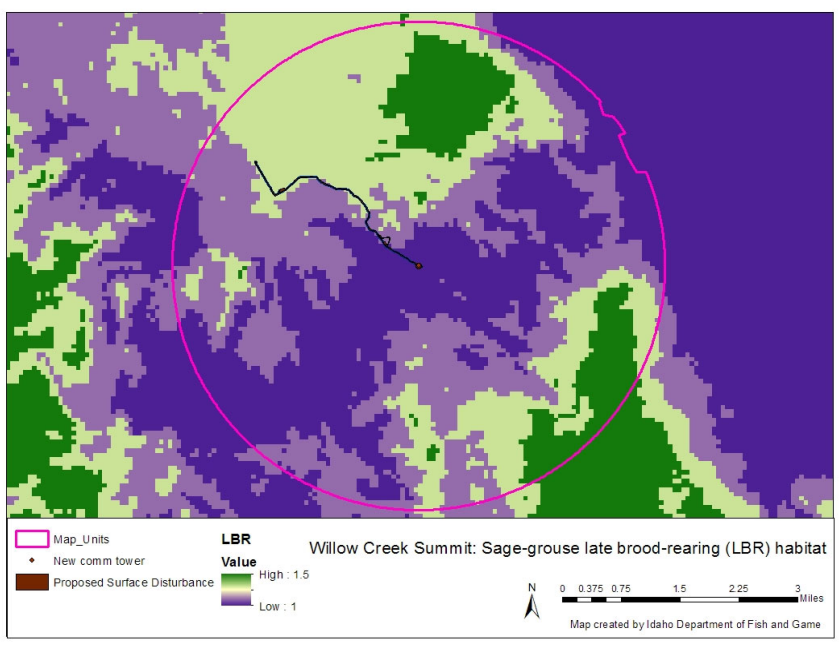
Local	Other maintained roads	25%	6.2 m	1 km
Primitive	Unimproved roads	25%	1.3 m	400 m

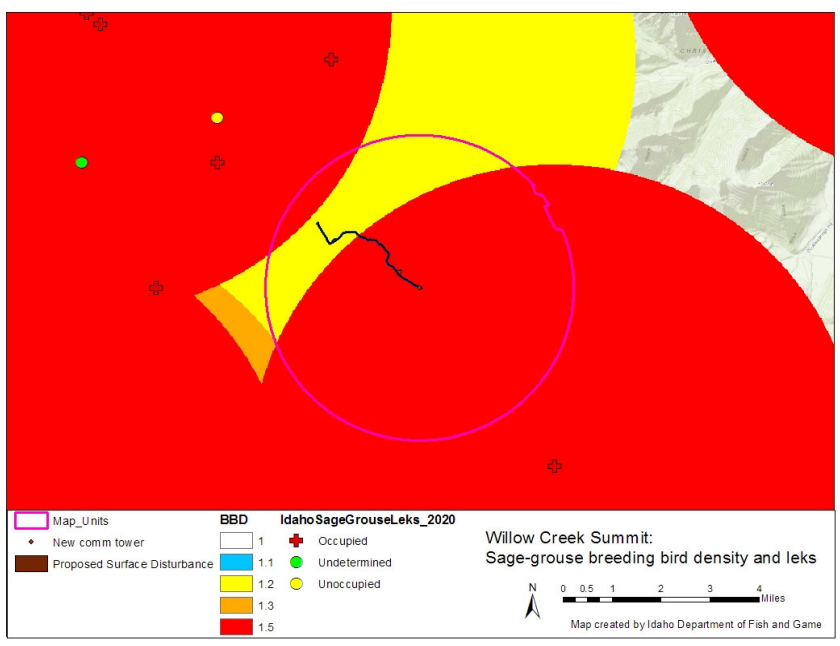
- Staging areas and fiber re-route area were run as temporary disturbances.
- The HQT tool has a built-in direct disturbance buffer of 56.7 m for communication towers. This buffer is meant to accommodate any associated facilities, concrete pads, etc. I was provided an actual facilities footprint for this project, which was smaller than the 56.7 m buffer. We may be able to work with a GIS analysis to modify the tool to accept an actual project footprint, if desired.

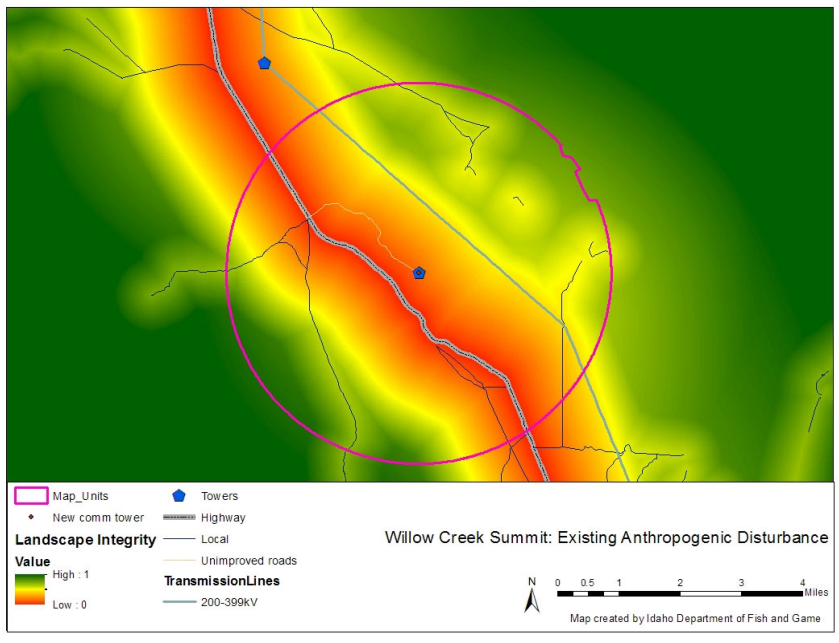

Map_Units
New comm tower
Proposed Surface Disturbance
GrSG HMAs
Priority
Important
General
Willow Creek Summit: Habitat Management Areas
N
0 0.375 0.75 1.5 2.25 3
Miles
Map created by Idaho Department of Fish and Game

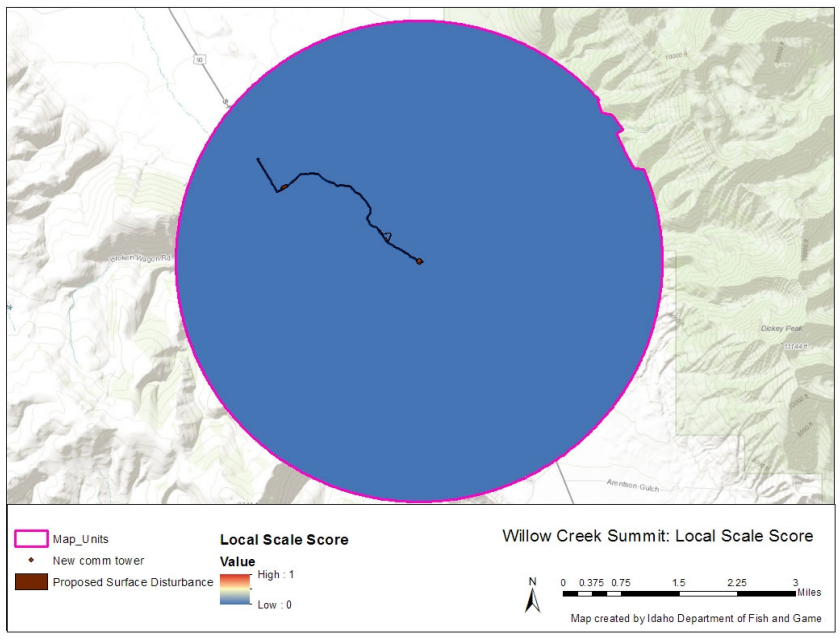

Map_Units
New comm tower
Proposed Surface Disturbance
Habitat Planning Map 2018
Key sagebrush
Conifer encroachment
Willow Creek Summit: Habitat Planning Map
N
0 0.375 0.75 1.5 2.25 3
Miles
Map created by Idaho Department of Fish and Game


Map_Units
New comm tower
Proposed Surface Disturbance
HSI
Value
High : 1
Low : 0
Willow Creek Summit: Sage-grouse Habitat Suitability (HSI)
N
0 0.375 0.75 1.5 2.25 3
Miles
Map created by Idaho Department of Fish and Game


Map_Units
New comm tower
Proposed Surface Disturbance
LBR
Value
High : 1.5
Low : 1
Willow Creek Summit: Sage-grouse late brood-rearing (LBR) habitat
N
0 0.375 0.75 1.5 2.25 3
Miles
Map created by Idaho Department of Fish and Game


Map_Units
New comm tower
Proposed Surface Disturbance
BBD
1
1.1
1.2
1.3
1.5
IdahoSageGrouseLeks_2020
Occupied
Undetermined
Unoccupied
Willow Creek Summit:
Sage-grouse breeding bird density and leks
N
0 0.5 1 2 3 4
Miles
Map created by Idaho Department of Fish and Game


Map_Units
New comm tower
Towers
Highway
Local
Unimproved roads
Landscape Integrity
Value
High : 1
Low : 0
TransmissionLines
200-399kV
Willow Creek Summit: Existing Anthropogenic Disturbance
N
0 0.5 1 2 3 4
Miles
Map created by Idaho Department of Fish and Game


Map_Units
New comm tower
Proposed Surface Disturbance
Local Scale Score
Value
High : 1
Low : 0
Willow Creek Summit: Local Scale Score
N
0 0.375 0.75 1.5 2.25 3
Miles
Map created by Idaho Department of Fish and Game

BONNEVILLE POWER ADMINISTRATION
DOE/BP-5144 ▪ June 2021