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Environmental Assessment

Idaho Power Company Line 328 Project

Boise National Forest
Emmett and Cascade Ranger Districts
Gem and Valley County, Idaho



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Chapter 1–Purpose and Need

1.1 Introduction

The Boise National Forest (Forest) has prepared this Environmental Assessment (EA) in compliance with the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 et seq., 40 CFR 1500–1508) and other relevant federal and State laws and regulations. Development of this EA and the analysis within is based on the direction contained in the 2010 Boise National Forest Land and Resource Management Plan (Forest Plan) (USDA Forest Service 2010a). This EA summarizes the environmental impacts assessed that would result from the Proposed Action and the No Action Alternatives. Additional documentation, including more-detailed analyses of the project, may be found in the Project Record located at the Cascade Ranger District (RD) office in Cascade, Idaho.

1.2 Background

Idaho Power Company (Idaho Power) is currently authorized to use National Forest System (NFS) lands for the purpose of operating and maintaining a 69-kilovolt transmission power line (Line 328) under the terms and conditions of a special-use permit.

Originally constructed in 1943, Line 328 traveled from Emmett, Idaho, to Stibnite, Idaho, to provide electricity for mining operations (Figure 1-1). The portion of the line from Yellow Pine to Stibnite has since been removed. The current purpose of Line 328 is to provide electrical service to the Warm Lake and Yellow Pine areas.

Line 328 includes a right-of-way (ROW) corridor 70 feet wide (i.e., 35 feet on either side of the centerline), which can be accessed using various NFS and County roads, as well as numerous short, unauthorized roads and overland access routes established when Line 328 was originally constructed.

This power line corridor has been identified through the land and resource management planning process for use as a designated utility corridor¹ on the Forest. These designations constitute a long-term allocation of National Forest System land. See the Forest Plan (USDA Forest Service 2010a, Volume 2, Appendix I) for additional detail on power line corridors.

1.3 Project Area Description

The project area is located in the Squaw Creek, North Fork Payette River, South Fork Salmon River, and Johnson Creek drainages on the Emmett and Cascade Ranger Districts of the Forest.

¹ Designated utility corridor is defined as, “A linear strip of National Forest System land, designated through the land and resource management planning process, for use as a utility corridor. These designations constitute a long-term allocation of National Forest System land. A utility corridor may be used to accommodate more than one utility use” (USDA Forest Service 2010a, Volume 1, p. G-11).

Portions of Line 328 and its associated access roads traverse lands administered by the Cascade and Emmett RDs of the Boise National Forest (Figure 1-1). Project-specific activities will occur on portions of the following sections of Gem and Valley County, Idaho:

- Township 10N, Range 02E, Sections 20, 17, 16, and 9
- Township 11N, Range 03E, Sections 30, 17, and 8
- Township 15N, Range 05E, Sections 33, 32, 28, 27, 24, 23, 22, and 13
- Township 15N, Range 06E, Sections 21, 20, 18, 17, 16, 15, 10, 11, 02, and 01
- Township 16N, Range 06E, Section 36
- Township 16N, Range 07E, Sections 31, 30, 20, 19, 17, 16, 12, 11, 10, 09, 02, and 01
- Township 17N, Range 07E, Section 36
- Township 17N, Range 08E, Sections 31, 30, 20, 19, 17, 08, and 05
- Township 18N, Range 08E, Sections 32, 29, 20, 17, and 16

1.4 Purpose and Need for Action

Idaho Power has requested that the Forest Service amend the current permit to allow access to and maintenance of Line 328 and its associated structures. The need to access structures and perform repair and maintenance on Line 328 has become critical, and limited access is affecting Idaho Power's ability to provide safe, reliable service to their customers through routine maintenance of Line 328.

Support structures associated with Line 328, many of which have been in use since 1943, have gradually deteriorated because of age, exposure to the elements, and other factors. Many of the structures, including wooden poles, cross arms, and X braces, are rotting, splitting, leaning, or showing other signs of damage, which seriously compromises their integrity. Access to Line 328 has changed over the years as well. Many of the unauthorized² roads are now impassable due to vegetation growth, rockfall, cut bank or fill slope failure, and/or wet areas or stream crossings. Access to several authorized roads and other unauthorized roads has been blocked or eliminated for a variety of reasons. In addition, while the current special-use permit allows operation and maintenance of the power line, it does not address access to Line 328 or its structures.

The current special-use permit will expire December 31, 2013. Rather than amend the permit through this action, and then complete additional NEPA review to renew the permit when it expires, the Forest has chosen to renew the permit as part of this action.

² Unauthorized roads, in contrast, are roads that are not included in an official forest transportation atlas (36 CFR § 212.1). Generally, unauthorized roads are created through repeated use, were not planned by the Forest Service, and are not maintained (70 FR 68,265). For example, many unauthorized roads do not have features for proper drainage or erosion control; thus, they may potentially increase sedimentation in streams.

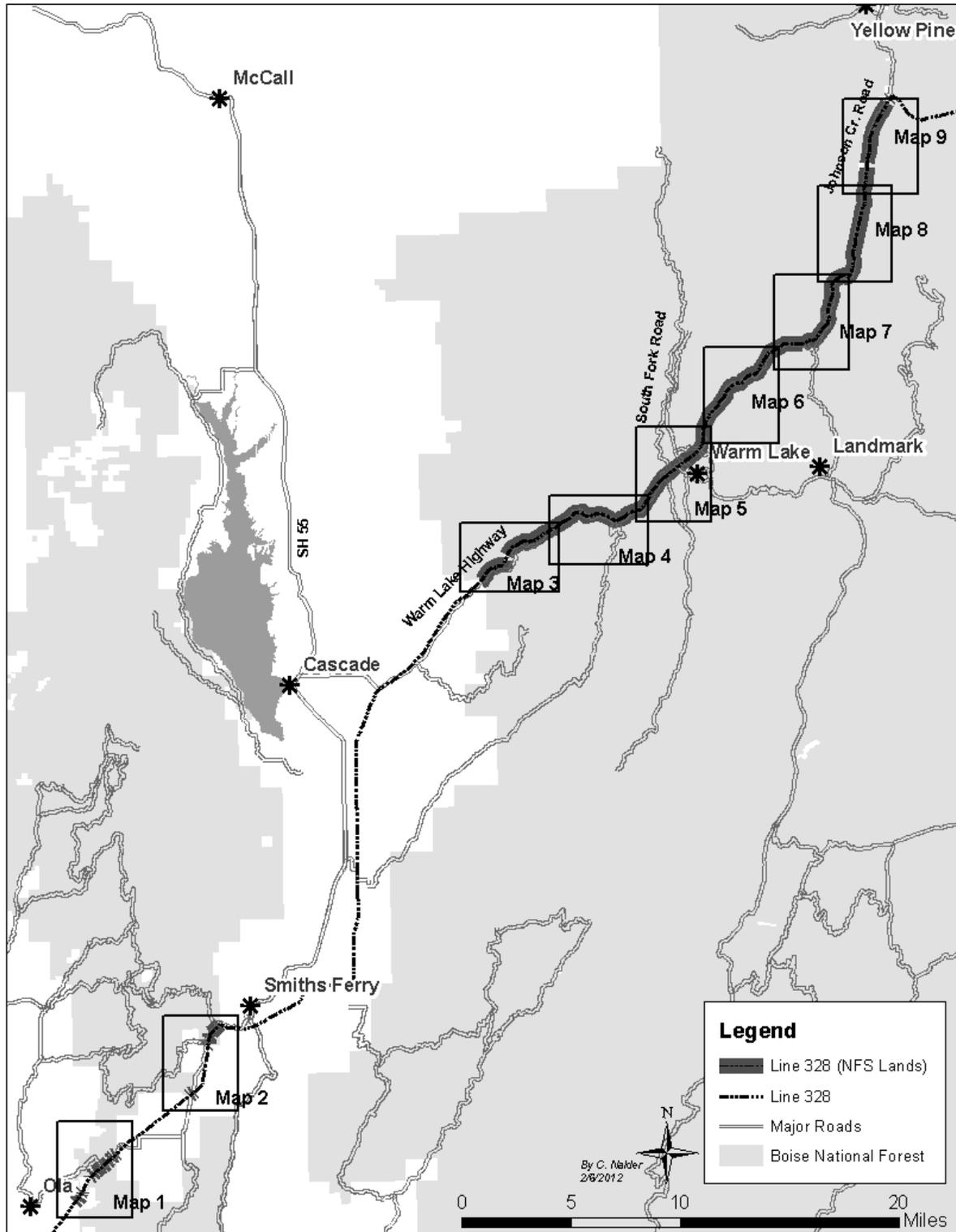


Figure 1-1. Project vicinity map (inset maps 1 through 9 can be found in Chapter 2)

1.5 Proposed Action

In response to a request from Idaho Power, the special-use permit for Line 328 on NFS lands would be renewed for another 20-year term. The renewed permit, which only includes those portions of Line 328 on the Emmett and Cascade RDs, would also address access to the power line and its structures. The Proposed Action would authorize the following activities.

- Idaho Power would be permitted to open, perform maintenance on, and use 6 miles within 11 existing authorized road segments that are on the National Forest road system in a state of storage (maintenance level 1³) (NFS roads 420, 420A, 497E, 497K, 644Z, 644Z2, 644Z3, 644E, 644AB, 644B, and 467P). Maintenance on these roads would include clearing vegetation, rocks, and/or fallen trees, as well as installing hardened stream crossings and repairing cut and fill slope failures in the existing road prism as necessary.

These roads would remain on the road system but be changed to maintenance level 2⁴ roads available for administrative use only⁵ (i.e., closed to public use). Unauthorized motor vehicle use on NFS roads 420, 420A, 497E, and 497K would continue to be prevented via the existing gates. Unauthorized motor vehicle use on NFS roads 644Z, 644Z2, 644Z3, and 644E would be prevented by installing gates across the travelway. Earthen berms and/or barrier rocks would be installed as needed to prevent unauthorized travel around the gates. Unauthorized motor vehicle access on NFS roads 644AB and 644B would be prevented by installing gates where these roads intersect with NFS road 644L and NFS road 644 respectively.

- A 1.02-mile segment of NFS road 467P, currently a maintenance level 1 road, would be opened and designated for public motor vehicle use as a maintenance level 2 road and would be displayed on the Motor Vehicle Use Map (MVUM).
- The Forest Service would convert 19 miles within 115 segments of existing unauthorized roads to maintenance level 2 roads for administrative use only and add them to the Forest transportation system. Idaho Power would be permitted to

³ Per US Forest Service (USFS) Handbook 7709.59 62.32, maintenance levels are assigned to all USFS system roads to describe in general terms the type of traffic that uses each road and the level of maintenance intended for the road. Maintenance level 1 roads are those that have been placed in storage between intermittent uses. The period of storage must exceed 1 year. Basic custodial maintenance is performed to prevent damage to adjacent resources and to perpetuate the road for future resource management needs. Emphasis is normally given to maintaining drainage facilities and runoff patterns. Planned road deterioration may occur at this level. Appropriate traffic management strategies are “prohibit” and “eliminate” all traffic. These roads are not shown on motor vehicle use maps.

⁴ Maintenance level 2 roads are open for use by high-clearance vehicles; passenger car traffic, user comfort, and user convenience are not considerations. Warning signs and traffic control devices are not provided, with the exception of some signing (such as W-18-1 “No Traffic” signs) that may be posted at intersections. Motorists should have no expectations of being alerted to potential hazards while driving these roads. Traffic is normally minor, usually consisting of administrative, permitted, dispersed recreation, or other specialized vehicles. Log haul may occur at this level.

The distinction between maintenance levels 1 and 2 is sharply defined. Maintenance level 1 roads are placed in storage with all vehicular traffic eliminated. Maintenance level 2 roads are passable by prudent drivers in high-clearance vehicles.

⁵ Maintenance level 2 roads can be ‘administrative only’ roads (closed to the public) or open to the public, depending upon the road objectives. Roads that are closed to public motor vehicle use but which receive Forest Service administrative traffic are constant service roads and designated as maintenance level 2 – administrative only use. Maintenance level 2 roads that are open to the public are passable by prudent drivers in high-clearance vehicles. Motorists should have no expectations of being alerted to potential hazards while driving these roads.

open, perform maintenance on, and use these roads for access to permitted facilities. Maintenance would include clearing vegetation, rocks, and/or fallen trees, as well as installing hardened stream crossings and repairing cut and fill slope failures, as necessary, to allow for a 10- to 12-foot-wide road surface. Unauthorized motor vehicle use would be prevented by installing gates across the travelway and additional physical barriers as shown in Table 1-1 through Table 1-3 below.

Table 1-1. National Forest System Roads converted from unauthorized to maintenance level 2—Emmett to Cascade

Road Identifier	Structure Number(s)	Adjoining Road	Closure Method
IPC 93	179–180	644E	Gate
IPC 96	181–184	644	Gate

Table 1-2. National Forest System Roads converted from unauthorized to maintenance level 2—Cascade to Warm Lake Substation

Road Identifier	Structure Number(s)	Adjoining Road	Closure Method
IPC 5, IPC5A	63–64	497.1	Gate w/ berm
IPC 6	65	497J	Gate
IPC 7	68–70	497I	Gate
IPC 19	107–108	HWY 22	Gate
IPC 20	109–113	HWY 22	Gate
IPC 25	123–127	HWY 22	Gate
IPC 28	131–132	HWY 22	Gate
IPC 29	133–134	HWY 22	Gate w/ boulders
IPC 30	136	HWY 22	Gate
IPC 31	137–138	493	Gate w/ boulders

Table 1-3. National Forest System Roads converted from unauthorized to maintenance level 2—Warm Lake Substation to Yellow Pine

Road Identifier	Structure Number(s)	Adjoining Road	Closure Method
IPC 34	3–4	474	Gate
IPC 37	13	467	Gate
IPC 40	22	467	Gate w/ boulders
IPC 41	23	467	Gate w/ heavy slash
IPC 44	36–38	467	Gate w/ boulders
IPC 50	55	467	Gate
IPC 53	60	467	Gate
IPC 56	76–77	413L	Gate
IPC 57	78–83	413	Gate
IPC 63	95–101	413	Gate w/ boulders
IPC 64	103–106	413	Gate
IPC 65	107–109	413	Gate
IPC 76	129	413	Gate
IPC 78	132	413	Gate
IPC 81	137–141	413	Gate
IPC 87	149–160	413	Gate
IPC 88	161–164	413	Gate

- One 0.75-mile of unauthorized road between NFS road 427 and NFS road 474 near the Warm Lake substation would be designated as a maintenance level 2 road open to public use and would be added to the MVUM.
- Where vegetation and terrain allow, the Forest Service would identify 68 segments of overland access routes totaling 4 miles. Idaho Power would be permitted to “walk” or slowly drive motorized equipment cross-country within the confines of these overland access routes to the power line corridor and/or structures. Overland access routes would be located in a manner to limit disturbance to vegetation, and no earth movement would be permitted, with the possible exception of removing and reinstalling cross-ditches.
- A portion of the overhead power line would be relocated between Structures 101 and 103 near Whitehorse Rapids. Relocation would necessitate installing a second supporting structure near Structure 101 and clearing approximately 1,060 feet of vegetation within the power line corridor.
- As necessary, Idaho Power would be permitted to inspect, maintain, repair, and/or replace existing power line structures, including poles, X braces, cross arms, down guys, insulators, and conductors.
- Idaho Power would be permitted to maintain the power line corridor (70 feet wide, with 35 feet on either side of the centerline) by clearing vegetation with hand labor. Felled vegetation would be limbed, bucked, and retained on-site.
- Stream Crossings
 - One crossing on an unnamed perennial non-fish bearing tributary to Curtis Creek to access structures 328-02-107 and 108. This crossing will be reconstructed as a hardened ford using a large crushed aggregate.

- One crossing on Trout Creek, high in the subwatershed to access structures 328-04-54 and 55. This crossing is a naturally armored crossing and no improvement will occur.
- The Proposed Action would require a site-specific non-significant amendment (Forest Service Handbook [FSH] 1926.51) of the Forest Plan. Specifically, the Forest-wide standard on page III-88 of the Forest Plan prohibits road construction in Management Prescription Category (MPC) 3.2 (USDA Forest Service 2010a). Since the Forest Plan Glossary defines new road construction as an, “Activity that results in the addition of forest classified or temporary road miles,” the addition of existing NFS roads to the Forest’s transportation system in MPC 3.2 would fail to comply with the standard⁶. Should the Proposed Action be selected, a site-specific non-significant Forest Plan amendment would be prepared and attached to the decision document for this project. The amendment would waive application of the MPC 3.2 standard to allow adding existing unauthorized roads to the transportation system in MPC 3.2 for the purposes of maintenance of the power line corridor and its structures only.

1.6 Decision Framework

Using the analysis documented in this EA, the Boise National Forest Supervisor will make decisions on this project. The following decisions will be made:

- Should the special-use permit for Idaho Power Company Line 328 be renewed for another 20-year term?
- Should Idaho Power be permitted to open, perform maintenance on, and use 6 miles within 11 authorized road segments that are currently in a state of storage?
- Should the Forest Service designate 19 miles within 115 segments of existing unauthorized roads as system roads and add them to the Forest transportation system, and should Idaho Power be permitted to open, perform maintenance on, and use these roads?
- Should the existing NFS road 467P (1.02 miles) and the 0.75-mile unauthorized road (between Road 427 and Road 474) near the Warm Lake substation both be designated as maintenance level 2 roads open to public use and added to the MVUM?
- Where vegetation and terrain allow, should the Forest Service designate 4 miles within 68 segments of overland access routes? And should Idaho Power be

⁶ The Forest Plan references the old definitions of “road construction” and “classified road.” The following definitions are found in 36 CFR 212 (promulgated in 2005):

Designated road, trail, or area—A National Forest System road, a National Forest System trail, or an area on National Forest System lands that is designated for motor vehicle use pursuant to § 212.51 on a motor vehicle use map.

Road construction or reconstruction—Supervising, inspecting, actual building, and incurrence of all costs incidental to the construction or reconstruction of a road.

permitted to “walk” motorized equipment cross-country within the confines of the overland access routes to the power line corridor and/or structures?

- Should a portion of the overhead power line be relocated between Structures 101 and 103 near Whitehorse Rapids?
- Should a site-specific non-significant amendment of the Forest Plan be prepared to allow adding existing unauthorized roads to the transportation system in MPC 3.2 for the purposes of maintaining the power line and its structures only?
- What design features, mitigation measures, and/or monitoring should be applied to the project?

1.7 Consistency with Laws, Regulations, and Policy

This EA has been prepared pursuant to the requirements of NEPA (42 U.S.C. 4321 *et seq.*, 40 CFR 1500–1508); other relevant federal and State laws and regulations; and the Forest Plan (USDA Forest Service 2010a).

This EA is tiered to the Final Environmental Impact Statement (FEIS) and planning record supporting the Forest Plan as amended in 2010 (USDA Forest Service 2010a), including the documentation related to the Continuous Assessment and Planning (CAP) process described in Chapter III and IV of the Forest Plan. This documentation includes monitoring reports, implementation guides, and errata/corrections to the FEIS and Forest Plan. Documented analyses in the Forest Plan FEIS have been referenced rather than repeated in some instances. Analyses pertaining to the 2003 FEIS supporting decisions concerning the revised Forest Plan (USDA Forest Service 2003) and 2010 FEIS supporting amendments to the 2003 revised Forest Plan (USDA Forest Service 2010b) are contained in the Forest planning record located at the Forest Supervisor’s Office in Boise, ID.

1.7.1 Forest Plan Management Direction

Activities associated with the Proposed Action would further the accomplishment of the following Forest Plan goals and/or objectives:

- **LSGO04**—Proposed special uses of National Forest System lands—such as hydroelectric development, communication sites, water developments, and utility corridors—are considered that meet public needs, are consistent with direction for other National Forest resources, and cannot be accommodated off the National Forest.
- **LSGO05**—Special-use authorizations are issued for uses that
 - a) serve the public,
 - b) promote public health and safety,
 - c) protect the environment, and/or
 - d) are legally mandated.
- **LSGO09**—Continue working with utilities and others to identify potential areas for additional designated utility and communication facilities.

- **FRGO01**—Provide and maintain a safe, efficient Forest transportation system that meets resource management and access needs, while mitigating degrading resource effects.
- **FROB05**—Coordinate transportation systems, management, and decommissioning with other federal, state, and county agencies, tribal governments, permittees, contractors, cost-share cooperators, and the public to develop a shared transportation system serving the needs of all parties to the extent possible.

Per the definition in the Forest Plan, adding an unauthorized road to the transportation system would be considered “new road construction” (USDA Forest Service 2010a, pg. GL-25). The Proposed Action would not comply with the following standard and would necessitate amendment of the Forest Plan (USDA Forest Service 2010a, Appendix A).

- **Forest-wide, MPC 3.2 (pg. III-88)**—Road construction or reconstruction may only occur where needed:
 - a) To provide access related to reserved or outstanding rights, or
 - b) To respond to statute or treaty, or
 - c) To support aquatic, terrestrial, and watershed restoration activities, or
 - d) To address immediate-response situations where, if the action is not taken, unacceptable impacts to hydrologic, aquatic, riparian, or terrestrial resources, or health and safety, would result.

Activities associated with the Proposed Action would further the accomplishment of the following Forest-wide MPC standards:

- **Forest-wide, MPC 3.2 (pg. III-87)**—Management actions, including salvage harvest, may only degrade aquatic, terrestrial, and watershed resource conditions in the temporary (up to 3 years) or short-term time periods and must be designed to avoid resource degradation in the long term (>15 years).
- **MA 19, MPC 4.2, ST1924**—New roads and landings shall be located outside of Riparian Conservation Areas (RCAs) in the MPC 4.2 portion of the Warm Lake Management Area downstream of Warm Lake unless it can be demonstrated through the project-level NEPA analysis and related Biological Assessment that:
 - a) For resources that are within their range of desired conditions, the addition of a new road or landing in an RCA shall not result in degradation to those resources unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and
 - b) For resources that are in a degraded condition, the addition of a new road or landing in an RCA shall not further degrade nor retard attainment of desired resource conditions unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and
 - c) Adverse effects to Threatened, Endangered, Proposed, or Candidate (TEPC) species or their habitats are avoided unless outweighed by demonstrable short- or long-term benefits to those TEPC species or their habitats.

An exception to ST1924 is where construction of new roads in RCAs is required to respond to reserved or outstanding rights, statute or treaty, or respond to emergency situations (e.g., wildfires threatening life or property, or search and rescue operations).

- **MA 19, MPC 4.2, ST1925**—New roads shall not be built in the MPC 4.2 portion of the management area downstream of Warm Lake except to replace existing roads in RCAs or directly repair human-caused damage to TEPC fish habitat in streams, unless it can be demonstrated through the project-level NEPA analysis and related Biological Assessment that adverse effects to TEPC species or their habitats are avoided unless outweighed by demonstrable short- or long-term benefits to those TEPC species or their habitats.
- **MA 20, ST2050**—New roads shall not be built except to replace existing roads in RCAs or directly repair human-caused damage to TEPC fish habitat in streams, unless it can be demonstrated through the project-level NEPA analysis and related Biological Assessment that adverse effects to TEPC species or their habitats are avoided unless outweighed by demonstrable short- or long-term benefits to those TEPC species or their habitats.
- **MA 21, MPC 5.1, ST2118**—New roads and landings shall be located outside of RCAs in the MPC 5.1 portion of the Lower Johnson Creek subwatershed, unless it can be demonstrated through the project-level NEPA analysis and related Biological Assessment that:
 - a) For resources that are within their range of desired conditions, the addition of a new road or landing in an RCA shall not result in degradation to those resources unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and
 - b) For resources that are in a degraded condition, the addition of a new road or landing in an RCA shall not further degrade nor retard attainment of desired resource conditions unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and
 - c) Adverse effects to TEPC species or their habitats are avoided unless outweighed by demonstrable short- or long-term benefits to those TEPC species or their habitats.

An exception to this standard is where construction of new roads in RCAs is required to respond to reserved or outstanding rights, statute or treaty, or respond to emergency situations (e.g., wildfires threatening life or property, or search and rescue operations).

In addition to Forest Plan standards, objectives, and guidelines, the Project complies with the following Biological Opinion Terms and Conditions (USDC NOAA-Fisheries 2003):

- In the Upper Salmon, South Fork Salmon, and Little Salmon River subbasins, do not allow “Likely to Adversely Affect” actions with adverse effects lasting 3 years or longer on Endangered Species Act (ESA) listed anadromous fish species or their habitat prior to completion of the appropriate consultation framework document, unless informed or driven by recommendations from existing or new subbasin assessments or watershed analyses.

- For projects that require ESA consultation, ensure that each project (with the exception of activities outside Forest Service discretion, or projects that directly repair salmon or steelhead habitat) that has more than a negligible likelihood of adverse effects (i.e., is likely to adversely affect) on ESA listed fish or their habitat meets the applicable criteria:
 - i. For projects proposed in upper portions of the subbasin, upstream of main spawning areas (Stolle Meadows, Dollar [Creek], Poverty Flats, Secesh Meadows, Lake Creek, etc.), or that involve road construction, opening closed roads, or activities on high- or moderate-risk landslide-prone areas, Forest Service must demonstrate (e.g., from monitoring results of projects below main spawning areas) during planning or consultation that similar projects have been implemented and sediment delivery to streams was avoided or minimized.
 - ii. Other projects will provide rationale—incorporating the best available existing information, including sediment monitoring data—that sediment delivery will likely be avoided or minimized.
 - iii. For projects where sediment delivery is a contributing factor to the “Likely to Adversely Affect” determination, monitor and evaluate the effectiveness of mitigating measures. The need for additional sediment monitoring related to “Not Likely to Adversely Affect” projects will be determined in project-level section 7 consultation with National Oceanic Atmospheric Administration (NOAA) Fisheries, on a case-by-case basis.

1.7.2 American Indian Treaty Rights

The proposed alternatives would not conflict with any treaty provisions.

1.7.3 Clean Water Act

The Clean Water Act (CWA) is a federal statute that requires States and tribes to restore and maintain the chemical, physical, and biological integrity of the nation’s waters (33U.S.C. 466 et seq., Title I, Section 101). The watershed/soils and fisheries analysis discloses the potential effects of the activities proposed in Alternatives A and B on water quality indicators. Based on the analysis disclosed in this document and the project record, Alternatives A and B would comply with the CWA. This project includes design features to ensure management activities maintain or improve watershed conditions. These features, including best management practices (BMPs), are designed to maintain or improve soil, water, riparian, and aquatic resources, including beneficial uses. Cumulatively, this direction would ensure continued compliance with the CWA.

1.7.4 Effects on Social Groups

The alternatives do not differ in terms of effects on consumers, minority groups, Native American Indians, women, other minorities, or civil rights of any American Citizen. The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of

program information (e.g., Braille, large print, audiotope) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

1.7.5 Endangered Species Act

The ESA creates an affirmative obligation "...that all Federal departments and agencies shall seek to conserve endangered and threatened (and proposed) species" of fish, wildlife, and plants. This obligation is further clarified in a National Interagency Memorandum of Agreement (dated August 30, 2000), which states our shared mission to "... enhance conservation of imperiled species while delivering appropriate goods and services provided by the lands and resources."

The EA discloses that Alternative B may affect but would not likely adversely affect the northern Idaho ground squirrel, Canada lynx (*EA Section 3.2, Table 3-3*), bull trout and bull trout critical habitat, Chinook salmon and Chinook salmon critical habitat and essential habitat, and steelhead and steelhead critical habitat (*EA Section 3.3.3.2, Table 3-16*). As summarized in Section 3.5 the EA, there is no potential habitat for Spalding's catchfly or Ute ladies'-tresses in the Project area. Therefore, there is a no effect determination for these species from the proposed activities. The planning record documents that the U.S. Fish and Wildlife Service concurred with these determinations on January 18, 2013, and NOAA Fisheries concurred on January 11, 2013.

The distinct population segment (DPS) of the North American wolverine occurring in the contiguous United States has been proposed for listing as a threatened species under the Endangered Species Act (FR Vol. 8, No.23, Feb. 4, 2013, pp 7864-7890). USFWS published the proposed rule on February 4, 2013. The primary threat to wolverine is habitat and range loss due to climate warming. Secondary threats include harvest (intended and incidental) and demographic stochasticity and loss of genetic diversity due to small effective population sizes. In light of the proposed listing, conferencing occurred with USFWS in March 2013. On March 29, 2013, USFWS provided a letter of concurrence as to the effects of this project on the wolverine and its habitat. Based on the outcome of the analysis summarized in the EA and results of conferencing, it was determined that implementation of Alternative B *would not likely to jeopardize North American wolverine*.

1.7.6 Environmental Justice—Executive Order 12898

Executive Order (EO) 12898 (59 FR 7629, 1994) directs federal agencies to identify and address, as appropriate, any disproportionately high and adverse human health or environmental effects on minority populations and low income populations. Based upon the analysis disclosed in this document, the proposed alternatives would not result in unequal protection of any part of the population in Valley and Gem counties in Idaho, and comply with EO 12898.

1.7.7 Executive Order 11988, Floodplain Management, and Executive Order 11990, Protection of Wetlands

The intent of Alternatives A and B is to improve the functions or values of wetlands and floodplains as they relate to protection of human health, safety, and welfare; preventing the loss of property values; and maintaining natural systems. The goals of EOs 11988 and 11990 would be met. All wetlands would be protected through design features that conform to EO 11990.

1.7.8 Effects of Alternatives on the Watershed

The State of Idaho Forest Practices Act, State of Idaho Stream Channel Alteration Rules, Forest Service Soil and Water Conservation Practices, Forest Plan standards, and Project design measures would be implemented to meet State and federal water quality regulations. The action alternative would comply with management direction including the Forest Plan (as amended) and the CWA.

1.7.9 Executive Order 13186 and the Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) protects all migratory birds and their parts (including eggs, nests, and feathers) from “take”. Take is defined in the MBTA to include by any means or in any manner, any attempt at hunting, pursuing, wounding, killing, possessing, or transporting any migratory bird, nest, egg, or part thereof. A migratory bird is any species or family of birds that live, reproduce, or migrate within or across international borders at some point during their annual life cycle. Under the MBTA, taking, killing, or possessing migratory birds is unlawful. The original intent was to put an end to the commercial trade in birds and their feathers that had wreaked havoc on the populations of many native bird species. On January 10, 2001, President William Clinton signed Executive Order (EO) 13186, Responsibilities of Federal Agencies to Protect Migratory Birds, directing executive departments and agencies to take certain actions to further implement the MBTA. The Bald and Golden Eagle Protection Act affords additional protection to all bald (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos canadensis*)

The Forest Service and USFWS have entered into a memorandum of understanding (MOU) to promote the conservation of migratory birds as a direct response to EO 13186 (USDA Forest Service and USFWS 2008). One of the steps outlined for the Forest Service is applicable to this analysis, “Within the NEPA process, evaluate the effects of agency actions on migratory birds, focusing first on species of management concern along with their priority habitats and key risk factors.” The Forest Service additionally agreed, to the extent practicable, to evaluate and balance benefits against adverse effects, pursue opportunities to restore or enhance migratory bird habitat, and consider approaches for minimizing take that is incidental to otherwise lawful activities.

Implementation of Alternative B will comply with the MBTA but may result in an “unintentional take” of individuals during proposed activities. However the project complies with the USFWS Director’s Order No. 131 related to the applicability of the MBTA to Federal agencies and requirements for permits for “take”. In addition, this project complies with EO 13186 because the analysis meets agency obligations as defined under the 2008, MOU between the Forest Service and USFWS designed to complement EO 13186. If new

requirements or direction result from subsequent interagency MOUs pursuant to EO 13186, this project will be reevaluated to ensure that it is consistent (refer to Wildlife Technical Report and BA available in the Project Record).

1.7.10 Facilitation of Hunting Heritage and Wildlife Conservation—Executive Order 13443

On August 16, 2007, President George Bush signed an executive order directing appropriate federal agencies to facilitate the expansion and enhancement of hunting opportunities and the management of game species and their habitat (FR Vol. 72, No. 160, August 20, 2007).

The Project area provides habitat for several game species including elk (*Cervus canadensis*), black bear (*Ursus americanus*), mountain lion (*Felix concolor*), wolf (*Canis lupus*), and forest grouse. The effects to gray wolves were considered in section 3.2.3.2.4. Mountain lion presence is largely tied to the presence of deer, and maintaining deer habitat is the primary consideration for this species.

Black bear are habitat generalists. While they prefer mixed deciduous-coniferous forests with thick understories, they will utilize a variety of habitats. Special habitat features include fallen logs and debris and standing hollow trees that provide denning sites for bears. Snag and coarse wood desired conditions apply to all management activity areas and will provide for these components on the landscape in amounts, distribution and sizes that were historically expected to exist within each of the Potential Vegetation Groups (PVGs).

The effects to elk are detailed in the Wildlife Technical Report. Because source habitat for this species would not be impacted by proposed alternatives and the Project would only slightly increase open road density in 2 of the 9 subwatersheds, the Project would not impact hunting opportunities within the analysis area.

The Project would not substantially modify habitat for any game species, as all of these species are largely habitat generalists and are not tied to specific vegetative components for habitat, and because the Project would manage a relatively small amount of acres within the ROW and permitted roads. Because source habitat would remain intact for these game species, the Project would not impact hunting opportunities within or adjacent to the analysis area. The Project would comply with EO 13443.

1.7.11 Idaho Stream Alteration Act

All action alternatives will adhere to the requirements of the Idaho Stream Alteration Act and the 404 permit processes of the U.S. Corps of Engineers. Refer to section 3.4.3.1, subsection *Clean Water Act Compliance*.

1.7.12 Inventoried Roadless Areas and Idaho Roadless Rule

In October 2008, the Forest Service adopted a state-specific, final rule establishing management direction for designating roadless areas in Idaho (36 CFR 294; 73 FR 61456–61496). The final rule designates 250 Idaho Roadless Areas and establishes 5 management themes that provide prohibitions with exceptions or conditioned permissions governing road construction, timber cutting, and discretionary mineral development.

Alternative B would be consistent with the Idaho Roadless Rule. Four different management themes occur within the analysis area: Primitive, Backcountry/Restoration, Special Area, and General Forest. No existing authorized or unauthorized roads, overland access routes, or sections of the power line corridor occur within the Primitive or Special Area themes, nor does my decision propose any activities within either of these themes.

Maintenance (e.g., cutting of trees) would be allowed on 0.12 miles of the power line corridor, roughly 1.0 acre, in the Backcountry/Restoration theme. Felled trees would be lopped and retained on site. However, 36 CFR §294.24(c)(1)(vii) states that the cutting, sale, or removal of timber is permissible in the Backcountry/Restoration theme where incidental to the implementation of a management activity not otherwise prohibited. Since the trees would be cut to prevent damage to the overhead power line, this action would be consistent with the Idaho Roadless Rule.

Approximately 0.12 miles of existing unauthorized roads in the Backcountry/Restoration theme and another 0.2 miles in the General Forest theme would be added to the Forest's transportation system, road management objectives assigned, and road maintenance activities permitted. The administrative action of adding 0.32 miles of existing roads to the transportation system is not prohibited by the Idaho Roadless Rule, nor is performing maintenance (e.g., clearing brush, blading the road surfaces) on authorized roads. In addition, 36 CFR §294.23(e) states that maintenance of temporary and forest roads is permissible in Idaho Roadless Areas, and 36 CFR §294.21 defines road maintenance as the ongoing upkeep of a road necessary to retain or restore the road to the approved road management objective.

Roughly 0.06 miles of overland access routes would be designated in the Backcountry/Restoration theme. Overland access routes would be situated to limit disturbance of vegetation and no earth movement would be involved, with the possible exception of removing and reinstalling cross-ditches. The Idaho Roadless Rule (36 CFR §294.26(c)) states that nothing in this subpart shall be construed as affecting the use of motorized equipment and mechanical transport in Idaho Roadless Areas.

None of the existing authorized roads that would be opened under my decision to provide access to the power line occur within any IRA nor would the 1,060 feet of power line realignment occur within any IRA.

This Project was introduced to the Idaho Roadless Commission on April 5, 2012, and discussed in depth on June 28, 2012, where the Commission concluded the Project would be consistent with the Idaho Roadless Rule (Commission Meeting Notes, April 5, 2012 and Commission Meeting Notes, June 28–29, 2012, both available in the project record).

1.7.13 National Historic Preservation Act

The National Historic Preservation Act (NHPA) is the principle, guiding statute for the management of cultural resources. Section 106 of the NHPA requires federal agencies to consider the effects of their activities and programs on historic properties, and provide the Advisory Council on Historic Preservation the opportunity to comment on Agency

undertakings. At the State level, the State Historic Preservation Officer (SHPO) reviews federal undertakings on behalf of the Advisory Council.

Historic properties are significant cultural resources that are included in or eligible for inclusion in the National Register of Historic Places. The criteria for National Register eligibility and procedures for implementing Section 106 of NHPA are outlined in the U.S. Code of Federal Regulations (36 CFR Parts 60 and 800, respectively).

The NHPA, as amended in 1992, also requires federal agencies to consult with appropriate Indian tribes regarding the management of traditional religious and cultural properties eligible for the National Register of Historic Places. The Nez Perce Tribe, Shoshone-Bannock Tribes, and Shoshone-Paiute Tribes in particular have expressed their interests in cultural resources management on the Boise National Forest. These tribes consider Native American sites in the area to be very important to their respective cultures.

Alternatives A and B would not be expected to have any direct or indirect effects on cultural resources if design features to protect these sites are implemented over the course of the 20-year special use permit. At a minimum, if cultural resources are encountered during implementation of this project, all ground-disturbing activities would cease until the Forest Archeologist is notified and the Idaho SHPO and potentially affected Indian tribes are consulted.

Structure replacements on historic properties will require additional site specific consultation with the Idaho SHPO and potentially affected Indian tribes prior to implementation. Furthermore, a qualified archeologist would be required to monitor the implementation of structure replacements on these sites. The Forest Service anticipates that the Idaho SHPO and potentially affected tribes will concur with the Agency's No Adverse Effect determination for this project.

1.7.14 Prime Range Land, Farm Land, and Forest Land—Department Regulation 9500-3

All alternatives comply with the Federal Regulations for prime land. The definition of "prime" forest land does not apply to lands within the National Forest System. The Project area does not contain any prime range land or farm land; therefore, no effects to prime farmland, rangeland, or forest lands would occur with implementation of either alternative. Under the alternatives, federal lands would be managed with appropriate sensitivity to the effects on adjacent lands.

1.7.15 Energy Requirements of Alternatives

No unusual energy requirements exist for implementing any alternative.

1.7.16 Travel Management Rule

The proposed activities in Alternatives A and B are a continuation of the Cascade Ranger District's route designation efforts to comply with the Travel Management Rule (36 CFR 212, Subpart B, Designation of Roads, Trails, and Areas for Motor Vehicle Use).

1.7.17 Best Available Science

The conclusions summarized in this document are based on a review of the Project's record that reflects consideration of relevant scientific information and responsible opposing views where raised by internal or external sources and the acknowledgement of incomplete or unavailable information, scientific uncertainty, and/or risk where pertinent to the decision being made.

1.7.18 Other Laws or Requirements

The proposed actions are consistent with all other federal, State, or local laws or requirements for the protection of the environment and cultural resources.

1.8 Public Involvement

The project has been listed in the Forest Schedule of Proposed Actions (SOPA) since January 1, 2011. The project was introduced to Level 1 representatives of the USFWS and NOAA Fisheries during a field trip conducted on October 13, 2011. This project was presented (Phase 1) to the Level 1 Team and Level 2 Team on November 3, 2011.

The project was presented to the Valley County Board of County Commissioners during their regular meeting on January 23, 2012, and to the Gem County Board of County Commissioners on March 12, 2012. The project was discussed with representatives of the Wilderness Society and the Idaho Conservation League (ICL) on February 21, 2012.

A legal notice soliciting public comment on the Proposed Action was published in the *Idaho Statesman* (the newspaper of record) on March 19, 2012, and in the *Emmett Messenger Index* on March 2, 2012, and the *Star News* on March 22, 2012.

In addition, a scoping package describing the Proposed Action was mailed to 73 individuals, groups, or agencies on March 19, 2012, and information regarding the project was posted on the Forest Web site on March 20, 2012.

This project was presented to the Idaho Roadless Commission on April 5, 2012.

The project was presented to the Level 1 Team on April 16, 2012, where a summary of analysis that had been completed and the outcomes of that analysis, was presented. A summary of the key parts of the aquatic analysis was presented and discussed on June 26, 2012, to the Level 1 Team.

Following these scoping efforts, but prior to completion of the assessment, a legal notice announcing the 30-day opportunity to comment on the project pursuant to 36 CFR 215 was published in *The Idaho Statesman* (the newspaper of record) on December 18, 2012. Copies of the Review EA were mailed on December 13, 2012 to those individuals who had expressed an interest in the project. Appendix C of the EA discloses all written comments received in response to these two 30-day comment periods and provides the Interdisciplinary Team's responses to those comments.

The contiguous United States wolverine Distinct Population Segment (DPS) was proposed for listing by the U.S. Fish and Wildlife Service on February 4, 2013. The Forest received the letter of concurrence for the wolverine addendum to the BA dated March 29, 2013.

1.9 Tribal Consultation and Coordination

The United States Government has a unique relationship with federally recognized American Indian tribes. Decisions concerning management on Federal lands can affect tribal community well-being. As Federal agencies undertake activities that may affect tribes' rights, property interests or trust resources, care must be taken to implement agency policies, programs and projects in a knowledgeable and sensitive manner respectful of tribes' sovereignty and needs. The intergovernmental consultation process serves as the primary means for the Federal agencies to carry out their tribal trust obligations.

Consultation is not a single event; it is a process that leads to a decision. Consultation can be either a formal process of negotiation, cooperation, and policy-level decision-making between tribal governments and the Federal Government, or a more informal process typically involving staff to staff discussions. Consultation can be viewed as an ongoing relationship between an agency and a tribe, characterized by consensus-seeking approaches to reach mutual understanding and resolve issues.

On January 12, 2012, and February 15, 2012, the Project was discussed with representatives of the Shoshone–Paiute Tribe at a scheduled Wings and Roots meeting. Representatives of the Shoshone–Paiute Tribe also attended a field trip to the Project area on July 17, 2012. Information regarding the Proposed Action was mailed to the tribal chairpersons and resources staff of the Shoshone–Bannock Tribe and Nez Perce Tribe on March 2, 2012. Consultation with federally recognized tribes followed the consultation agreements between the tribal governments and the Forest (section 1.8).

Consultation through this process served several purposes, including:

- To identify and clarify the issues
- To provide for an exchange of existing information and identify where information is needed
- To identify and serve as a process for conflict resolution
- To discuss and explain the decision
- To fulfill the core of the Federal trust obligation
- If any cultural resources are encountered during implementation of this project, all ground-disturbing activities in the immediate vicinity of the discovery would cease until the Forest Archeologist is notified and the Idaho SHPO and potentially affected Indian tribes are consulted.

Two design features were added to specifically address tribal rights and interests identified during consultation and notification efforts; EA section 2.4.2.1.2.

1.10 Identification of Issues

The public and other agencies identified several concerns in response to requests for comments during the scoping process. Identification of issues included input from Forest

Service resource specialists, review of the Forest Plan, and review of written and verbal comments from interested individuals, groups, and State and other federal agencies. Comments identified during scoping were evaluated against the following criteria to determine whether a concern would be a major factor in the analysis process:

- Has the concern been addressed by implementation of the Forest Plan, in a previous site-specific analysis, or through legislative action?
- Can the concern be resolved through mitigation (avoiding, minimizing, reducing, or eliminating, or compensating for the proposed impact) in all alternatives?
- Can the concern be resolved through project design features in all alternatives?
- Is the concern within the scope of and relevant to the decision being made, and does the concern pertain directly to the Proposed Action?

Although a number of concerns were noted during scoping and analysis, no significant issues were identified. Significant issues are points of unresolved conflict with the Proposed Action identified during internal and external scoping efforts. Certain concerns prompted inclusion of design or mitigation measures, and these issues were included in Chapter 3 analyses.

1.11 Document Organization

This EA incorporates by reference the project planning record for this project (40 CFR §1502.21, 2007). The project record contains specialist reports and other technical documentation used to support the analysis and conclusions in this EA.

Unless specifically noted otherwise, detailed information that supports the analyses presented in this document is contained in the project planning record located at the Cascade Ranger District Office.

This document consists of the following chapters:

Chapter 1—Purpose and Need for Action. This chapter describes the purpose and need for the proposed action; decisions to be made; consistency with laws, regulations, and policy; public involvement; and identification of significant NEPA issues.

Chapter 2—Alternatives. This chapter includes project design features and/or mitigation measures, description of alternatives considered in detail, alternatives considered but eliminated from detailed study, and a comparative summary of the environmental consequences of each alternative analyzed in detail.

Chapter 3—Affected Environment and Environmental Consequences. This chapter describes the existing resource conditions of the resources within the project area and the environmental impacts of the alternatives on these resources.

Chapter 4—Consultation and Coordination. This chapter provides a list of primary preparers of this document and a list of agencies, organizations, and persons who were consulted.

Chapter 2–Alternatives

2.1 Introduction

This chapter describes and compares the alternatives considered for the project and summarizes how the alternatives meet the purpose and need presented in Chapter 1. Each alternative reflects a different response to the issues identified through the scoping and analysis process, and each alternative would result in different environmental effects. This comparison, combined with the more detailed disclosure of impacts in Chapter 3, provides the information necessary for the decision-maker to make an informed choice between alternatives.

2.2 Development of Alternatives

The Proposed Action was developed by the Interdisciplinary Team (IDT) and approved by the Responsible Official prior to scoping. Chapter 1 of this document discloses that no significant issues were identified during internal or external scoping. As documented in Chapter 3 and the project planning record, the Proposed Action would not result in unacceptable impacts on any given resource, and the Proposed Action would be consistent with applicable laws, rules, regulations, and Forest Plan standards and guidelines.

2.3 Alternatives Eliminated from Detailed Study

In addition to the alternatives fully evaluated in this document, other management approaches were considered by the IDT in response to preliminary concerns generated from internal and external scoping of the Proposed Action.

2.3.1 Removal of Unauthorized Road Miles to Equal the Road Miles that will be Authorized in the Proposed Action

The ICL suggested the Proposed Action be modified to include removal of an additional 9.3 miles of unauthorized roads within MPC 3.2 (South Fork Salmon River) to offset the roads being converted to authorized roads. The Proposed Action includes converting 9.3 miles of unauthorized roads in MPC 3.2 to maintenance level 2, administrative roads.

Initial Evaluation

The first step when evaluating an alternative is to ensure that any alternative meets the Purpose and Need (P&N) statement. The P&N for this project (in summary) is as follows:

There is a need to access structures and perform repair and maintenance on Line 328—this need has become critical and is affecting Idaho Power’s ability to provide safe, reliable service to their customers through routine maintenance of Line 328.

This alternative would meet the P&N in that it would still allow for access and maintenance of Line 328.

The second step when evaluating an alternative is to ensure that the alternative addresses an unresolved conflict created by the Proposed Action. This alternative is submitted on the premise that converting unauthorized roads to authorized roads and adding them to the transportation system for administrative access only will result in resource impacts. This

alternative also assumes that removing an equal amount of unauthorized roads would offset these resource impacts and improve the overall health of the South Fork Salmon River watershed.

The unauthorized roads proposed to become NFS roads for administrative use only already exist on the ground. No new road construction would occur under the Proposed Action.

NFS roads are maintained by the Forest Service to appropriate standards, depending on the type of road. As explained in Chapter 1, unauthorized roads, in contrast, are roads that are not included in an official forest transportation atlas (36 CFR § 212.1). Generally, unauthorized roads are created through repeated use, were not planned by the Forest Service, and are not maintained (70 FR 68,265). For example, many unauthorized roads do not have features for proper drainage or erosion control; thus, they may potentially increase sedimentation in streams. The unauthorized roads proposed to be designated for administrative vehicle use would become part of the National Forest transportation system and would be maintained to appropriate standards.

The effects analysis (see section 3.4.3) shows a risk of increased temporary (0–2 years) sediment delivery and a decrease in short-term (3–15 years) and long-term (>15 years) sediment delivery. Sediment reductions would be largely due to road drainage improvements. The designated access roads in the Proposed Action (Alternative B) would follow existing routes that were used to access these structures in the past⁷. Those roads delivering sediment to waterbodies would receive drainage improvements. These improvements would include large waterbars or dips not designed to be drivable by high-clearance vehicles. The waterbars would be designed to function without maintenance and would be constructed at the frequency described under the “Design Features” section (section 2.4.2.1).

Rationale for Dismissal

NEPA requires analyzing alternatives to display a range of environmental consequences sufficient to support an informed decision (NEPA Sec. 102.E; 40 CFR 1508 (b)). However, no requirement to analyze an infinite range of slightly different alternatives exists (FSH 1909.15, Section 65.12-1b).

As displayed above, converting 9.3 miles of unauthorized routes to authorized routes and adding them to the Forest transportation system for administration use would not increase resource impacts. Although sediment may temporarily (≤ 2 years) increase, it will improve over the short and long term. Therefore, the premise that removing and obliterating an equal number of road miles due to resource impacts is unwarranted. This alternative does not respond to an unresolved conflict.

The opportunity to improve conditions in any watershed is a worthy goal. The P&N for this project focuses on access and maintenance of Line 328; thus, restoration activities in and of themselves do not meet the P&N and are not proposed. Removing unauthorized routes can be considered in an analysis with restoration as a P&N component. In 2010 and 2011, the Forest made 2 decisions to obliterate 80 miles of maintenance level 1 Forest System roads deemed

⁷ The designated routes are the maintenance level 2 administrative use only roads. The term “designated routes” is not referring to the occasional overland travel that is permitted in the Proposed Action.

excess to the Forest's needs based on travel analysis (USDA Forest Service 2010d). The decisions also identified 41 miles of unauthorized routes to be obliterated.

Since 2010, 51 miles of maintenance level 1 Forest System roads and 15 miles of unauthorized routes have been obliterated in the South Fork Salmon River watershed. Pending funding, an additional 10 to 20 miles of Forest System roads and unauthorized routes are expected to be obliterated in this watershed in 2013.

For the reasons cited above, this alternative was eliminated from detailed study.

2.4 Alternatives Considered in Detail

2.4.1 Alternative A—No Action

This alternative provides a baseline against which the impacts of the action alternative can be measured and compared. No new actions would be authorized with this alternative. This alternative does not meet the purpose and need to amend the permit to allow access to Line 328.

For the purposes of this analysis, under the No Action Alternative, the existing permit was assumed to be renewed for another 20 years after its expiration on December 31, 2013, and assumed to include the identical terms and conditions found in the current permit, including restricting access to authorized roads only. For the purposes of this analysis, Idaho Power would continue to operate and maintain the power line as allowed under the terms and conditions of their existing permit. Maintenance activities that would create measurable ground disturbance or prompt subsequent NEPA analysis would continue to require separate or additional approval. However, in contrast to the Proposed Action, access facilitating these maintenance activities would continue to be restricted to existing authorized roads only.

Rather than assuming that the permit would not be renewed, this approach to the No Action Alternative was considered appropriate based on the following rationale:

- The Proposed Action was developed in response to a request from Idaho Power to provide access for maintenance activities, thereby improving efficiency and reducing costs. The secondary component of the Proposed Action, to renew the existing permit at this time, was included only to improve Agency NEPA efficiency.
- This power line corridor was identified through the land and resource management planning process as a designated utility corridor (USDA Forest Service 2010a, Appendix I). Thus, through designation in the Forest Plan, the decision has already been made as to the corridor's long-term dedicated use. Therefore, any subsequent site-specific proposals related to the corridor should pertain to how this dedicated use should be managed rather than revisiting whether the corridor should be dedicated for this use.
- Line 328 has been in place for nearly 70 years and provides electricity to the communities of Yellow Pine and Warm Lake. To assume that the No Action Alternative would eliminate this essential service and require removal of the power line's infrastructure would be unreasonable.

- In light of the Forest Plan designation, a No Action Alternative that retains the power line corridor and allows continuation of the current operation, but does not allow any additional access, provides the best alternative framework for comparing and contrasting the effects of No Action against the effects of a Proposed Action that includes only changes in access.

2.4.2 Alternative B—Proposed Action

In response to a request from Idaho Power, the special-use permit for Line 328 on NFS lands would be renewed for another 20-year term. The renewed permit, which includes those portions of Line 328 on the Emmett and Cascade RDs only, would also address access to the power line and its structures. The Proposed Action would authorize the following activities (see Figure 2-1 through Figure 2-10):

- Idaho Power would be permitted to open, perform maintenance on, and use 6 miles within 11 existing authorized road segments that are on the Forest road system in a state of storage (maintenance level 1) (Forest Roads 420, 420A, 497E, 497K, 644Z, 644Z2, 644Z3, 644E, 644AB, 644B, and 467P). Maintenance on these roads would include clearing vegetation, rocks, and/or fallen trees, as well as installing hardened stream crossings and repairing cut and fill slope failures in the existing road prism as necessary. These roads would remain on the road system but be changed to maintenance level 2 roads available for administrative use only (i.e., closed to public use). Unauthorized motor vehicle use on Roads 420, 420A, 497E, and 497K would continue to be prevented via the existing gates. Unauthorized motor vehicle use on Roads 644Z, 644Z2, 644Z3, and 644E would be prevented by installing gates across the travelway. Earthen berms and/or barrier rocks will be installed as needed to prevent unauthorized travel around the gates. Unauthorized motor vehicle access on Roads 644AB and 644B would be prevented by installing gates where these roads intersect with Road 644L and Road 644, respectively.
- A 1.02-mile segment of Road 467P, currently a maintenance level 1 road, would be opened and designated for public motor vehicle use as a maintenance level 2 road and would be displayed on the MVUM.
- The Forest Service would redesignate 19 miles within 115 segments of existing unauthorized roads to maintenance level 2 roads for administrative use only and add them to the Forest transportation system. Idaho Power would be permitted to open, perform maintenance on, and use these roads for access to permitted facilities. Maintenance would include clearing of vegetation, rocks, and/or fallen trees, as well as installation of hardened stream crossings and repair of cut and fill slope failures, as necessary, to allow for a 10- to 12-foot-wide road surface. Unauthorized motor vehicle use would be prevented by installing gates across the travelway and additional physical barriers as shown in Table 2-1 through Table 2-3 below.

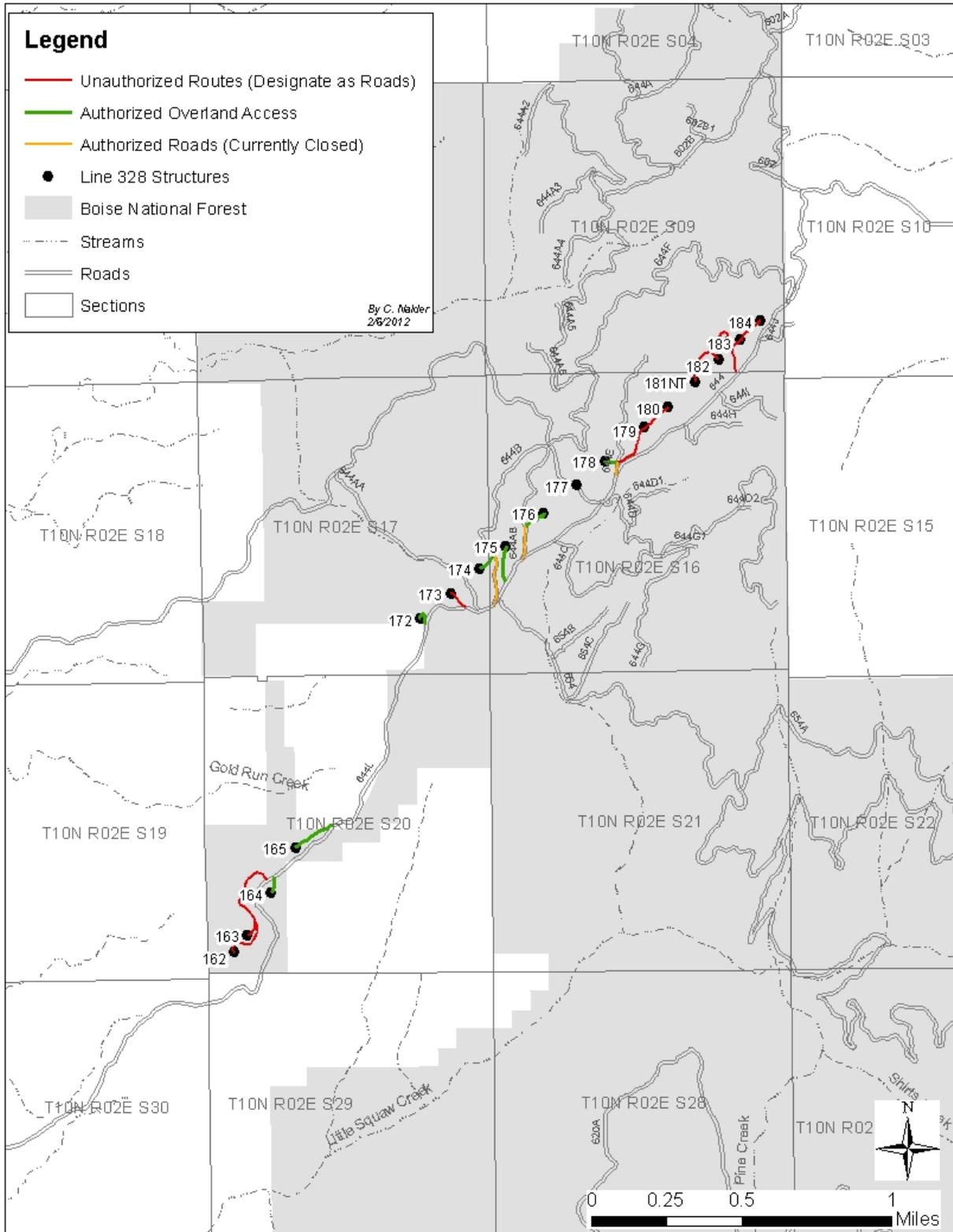


Figure 2-1. Ola Summit (Map 1 from Figure 1-1)

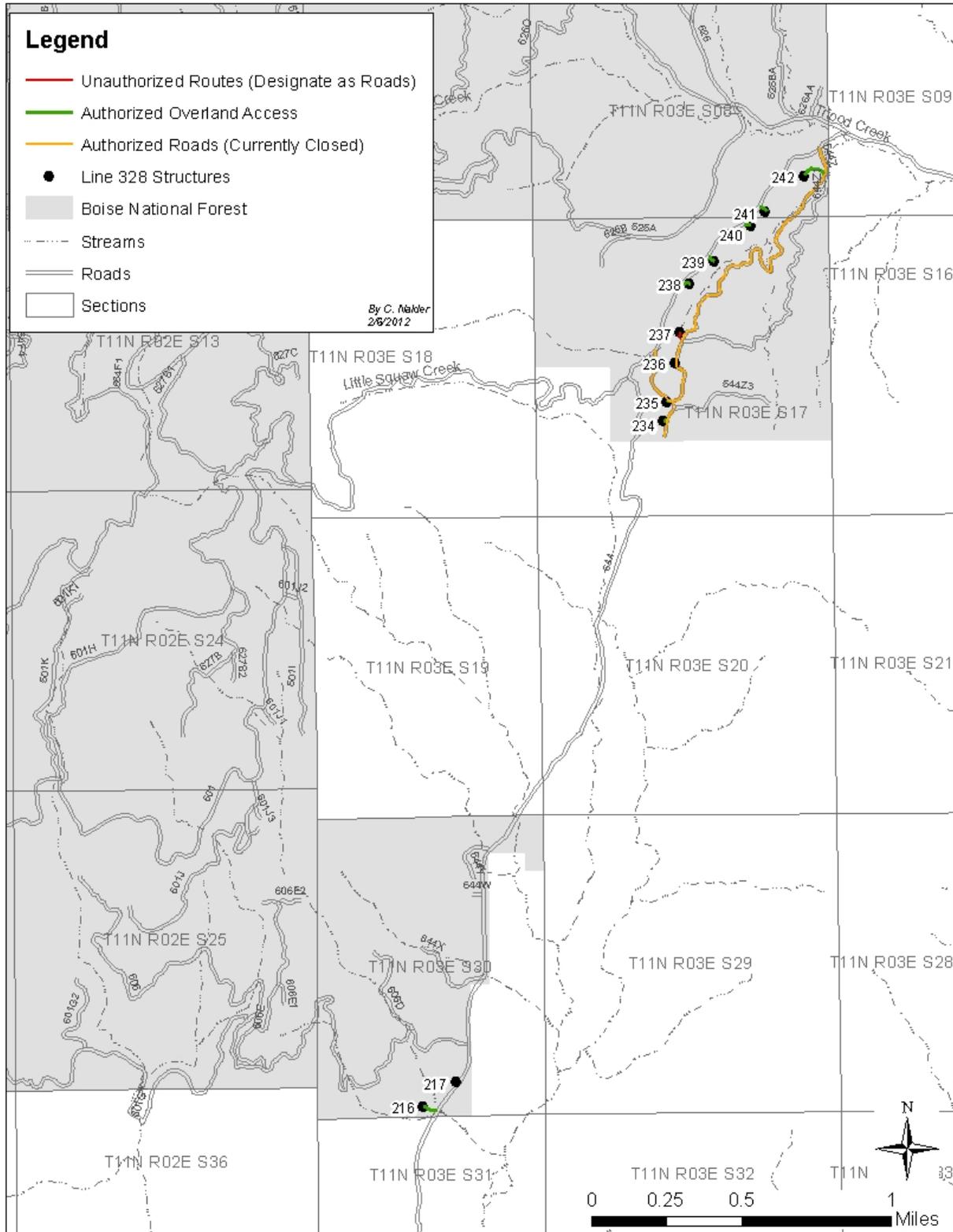


Figure 2-2. Tripod Summit (Map 2 from Figure 1-1)

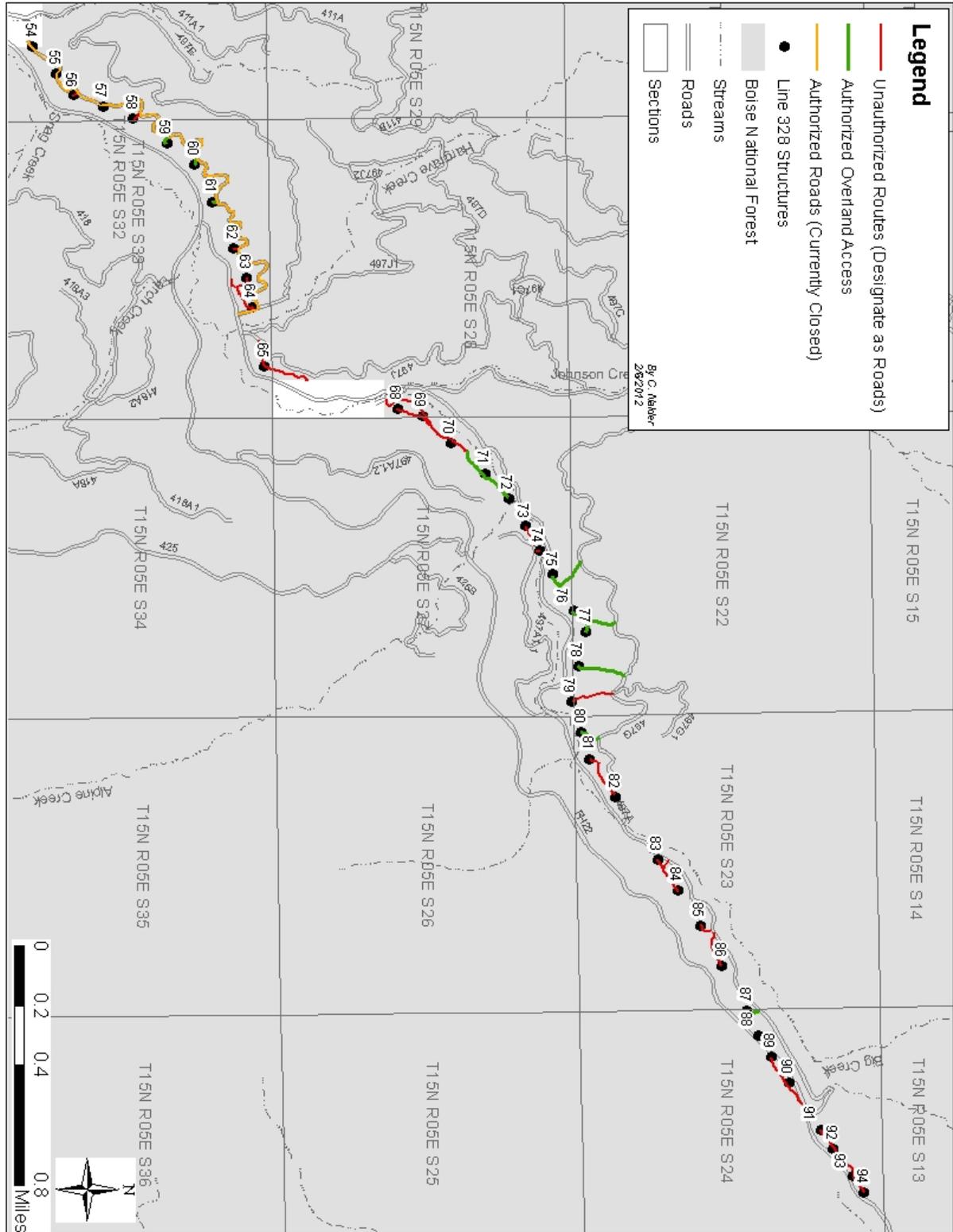


Figure 2-3. Big Creek (Map 3 from Figure 1-1)

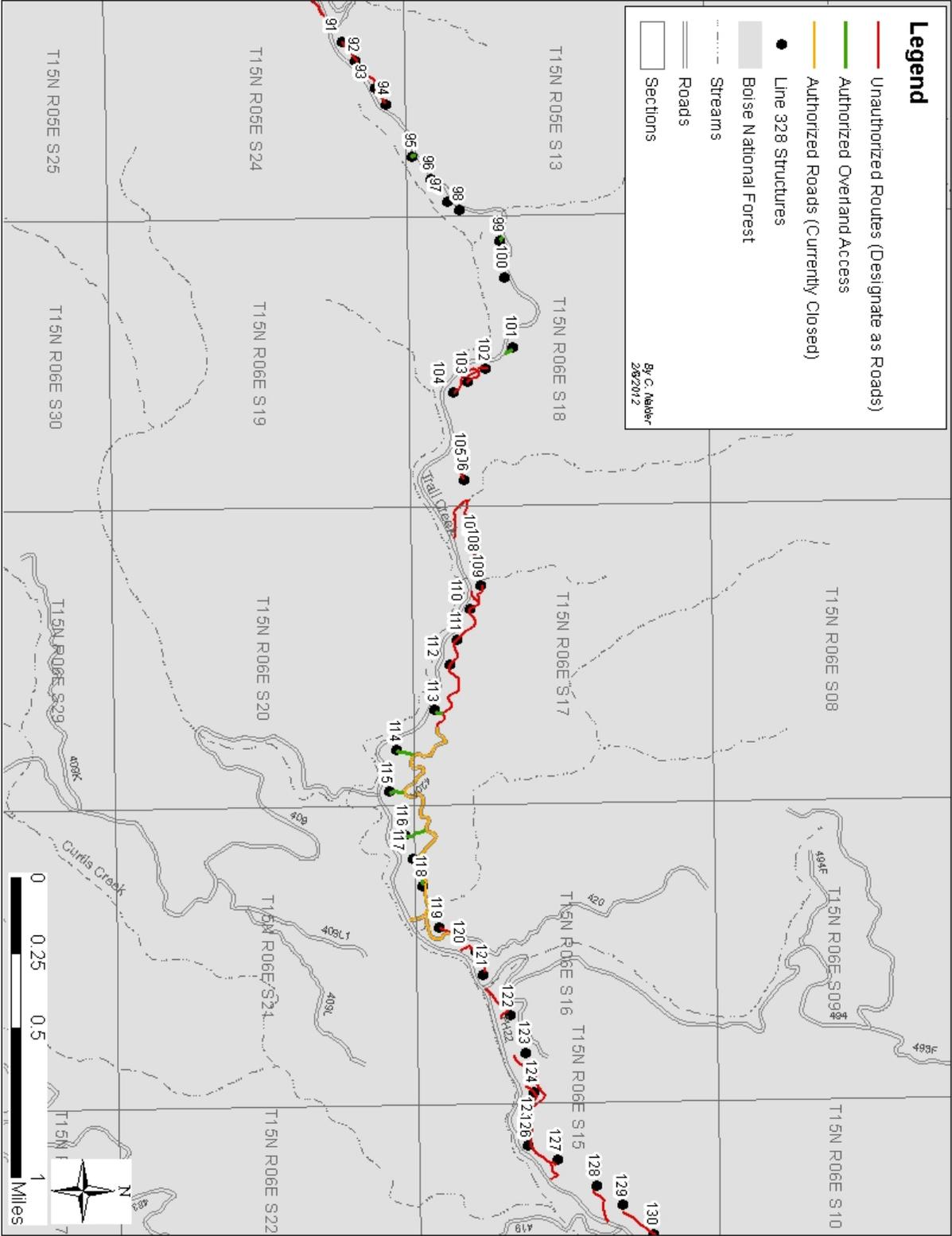


Figure 2-4. Trail Creek (Map 4 from Figure 1-1)

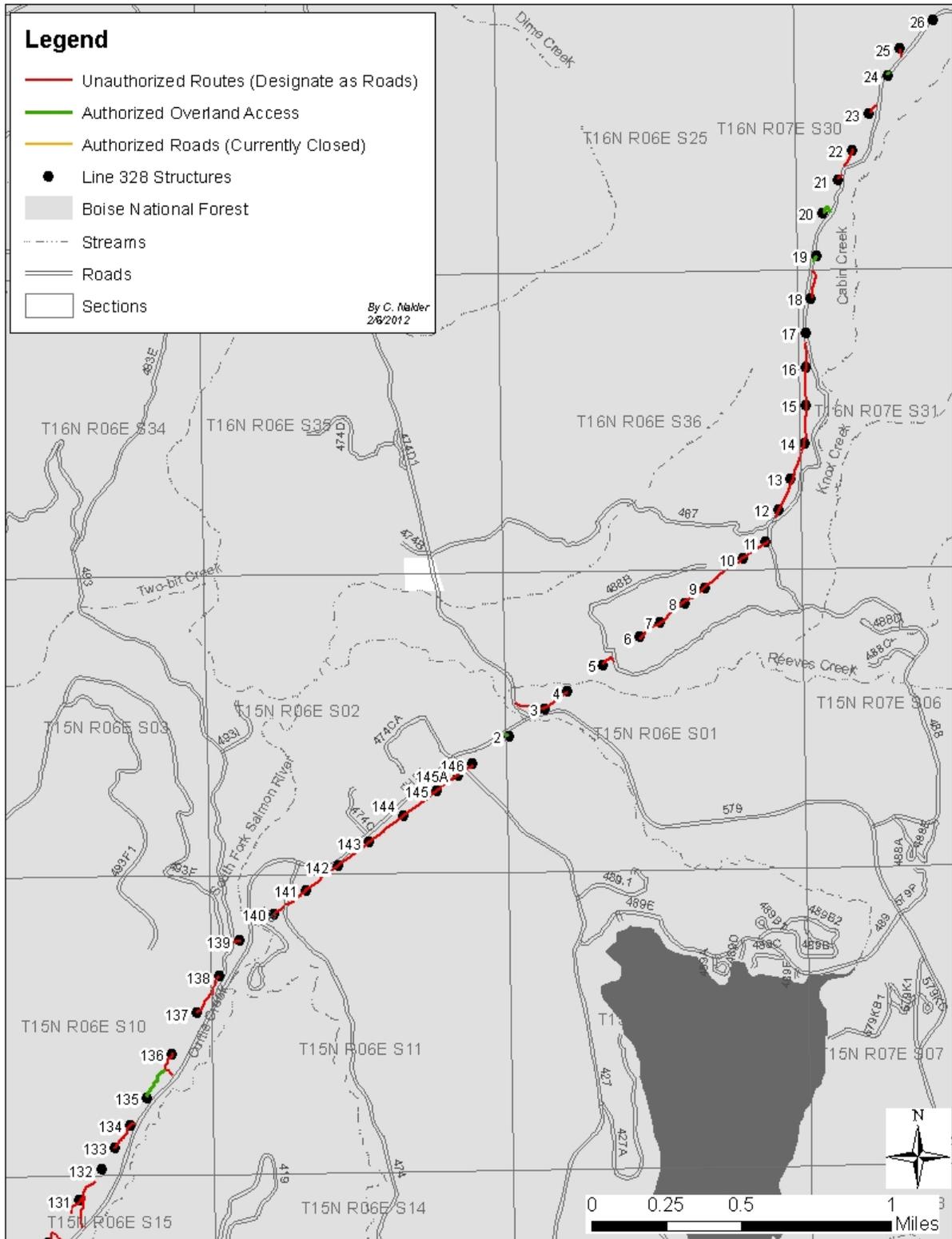


Figure 2-5. Warm Lake (Map 5 from Figure 1-1)

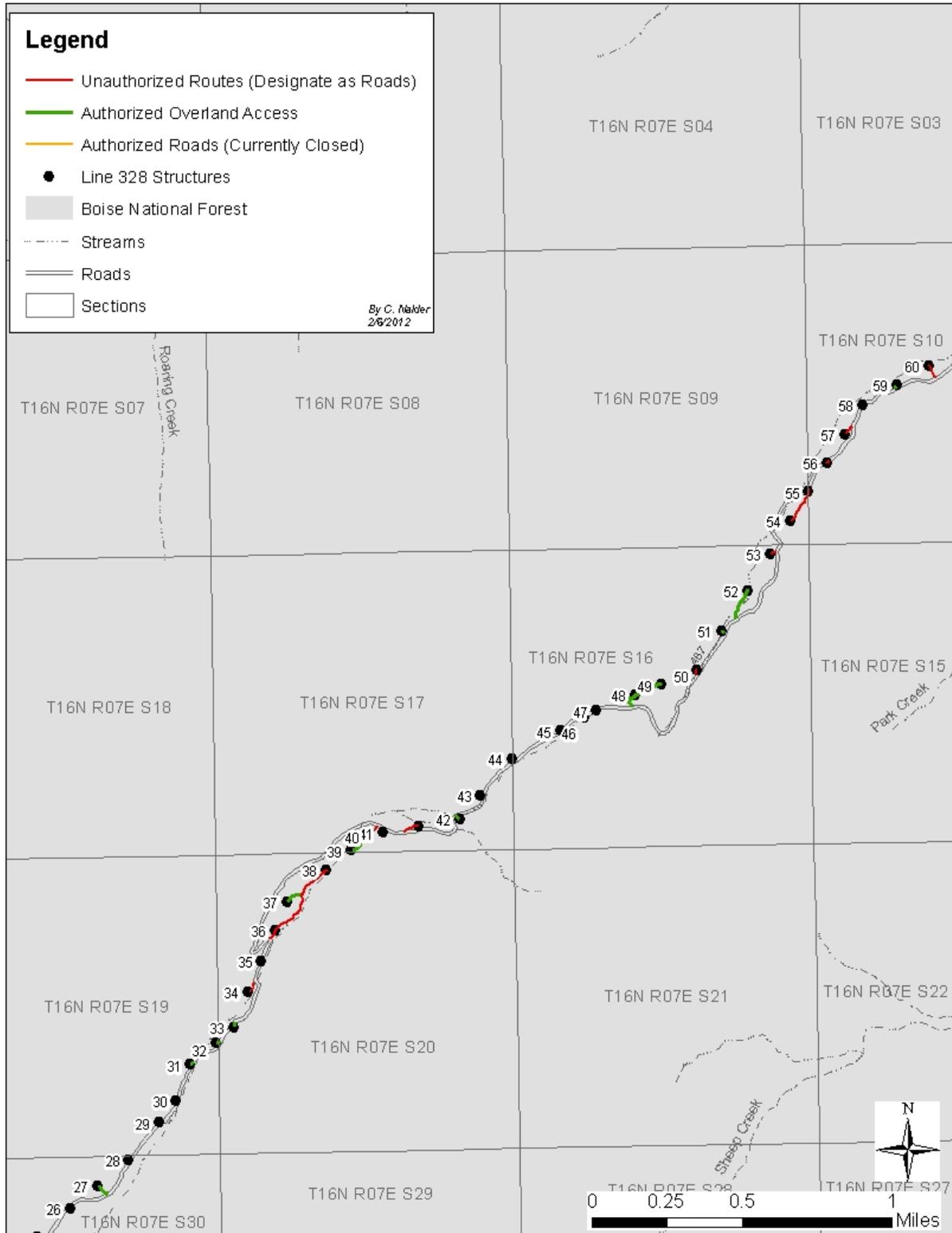


Figure 2-6. Cabin Peak (Map 6 from Figure 1-1)

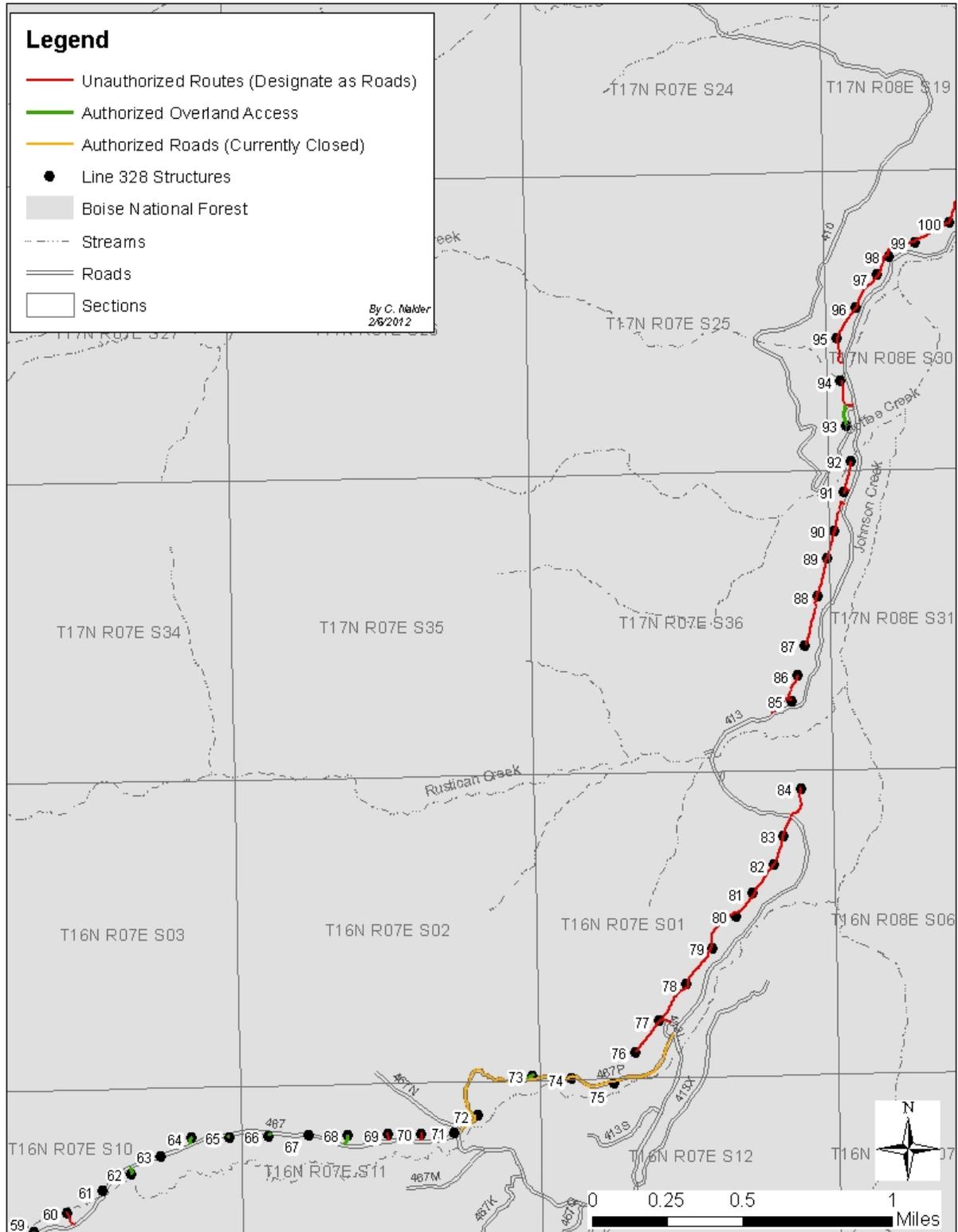


Figure 2-7. Trout Creek (Map 7 from Figure 1-1)

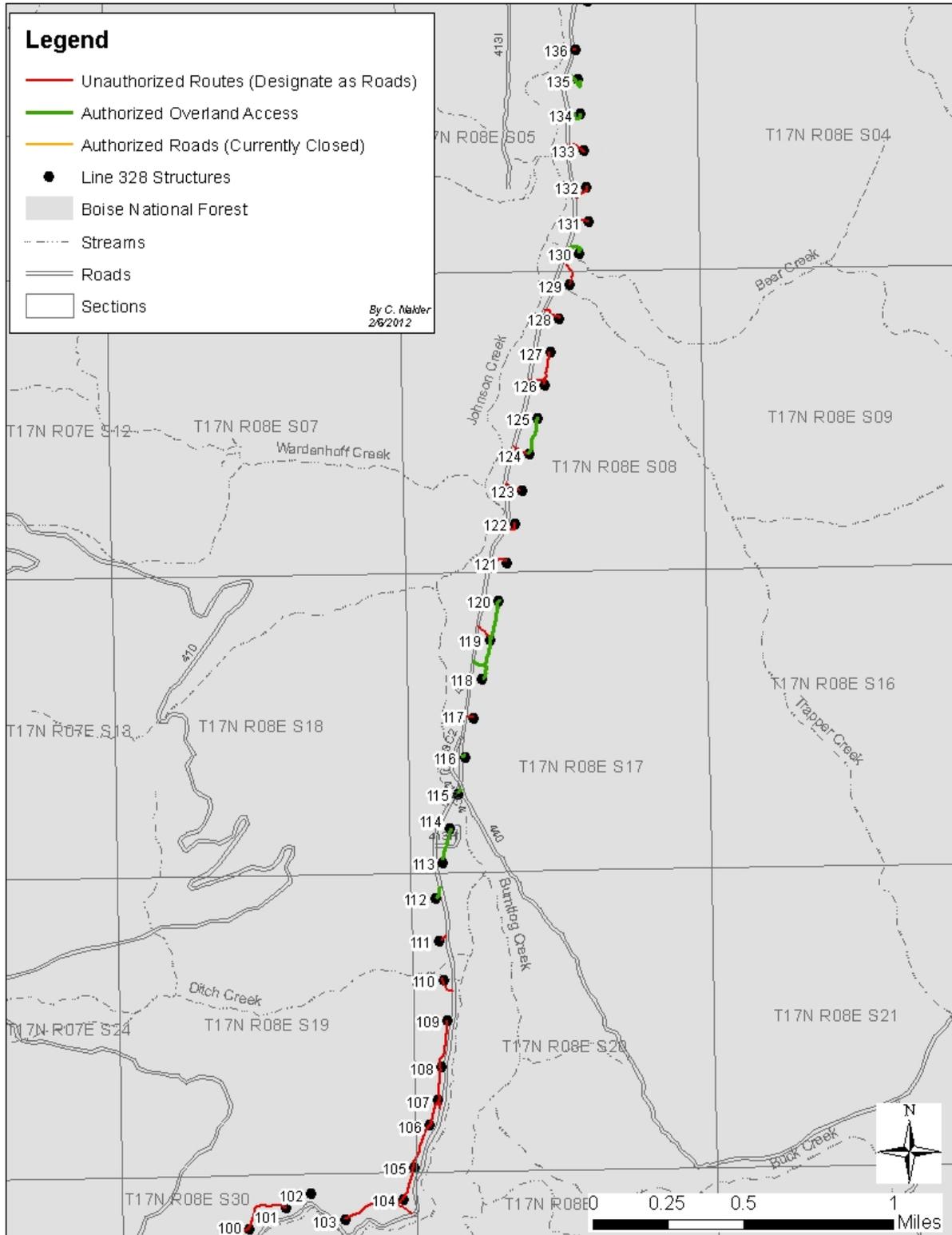


Figure 2-8. Johnson Creek (Map 8 from Figure 1-1)

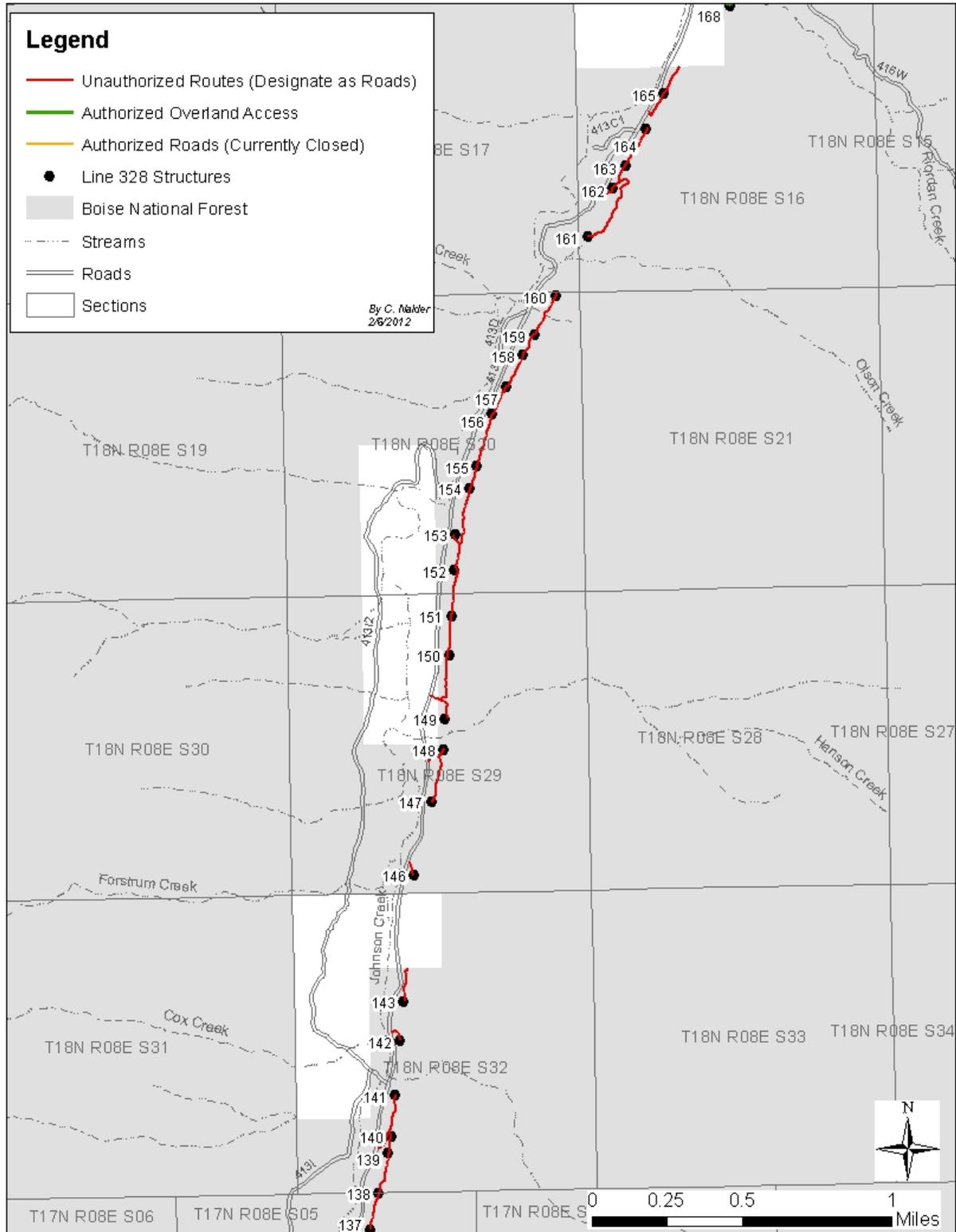


Figure 2-9. Yellow Pine (Map 9 from Figure 1-1)

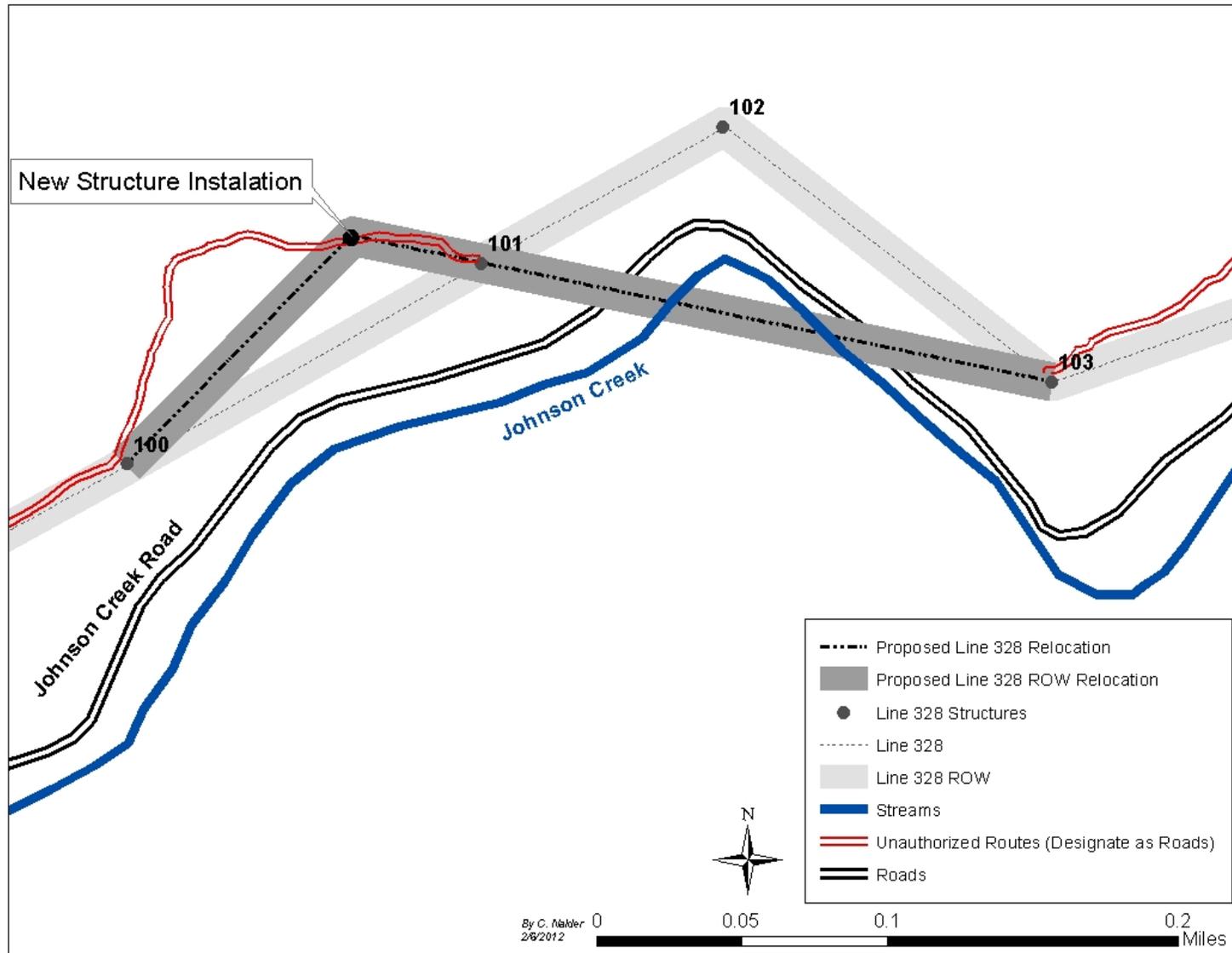


Figure 2-10. Line 328 relocation

Table 2-1. National Forest System Roads converted from unauthorized to maintenance level 2—Emmett to Cascade

Road	Structure Number(s)	Adjoining Road	Closure Method
IPC 93	179–180	644E	Gate
IPC 96	181–184	644	Gate

Table 2-2. National Forest System Roads converted from unauthorized to maintenance level 2—Cascade to Warm Lake Substation

Road Identifier	Structure Number(s)	Adjoining Road	Closure Method
IPC 5, IPC5A	63–64	497.1	Gate w/ berm
IPC 6	65	497J	Gate
IPC 7	68–70	497I	Gate
IPC 19	107–108	HWY 22	Gate
IPC 20	109–113	HWY 22	Gate
IPC 25	123–127	HWY 22	Gate
IPC 28	131–132	HWY 22	Gate
IPC 29	133–134	HWY 22	Gate w/ boulders
IPC 30	136	HWY 22	Gate
IPC 31	137–138	493	Gate w/ boulders

Table 2-3. National Forest System Roads converted from unauthorized to maintenance level 2 Warm Lake Substation to Yellow Pine

Road Identifier	Structure Number(s)	Adjoining Road	Closure Method
IPC 34	3–4	474	Gate
IPC 37	13	467	Gate
IPC 40	22	467	Gate w/ boulders
IPC 41	23	467	Gate w/ heavy slash
IPC 44	36–38	467	Gate w/ boulders
IPC 50	55	467	Gate
IPC 53	60	467	Gate
IPC 56	76–77	413L	Gate
IPC 57	78–83	413	Gate
IPC 63	95–101	413	Gate w/ boulders
IPC 64	103–106	413	Gate
IPC 65	107–109	413	Gate
IPC 76	129	413	Gate
IPC 78	132	413	Gate
IPC 81	137–141	413	Gate
IPC 87	149–160	413	Gate
IPC 88	161–164	413	Gate

- One 0.75-mile of unauthorized road between NFS road 427 and NFS road 474 near the Warm Lake substation would be designated as a maintenance level 2 road open to public use and would be added to the Forest MVUM.

- Where vegetation and terrain allow, the Forest Service would identify 68 segments of overland access routes totaling 4 miles. Idaho Power would be permitted to “walk” motorized equipment cross-country within the confines of these overland access routes to the power line corridor and/or structures. Overland access routes would be located in a manner to limit disturbance of vegetation, and no earth movement would be permitted, with the possible exception of removing and reinstalling cross-ditches.
- A portion of the overhead power line would be relocated between Structures 101 and 103 near Whitehorse Rapids. Relocation would necessitate installation of a second supporting structure near Structure 101 and clearing approximately 1,060 feet of vegetation within the power line corridor.
- As necessary, Idaho Power would be permitted to inspect, maintain, repair, and/or replace existing power line structures, including poles, X braces, cross arms, down guys, insulators, and conductors.
- Idaho Power would be permitted to maintain the power line corridor (70 feet wide, with 35 feet on either side of the centerline) by clearing vegetation with hand labor. Felled vegetation would be limbed, bucked, and retained on-site.
- Stream Crossings
 - One crossing on an unnamed perennial non-fish bearing tributary to Curtis Creek to access structures 328-02-107 and 108. This crossing will be reconstructed as a hardened ford using a large crushed aggregate.
 - One crossing on Trout Creek, high in the subwatershed to access structures 328-04-54 and 55. This crossing is a naturally armored crossing and no improvement will occur.
- The Proposed Action would require a site-specific non-significant amendment (FSH 1926.51) of the Forest Plan. Specifically, the Forest-wide standard on page III-88 of the Forest Plan limits road construction in MPC 3.2 where needed to reserved or outstanding rights; respond to statute or treaty; support aquatic, terrestrial, and watershed restoration activities; or address immediate response situations (USDA Forest Service 2010a). Since the Forest Plan Glossary defines new road construction as an, “Activity that results in the addition of forest classified or temporary road miles,” the addition of existing NFS roads to the Forest’s transportation system in MPC 3.2 would fail to comply with the standard because it does not meet the exception to the prohibition of road construction. Should the Proposed Action be selected, a site-specific non-significant Forest Plan amendment would be prepared and attached to the decision document for this project. The amendment would waive application of the MPC 3.2 standard to allow adding existing unauthorized roads to the transportation system in MPC 3.2 for the purposes of maintenance of the power line corridor and its structures only.

2.4.2.1 Design Features

In addition to Forest Plan standards and guidelines designed to mitigate impacts, the IDT identified other measures that would be applicable to Alternative B. These design features have been incorporated to reduce or prevent undesirable impacts resulting from the proposed management activities.

2.4.2.1.1 General

The new special use permit will authorize access, operation, and maintenance of the line. Prior to any implementation, the special use permit requires Idaho Power Company to develop annual or site-specific work plans and submit those to the Forest Service. During review of those plans, the Forest may add additional site-specific requirements beyond what is identified here prior to approval of work. This requirement will give the Forest Service the opportunity to look at and address site-specific details for individual actions to minimize or eliminate undesired environmental consequences.

2.4.2.1.2 Cultural Resources

If any cultural resources are encountered during implementation of this project, all ground-disturbing activities in the immediate vicinity of the discovery would cease until the Forest Archeologist is notified and the Idaho SHPO and potentially affected Indian tribes are consulted.

Line 328 structure replacements on historic properties will require additional site-specific consultation with the Idaho SHPO and potentially affected Indian tribes prior to implementation. A qualified archeologist will be required to monitor the implementation of structure replacements on these sites. Design features to protect significant cultural resources are documented in the record of NHPA Section 106 consultation completed for this Project.

2.4.2.1.3 Noxious Weeds / Botany

In consultation with the Cascade Ranger District, Idaho Power would develop a Noxious Weed Abatement Plan. At a minimum, the plan would address pressure washing all equipment before use on NFS lands, before moving from a known infested area to a non-infested area within the Forest boundary, and before leaving NFS lands. The Noxious Weed Abatement Plan will ensure actions are in compliance with Forest Plan direction for this project.

For any seeding/planting of disturbed areas, the species used should be selected or reviewed by the Forest or District Botanist to ensure that additional undesirable species are not introduced into the project area and the seed mix is certified weed seed free. The use of native seeds/plant material, if available, is highly preferable. Short-lived native cultivars can be used to supplement native seed supplies. Ground-disturbance activities, such as equipment use and construction, should be reduced to the greatest degree possible.

2.4.2.1.4 Wildlife

The District Wildlife Biologist would be notified of any occupied nests or dens that may be associated with listed, sensitive, or management indicator species (MIS). If necessary to maintain key features of nesting or denning habitat or to avoid disruption of nesting or

denning activities, prescribed activities would be delayed until such time that the activity would not be disruptive.

If an active goshawk nest is detected within the analysis area during implementation of the project, use a 650 foot no vegetation treatment or activity buffer around the active nest tree from March 1st to August 15th. The Wildlife Biologist may alter the actual size and shape of the buffer around the nest if conditions (e.g. topography) warrant modifications.

2.4.2.1.5 Soils / Water

Seeding, straw mulch, and fertilizer would be applied to all disturbed areas, including road cut and fill slopes and road surfaces. Straw would be applied at a rate of 1 tons (2,000 pounds) per acre on all disturbed areas. Finished straw mulch application shall provide a uniform ground cover. The seed mix and all straw would be certified weed/weed seed-free. Fertilizer would be applied at 1,000 pounds per acre on all disturbed areas. An organic delayed-release fertilizer, such as Biosol™, should be used. The seed mixture and application rates are shown in Table 2-4. Any changes to these recommended mixtures and rates must be approved by the Forest Service before application.

Table 2-4. Recommended seed mixture and application rate

Seed Species	Variety	Pounds/Acre
Mountain Brome	Bromar	6
Bluebunch Wheatgrass	Secar	6
Streambank Wheatgrass	Sodar	6
Sheep Fescue	Covar	2
Sundial Lupine		4
Western Yarrow (White)		0.2
Total		24.2

Water bars and/or rolling dips would be installed on all unauthorized roads added to the Forest transportation system, and as needed on existing authorized roads, to meet the standards shown in Table 2-5.

Table 2-5. Drainage feature spacing for the Proposed Action

Road Grade (%)	Water Bar/Rolling Dip Interval (feet)
<2	100
2%–5	75
5%–10	50
>10	30

During road maintenance activities, side casting any soils from road surface or cut slopes onto the fill slope would be avoided. The spoils from water bars/rolling dips would be placed on the downslope side of the road surface to prevent soil movement into the channels created by the water bars/rolling dips. Maintenance on access roads would be prohibited during wet periods without the prior written consent from the Forest Service.

Where appropriate, additional BMPs would be implemented as identified in National Best Management Practices for Water Quality Management on National Forest System Lands Volume 1: National Core BMP Guide (USDA Forest Service 2012).

To meet Forest Plan Standard SWST10: Felled trees would be left intact in the RCA, but slash would be placed at the toe of the fill to provide a slash filter windrow to mitigate sediment delivery to streams.

To meet Forest Plan Standard SWST11: All refueling of equipment would occur outside of the RCA.

2.4.2.1.6 Vegetation

Clearing of vegetation from access road prisms would be completed using hand tools and not heavy equipment. Trees and tall brush would be cut at ground level with root wads left in place. Low-growing brush, grasses, and forbs would be left in place. Cut material would be placed at the toe of access road fill slopes to act as a filter windrow. Road surfaces and ditch lines would be kept free of created slash.

2.4.2.1.7 Visuals

Visible new ground disturbance on overland access routes may encourage the public to attempt unauthorized off-road motor vehicle use. Therefore, adequate rehabilitation of the disturbed area (including physical barriers such as rocks, logs, or slash and/or visual barriers such as wooden or fiberglass signposts) shall be completed to discourage or limit such unauthorized use.

2.4.2.1.8 Watershed/Fisheries

No fuel would be stored within any RCAs and refueling of all equipment would take place **outside** of RCAs as defined below:

- 300 feet for all perennial streams and intermittent fish-bearing streams
- 150 feet for all intermittent non-fish-bearing streams

All equipment would be inspected for fluid leaks prior to entering National Forest System lands.

Refueling of hand tools would occur away from streambanks.

Trees felled within RCAs would be left intact.

The ford stream crossing to IPC Structures 328-02-107 and 108 would be hardened prior to use. Sediment control would be employed as identified in Volume 1: National Core BMP Guide (USDA Forest Service 2012).

2.5 Comparison of Alternatives

This section provides a summary of the potential effects for the alternatives being considered in detail. The summary is limited to the effects of each alternative on the elements of the purpose and need, and issues or concerns, Forest Plan standards, and/or other resources the

IDT deemed important for an informed decision. More-detailed discussions of environmental consequences are provided in Chapter 3.

This section compares the no action and the proposed action alternatives. See Chapter 3 for a complete description of effects and for the scientific basis for the results in the comparison tables.

2.5.1 Purpose and Need Indicator Comparisons

Table 2-6 compares the effects of the alternatives on meeting elements of the purpose and need and displays activities and outputs. A narrative for each element follows, and detailed information is included in Chapter 3.

Table 2-6. Alternative Comparison for Meeting Purpose and Need

Purpose and Need	Alternative A	Alternative B
Number of special-use permits for Line 328 renewed for 20-year term	0	1
Number of structures where Idaho Power has motorized access	23	284
• Miles of existing currently closed authorized roads to be opened	0	6
• Miles of existing unauthorized roads to be designated as system roads	0	19
• Miles of overland access routes to be designated for use	0	4
• Feet of power line corridor that would need to be relocated	0	1,060
Activities require site-specific non-significant Forest Plan amendment	No	Yes

2.5.1.1 Special-Use Permits

Alternative A assumes the existing permit would be renewed for another 20 years after its expiration on December 31, 2013, and would include the identical terms and conditions found in the current permit, including restricting access to authorized roads only.

Alternative B would renew the permit for another 20-year term and include motorized access to the power line and its structures.

2.5.1.2 Motorized Access to Idaho Power Structures

Alternative A would restrict motorized access to the power line and its structures to authorized roads only.

Alternative B would provide Idaho Power with motor vehicle access to all 284 structures located on Forest lands and address public access needs and health and safety along a 1.02 mile segment of NFS road 476P and access needs between NFS road 427 and 474. . Changes in access and to the Forest transportation system would include the following:

- Idaho Power would be permitted to open, perform maintenance on, and use 6 miles within 11 authorized road segments that are in a state of storage. These roads would remain closed to the public year-round, and unauthorized motor vehicle use would continue to be prevented by the existing gates, boulders, or earthen berms and existing road closures. A 1.02-miles segment of Road 467P would be opened for public motor vehicle use.

- The Forest Service would designate 19 miles within 115 segments of existing unauthorized roads to maintenance level 2 roads and add them to the Forest transportation system. Road management objectives would be established for each road. These roads would remain closed to the public year-round, and unauthorized motor vehicle use would be prevented by installing physical barriers and by existing road closures.
- The Forest Service would designate a 1.02 mile segment of NFS road 467P as open to public motorized use to meet access needs for the proponent, but also to address public access needs and resource issues due to changes made along NFS Road 467. The 467 route is an important and popular motorized vehicle route from Warm Lake to Johnson Creek. In the early 2000s a log stringer bridge across Trout Creek was removed due to safety concerns. In the 2011 Johnson Creek Watershed Improvement Project Decision Notice the bridge was planned to be replaced. However, due to the high cost of the bridge replacement and the preference to eliminate a stream crossing to further reduce resource concerns, I decided to alternatively designate 467P road as open to the public. Selecting this alternative route eliminates the need for the stream crossing, reduces resource effects to this sensitive area and reduces cost to the government. The 2013 South Fork Salmon River Subbasin TAP completed in support of this project, documents this alternative route to meet long term management and access needs.
- The Forest Service would designate 0.75 miles of unauthorized road between NFS road 427 and NFS road 474 near the Warm Lake substation to provide both access to the proponent for maintenance and repair of the power line, as well as to address a public safety needs for motorized access in this area. The unauthorized route between 474 and 427 to be designated parallels Warm Lake Highway. Authorizing this road would provide for an alternative route for both highway and non-highway legal vehicles to make the loop around 427 and 474 without traveling on Warm Lake Highway. Use of this route would avoid or minimize existing congestion and safety issues along the Warm Lake Highway resulting from this traffic.
- Where vegetation and terrain allow, the Forest Service would designate 68 segments of overland access routes totaling 4 miles. Idaho Power would be permitted to “walk” motorized equipment cross-country within the confines of these overland access routes to the power line corridor and/or structures.

2.5.2 Environmental Effects Comparisons

Table 2-7 compares the effects of the alternatives on meeting elements of the issues and compares the effects of the alternative on meeting elements of the issue indicators.

Table 2-7. Alternative Comparison for Issue Indicators

Resource Issue and Indicator	Alternative A	Alternative B
Vegetation—Not Analyzed in Detail		
Change in quantity or distribution of forested habitat types or PVGs	No change	No change
Tree size class: Acres of tree size classes unrepresentative of adjacent stands Canopy Cover: Acres of canopy covers unrepresentative of adjacent stands Tree Species Composition: Acres of shade intolerant seral tree species overrepresented Landscape Patch and Pattern: Acres of fragmentation of forested patches with an atypical landscape pattern	312 acres	329 acres (addition of 7 miles of unauthorized roads outside power line corridor to Forest's transportation system)
Created Openings	0	0
Snags: Acres of potential snag recruitment not available Coarse Woody Debris (CWD): Acres of potential CWD recruitment not available	312 acres	329 acres
Scenic Resources—Not Analyzed in Detail		
Visual quality	Negligible effect	Negligible effect
Visual quality objectives	Consistent or met	Consistent or met
Congressionally Designated Areas and Research Natural Areas—Not Analyzed in Detail		
Effects to Congressionally designated areas, or natural resource areas	No effect	No effect

Resource Issue and Indicator	Alternative A	Alternative B
Wildlife		
Habitat Elements		
Acres of Old Forest and Large-Tree Habitat Affected	0 acres	0 acres
Large Diameter Snag Habitat: Acres change in large snag densities at stand level	0 acres	0 acres
Species Effects		
Threatened —Canada lynx and northern Idaho ground squirrel	NLAA	NLAA
Proposed —Wolverine	NLJ/NLAA	NLJ/NLAA
Sensitive —White-headed woodpecker, American three-toed woodpecker, boreal owl, fisher, flammulated owl, Northern Goshawk, gray wolf, spotted bat, Townsend's big-eared bat, bald eagle	MII	MII
Candidate —Greater sage grouse, southern Idaho ground squirrel, yellow-billed cuckoo	NI	NI
Sensitive —Mountain quail, peregrine falcon, Rocky Mountain bighorn sheep, Columbian sharp-tailed grouse, southern Idaho ground squirrel, and common loon	NI	NI
Management Indicator Species —White-headed woodpecker, black-backed woodpecker, pileated woodpecker	No change in overall population or source habitat trend at Forest scale	No change in overall population or source habitat trend at Forest scale
Species of Interest: Elk	No substantial impacts on open road densities, seasonal movements, or winter range and would not impact calving habitat. Critical life stage habitat including winter range and calving habitat would be maintained at existing levels	No substantial impacts on open road densities, seasonal movements, or winter range and would not impact calving habitat. Critical life stage habitat including winter range and calving habitat would be maintained at or near existing levels
Fisheries		
Species Effects		
Threatened —Bull Trout and Critical Habitat, Chinook Salmon and Critical Habitat and Essential Fish Habitat, Steelhead and Critical Habitat	NLAA	NLAA
Sensitive —Westslope Cutthroat Trout	MII	MII
Soil and Water Resources		
Water Quality —Tons of Sediment Delivery to Streams	0.28 tons/year	0.04 tons/year
Water Quantity —Equivalent Clearcut Acres (ECA) percent	24.3%	24.4%
Slope Stability —Acres of landslide prone areas affected by activities	16 acres	23 acres temporary 22 acres short & long term
Long Term Soil Productivity —Percent detrimentally disturbed soils	0%–22.71%	0%–7.3%

Resource Issue and Indicator	Alternative A	Alternative B
Long Term Soil Productivity —Percent Total Soil Resource Commitment	1.2%	4.2%
Wetlands/Floodplains	No effect	No effect
Municipal Watersheds	No effect	No effect
Botany		
Threatened —Spalding’s catchfly and Ute ladies’-tresses	NE	NE
Candidate —Whitebark Pine—Acres of potential reduced prevalence of immature and mature whitebark pine	312 acres	329 acres +4 miles of overland access
Sensitive—Whitebark pine	MII	MII
Sensitive —Linear-leaved moonwort, whitebark pine, Idaho primrose, Sacajawea’s bitterroot	MII	MII
Sensitive —Least phacelia, leathery grapefern, scalloped moonwort, and rattlesnake fern	NI	NI
Sensitive —Small phacelia	NI	NI
Forest Watch —Least moonwort	MII	MII
All Other Forest Watch Species , including scalloped moonwort	NI	NI
Cultural Resources		
Effects to historically significant sites	No adverse effect	No adverse effect
Noxious Weeds		
Potential weed introduction and expansion risk	No change	No change (mitigation)
Roadless Areas		
Changes to natural integrity, apparent naturalness, and remoteness	No change	No change
Changes to solitude, or opportunities for primitive recreation	No change	No change
Consistency with Idaho Roadless Rule	Consistent (per Idaho Roadless Commission)	Consistent (per Idaho Roadless Commission)
Wild and Scenic Rivers		
Eligibility for addition to National Wild and Scenic Rivers System (Johnson Creek, Burntlog Creek, South Fork Salmon River)	Maintained	Maintained
Outstandingly Remarkable Values	Maintained	Maintained
Free-flowing Characteristics	Maintained	Maintained
Recreation Opportunity Spectrum		
Recreation Opportunity Spectrum classification changes	No change	No change

Note: NE = No Effect; NLAA = May Affect, but Not Likely to Adversely Affect; NI = No Impact; MI = May Impact individuals or habitat, but would not likely contribute to a trend toward Federal listing.

Chapter 3—Affected Environment and Environmental Consequences

3.1 Introduction

This chapter provides a summary of the environmental effects of the alternatives considered in detail for the Idaho Power Line 328 Project (Project) (36 CFR 220.7(b)(3)(i)). The individual discussions are organized by the following resources: wildlife, fisheries, soil and water, botanical, noxious weeds, IRAs, scenic environment, and recreation.

Pursuant to the direction found at 40 CFR 1500.1(b) and 1500.4, the discussions presented here are summaries of the completed analyses and form the scientific and analytical basis for the alternatives' comparison at the end of Chapter 2. Additional details regarding the affected environment, conclusions about potential effects, and applicable Forest Plan and regulatory direction are available in specialist reports for each resource and other supporting documentation in the project record located at the Cascade Ranger District.

The Project is not a major federal action. It has limited context and intensity (40 CFR 1508.27), individually or cumulatively, to the biological, physical, social, or economic components of the human environment.

3.1.1 Issues Not Analyzed in Detail

The following is a discussion of the issues not analyzed in detail and the reasons regarding their categorization. Additional information on each of these issues is found in the project record.

3.1.1.1 Vegetation

Because the management activities for both alternatives would be similar with respect to vegetation and would be consistent with Forest Plan standards and guidelines, and the effects of the proposed activities are limited, vegetation was not an issue that was useful in distinguishing between the alternatives. These considerations eliminated vegetation as an issue for detailed environmental analysis for this proposal. The potential for effects on the vegetation resource is documented in the project record (see Vegetation Technical Report). Potential effects for Threatened, Sensitive, and Forest Watch plant species are discussed in section 3.5 (Botanical Resources) and noxious weeds are discussed in section 3.6 (Noxious Weeds).

3.1.1.2 Wild and Scenic Rivers

Three river segments eligible for inclusion as Wild and Scenic Rivers and their corridors, which extend 0.25 miles on each side of the watercourse, occur in the Project area: Johnson Creek, Burntlog Creek, and the South Fork Salmon River. However, eligibility for potential addition to the National Wild and Scenic Rivers System for Johnson Creek, Burntlog Creek, and the South Fork Salmon River, and their outstandingly remarkable values and free-flowing characteristics, would be maintained under both Alternatives A and B.

Because the management activities for both alternatives would be similar with respect to Wild and Scenic Rivers, and the effects of the proposed activities are limited, Wild and

Scenic Rivers was not an issue that was useful in distinguishing between the alternatives. The Outstanding Remarkable Values (ORVs) and the Free Flowing Characteristics of the river segments are maintained under the Proposed Action. These considerations eliminated Wild and Scenic Rivers as an issue for detailed environmental analysis for this proposal. The potential for effects on Wild and Scenic Rivers is documented in the project record (see Wild and Scenic Rivers Technical Report).

3.1.1.3 Congressionally Designated Areas and Research Natural Areas

The Project area is not located in any congressionally designated area or research natural area, and therefore, no effects were identified to these resources. Several suitable or eligible Wild and Scenic River segments do occur within the immediate vicinity but none of these river segments have been designated by Congress. These considerations eliminated congressionally designated area and research natural area as issues for detailed environmental analysis for this proposal. The potential for effects on Congressionally Designated Areas is documented in the project record (see Congressionally Designated Areas, RNAs, and ROS Technical Report).

3.2 Wildlife

Issue: Proposed activities have the potential to affect wildlife habitat elements (old forest and large-tree habitat and large-diameter snag habitat) and individual wildlife species.

Indicators:

- Old Forest and Large-Tree Habitat: Acres of old forest and large-tree habitat affected
- Large-Diameter Snag Habitat: Acres of change in large-diameter snag densities at stand level
- Effects to Threatened Species: Canada lynx and northern Idaho ground squirrel
- Effects to Proposed Species: Wolverine (*Gulo gulo*)
- Effects to Candidate Species: Greater sage grouse (*Centrocercus urophasianus*), southern Idaho ground squirrel (*Spermophilus brunneus endemicus*), yellow-billed cuckoo (*Coccyzus americanus*)
- Effects to Sensitive Species: White-headed woodpecker (*Picoides albolarvatus*), flammulated owl (*Otus flammeolus*), northern goshawk (*Accipiter gentilis*), gray wolf (*Canis lupus*), spotted bat (*Euderma maculatum*), Townsend's big-eared bat (*Corynorhinus townsendii*), bald eagle (*Haliaeetus leucocephalus*), Columbia spotted frog (*Rana luteiventris*), American three-toed woodpecker (*Picoides dorsalis*), boreal owl (*Aegolius funereus*), fisher (*Martes pennanti*), great gray owl (*Strix nebulosa*), mountain quail (*Oreortyx pictus*), peregrine falcon (*Falco peregrinus*), Rocky Mountain bighorn sheep (*Ovis canadensis*), greater sage grouse, Columbian sharp-tailed grouse (*Tympanuchus phasianellus columbianus*), southern Idaho ground squirrel, yellow-billed cuckoo, and common loon (*Gavia immer*)

The potential for effects on wildlife species and habitat is documented in the project record (see Wildlife Technical Report). This section summarizes that analysis, focuses on effects of the alternatives to wildlife, and discusses proposed management activities that may affect individuals, populations, or habitats of wildlife species and migratory birds in the project area. Indicators of management activity effects include effects to habitat elements (old forest and large tree and large diameter snag habitats) and effects to individual species.

3.2.1 Background

3.2.1.1 Wildlife Habitat Indicators

3.2.1.1.1 Old Forest and Large-Tree Habitat—Families 1 and 2

Old forest habitat is an important source habitat condition that provides essential denning, nesting, foraging, and cover habitat for many Family 1 and 2 wildlife species. Large-tree habitat is an important foundational component of old forest; at the scale of the Forest, large-tree habitat is below desired quantities in nonlethal and mixed1 fire regimes. Large-tree habitat can be a critical building block in the restoration of old forest habitat when quantities and distribution of old forest are not reflective of historic conditions. Large-tree habitat provides areas for foraging and breeding for many wildlife species that also use old forest.

As described in the Forest Plan and as used in this analysis, old forest habitat occurs in the mid-seral, fire-maintained systems associated with fire regimes that were historically prevalent in central Idaho. Appendix E of the Forest Plan describes the desired attributes of old forest habitat. These include, by PVG: canopy cover of live trees ≥ 20 inches diameter breast height (dbh); canopy cover of live trees ≥ 0.1 inches dbh; species composition of live trees ≥ 20 inches dbh; snag quantities per acre; and quantities of coarse woody debris (CWD) per acre (USDA Forest Service 2010a).

The large tree size class provides important habitat for a variety of wildlife species even when not in an old forest habitat condition. Existing old forest habitat components (e.g., legacy ponderosa pine and Douglas fir trees, large diameter snags, canopy cover, species composition) within large tree stands provide building blocks for managing stands to maintain desired old forest habitat components. The 36.8-mile power line corridor has been identified through the land and resource management planning process for use as a designated utility corridor. This designation constitutes a long-term allocation of affected acres and, as such, would not be expected to provide the same level of large tree size class as adjacent forested stands.

3.2.1.1.2 Large-diameter Snag Habitat Common to All Habitat Families

For many wildlife species, large-diameter snags are an important habitat component. Desired conditions under the Forest Plan in Appendix A fall within the historical range of variability (HRV). The 2010 Forest Plan includes guidance to retain large-diameter snags in heavily roaded areas, where snags are vulnerable to removal by fuelwood cutters. The analysis area for the large-diameter snag habitat discussions is the same as that used for the old forest analysis.

3.2.1.2 Species

The USFWS identified the threatened, endangered, proposed, and candidate species (TEPC) that should be considered during project planning within the counties in each state. The Forest Service compiles this county-by-county information to form a species list specific for each project. This project occurs within Valley and Gem counties. The current list (USDI FWS 2011) identifies 2 wildlife species as Threatened (Canada lynx and the northern Idaho ground squirrel) both of which occur within Valley County. The list also identifies 4 Candidate species, 3 of which occur within either Valley or Gem counties: wolverine, greater sage grouse, and southern Idaho ground squirrel. While Candidate species are not afforded protection under the ESA, the USFWS advises that they be evaluated for effects for any given project (USDI FWS 2011). As such, Candidate species are analyzed as Sensitive species in Region 4, and impact determinations are provided accordingly.

All TEPC species and Sensitive species (TEPC/S) and MIS were initially considered for this analysis. Of the 25 species considered, 19 could potentially be affected by the proposed action (Table 3-1). In addition, Rocky Mountain elk were analyzed due to the importance of these species locally and in management direction found in the Forest Plan.

The analysis determined there would be no effects/impacts from either Alternative A or B on the following species because source habitat for these species would not be impacted by proposed activities, the Project area is outside their current and historical range, or there is a lack of source habitat and/or key habitat features within the Project area: greater sage grouse, mountain quail, yellow-billed cuckoo, Rocky Mountain bighorn sheep, Columbian sharp-tailed grouse, common loon, southern Idaho ground squirrel, American three-toed woodpecker, and peregrine falcon. Therefore, these species will not be addressed further in this document. The determination for elk (species of interest) is “habitat will be maintained” for all alternatives; therefore, this species will not be addressed further in this document.

However, the determination for the following species is “may impact individuals but is not likely to cause a trend to federal listing or loss of viability” and these species are discussed in detail:

- Canada lynx (threatened)
- Northern Idaho ground squirrel (threatened)
- Wolverine (proposed threatened)
- White-headed woodpecker (sensitive and MIS)
- American three-toed woodpecker (sensitive)
- Boreal owl (sensitive)
- Fisher (sensitive)
- Flammulated owl (sensitive)
- Northern goshawk (sensitive)
- Gray wolf (sensitive)
- Spotted bat (sensitive)
- Townsend’s big-eared bat (sensitive)
- Bald eagle (sensitive)

- Pileated woodpecker (*Dryocopus pileatus*) (MIS)
- Black-backed woodpecker (*Picoides arcticus*) (MIS)

Table 3-1. Wildlife species analyzed and species status

Source Habitat Restricted to...	Family Name	Species Considered in this Analysis	Species Status ^a	Potentially Affected
Suite 1: Forest Only	Low elevation, old forest	White-headed woodpecker	MIS/S	Yes
	Broad elevation, old forest	American three-toed woodpecker	S	Yes
		Black-backed woodpecker	MIS	Yes
		Boreal owl	S	Yes
		Fisher	S	Yes
		Flammulated owl	S	Yes
		Great gray owl	S	Yes
		Northern goshawk	S	Yes
		Pileated woodpecker	MIS	Yes
	Forest mosaic	Canada lynx	T	Yes
		Mountain quail	S	No
Wolverine		P	Yes	
Suite 2: Combination of Forest and Rangeland	Forest and range mosaic	Gray wolf	S	Yes
		Rocky Mountain bighorn sheep	S	No
		Peregrine falcon	S	Yes
		Rocky Mountain elk	SOI	Yes
	Forests, woodlands, and sagebrush	Spotted bat	S	Yes
		Townsend's big-eared bat	S	Yes
Suite 3: Rangeland Only	Sagebrush	Greater sage grouse	S/C	No
	Grassland and open-canopy sagebrush	Northern Idaho ground squirrel	T	Yes
		Southern Idaho ground squirrel	S/C	Yes
		Columbian sharp-tailed grouse	S	No
Suite 4: Riverine and Nonriverine Riparian and Wetland	Riverine riparian and wetland	Bald eagle	S	Yes
		Columbia spotted frog	S	Yes
		Yellow-billed cuckoo	S/C	No
	Nonriverine riparian and wetland	Common loon	S	No

^aSpecies status for Valley County, Idaho: C = candidate (USDI FWS 2011); E = endangered (USDI FWS 2011); MIS = Forest Plan MIS (USDA Forest Service 2010a, Appendix E); P = proposed (USDI FWS 2011); S = sensitive (USDA Forest Service 2010c); T = threatened (USDI FWS 2011); SOI = species of interest.

3.2.2 Affected Environment

3.2.2.1 Wildlife Habitat Indicators

The analysis area used for the assessment of old forest, large trees, and large snags includes the 36.8-mile power line corridor in its entirety and all overland access routes, all unauthorized roads that would be added to the transportation system, and all existing authorized roads that would be opened under Alternative B. The analysis area also includes

the 1,060 feet of power line corridor that would be created to realign the power line in the vicinity of Whitehorse Rapids.

None of the stands within the analysis area are believed to provide old forest habitat. The 36.8-mile power line corridor and the 19 miles of unauthorized roads are currently within the grass/forb/seedling or sapling tree size classes. Authorized roads associated with this project would be considered non-forest. Overland access routes occur in a variety of tree size classes. However, these routes do not likely occur in old forest habitat, since they are near authorized roads and therefore near areas where some level of harvest occurred in the past. The 1,060 feet of power line corridor that would be realigned in the vicinity of Whitehorse Rapids is in the grass/forb/seedling or sapling tree size class.

The clearing and maintenance of the 36.8-mile power line corridor (312 acres) and the establishment and use of roughly 7 miles of unauthorized roads outside of the corridor (17 acres) resulted in a number of narrow, linear features on the landscape. It should be noted that 12 of the 19 total miles occur within and overlap the power line corridor, and is why only the 7 miles (of the 19 total miles) that occur outside of the corridor are used in the old forest, large tree and large snag effects analysis. In general, these 329 acres contain tree size classes, canopy covers, and tree species compositions unlike adjacent stands and contribute to fragmentation of forested patches, some of which could potentially provide old forest habitat.

3.2.2.1.1 Large-diameter Snag Habitat Common to All Habitat Families

The 36.8-mile power line corridor (which includes 12 miles of unauthorized roads) and 7 miles of unauthorized roads outside of the ROW are devoid of snags and live trees of sufficient diameter to provide snags in the near future.

3.2.2.2 Species

3.2.2.2.1 White-headed Woodpecker, American Three-toed Woodpecker, Boreal Owl, Fisher, Flammulated Owl, Great Gray Owl, Northern Goshawk (Sensitive); Black-backed Woodpecker and Pileated Woodpecker (MIS)

The analysis area used for these species consists of the Forest Service managed portions of 11 subwatersheds (6th field HUCs⁸) that the power line crosses through, totaling 130,318 acres. An area this large was necessary in order to show the potential impacts on road density. This area is also defined by hydrological units, which are natural features of the landscape, and are the outermost extent in which effects to a species or its habitat would be expected.

All of these species except the white-headed woodpecker and black-backed woodpecker have been documented within the analysis area (Cascade Ranger District Sightings Database 2011 [available in the project record], IFWIS 2011). No documentation of the white-headed woodpecker has ever occurred on the Cascade Ranger District (Cascade Ranger District Sightings Database 2011 [available in the project record], IFWIS 2011).

⁸ A hydrological unit code, abbreviated as 'HUC', is a sequence of numbers or letters that identify a hydrological feature like a river, river reach, lake, or watershed. A 6th field HUC is a subwatershed.

In general, source habitat for white-headed woodpecker, boreal owl, fisher, great gray owl, goshawk, and pileated woodpecker have been greatly reduced or are lacking within the 6 northern-most subwatersheds that make up the analysis area. This reduction is due to the large wildfire in 2007 and the accompanying beetle kill that has occurred and rendered much of the forested portions of these subwatersheds unsuitable as source habitat for these species. Conversely, these same areas of burned and/or beetle-killed habitat provide large amounts of high quality source habitat for the three-toed and black-backed woodpeckers. Within the southern-most subwatershed on the Cascade Ranger District and all 4 on the Emmett Ranger District that comprise the remainder of the analysis area, forested stands are relatively intact and potentially provide source habitat for all species in this group.

Although the analysis area includes a relatively large area, only the area within the 307 acres of the ROW is subject to habitat modification by the alternatives. Due to the lack of stand exam data, habitat within the ROW will be described in terms of source habitat capacity (SHC), which is the preferred habitat type(s) capable of providing source habitat for a given species. Because of the long, linear nature of the ROW, which is 36.8 miles long by 70 feet wide, SHC for a given species occurs in small sections, not likely capable of providing meaningful source habitat on its own. In reality, these small sections of SHC are likely part of a larger stand of the same habitat type, which are capable of providing source habitat at that scale. The Wildlife Technical Report contains detailed SHC information.

Although the ROW provides potential source habitat for the species listed above, due to its current cleared condition, it does not provide source habitat for any of these species except for great gray owl forage habitat.

Roads facilitate fragmentation and alteration of habitat (Nutt et al. 2010). Total road density is the indicator that quantifies these potential risks associated with roads. The Wildlife Technical Report contains detailed information about total road densities within the analysis area by subwatershed. Currently 5 subwatersheds have moderate total road densities (0.7–1.7 miles per square mile [mi/mi^2]) and 5 have high total road densities ($>1.7 \text{ mi}/\text{mi}^2$).

3.2.2.2.2 *Wolverine*

The analysis area used for this species consists of the Forest Service managed portions of 7 subwatersheds (6th field HUCs) that the power line crosses through that contain potential source habitat (persistent snow), totaling 120,395 acres, and all within the Cascade Ranger District. The low elevation habitat on the Emmett Ranger District does not provide persistent snow. This area is also defined by hydrological units, which are natural features of the landscape, and are the outermost extent in which effects to a species or its habitat would be expected. Six wolverine observations have been documented within the analysis area (Cascade Ranger District Sightings Database 2011 [available in the project record], IFWIS 2011).

The persistence of wolverine on the landscape is a function of the quantity and quality of its source habitat, which is described as the persistent snow layer. Persistent snow is critical for denning and typically consists of the more remote areas on the landscape due to the elevation, and is where the wolverine spends much of its time. Approximately 62,378 acres of the 120,395-acre analysis area occurs in persistent snow and provides source habitat for the wolverine. Although the analysis area and modeled source habitat comprise a relatively

large area, only the area within and directly adjacent to the power line ROW is subject to habitat modification or disturbance by the alternatives. At present, roughly 11.7 miles of the power line corridor occurs within wolverine source habitat, which equates to approximately 41 acres.

Habitat within and adjacent to the power line corridor is not considered denning habitat because of the close proximity to open roads, typically within 0.1 miles of roads that include Warm Lake Highway, Cabin Creek road and Johnson Creek road. The consistent use of these roads in both summer and winter (snowmobiling) and the associated disturbance is not conducive to wolverine denning. Habitat within and adjacent to the power line corridor is considered forage and travel habitat.

Wolverine habitat selection may be negatively influenced by human activity, including roads (Nutt et al. 2010). Roads facilitate fragmentation and alteration of habitat (Nutt et al. 2010), and are used as access routes into more remote areas during winter. Total road density is the indicator that quantifies these potential risks associated with roads. The Wildlife Technical Report details total road densities within the analysis area by subwatershed. Currently, 6 subwatersheds have moderate total road densities (0.7–1.7 mi/mi²) and 1 has high total road density (>1.7 mi/mi²).

The contiguous United States wolverine Distinct Population Segment (DPS) was proposed for listing by the U.S. Fish and Wildlife Service on February 4, 2013 (78 FR 7864). An addendum to the Biological Assessment was prepared that addressed Section 7 consultation requirements, which updated the BA to disclose effects to the wolverine from the proposed action.

3.2.2.2.3 Canada Lynx

The analysis area used for the assessment of Canada lynx consists of 4 Lynx Analysis Units (LAUs) containing the proposed power line, totaling 322,100 acres and containing all or portions of 8 5th field HUCs, because all potential impacts will occur within this boundary. LAUs tend to follow hydrological features, and the hydrological unit is a feature on the landscape that can influence wildlife species movements and distribution. Impacts to the amount, distribution, and quality of source habitat for this species will be assessed by LAU.

No lynx sightings have been documented on the Cascade Ranger District since the trapping of a lynx in 1978 in the Warm Lake area (Terra-Berns et al. 1998, Cascade Ranger District Sightings Database 2011 [available in the project record], IFWIS 2011). No documentation of lynx has occurred on the Emmett Ranger District (IFWIS 2011, Terra-Burns et al. 1998). In addition, no detections have occurred from fisher hair snare survey efforts or from bait/trapping stations used to capture wolverine for the ongoing Wolverine Response to Winter Recreation Use project (Cascade Ranger District Sightings Database 2011 [available in the project record], IFWIS 2011).

LAUs have been identified through consultation with USFWS and are used to evaluate lynx habitat and effects to lynx. The Project occurs within the East Mountain, Warm Lake, Burntlog, and Yellow Pine LAUs. The East Mountain LAU is the only LAU in the analysis area that meets the habitat requirement for a viable home range (see Forest Plan Standard TEST15).

Approximately 4 total miles of the 36.8 mile power line corridor traverses through existing modeled lynx source habitat. Approximately 3.3 miles of the ROW that occurs within existing source habitat is within the Burntlog LAU, and the remaining 0.7 miles occurs within the East Mountain LAU. While the ROW traverses through modeled lynx source habitat in both of these sections, the 70-foot-wide corridor itself has been maintained in the grass/forb/seedling/sapling stage and is not suitable source habitat. Habitat within and adjacent to the power line corridor is not considered denning habitat, due to its proximity to open roads, typically within 0.1 miles of roads that include Warm Lake Highway, Cabin Creek Road, and Johnson Creek Road. The consistent use of these roads in both summer and winter (snowmobiling) and the associated disturbance are not expected to be conducive to lynx denning. Habitat within and adjacent to the power line corridor is considered lynx forage and travel habitat, however.

3.2.2.2.4 Gray Wolf

The analysis area used for this species consists of the Forest Service managed portions of 11 subwatersheds (6th field HUCs) that the power line crosses through, totaling 130,318 acres. An area this large was necessary in order to show the potential impacts on road density. This area is also defined by hydrological units, which are natural features of the landscape, and are the outermost extent in which effects to a species or its habitat would be expected. Multiple wolf sightings have been documented within the analysis area, the most recent of which occurred in 2009 (Cascade Ranger District Sightings Database 2011 [available in the project record]).

The entire analysis area is considered source habitat as this species is not dependent on vegetative conditions or structure for source habitat. The analysis area contains denning, rendezvous, forage and travel habitat. Habitat within and adjacent to the power line corridor is not considered denning habitat because of the close proximity to open roads, typically within 0.1 miles of open roads that include Warm Lake Highway, Cabin Creek road and Johnson Creek road. The consistent use of these roads in both summer and winter (snowmobiling) and the associated disturbance is not expected to be conducive to wolf denning. Habitat within and adjacent to the power line corridor is considered forage and travel habitat, however.

The primary threat to wolves is human-caused mortality. Human factors have been the greatest source of documented mortality for wolves in Idaho (Nadeau et al. 2009). Roads, trails, and their associated human use and development increase the potential for human-wolf conflict and wolf vulnerability. Therefore, the focus of this analysis will be on open road density. While there would be impacts to source habitat from clearing of the ROW and new roadways, the amount of acres actually impacted would be small because of the long (36.8 miles), narrow linear nature of the power line corridor. As a result, open road density was selected as the primary indicator used to assess effects of the alternatives on the wolf. The Wildlife Technical Report details existing open road densities by subwatershed. Currently, 6 subwatersheds have moderate open road densities (0.7–1.7 mi/mi²) and 5 have high open road densities (>1.7 mi/mi²).

3.2.2.2.5 *Townsend's Big-eared Bat and Spotted Bat*

The analysis area used for these species consists of the Forest Service managed portion of 11 subwatersheds (6-field HUCs) that the power line crosses through, totaling 130,318 acres. This area is also defined by hydrological units, which are natural features of the landscape, and are the outermost extent in which effects to a species or its habitat would be expected. Neither species has been documented within the analysis area, or on the Cascade Ranger District (Cascade Ranger District Sightings Database 2011 [available in the project record]; IFWIS 2011).

While neither species has hibernacula habitat present, both species have roosting structures within the analysis area. Multiple buildings, bridges and mines occur that could provide roost habitat for the big-eared bat, and there are limited rock outcrops within the analysis area that could provide roost habitat for the spotted bat. Only 4 of these are within 0.5 miles of the power line. Forage habitat exists for both species in the lower elevation montane forests and along riparian corridors.

3.2.2.2.6 *Northern Idaho Ground Squirrel*

The analysis area used for this species consists of 130,318 acres managed by the Forest Service; this area includes a portion of 11 subwatersheds (6th field HUCs) that the power line crosses through. The analysis area is also defined by hydrological units, which are natural features of the landscape, and are the outermost extent in which effects to a species or its habitat would be expected.

No occurrences of the northern Idaho ground squirrel have been documented within the analysis area (IFWIS 2011; USDA Forest Service 2011). The nearest existing population is the Round Valley colony that occurs 2 miles east of the portion of the analysis area on the Emmett Ranger District. The Idaho Department of Fish and Game conducted an extensive survey effort in 2006 in order to identify new colonies and to expand existing colonies (IDFG 2005). High Valley, in the southern part of the analysis area, was surveyed at that time. No detections were made.

The analysis area is split into 2 areas. The first is a group of 7 subwatersheds on the Cascade Ranger District that run from the east edge of Long Valley to the town of Yellow Pine. The second is a group of 4 subwatersheds on the Emmett Ranger District that run from the southwestern edge of Round Valley to Ola, Idaho. The northern Idaho ground squirrel habitat model delineated potential source habitat within both sections of the analysis area. However, proposed activities would occur near potential source habitat in only 1 location, within the portion on the Emmett Ranger District, where a 0.26-mile segment of the power line corridor lies adjacent to modeled potential habitat. All other modeled potential source habitat within the analysis area occurs more than 0.5 miles from proposed activities.

3.2.2.2.7 *Bald Eagle*

The analysis area used for this species consists of the Forest Service managed portions of 11 subwatersheds (6-field HUCs) that the power line crosses through, totaling 130,318 acres. An area this large was necessary in order to show the potential impacts on road density. This area is also defined by hydrological units, which are natural features of the landscape, and are the outermost extent in which effects to a species or its habitat would be expected.

There are 3 known bald eagle territories within or adjacent to the analysis area. One is the Sage Hen nesting territory located on Sage Hen Reservoir. The nest site is roughly 3.5 miles north of the nearest section of the ROW, and is just outside the southern portion of the analysis area. Also in this area is the Smith's Ferry nesting territory located on the Payette River below the town of Smith's Ferry and within the analysis area. The nest site is roughly 2.2 miles from the nearest section of the ROW, which is the same section closest to the Sage Hen nest site. The third nesting territory is the Warm Lake nesting territory, located on Warm Lake on the Cascade Ranger District. The nest site is roughly 2.5 miles from the nearest section of the ROW.

The analysis area contains several large bodies of water conducive to providing bald eagle nesting and forage habitat. These include Sage Hen Reservoir, Warm Lake, North Fork Payette River, South Fork Salmon River, and Johnson Creek. Numerous perch sites border these water bodies.

The focus on this analysis will be on the potential disturbance of perch sites along the power line corridor. Currently the only territory that has structures within it is the Warm Lake bald eagle territory, which has 12 to 15 structures within the primary nesting territory. These structures follow the Warm Lake Highway corridor through the territory, which crosses the South Fork Salmon River.

3.2.2.2.8 Columbia Spotted Frog

The analysis area used for this species consists of the Forest Service managed portion of 11 subwatersheds (6-field HUCs) that the power line crosses through, totaling 130,318 acres. This area is also defined by hydrological units, which are natural features of the landscape, and are the outermost extent in which effects to a species or its habitat would be expected. Three confirmed sightings have occurred within the analysis area, although the analysis area provides large amounts of source habitat for this species (Cascade Ranger District Sightings Database 2011 [available in the project record], IFWIS 2011).

Source habitat for this species, including overwintering, breeding, and post-breeding dispersal habitat, occurs along slow-moving portions of Johnson Creek and South Fork Salmon River and their larger tributaries and within the numerous perennial streams found throughout the analysis area, at the edges of pools or eddies with emergent vegetation. While the many of the perennial streams are fast-moving with high to moderate gradients, slow-moving sections exist that could provide source habitat for the spotted frog.

Relevant watershed pathways that correlate with habitat features include Water Quality, Channel Conditions and Dynamics, Flow/Hydrology and Watershed Condition. The Fisheries Technical Report (Fisheries Specialist Report) identified the current condition of these pathways in terms of functionality ratings. The ratings for pathways relevant to the spotted frog are summarized in the Wildlife Technical Report.

In general, Water Quality, Watershed Condition, and Flow/Hydrology are functioning poorly within most subwatersheds primarily due to high road densities within and outside of RCA corridors and large areas affected by wildfire, while Channel Condition and Dynamics is currently functioning appropriately.

RCAs were delineated using the following (USDA Forest Service 2010a):

- 300 feet each side of stream—perennial streams
- 150 feet each side of stream—intermittent streams, ponds, lakes, reservoirs, or wetlands

In lieu of field data, selection of the first option provides a conservative boundary--generally in excess of two site-potential tree heights in the case of the 300-foot slope distance, and greater than one site-potential tree height in the case of the 150-foot slope distance--that would be expected to account for most riparian processes including large woody debris (LWD) recruitment, fine organic litter input, bank stabilization, sediment filtration, wind-throw, riparian microclimate and productivity, and wildlife habitat. Again, selection of this option is expected to provide land managers with the option of delineating an RCA in the absence of field confirmation, with the expectation that the distances would account for most riparian functions and ecological processes in a system. The Wildlife Technical Report details the amount of RCA acres by subwatershed within the analysis area.

3.2.3 Environmental Consequences

3.2.3.1 Wildlife Habitat Indicators

The effects of each alternative to habitat elements important to wildlife species are summarized below (Table 3-2).

Table 3-2. Effects of alternatives to wildlife habitat elements

Habitat Element	Alternative A	Alternative B
Acres of old forest and large-tree habitat affected	0	0
Large-diameter snag habitat: acres of change in large-snag densities at stand level	0	0

3.2.3.1.1 Old Forest and Large-tree Habitat

Direct and Indirect Effects

Alternative A

Alternative A would maintain the existing grass/forb/seedling and sapling tree size classes within the 36.8-mile power line corridor; maintain the 12 miles of unauthorized roads that occur within the grass/forb/seedling and sapling tree size classes in the power line corridor; and allow trees on the remaining 7 miles of unauthorized roads outside of the corridor to continue to grow, trending toward larger tree size classes and increased stand densities over time.

Authorized roads associated with this project would continue to represent a dedicated use as part of the Forest’s transportation system and would continue to be considered non-forest.

No overland access routes would be designated or used under this alternative, nor would any section of the power line be relocated.

Maintenance (e.g., cutting trees) of the 36.8-mile power line corridor, including 12 miles of unauthorized roads within that corridor, would retain the narrow, linear features on the landscape. In general, the 312 acres within the corridor reflect tree size classes, canopy covers, and tree species compositions unlike adjacent stands and contribute to fragmentation

of forested patches, some of which could potentially provide old forest habitat. Allowing maintenance (e.g., cutting trees) of the power line corridor would effectively retain the existing low canopy cover within the 36.8-mile corridor.

Although Alternative A would maintain the linear features on the landscape, the clearings would not be substantial enough to affect old forest or old forest habitat components at the stand scale.

Alternative B

Alternative B would maintain the existing grass/forb/seedling and sapling tree size classes within the 36.8-mile power line corridor and convert 19 miles of unauthorized roads currently in grass/forb/seedling and sapling tree size classes to non-forest.

Authorized roads would remain in a non-forested condition as part of the dedicated transportation system.

Designation and use of overland access routes would have no measureable effect on tree size classes. Overland access routes designated under this alternative would be situated in a manner to limit disturbance of vegetation.

Realignment of 1,060 feet of the power line corridor in the vicinity of Whitehorse Rapids is expected to have a negligible effect on tree size classes or old forest habitat. The new location occurs in an area affected by past wildfires and would currently be described as being in the grass/forb/seedling or sapling tree size class. Over time, this new section of the power line corridor would be maintained in the grass/forb/seedling or sapling tree size class. Trees in the abandoned section of the corridor would continue to grow, moving toward larger tree size classes over time eventually offsetting any effects associated with the new section of power line corridor.

Maintenance (e.g., cutting trees) of the 36.8-mile power line corridor and the addition of 7 miles of unauthorized roads to the Forest's transportation system outside the corridor, would result in several narrow, linear features on the landscape, similar to the existing conditions. In general, the 329 acres affected by this alternative would continue to reflect tree size classes unlike adjacent stands and contribute to fragmentation of forested patches.

Although Alternative B would maintain the linear features on the landscape, the clearings would not be substantial enough to affect old forest or old forest habitat components at the stand scale.

Cumulative Effects

Alternative A

Because Alternative A would not impact old forest or old forest habitat components at the stand scale, no cumulative impacts are expected from implementation of this alternative.

Alternative B

Because of the limited effects of past and ongoing projects, and because Alternative B would not result in effects to old forest or old forest habitat components at the stand scale, any cumulative effects would be negligible.

3.2.3.1.2 Large-diameter Snag Habitat Common to All Habitat Families

Direct and Indirect Effects

Alternative A

Allowing maintenance (e.g., cutting of trees) of the power line corridor would effectively eliminate the potential for recruitment of snags within the 36.8-mile corridor. Trees on the 7 miles of unauthorized roads outside of the corridor would continue to grow, thereby eventually providing a source of snags.

No overland access routes would be designated or used under this alternative, nor would any section of the power line be relocated.

Removing large snags along the outside edge of the ROW could occur under this alternative, even though vehicle access is limited to the existing open roads. Only those snags that pose a risk of falling into the power line would be felled and left onsite. The number of snags that may be felled has not been estimated but is expected to be relatively low and not substantial enough to change existing snag densities at the stand level or measurably impact nesting or forage opportunities for snag-dependent wildlife species.

Alternative B

Allowing maintenance (e.g., cutting trees) of the power line corridor would effectively eliminate the potential for recruitment of snags within the 36.8-mile corridor.

Adding 19 miles of existing unauthorized roads to the Forest's transportation system, and allowing maintenance and use of these roads, would convert affected acres to a non-forested condition, thus preventing the potential for snag recruitment. These 19 miles would become part of the dedicated transportation system.

Authorized roads would remain in a non-forested condition as part of the dedicated transportation system.

Designation and use of overland access routes would have no measurable effect on snag densities. Overland access routes designated under this alternative would be situated in a manner to limit disturbance of vegetation. However, some existing snags may need to be felled for safety reasons.

Realignment of 1,060 feet of the power line corridor in the vicinity of Whitehorse Rapids and allowing maintenance (i.e. cutting of trees) of that power line corridor would eliminate the potential for recruitment of large snags on these acres in the foreseeable future. Over time, this new section of the power line corridor would be maintained in the grass/forb/seedling or sapling tree size class. Trees in the abandoned section of the corridor would continue to grow and provide a future source for large snag recruitment eventually offsetting any effects associated with the new section of power line corridor.

Removal of large snags along the outside edge of the ROW could occur under this alternative, even though vehicle access is limited to the existing open roads. Only those snags that pose a risk of falling into the power line would be felled and left onsite. The number of snags that may be felled has not been estimated but is expected to be relatively low and not

substantial enough to change existing snag densities at the stand level or meaningfully impact nesting or forage opportunities for snag-dependent wildlife species.

Because the proposed activities are expected to have minimal impacts on large snags, overall impacts from Alternative B are expected to be negligible.

In the long term, nesting opportunities for species such as flammulated owl and nesting and forage opportunities for species such as the pileated woodpecker would remain similar to the current condition, which is limited along the ROW and adjacent roadways.

Cumulative Effects

Alternative A

Alternative A would not impact large-snag densities at the stand scale, and therefore, no cumulative impacts are expected from implementation of this alternative.

Alternative B

Because of the limited effects of ongoing projects, and because Alternative B would have only negligible effects to large snags at the stand scale, any cumulative effects would be negligible.

3.2.3.2 Individual Species

This section summarizes the analysis of the effects of each alternative to TEPC and Sensitive species and MIS. Determinations of effects to wildlife species can be found in Table 3-3 below.

Table 3-3. Determination of effects of alternatives to wildlife species

Source Habitat Family	Species Common Name	Determination	
		Alternative A	Alternative B
Family 1	White-headed woodpecker	MII	MII
Family 2	American three-toed woodpecker	MII	MII
	Boreal owl	MII	MII
	Fisher	MII	MII
	Flammulated owl	MII	MII
	Great gray owl	MII	MII
	Northern Goshawk	MII	MII
Family 3	Wolverine	NJL/NLAA	NLJ/NLAA
	Canada lynx	NLAA	NLAA
	Mountain quail	NI	NI
Family 5	Gray wolf	MII	MII
	Peregrine falcon	NI	NI
	Rocky Mountain bighorn sheep	NI	NI
Family 7	Spotted bat	MII	MII
	Townsend's big-eared bat	MII	MII
Family 11	Greater sage grouse	NI	NI
Family 12	Columbian sharp-tailed grouse	NI	NI
	Southern Idaho ground squirrel	NI	NI
	Northern Idaho ground squirrel	NLAA	NLAA
Family 13	Bald eagle	MII	MII
	Columbia spotted frog	MII	MII
	Yellow-billed cuckoo	NI	NI
Family 14	Common loon	NI	NI
Management Indicator Species	Pileated woodpecker	No change in overall population or source habitat trend at Forest scale	No change in overall population or source habitat trend at Forest scale
	White-headed woodpecker	No change in overall population or source habitat trend at Forest scale	No change in overall population or source habitat trend at Forest scale
	Black-backed woodpecker	No change in overall population or source habitat trend at Forest scale	No change in overall population or source habitat trend at Forest scale
Species of Interest	Elk	No substantial impacts on open road densities or critical life stage habitats.	No substantial impacts on open road densities or critical life stage habitats

Note: NE=No Effect; NLAA=Not Likely to Adversely Affect; NLJ = Not Likely to Jeopardize proposed species or modify proposed critical habitat; NI=No Impact; MII=May impact individuals but is not likely to cause a trend to federal listing or loss of viability;

^aThese species are also considered sensitive species.

^bThese species are also considered MIS.

3.2.3.2.1 *White-headed Woodpecker, American Three-toed Woodpecker, Boreal Owl, Fisher, Flammulated Owl, Great Gray Owl, Northern Goshawk (Sensitive); Black-backed Woodpecker and Pileated Woodpecker (MIS)*

Direct and Indirect Effects

Alternative A

Potential Impacts from Disturbance—Activities under the No Action Alternative that could result in disturbance include mechanical thinning of the 307-acre ROW with chainsaws, activities associated with the repair and replacement of the 284 structures, and removal of snags outside the 70 foot ROW with chainsaws. Potential disturbance or displacement from these activities would be considered negligible for the following reasons:

- Thinning of the ROW and clearing snags or repair of structures would occur at specific points along the 36.8-mile ROW and would have a very small footprint at any given time for either activity.
- All proposed activities can be completed in a relatively short time; structure repair/replacement is estimated to take no more than 1 week to complete at any given site, and thinning or snagging crews would move in and out of an area in a matter of hours.
- Because of the short duration and small footprint of activities, disturbance or displacement is expected to be temporary in nature, as individuals would be expected to simply move around a noisy activity or avoid the area until the disturbance stops.
- It is important to note that all but 0.6 miles of the 36.8-mile long ROW occurs within 0.1 miles (528 feet) of a major highway or other year-round open roadway, and all occur within 0.25 miles of an open roadway. The vast majority of these open roadways adjacent to the ROW are major roads that include Warm Lake Highway, Cabin Creek road, Johnson Creek road, and the Forest Service 644 road on the Emmett Ranger District. Any disturbance that may occur within the ROW would also occur within these already highly disturbed road corridors. Because the proposed activities occur within areas of existing high levels of disturbance, any additional negative disturbance impacts from proposed activities within or adjacent to the ROW would be considered negligible.
- Because of the proximity to open roads described in the bullet above, habitat adjacent to the ROW would not likely be used for denning or nesting habitat. Therefore, denning or nesting activities would not be impacted by proposed activities.
- No documentation of white-headed or black-backed woodpeckers has occurred within the analysis area or on the Cascade Ranger District (Cascade Ranger District Sightings Database 2011 [available in the project record], IFWIS 2011). In spite of the surveys (although limited) and ongoing monitoring efforts, the lack of documentation of this species on the district indicates that this species is extremely rare and presence is not anticipated within the analysis area as a result.
- Daytime proposed activities would not impact the nocturnal activities of the great gray owl, boreal owl, or flammulated owl.

Clearing and maintenance of the 307-acre ROW would render the affected corridor incapable of providing source habitat for any of the species in this group in the temporary, short and long terms. However, because of the narrow linear nature of the affected area, the clearing of a 70 foot wide corridor within a given stand would not change the average sized stand's existing tree size class or canopy cover class, and would not render the stand as a whole unsuitable for any of these species.

Therefore, this narrow linear feature on the landscape is not expected to have substantial impacts on formation of home ranges or use of adjacent source habitat for any of the species in this group. In addition, maintenance of the ROW into the long term is not expected to alter dispersal or traveling activities for individuals that may utilize source habitat adjacent to the ROW.

Removing snags along the outside edge of the ROW could occur under this alternative, even though vehicle access is limited to the existing open roads. Only those snags that pose a risk of falling into the line would be felled and left on site. While there are no estimates for the number of snags potentially felled, the number is believed to be relatively low and is not expected to be substantial enough to change existing snag densities at the stand level, or meaningfully impact nesting or forage opportunities for the snag dependent species in this group.

Total Road Density—Changes in road density can result in both disturbance and habitat modification. However, total road density would not change under this alternative, as access would not change and no new roads or overland access would be authorized. Total road densities would remain at existing levels for each subwatershed as detailed in the Wildlife Technical Report.

Alternative B

Potential Impacts from Disturbance—Activities under Alternative B that could result in disturbance include mechanical thinning of the 307-acre ROW with chainsaws, activities associated with the repair and replacement of the 284 structures, removal of snags outside the 70-foot ROW with chainsaws, clearing of 4 miles of overland routes, converting 19 miles of existing unauthorized routes and 6 miles of closed road to open road, and realigning 1,060 feet of line along Johnson Creek.

Disturbance or displacement of individuals could occur from any of the activities listed above. However, potential disturbance or displacement would be considered negligible for the reasons cited above as well as the following:

- Thinning of the ROW and clearing snags or repair of structures would occur at specific points along the 36.8-mile ROW, and, as a result, would have a very small footprint at any given time for any activity. The additional activities within the analysis area would also be localized at specific points along roadways or the power line, and would also have a very small footprint at any given time. Clearing of overland routes would consist of primarily shrubs as every attempt to avoid trees would be made.

Potential Impacts from Habitat Modification—Activities under Alternative B that could impact source habitat include clearing of the 307-acre ROW, removal of snags outside of the 70-foot-wide ROW, realignment of 1,060 feet of line along Johnson Creek, and clearing of

4 miles of overland routes, 19 miles of existing unauthorized routes and 6 miles of closed road proposed for conversion to open road.

Clearing and maintaining the 307-acre ROW and removal of vegetation on the 6 miles of closed to open conversion roads (total of 7.3 acres) would render the affected corridors incapable of providing source habitat for any of the species in this group in the temporary, short and long terms. However, because of the narrow linear nature of the affected areas, the clearing of a 70-foot-wide ROW corridor or 10-foot-wide road corridors within a given stand would not change the average sized stand's existing tree size class or canopy cover class, and would not render the stand as a whole unsuitable for any of these species.

Clearing of 19 miles of unauthorized routes could impact up to 66.5 acres, and clearing of 6 miles of closed to open road conversion could impact up to 21 acres. Clearing of vegetation along the 4 miles of overland routes would impact approximately 14 acres. Overland access routes designated under this alternative would be situated in a manner to limit disturbance of vegetation, and any clearing would consist of primarily seedling/sapling sized vegetation and shrubs. These estimates of acres impacted are likely much higher than what would actually occur on the ground because much of the existing unauthorized and closed roads are already clear of woody vegetation. Clearing of vegetation on these linear features would not change the overall existing tree size class and canopy cover classes within a given stand, and as a result, any impacts to species' source habitat would be minimal.

Clearing of the 1,060 foot section of realigned ROW would be offset because the original ROW would be allowed to revegetate.

Furthermore, all species in this group, with the exception of the flammulated owl, have relatively large home ranges and it is common for this species to have open areas within home ranges, whether natural or man-made. While the ROW corridor and cleared road corridors would not provide source habitat for these species, they could be incorporated into existing home ranges for some individuals from this group of species (i.e., while these corridors fragment habitat they are not expected to be substantial enough to pose as barriers to the species in this group). The flammulated owl has a much smaller home range than the rest of the species in this group, averaging only 31 acres (Barnes 2007). However, flammulated owls are known to utilize openings within their home ranges, or may chose an opening such as these as a border for their home range.

For the reasons described above, these narrow linear features on the landscape are not expected to have substantial impacts on formation of home ranges or use of adjacent source habitat for any of the species in this group. In addition, maintenance of the ROW and converted roads into the long term is not expected to alter dispersal or traveling activities for individuals that may utilize source habitat adjacent to the ROW.

Removing snags along the outside edge of the ROW could occur under this alternative, even though vehicle access is limited to the existing open roads. Only those snags that pose a risk of falling into the line would be felled and left on site. While there are no estimates for the number of snags potentially felled, the number is believed to be relatively low and is not expected to be substantial enough to change existing snag densities at the stand level, or meaningfully impact nesting or forage opportunities for the snag dependent species in this group.

Total Road Density—The key difference in this alternative from the No Action Alternative is the proposed access component. The conversion of 6 miles of closed road to open status and 19 miles of new system road designation would increase total road densities in all but 2 of the 11 subwatersheds within the analysis area, although none of the subwatersheds move into a higher road density classification. Proposed overland access routes would not be classified as roads and would not add to the road density. Changes in road density by subwatershed for the proposed action are detailed in the *Wildlife Technical Report*.

The increases in road density would incrementally reduce the quality of source habitat within these subwatersheds by further fragmenting habitat and by eliminating habitat within the road prism. However, 21.6 miles (86%) out of 25.1 total miles of proposed access roads are within 0.1 miles (528 feet) of an existing open road corridor that already experiences disturbance. The remaining 14% is within 0.25 miles (1,320 feet) of the same open roads. For elk the disturbance corridor of an open road is considered 0.5 miles on either side of the road (reference), and for the purposes of this analysis this 0.5 mile buffer will be used for all other species as well. Because these proposed roads are already within the zone of disturbance of these existing open road corridors, any additional disturbance caused by the proposed roads would be minimal, although they are contributing to an overall wider zone of disturbance when combined with existing open roads. In addition, because the additional roads would not be open to the public, there would be no increase in the potential for fuelwood removal.

Cumulative Effects

Alternative A

Past activities that have contributed to the existing condition of source habitat in the analysis area include timber sales, the firewood program, construction and maintenance of roads, and fire suppression. Ongoing and foreseeable future activities within the analysis area that could potentially impact the species in this group or their habitat in conjunction with the activities proposed in this alternative are detailed in the *Wildlife Technical Report*.

None of the ongoing or foreseeable activities would increase the total road density within the analysis area. Grazing within the 4 allotments will continue to occur in the area, but grazing was identified as low to no risk for the all species in this group except flammulated owl (Nutt et al. 2010). Road and trail maintenance and dispersed recreation occur primarily within existing road and trail corridors. If present, individuals are likely habituated to the noise and disturbance that are associated with these areas or completely avoid these sources of disturbance.

Fuelwood cutting and the Lower Johnson project are the only ongoing or foreseeable activities that would negatively modify source habitat for species in this group. Fuelwood cutting can impact source habitat by removing snags within road corridors that provide structure for nesting and forage and future CWD recruitment for many species. Analysis for the Lower Johnson project determined that the project would have no impacts on white-headed woodpecker, boreal owl and three-toed woodpecker, but could have negligible impacts on great gray owl, fisher, flammulated owl, black-backed woodpecker, pileated woodpecker from disturbance and a small amount of habitat modification (less than 100 acres for each species).

Alternative A would have negligible impacts to source habitat through habitat modification, would incrementally increase the potential for disturbance from proposed activities, but would not add to the existing total road density within the analysis area. All of the ongoing or foreseeable projects could overlap with the proposed project in time and space, and as a result, could add incrementally to disturbance within the analysis area. However, due to the small footprint and localized nature of all of these ongoing and future projects and the proposed project, the combination of potential impacts would be considered negligible and is not expected to cause shifts in habitat use or reconfiguration of home ranges for any species in this group. Therefore, the cumulative effect of this alternative, when combined with ongoing and future activities within the analysis area, would be maintenance of the current trend in source habitat quantity and quality within the analysis area into the short- and long-term.

Alternative B

Past activities that have contributed to the existing condition of source habitat in the analysis area include timber sales, the firewood program, construction and maintenance of roads, and fire suppression. Ongoing and foreseeable future activities within the analysis area that could potentially impact the species in this group or their habitat in conjunction with the activities proposed in this alternative are detailed in the *Wildlife Technical Report*.

Cumulative impacts from past, ongoing, or foreseeable activities would be the same for Alternative B as for Alternative A. Alternative B would have negligible impacts to source habitat through habitat modification, would incrementally increase the potential for disturbance from proposed activities, and would increase total road density within the analysis area. However, the increase in total road density would be expected to have negligible impacts as all occur within existing open road corridors that already experience disturbance. All of the ongoing or foreseeable projects could overlap with the proposed project in time and space, and as a result, could add incrementally to disturbance within the analysis area. However, due to the small footprint and localized nature of all of these ongoing and future projects and the proposed project, the combination of potential impacts would be considered negligible and is not expected to cause shifts in habitat use or reconfiguration of home ranges for any species in this group. Therefore, the cumulative effect of this alternative, when combined with ongoing and future activities within the analysis area, would be maintenance of the current trend in source habitat quantity and quality within the analysis area into the short- and long-term.

TES Determinations—Alternatives A and B *may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species* for the white-headed woodpecker, northern three-toed woodpecker, flammulated owl, fisher, boreal owl, great gray owl, and northern goshawk.

Considering the negligible impacts of both alternatives, ongoing and future activities, the overall trend for source habitat would be maintained within the analysis area for the black-backed woodpecker and pileated woodpecker.

3.2.3.2.2 *Wolverine*

Direct and Indirect Effects

Alternative A

Activities under the No Action Alternative that could result in disturbance include mechanical thinning with chainsaws of the 41-acre portion of the ROW within source habitat, activities associated with the repair and replacement of the 95 structures that are within source habitat, and removal of snags with chainsaws outside the 70-foot ROW along the 11.7 miles of the ROW that occurs within or adjacent to source habitat.

Disturbance or displacement of individuals could occur from any of the activities listed above. However, potential disturbance or displacement would be considered negligible for the following reasons:

- Thinning of the ROW and clearing snags or repair of structures would be accomplished by crews moving linearly along the corridor. As a result, disturbance would be localized around where the crew is working and would have a very small footprint at any given time for either activity.
- All proposed activities can be completed in a relatively short time; structure repair/replacement is estimated to take no more than 1 week to complete at any given site, and thinning or snagging crews would move in and out of an area in a matter of hours. As a result, the duration of activities at a given site would be minimal.
- Because of the short duration and small footprint of activities, disturbance or displacement is expected to be brief and temporary in nature, as individuals would be expected to simply move around a noisy activity or avoid the area until the disturbance stops.
- Within the portion of the 11.7-mile long ROW that occurs within source habitat, all occurs within 0.1 miles (528 feet) of a major highway or other year-round open roadway. All of these open roadways adjacent to the ROW are major roads that include Warm Lake Highway, Cabin Creek road, and Johnson Creek road. Any disturbance that may occur within the ROW would also occur within these already highly disturbed road corridors. Because the proposed activities occur within areas of existing high levels of disturbance, any additional negative disturbance impacts from proposed activities within or adjacent to the ROW would be considered negligible.
- Because of the proximity to open roads described in the bullet above, habitat adjacent to the ROW would not likely be used for denning habitat. Therefore, denning activities would not be impacted by proposed activities.
- The wolverine has a large home range, with females averaging over 20,000 acres (Copeland 1996). Because of the localized nature of proposed activities, a wolverine could easily avoid portions of its home range until activities are completed.

Potential Impacts from Habitat Modification—The only activity under the No Action Alternative that could impact source habitat is the on-going clearing of the 41-acre portion of the ROW within source habitat.

The wolverine is a habitat generalist with respect to vegetative needs and is not dependent on vegetative structure for source habitat. As a result, clearing within the ROW would not reduce the quality or quantity of source habitat for the wolverine, as it would remain suitable for foraging or traveling activities. As a result, Alternative A would not negatively impact source habitat for the wolverine.

Total Road Density—Changes in road density can result in increased potential for disturbance. However, total road density would not change under this alternative, as access would not change and no new roads or overland access would be authorized. Total road densities would remain at existing levels for each subwatershed.

Alternative B

Potential Impacts from Disturbance—Additional activities under Alternative B not included under the No Action Alternative that could result in disturbance include clearing of vegetation using chainsaws and/or heavy equipment for approximately 3.5 miles (12 acres) of proposed road designation and 1.4 miles (5 acres) of overland access routes.

Disturbance or displacement of individuals could occur from any of the activities listed above. However, potential disturbance or displacement would be considered negligible for the following reasons:

- Alternative B proposes road clearing and/or improvements for newly designated roads (3.5 miles) and overland routes (1.4 miles), and installation of barriers for newly designated roads. These additional activities within the analysis area would also be localized at specific points along roadways or the power line, and would also have a very small footprint at any given time.
- All proposed activities can be completed in a relatively short time. Road clearing and maintenance crews would also spend minimal time at a single site before they move to the next site or down the roadway. As a result, the duration of these additional activities at a given site would be minimal.
- The small amount of proposed road designation (3.5 miles) and overland access routes (1.4 miles) where clearing would occur within source habitat, totaling 4.9 miles, will further minimize disturbance from this activity.

Potential Impacts from Habitat Modification—Additional activities under Alternative B not included under the No Action Alternative that could result in habitat modification include clearing of 3.5 miles of new road designation (previously unauthorized routes) (12 acres) and 1.4 miles (5 acres) of overland routes.

The wolverine is a habitat generalist with respect to vegetative needs and is not dependent on vegetative structure for source habitat. As a result, the additional clearing of proposed roadways and routes would not reduce the quality or quantity of source habitat for the wolverine, as it would remain suitable for foraging or traveling activities. As a result, Alternative B would not negatively impact source habitat for the wolverine.

Total Road Density—The key difference in this alternative from the No Action Alternative is the proposed access component. Within the project area, access to the power line structures would be permitted with 19 miles of road designation (115 separate segments); 6 miles of closed road converted to open road (with 1 segment to be designated road open to all vehicles); and 4 miles of overland access (68 separate segments) (with one 0.75 mile segment converted to a trail open to all vehicles). However, the wolverine analysis area does not include 4 of the 11 total 6th field HUCs that would have proposed activities, as these 4 HUCs do not provide source habitat. As a result, the total road density discussion will only include those subwatersheds containing wolverine source habitat.

The proposed action would increase total road density in all 6 of the subwatersheds within the analysis area. However, all increases would be relatively small and no subwatersheds would move into a higher density classification. Proposed overland access routes would not be classified as roads and would not add to the road density.

The increases in road density would incrementally reduce the quality of source habitat within these subwatersheds by further fragmenting habitat. Because all of the newly designated roads are within 0.1 miles of an existing open road, the increases in road density would not result in increased access into remote areas, a primary concern with new road designation for wolverine (Hornocker and Hash 1981). As a result, the increase in total road density within the analysis area is not expected to have substantial impacts on the wolverine.

Cumulative Effects

Alternative A

Past activities that have contributed to the existing condition of source habitat in the analysis area include timber sales, construction and maintenance of roads, and fire suppression. Ongoing and foreseeable future activities within the analysis area that could potentially impact this species or its habitat in conjunction with the activities proposed in this alternative are detailed in the Wildlife Technical Report.

None of the ongoing or foreseeable activities would increase the total road density within the analysis area. Road and trail maintenance, dispersed recreation and fuelwood gathering occur primarily within existing road and trail corridors. If present, individuals are likely habituated to the noise and disturbance that are associated with these areas or completely avoid these sources of disturbance.

A snow-grooming permit renewal project will renew the existing grooming permit, in effect reauthorizing grooming on the same routes authorized by the previous permit. While grooming can provide easy access into the backcountry for snowmobilers and other recreationists, wolverines are likely habituated to existing groomed routes and avoid those areas. The permit renewal will maintain the existing level of disturbance associated with winter recreation within the analysis area.

Alternative A would have no negative impacts to source habitat, would incrementally increase the potential for disturbance from proposed activities from activities within source habitat, but would not add to the existing total road density within the analysis area and would not impact denning. All of the ongoing or foreseeable projects could overlap with the proposed project in time and space, and as a result, could add incrementally to disturbance within the analysis area. However, due to the small footprint and localized nature of all of

these ongoing and future projects and the proposed project, the combination of potential impacts would be considered negligible and is not expected to cause shifts in habitat use or reconfiguration of home ranges for wolverine. Therefore, the cumulative effect of this alternative, when combined with ongoing and future activities within the analysis area, would be maintenance of the current trend in source habitat quantity and quality within the analysis area into the short- and long-term.

Alternative B

Past activities that have contributed to the existing condition of source habitat in the analysis area include timber sales, construction and maintenance of roads, and fire suppression. Ongoing and foreseeable future activities within the analysis area that could potentially impact this species or its habitat in conjunction with the activities proposed in this alternative are detailed in the Wildlife Technical Report.

Cumulative impacts from past, ongoing, or foreseeable activities would be the same for Alternative B as for Alternative A. Alternative B would have no negative impacts to source habitat, would incrementally increase the potential for disturbance from proposed activities from activities within source habitat, and would add to the existing total road density within the analysis area, but would not impact denning. All of the ongoing or foreseeable projects could overlap with the proposed project in time and space, and as a result, could add incrementally to disturbance within the analysis area. However, because of the improvements to source habitat from road decommissioning resulting from the watershed improvement projects, the small footprint and localized nature of the remaining ongoing and future projects, and the negligible impacts from the proposed project, the combination of potential impacts would be considered negligible and is not expected to cause shifts in habitat use or reconfiguration of home ranges for wolverine. Therefore, the cumulative effect of this alternative, when combined with ongoing and future activities within the analysis area, would be maintenance of the current trend in source habitat quantity and quality within the analysis area into the short- and long-term.

TES Determinations— Alternatives A and B are not likely to jeopardize the continued existence of the wolverine. Additionally, upon potential future listing as threatened Alternatives A and B may affect, but would not likely adversely affect the wolverine.

3.2.3.2.3 Canada Lynx

Direct and Indirect Effects

Alternative A

Potential Effects from Disturbance—Activities under the No Action Alternative that could result in disturbance include mechanical thinning with chainsaws of the 33-acre portion of the ROW within lynx source habitat, activities associated with the repair and replacement of the 76 structures that are within or adjacent to source habitat, and removal of snags with chainsaws outside the 70-foot-wide ROW along the 4 total miles of the ROW that occur within or adjacent to lynx source habitat.

Disturbance or displacement of individuals could occur from any of the activities listed above. However, potential disturbance or displacement would be considered negligible for the following reasons:

- Thinning of the ROW and clearing snags or repair of structures would be accomplished by crews moving linearly along the corridor. As a result, disturbance would be localized around where the crew is working and would have a very small footprint at any given time for either activity.
- All proposed activities can be completed in a relatively short time; structure repair/replacement is expected to take no more than 1 week to complete at any given site, and thinning or snagging crews would move in and out of an area in a matter of hours. Therefore, the duration of activities at a given site would be minimal.
- Because of the short duration and small footprint of proposed activities, disturbance or displacement is expected to be temporary, as individuals are expected to simply move around a noisy activity or avoid the area until the disturbance stops.
- Within the 4-mile-long portion of the ROW that occurs within lynx source habitat, all but 0.15 miles occurs within 0.1 miles (528 feet) of a major highway or other year-round open roadway, and all occur within 0.25 miles of an open roadway. All of these open roadways adjacent to the ROW are major roads, including Warm Lake Highway, Cabin Creek Road, and Johnson Creek Road. Any disturbance that may occur within the ROW would also occur within these already highly disturbed road corridors. Because the proposed activities occur within areas of existing high levels of disturbance, any additional negative disturbance impacts from proposed activities within or adjacent to the ROW would be considered negligible.
- Because of the proximity to open roads described above, habitat adjacent to the ROW would not likely be used for denning habitat. Therefore, denning activities would not be impacted by proposed activities.

The potential for effects from disturbance are even more reduced due to the historic rarity of lynx on the district. Lynx were considered extremely rare on the Cascade Ranger District even before the wildfire and loss of habitat, as evidenced by the lack of documentation of the species on the district. All data indicate that a lynx population does not exist and that lynx are extremely rare on the Cascade Ranger District: No incidental sightings have occurred on the district since 1978 (Terra-Burns et al. 1998), and no lynx have been documented during various surveys, including winter tracking surveys in 1998, 1999, and 2001, the National Lynx Detection Survey (hair snare) conducted in the Johnson Creek drainage from 2001 through 2003, and camera trap sets in 1998, 1999, 2001, 2008, and 2009 (Cascade Ranger District Tracking Records 2012). By contrast, at least 12 wolverine sightings and 7 fisher sightings have been documented on the district since 1990 (Cascade Ranger District Sightings Database 2011 [available in the project record]). Both of these mustelid species are very elusive and also considered rare in Idaho.

Potential Impacts from Habitat Modification—Activities under the No Action Alternative that could impact source habitat include clearing of the 33-acre portion of the ROW within lynx source habitat and removal of snags outside of the 70-foot-wide ROW, along the 4 total miles of the ROW that occur within or adjacent to lynx source habitat.

Clearing and maintenance of the 33 acres within 2 sections of the ROW adjacent to source habitat would leave the affected acres in an unsuitable condition in the temporary, short term and the long term. However, because of the narrow, linear nature of the affected area, the clearing of a 70-foot-wide corridor within a given stand would not change the existing tree size class or canopy cover class of an average-sized stand and would not render the stand as a whole unsuitable for lynx. Therefore, use of adjacent habitat would not be impacted.

Lynx have relatively large home ranges (15–147 square miles [Ruediger et al. 2000]). These home ranges typically contain various landscape features, including natural or man-made open areas. Openings can impact lynx movement across the landscape (Koehler and Aubrey 1994). Lynx also tend to avoid hunting in openings larger than 328 feet wide, although they hunt the edges created by the opening (Ruediger et al. 2000). Neither the cleared 70-foot-wide ROW by itself nor the combination of the ROW with a major roadway (e.g., Warm Lake Highway) is wide enough to impede lynx movements or limit hunting opportunities. The corridor containing both the ROW and Warm Lake Highway would be approximately 160 feet at its widest. While the cleared ROW would add to fragmentation of source habitat within the LAUs, the feature would not be substantial enough to create a barrier to lynx dispersal movements or hunting activity.

For the reasons described above, this narrow linear feature on the landscape is not expected to have substantial impacts on use of adjacent source habitat or to cause changes in dispersal movements or hunting behavior. In addition, maintenance of the ROW into the long term is not expected to alter habitat use, dispersal, or traveling activities within any of the LAUs.

Removal of snags along the outside edge of the ROW could occur under this alternative, even though vehicle access is limited to the existing open roads. Only those snags that pose a risk of falling into the power line would be felled and left onsite. The number of snags that may be felled has not been estimated but is expected to be relatively low and not substantial enough to change existing snag densities at the stand level or to meaningfully impact the recruitment of CWD used for denning structure by lynx. Because the ROW within lynx source habitat is within 0.1 miles of a major open roadway, habitat adjacent to the ROW is not considered suitable for denning habitat, even if adequate CWD levels are present.

Total Road Density—Changes in road density can result in both disturbance and habitat modification. However, total road density would not change under this alternative, as no new roads or overland access would be authorized. Total road densities would remain at existing levels for each subwatershed.

Alternative B

Potential Effects from Disturbance—Proposed activities would occur within approximately 39.5 acres of suitable source habitat across both affected LAUs (East Mountain and Burntlog) and could result in disturbance impacts. These activities include mechanical thinning with chainsaws of the 33-acre portion of the ROW (70 feet by 4 miles); repair and replacement of the 76 structures that are within or adjacent to source habitat; removal of snags with chainsaws outside the 70-foot-wide ROW along the 4 total miles of the ROW that occur within existing lynx source habitat; and clearing of vegetation using chainsaws and/or heavy equipment for approximately 1.3 miles (4.6 acres) of proposed road designation, 0.4 miles (1.4 acres) of permitted opening/use of existing authorized roads, and

0.4 miles (0.5 acres) of overland access routes. See Table 3 4 for road miles and acres affected by proposed activity and LAU.

Disturbance or displacement of individuals could occur from any of the activities listed above. However, potential disturbance or displacement will be considered negligible for the reasons listed for Alternative A in addition to the following:

- Additionally, thinning of the ROW, clearing of snags, and road/route clearing will progress linearly along the corridor, limiting time spent in a given area. Disturbance from these activities, and from structure repair, road improvements, and barrier installation, will be localized around where the crew is working and will have a very small footprint at any given time.
- Any disturbance resulting from proposed activities within the affected LAUs (East Mountain and Burntlog) would be negligible due to the small amount of habitat actually impacted within these LAUs.
- Because of its proximity to open roads, habitat adjacent to the ROW will not likely be used for denning habitat. Therefore, denning will not be impacted by proposed activities. In addition, the project design feature described in section 2.4.2.1.4 would provide protective measures if a den site is located at any time during implementation of the proposed action.

Table 3-4. Acres of existing source habitat impacted by proposed activities for each Lynx Analysis Unit (LAU)

Activity	Miles within East Mnt LAU	Acres within East Mnt LAU	Miles within Burntlog LAU	Acres within Burntlog LAU	Total Miles	Total Acres
Right-of-way ^a	0.7	6.0	3.3	27.0	4.0	33.0
Road designation ^b	0.5	1.8	0.8	2.8	1.3	4.6
Permitted opening/use of existing authorized roads ^b	0	0	0.4	1.4	0.4	1.4
Overland access routes ^c	0.1	0.1	0.3	0.4	0.4	0.5
Reroute	0	0	0	0	0	0
Totals	1.3	7.9	4.8	31.6	6.1	39.5

^aAcres determined by multiplying 70-foot corridor width by length

^bAcres determined by multiplying 29-foot prism width by length

^cAcres determined by multiplying 12-foot prism width by length

Potential Effects from Habitat Modification of Existing Source Habitat—Under the proposed action, various activities would occur within existing lynx source habitat and potentially impact the habitat. Proposed activities include clearing of 33 acres of the ROW, removal of snags outside of the same sections of ROW, and clearing of 6.5 total acres of new road designation (previously unauthorized routes), permitted opening/use of existing authorized roads, and overland access routes. Existing source habitat would only be impacted within the East Mountain and Burntlog LAUs. Although the ROW also traverses the Warm

Lake and Yellow Pine LAUs, all proposed activities are well outside existing source habitat in those LAUs.

Clearing and maintenance of the 33 acres of the ROW adjacent to source habitat and clearing of a total of 6.5 acres for newly designated roads, reopened authorized roads, or overland routes will leave the affected acres in an unsuitable condition in the temporary, short term, and the long term. However, because of the narrow linear nature of the affected area, maintenance of the 70-foot-wide ROW or a roadway within a given stand in existing lynx source habitat will not change the existing tree size class or canopy cover class of an average-sized stand and will not render the stand as a whole unsuitable for lynx.

Lynx have relatively large home ranges (15–147 square miles [Ruediger et al. 2000]). These home ranges typically contain various landscape features, including natural or man-made open areas. Openings can impact lynx movement across the landscape (Koehler and Aubrey 1994). Lynx also tend to avoid hunting in openings larger than 100 meters wide (328 feet), although they hunt the edges created by the opening (Ruediger et al. 2000). Neither the cleared 70-foot-wide ROW by itself nor the combination of the ROW with a major roadway (e.g., Warm Lake Highway) and the newly designated road corridors will be wide enough to impede lynx movements or limit hunting opportunities. The corridor containing both the ROW and Warm Lake Highway will be approximately 160 feet at its widest. With the addition of another designated roadway, the width will increase to about 190 feet. While the cleared ROW and new designated roadways will add to fragmentation of source habitat within the Burntlog and East Mountain LAUs, these features, even in combination, will not be substantial enough to create a barrier to lynx dispersal movements or hunting activity.

For the reasons described above, the narrow linear features on the landscape are not expected to have substantial impacts on use of adjacent source habitat or to cause changes in dispersal movements or hunting behavior. In addition, maintenance of the ROW into the long term and the addition of 2.1 miles of new designated road or route corridors are not expected to alter habitat use, dispersal, or traveling activities within the Burntlog or East Mountain LAUs.

Within the East Mountain LAU, proposed activities would cause a total reduction of nearly 8 acres; within the Burntlog LAU, a total reduction of 32 acres would occur (Table 3-5). The East Mountain LAU is well within the desired range of suitable habitat quantity for the LAU (Table 3-5), and the loss of 8 acres will not be meaningful at the LAU scale. The Burntlog LAU is above the 30% minimum threshold for unsuitable habitat. The estimated loss of 32 acres of source habitat, spread out across 1.5 miles of new roadway/routes and 3.3 miles of ROW, will not impact the ability of the LAU to recover. Recovery of this LAU will depend entirely on recovery of the tens of thousands of acres of habitat that burned in the 2007 Cascade Complex Wildfire; this recovery will likely take another 15–20 years, the time required for regenerating conifers to reach sufficient heights above the snow line to provide snowshoe hare habitat. In addition, Forest Plan Standard TEST15 states that if an LAU is above the minimum threshold, or above 30% unsuitable habitat, vegetative management actions that will further increase unsuitable habitat will not be allowed to occur (USDA Forest Service 2010a, pg. III-12). This project is not a vegetation management project and thus will not be bound by the Forest Plan standard. Therefore, even though this project will slightly increase the amount of unsuitable habitat within the Burntlog LAU, no violation of Forest Plan Standard TEST15 would occur.

Table 3-5. Change in existing lynx source habitat following proposed activities, by Lynx Analysis Units

Lynx Analysis Units	Source Habitat Capacity (acres)	Existing Acres of Suitable Habitat (acres)	Estimated Reduction (acres)	Acres of Suitable Habitat Following Implementation (acres)	Acres of Unsuitable Habitat (acres)	Percent Change (%)	Percent Unsuitable (%)	Within TEST15 Threshold?
East Mountain	28,832	25,259	8	25,251	3,581	0.0	12.4	Yes
Warm Lake	32,095	1,886	0	1,886	30,209	0.0	94.1	No
Burntlog	34,487	15,507	32	15,475	19,012	-0.1	55.1	No
Yellow Pine	30,805	9,095	0	9,095	21,710	0.0	70.5	No

Removal of snags along the outside edge of the ROW could occur during this project, even though vehicle access is limited to the existing open roads. Only those snags that pose a risk of falling into the power line will be felled and left onsite. The number of snags that may be felled has not been estimated but is expected to be relatively low and not substantial enough to change existing snag densities at the stand level or meaningfully impact the recruitment of CWD used for denning structure by lynx. As stated earlier in this document, because the ROW within existing lynx source habitat is within 0.1 miles of a major open roadway, habitat adjacent to the ROW is not considered suitable for denning habitat, even if adequate CWD levels are present.

Potential Effects from Habitat Modification in Future Source Habitat—As discussed above, a substantial amount of source habitat is expected to recover in 15–20 years within burned habitat in the Burntlog, East Mountain, Warm Lake, and Yellow Pine LAUs. Within this time period, conifer regeneration is expected to reach heights of 2–3 feet above the average snow depth, providing snowshoe hare winter habitat and lynx hiding cover in these burned areas.

A summary of the amount of potential source habitat estimated to be affected by proposed activities appears in Table 3-6.

The rationale for effects associated with modifying future lynx source habitat would be identical to those effects determined for modifying existing source habitat, described above, although there would be an additional 20 acres impacted of future source habitat, mostly stemming from effects to recovered source habitat within the Warm Lake LAU. The amount of future source habitat estimated to be impacted by proposed activities relative to future existing source habitat cannot be determined (i.e., what percent of an LAU is suitable versus unsuitable), because the amount of suitable habitat in 20 years is unknown. However, the overall effect of potentially reducing 59.3 acres of future suitable source habitat across 3 fully recovered LAUs scattered along the 70-mile length of the ROW would be considered negligible to the species.

Table 3-6. Acres of future source habitat impacted by proposed activities for each Lynx Analysis Unit (LAU)

Activity	Miles within East Mnt LAU	Acres within East Mnt LAU	Miles within Burntlog LAU	Acres within Burntlog LAU	Miles within Warm Lake LAU	Acres within Warm Lake LAU	Total Miles	Total Acres
Right-of-way ^a	0.8	6.8	3.2	27.2	1.8	15.3	5.8	49.3
Road designation ^b	0.5	1.8	0.9	3.2	0.8	2.8	2.2	7.8
Permitted opening/use of existing authorized roads ^b	0	0	0.4	1.4	0	0	0.4	1.4
Overland access routes ^c	0.1	0.1	0.3	0.4	0.2	0.3	0.6	0.8
Reroute	0	0	0	0	0	0	0	0
Totals	1.4	8.7	4.8	32.2	2.8	18.4	9.0	59.3

^aAcres determined by multiplying 70-foot corridor width by length

^bAcres determined by multiplying 29-foot prism width by length

^cAcres determined by multiplying 12-foot prism width by length

Total Road Density within Existing Source Habitat—Within the project area, access to the power line structures will be permitted with 19 miles of road designation (115 separate segments), 6 miles of closed road converted to open road (with 1 segment to be designated road open to all vehicles), and 4 miles of overland access (68 separate segments) (with one 0.75-mile segment converted to a trail open to all vehicles).

The proposed action will increase total road density in all 4 of the LAUs that make up the analysis area. However, all increases would be relatively small, and no LAUs would move into a higher-density classification.

Because the Burntlog and East Mountain LAUs would have only small increases in total road density within existing source habitat, they would remain within their low- and moderate-density classifications, respectively. These road density classifications are not considered a risk to lynx, and because most new roads would remain closed to the public, any impacts from the small increase in total road density within the lynx analysis area would be considered negligible.

Cumulative Effects

Alternatives A and B

Past activities that have contributed to the existing condition of source habitat in the analysis area include timber sales, the firewood program, construction and maintenance of roads, and fire suppression. Ongoing and foreseeable future activities within the analysis area that could potentially impact this species or its habitat in conjunction with the activities proposed in this alternative are detailed in the Wildlife Technical Report.

Proposed activities under Alternatives A and B would incrementally increase the potential for disturbance within the analysis area. However, the effects of the increase in total road density for Alternative B are expected to be negligible, as all occur within existing open road corridors that already experience disturbance. All of the ongoing or foreseeable projects

could overlap with the proposed project in time and space and, as a result, could add incrementally to disturbance within the analysis area. While ongoing and future state and private activities could result in impacts to lynx or lynx source habitat, the potential impacts from Alternative A are not expected to substantially add to the effects of those other activities, primarily due to the short duration of the proposed activities, the small footprint of the proposed activities, and the documented rarity of the species on the Cascade Ranger District. Impacts from Alternative A are not expected to cause changes in habitat use or reconfiguration of home ranges (LAUs). Therefore, source habitat quality would be maintained with minimal disturbance in the short term and the long term.

Because of the limited spatial and temporal impacts of the proposed action, any potential cumulative impacts from implementing Alternatives A or B are expected to be negligible. In conclusion, the cumulative effect of this alternative, when combined with ongoing and future activities within the analysis area, would be to maintain the current trends in source habitat quantity and quality within the analysis area in the short term and the long term.

TES Determinations—Alternatives A and B *may affect, but would not likely adversely affect* the Canada lynx.

Rationale for Determination

- Any potential effects from disturbance or modification of existing source habitat would only occur within the East Mountain and Burntlog LAUs. The Warm Lake and Yellow Pine LAUs would not be impacted, as all proposed activities occur outside of existing source habitat within these LAUs.
- Within the East Mountain LAU, approximately 8 acres of existing source habitat would be modified by proposed activities, which include clearing and maintenance of the ROW, felling of snags in source habitat outside the ROW, and clearing of designated roads and overland routes. The amount of future source habitat modified by proposed activities following the recovery of source habitat is estimated to be to increase only 1 acre to 9 acres. The loss of just 8 acres of existing source habitat, or 9 acres of future source habitat, is not expected to be meaningful at the scale of the LAU. The East Mountain LAU would remain consistent with Forest Plan Standard TEST15, which requires that <30% of source habitat in a given LAU be in an unsuitable condition. Therefore, any impacts from source habitat modification within this LAU would be considered negligible.
- Within the Burntlog LAU, approximately 31.6 acres of existing source habitat would be modified by proposed activities, which include clearing and maintenance of the ROW, felling of snags in source habitat outside the ROW, and clearing of newly designated roads, reopened authorized roads, or overland routes. The amount of future source habitat modified by proposed activities following the recovery of source habitat is estimated to be approximately 32.2 acres, an increase of <1 acre. The loss of nearly 32 acres of existing source habitat, or just over 32 acres of future source habitat, is not expected to be meaningful at the scale of the LAU. Therefore, any impacts from source habitat modification within this LAU would be considered negligible.

- The Burntlog LAU is currently above the 30% minimum threshold for unsuitable habitat and outside of the desired condition for this LAU under Forest Plan Standard TEST15. The estimated loss of nearly 32 acres of source habitat, spread out across 1.5 miles of new roadway/routes and 3.3 miles of ROW, will not impact the ability of the LAU to recover. Recovery of this LAU will depend entirely on recovery of the tens of thousands of acres of habitat that burned in the 2007 Cascade Complex Wildfire. Forest Plan Standard TEST15 states that if an LAU has >30% of potential habitat in an unsuitable condition, vegetative management actions that will further increase unsuitable habitat will not be allowed to occur (USDA Forest Service 2010a, pg. III-12). This project is not a vegetation management project and thus would not be bound by the Forest Plan standard. Therefore, even though this project will slightly increase the amount of unsuitable habitat within the Burntlog LAU, no violation of Forest Plan Standard TEST15 would occur.
- Within the Warm Lake LAU, no existing source habitat would be modified by proposed activities. The amount of future source habitat modified by proposed activities following the recovery of source habitat is estimated to be approximately 18.4 acres. The loss of 18.4 acres of future source habitat is not expected to be meaningful at the scale of the LAU. Because source habitat within the LAU has to be recovered for the 18.4 acres to be affected, the LAU would be well below the 30% minimum suitable source habitat threshold at that time and would be consistent with Forest Plan Standard TEST15. Therefore, any impacts from source habitat modification within this LAU would be considered negligible.
- Potential disturbance impacts could occur from proposed activities within existing source habitat. Proposed activities would occur within approximately 39.5 acres of existing source habitat across both affected LAUs (East Mountain and Burntlog) and would include clearing vegetation from 33 acres of ROW, repair and replacement of 76 structures, snag removal adjacent to the 33 acres of ROW, and clearing vegetation from an additional 6.5 acres of newly designated roads and overland routes. However, these potential impacts are considered negligible because 1) proposed activities would be localized and would be completed in a short period (ranging from a couple of hours for clearing the ROW and snag removal to no more than a week for repair/replacement of structures), 2) most proposed activities would occur within existing open road corridors that already experience high levels of disturbance, 3) denning habitat is not present and no impacts to denning activities would occur, and 4) lynx are historically rare on the Cascade Ranger District.
- Roads were not determined to be a risk factor for lynx when total road densities are within the low to moderate classification (Nutt et al. 2010). Within the Burntlog and East Mountain LAUs, proposed activities would slightly increase total road densities within existing lynx source habitat. However, because these LAUs would remain within the low or moderate road density classification, any impacts from the small increase in total road density within existing source habitat would be considered negligible.

3.2.3.2.4 Gray Wolf

Direct and Indirect Effects

Alternative A

Open Road Density—Alternative A would not change the current open road density, and, therefore, there would be no change in vulnerability stemming from an increase in open roads. Other components of Alternative A could, however, result in disturbance and/or habitat impacts to wolves.

Potential Impacts from Disturbance—Activities under the No Action Alternative that could result in disturbance include mechanical thinning with chainsaws of the 307-acre ROW, activities associated with the repair and replacement of the 284 structures, and removal of snags with chainsaws outside the 70-foot ROW.

Disturbance or displacement of individuals could occur from any of the activities listed above. However, potential disturbance or displacement would be considered negligible for the following reasons:

- All but 0.6 miles of the 36.8-mile ROW occurs within 0.1 miles (528 feet) of a major highway or other year-round open roadway, and all occur within 0.25 miles of an open roadway. The vast majority of these open roadways adjacent to the ROW are major roads that include Warm Lake Highway, Cabin Creek road, Johnson Creek road, and the FS 644 road on the Emmett Ranger District. Any disturbance that may occur within the ROW would also occur within these already highly disturbed road corridors. Because the proposed activities occur within areas of existing high levels of disturbance, any additional negative disturbance impacts from proposed activities within or adjacent to the ROW would be considered negligible.
- Because of the proximity to open roads described in the bullet above, habitat adjacent to the ROW would not likely be used for denning habitat. Therefore, denning activities would not be impacted by proposed activities.
- Thinning of the ROW and clearing snags or repair of structures would occur at specific points along the 36.8-mile ROW and, as a result, would have a very small footprint at any given time for either activity.
- All proposed activities can be completed in a relatively short time; structure repair/replacement is estimated to take no more than 1 week to complete at any given site, and thinning or snagging crews would move in and out of an area in a matter of hours. As a result, the duration of activities at a given site would be minimal.
- Because of the short duration and small footprint of activities, disturbance or displacement is expected to be brief in nature, as individuals would be expected to simply move around a noisy activity or avoid the area until the disturbance stops, and could reenter the area during the night after daytime work activities. For the same reasons, proposed activities would not be expected to alter habitat use patterns.

- The wolf has a large home range, ranging from 32,000 to 192,000 acres (Spahr et al. 1991). Because of the localized nature of proposed activities, a wolf could easily avoid portions of its home range until activities are completed.

Potential Impacts from Habitat Modification—The only activity under the No Action Alternative that could impact source habitat is the on-going clearing of the 307-acre ROW.

The wolf is a habitat generalist with respect to vegetative needs and is not dependent on vegetative structure for source habitat. As a result, clearing within the ROW would not reduce the quality or quantity of source habitat for the wolf, as it would remain suitable for foraging or traveling activities. As a result, Alternative A would not negatively impact source habitat for the wolf.

However, the proposed project could result in indirect impacts to wolves through modification of prey species' habitat. Because of the narrow linear nature of the ROW, the clearing of a 70-foot wide corridor within a given stand would not change the average sized stand's existing tree size class or canopy cover class, and would not render a given stand within which the corridor passes through unsuitable. In addition, the clearing of the ROW corridor is not expected to measurably reduce the quality of security cover in affected stands or adjacent habitat, other than within the ROW itself.

Only 3 miles of the 36.8 total miles of the ROW occur within winter range areas. Clearing of the ROW would impact approximately 11 acres along these 3 miles. Because the cleared ROW would still provide forage and shrub species for winter browse, any impacts from modification of winter range is expected to be minimal. Calving habitat would not be impacted by proposed activities. Because the potential impacts from proposed activities are not expected to be substantial enough to alter existing distribution and habitat use patterns, any indirect impacts from modification of prey species' habitat are considered negligible.

Alternative B

Open Road Density—The key difference in this alternative from the No Action Alternative is the proposed access component. Within the project area, access to the power line structures would be permitted with 19 miles of road designation (115 separate segments); 6 miles of closed road converted to open road (with 1 segment to be designated road open to all vehicles); and 4 miles of overland access (68 separate segments) (with one 0.75 mile segment converted to a trail open to all vehicles).

The proposed action would increase open road density in only 2 of the 11 subwatersheds within the analysis area (see Wildlife Technical Report). The increase of 0.03 mi/mi² in the Warm Lake Creek 6th HUC stems from an increase of 0.8 road miles. The increase of 0.05 mi/mi² in the Halfway 6th HUC stems from an increase in road miles of 1.1 miles. Both remain within the moderate density classification.

An increase in open road density by definition would incrementally reduce the quality of source habitat within these 2 subwatersheds by increasing overall vulnerability. However, the increases are so small they are not expected to be meaningful at the scale of the subwatershed. Because both segments of new open road are within 0.1 miles (324 feet) of existing open roads, including Warm Lake Highway and Johnson Creek road, they are already within the existing influence of these major road corridors. As a result, vulnerability

is expected to remain very close to existing levels. The other 9 subwatersheds would not change open road density and, therefore, would not see any changes in wolf vulnerability.

In summary, because 9 of the 11 subwatersheds within the analysis area would not experience changes in open road densities, and the increases in the 2 that do change are so small they are not expected to be meaningful at the subwatershed scale, any impacts from the small increase in total road density within the analysis area would be considered negligible.

Potential Impacts from Disturbance—Additional activities under Alternative B not included under the No Action Alternative that could result in disturbance include realignment of 1,060 feet of line along Johnson Creek, and clearing of vegetation using chainsaws and/or heavy equipment for approximately 19 miles (66.5 acres) of proposed road designation, 6 miles (21 acres) of road conversion, and 4 miles (14 acres) of overland access routes.

Disturbance or displacement of individuals could occur from any of the activities listed above. However, potential disturbance or displacement would be considered negligible for the following reasons:

- The additional activities within the analysis area under this alternative would also be localized at specific points along roadways or the power line, and would also have a very small footprint at any given time.
- All proposed activities can be completed in a relatively short time; realignment is estimated to take no more than 1 week to complete at any given site. Road clearing and maintenance crews would also spend minimal time at a single site before they move to the next site or down the roadway. As a result, the duration of these additional activities at a given site would be minimal.

Potential Impacts from Habitat Modification—Additional activities under Alternative B not included under the No Action Alternative that could result in disturbance include realignment of 1,060 feet of line along Johnson Creek, and clearing of 19 miles of new road designation (previously unauthorized routes), 6 miles of road conversion, and 4 miles of overland routes.

The wolf is a habitat generalist with respect to vegetative needs and is not dependent on vegetative structure for source habitat. As a result, clearing within the newly designated road corridors or overland routes would not reduce the quality or quantity of source habitat for the wolf, as it would remain suitable for foraging or traveling activities. As a result, Alternative B would not negatively impact source habitat for the wolf.

However, the proposed project could result in indirect impacts to wolves through modification of prey species' habitat. Because of the narrow linear nature of the newly designated road corridors and overland routes, the clearing of a corridor within a given stand would not change the average sized stand's existing tree size class or canopy cover class, and would not render a given stand within which the corridor passes through unsuitable. In addition, the clearing of these road or overland route corridors is not expected to measurably reduce the quality of security cover in affected stands or adjacent habitat, other than within the road prism itself.

Only 3 miles of the 36.8 total miles of the ROW occur within winter range areas. Clearing of the ROW would impact approximately 11 acres along these 3 miles. Because the cleared ROW would still provide forage and shrub species for winter browse, any impacts from

modification of winter range is expected to be minimal. Calving habitat would not be impacted by proposed activities. Because the potential impacts from proposed activities are not expected to be substantial enough to alter existing distribution and habitat use patterns, any indirect impacts from modification of prey species' habitat are considered negligible.

For the reasons described above, proposed activities are not expected to have substantial impacts on open road densities, wolf vulnerability or denning activities.

Cumulative Effects

Alternative A

Past activities that have contributed to the existing condition of source habitat in the analysis area include timber sales, the firewood program, construction and maintenance of roads, and fire suppression. Ongoing and foreseeable future activities within the analysis area that could potentially impact this species or its habitat in conjunction with the activities proposed in this alternative are detailed in the Wildlife Technical Report

Alternative A would have no negative impacts to source habitat from maintenance of the ROW clearing and would not add to the existing total road density or wolf vulnerability within the analysis area. Proposed activities under Alternative A would incrementally increase the potential for temporary disturbance within the analysis area. All of the ongoing or foreseeable projects could overlap with the proposed project in time and space, and as a result, could add incrementally to disturbance within the analysis area. However, because ongoing road decommissioning projects and weed treatments will result in an overall improvement of source habitat within the analysis area, and because the proposed project is expected to have only negligible impacts, the combination of potential disturbance and habitat impacts would not be of a magnitude or scale that would cause changes vulnerability or habitat use patterns. As a result, the cumulative effect of this alternative, when combined with ongoing and future activities within the analysis area, are that overall source habitat quantity and quality trends would be maintained into the short term and long term.

Alternative B

Past activities that have contributed to the existing condition of source habitat in the analysis area include timber sales, the firewood program, construction and maintenance of roads, and fire suppression. Ongoing and foreseeable future activities within the analysis area that could potentially impact this species or its habitat in conjunction with the activities proposed in this alternative are detailed in the Wildlife Technical Report

Proposed activities under Alternative B would add to the existing total road density within the analysis area but would not meaningfully increase vulnerability because all newly designated roadways are within the existing open road corridors. Alternative B would have no negative impacts to source habitat but would incrementally increase the potential for temporary disturbance within the analysis area. All of the ongoing or foreseeable projects could overlap with the proposed project in time and space, and as a result, could add incrementally to disturbance within the analysis area. However, because ongoing road decommissioning projects and weed treatments will result in an overall improvement of source habitat within the analysis area, and because the proposed project is expected to have only negligible impacts to open road density and disturbance, the combination of potential disturbance and habitat impacts would not be of a magnitude or scale that would cause

changes vulnerability or habitat use patterns. As a result, the cumulative effect of this alternative, when combined with ongoing and future activities within the analysis area, are that overall source habitat quantity and quality trends would be maintained into the short and long terms.

TES Determinations—Alternatives A and B may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species for the Gray Wolf.

3.2.3.2.5 *Townsend's big-eared Bat and Spotted Bat*

Direct and Indirect Effects

Alternative A

Potential Impacts from Disturbance—There are no activities under the No Action Alternative that could result in disturbance. None of the proposed activities would impact hibernacula or roost sites for either species. In addition, all activities would be completed during daytime work hours and would not impact the nocturnal foraging activities of either species.

Potential Impacts from Habitat Modification—Activities under the No Action Alternative that could impact source habitat include clearing of the 307-acre ROW.

Because of the narrow linear nature of the affected area, the clearing of a 70-foot-wide corridor within a given stand would not change the average sized stand's existing tree size class or canopy cover class, and would not render the stand as a whole unable to provide prey for both of these species. Clearing and maintenance of the 36.8-mile, 307-acre ROW would not alter prey species numbers or distribution, and both species would still be able to forage above the canopy or within RCA habitat along the ROW. As a result, the No Action Alternative would not measurably impact source habitat for either bat species.

Alternative B

Potential Impacts from Disturbance—There would be no disturbance to hibernating individuals of either species because there are no hibernacula within the analysis area for either species.

None of the proposed activities would impact potential roost sites, including old buildings, mines or bridges, of the Townsend's big-eared bat.

In addition, all activities would be completed during daytime work hours and would not impact the nocturnal foraging activities of either species.

Potential Impacts from Habitat Modification—Activities under Alternative B not included under the No Action Alternative that could result in disturbance include realignment of 1,060 feet of line along Johnson Creek, and clearing of 19 miles of new road designation (previously unauthorized routes), 6 miles of road conversion, and 4 miles of overland routes.

Clearing of approximately 19 miles of proposed road designation corridors would occur, which equates to approximately 66.5 acres. Potential clearing of 6 miles of road conversion roadways would occur, which equates to 21 acres. Clearing could also occur on 4 miles of overland routes, which equates to 14 acres. Including the ROW (307 acres), a maximum of

approximately 409 total acres could be cleared under Alternative B. The typical unit of measure and management for vegetation is the stand. Because of the narrow linear nature of the affected areas, the clearing of a 12 to 29-foot-wide road corridor within a given stand would not change the existing tree size class or canopy cover class of an average-sized stand, and would not render the stand as a whole unsuitable for forage or alter prey availability for either species. In other words, the stand could still provide forage habitat in spite of the 70 foot wide corridor of cleared vegetation that passes through it. While there would be a decrease in total acres providing source habitat, the narrow linear nature of the clearing of the ROW and newly designated roads would not measurably decrease the quantity or quality of source habitat within the analysis area. Both species would still be able to forage above the canopy or within RCA habitat along the power line corridor. As a result, the No Action Alternative would not measurably impact source habitat for either bat species.

Clearing of the 1,060 foot section of realigned ROW would be offset because the original ROW would be allowed to revegetate.

Total Road Density—The key difference in this alternative from the No Action Alternative is the proposed access component. For the Townsend’s big-eared bat, road density was identified as a potential risk as roads provide access and possible disturbance at roost sites (Nutt et al. 2010). However, because only a total of 1.9 miles of newly designated roads would be open to the public, none of which accesses potential roost sites, no impacts are expected from the slight increase in open road density. The other 27.1 miles of proposed routes would remain closed to the public.

Cumulative Effects

Alternative A

While there would be an overall decrease in source habitat within the analysis area for both species, 307 acres, the affected acres would be spread out along a 36.8-mile corridor and within 11 subwatersheds, and would not result in measureable impacts to either species. Because Alternative A would have no meaningful direct or indirect impacts to either bat species, no cumulative impacts are expected.

Alternative B

While there would be an overall decrease in source habitat within the analysis area for both species, 409 acres, the affected acres would be spread out along a 36 mile long corridor and within 11 subwatersheds, and would not result in measureable impacts to either species. Because Alternative B would have no meaningful direct or indirect impacts to either bat species, no cumulative impacts are expected.

Determinations—Alternatives A and B “may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability” to the population or species for both the Spotted Bat and Townsend’s Big-eared Bat.

3.2.3.2.6 Northern Idaho Ground Squirrel

Direct and Indirect Effects

Alternative A

Potential Impacts from Disturbance—Activities under the No Action Alternative that could result in disturbance include mechanical thinning with chainsaws of the 0.26-mile section of ROW adjacent to potential source habitat, activities associated with the repair and replacement of the 2 structures adjacent to potential source habitat, and removal of snags with chainsaws outside the same 0.26-mile section of the ROW.

While certainly possible, disturbance is considered extremely unlikely to occur within the potential source habitat along the small section of ROW. Disturbance is expected to be negligible for the reasons discussed below.

The survey conducted by the state in 2006 did not yield any detections within the 1,332 acres surveyed in High Valley. The surveyed area lies 0.8 miles south of the proposed power line segment adjacent to modeled source habitat. This species is known for appearing and disappearing, even in consecutive years, which makes annual surveys important in determining presence. The 2006 survey, although now becoming dated, showed that the species was not present in the area surveyed at that time. While this by no means proves absence, the lack of detections during an intensive survey in 2006 indicates that northern Idaho ground squirrel were not likely within High Valley at that time. And because the nearest known colony (Round Valley) is nearly 9 miles away, with no apparent dispersal pathways linking the 2 areas together, northern Idaho ground squirrel presence within High Valley, and within the analysis area, is highly unlikely. By contrast, the colonies found on the Payette National Forest and surrounding private and state lands are all close to each other and have connective habitat, affording individuals the ability to move from site to site. This habitat structure is not present in the southern extent of the species' range, as the Round Valley colony appears to be completely isolated.

Because the species is likely not present within the section of power line corridor adjacent to potential source habitat, any potential for disturbance to individuals from proposed activities (such as clearing of the 0.26 miles of ROW, repair and maintenance of the 2 existing structures on that stretch of ROW, and removal of snags outside the ROW) is extremely unlikely to occur.

Because the section of ROW adjacent to modeled potential habitat is small, totaling <1 acre, and because only 2 structures need service, maintenance and/or clearing activities at this site would be brief, reducing the potential for disturbance, even if individuals were suspected to be present.

Potential Impacts from Habitat Modification—The only activity under the No Action Alternative that could impact source habitat would be the clearing of the 1 acre of ROW adjacent to potential habitat.

This particular site is already devoid of much vegetation, requiring minimal maintenance clearing and likely much less than the estimated 1 acre. Clearing of vegetation to form linkage pathways between colonies and potential habitat is a common treatment used to expand and enhance the species on the Payette National Forest. Clearing of a small amount

of vegetation is not expected to reduce the quality of potential source habitat along the ROW and may even improve it, as this species commonly uses stumps as protection for their burrows. Replacement of the 2 structures at this site could temporarily modify source habitat, however.

In summary, negative impacts from disturbance or habitat modification would be extremely unlikely to occur under this alternative; any impacts that might occur would be considered negligible because <1 acre would be modified, repair and maintenance would be necessary for only 2 structures, and the species is not likely present within modeled source habitat in the High Valley area.

Alternative B

Potential Impacts from Disturbance—The only activities under Alternative B not included under the No Action Alternative that could result in disturbance include clearing of vegetation using chainsaws and/or heavy equipment for approximately 0.05 miles (0.2 acres) of overland access routes.

While certainly possible, disturbance is considered extremely unlikely to occur within the potential source habitat along the small section of ROW. Any disturbance that might occur is expected to be negligible. Because the species is likely not present within the section of power line corridor adjacent to potential source habitat, the clearing of 0.05 miles of overland routes is extremely unlikely to cause disturbance to individuals.

Potential Impacts from Habitat Modification—The only activity under the No Action Alternative that could impact source habitat would be the clearing of the 0.2 acres of proposed overland routes adjacent to potential habitat.

This particular site is already devoid of much vegetation, requiring minimal maintenance clearing and likely much less than the estimated 1 acre. Clearing of vegetation to form linkage pathways between colonies and potential habitat is a common treatment used to expand and enhance the species on the Payette National Forest. Clearing of a small amount of vegetation is not expected to reduce the quality of potential source habitat along the overland routes and may even improve it, as this species commonly uses stumps as protection for their burrows.

In summary, any negative impacts from disturbance or habitat modification would be extremely unlikely to occur under this alternative; any impacts that might occur would be considered negligible because of the small area (0.05 miles, or 0.2 acres) that would be modified and because the species is not likely present within modeled source habitat in the High Valley area.

Cumulative Effects

Alternatives A and B

Past activities that have contributed to the existing condition of source habitat in the analysis area include timber sales, construction and maintenance of roads, grazing, and fire suppression. Ongoing activities within the analysis area that could potentially impact this species or its habitat in conjunction with the activities proposed in this alternative are detailed in the Wildlife Technical Report.

All of the ongoing projects could overlap with the proposed project in time and space and could add incrementally to disturbance and/or habitat modification within the analysis area. However, Alternatives A and B are expected to have only negligible impacts due to the small area affected by proposed activities, and northern Idaho ground squirrel presence is not expected or likely within the analysis area; therefore, the combination of potential impacts would also be considered negligible. The cumulative effects of Alternative A or Alternative B, when combined with ongoing and future activities within the analysis area, would be maintenance of the current trend in source habitat quantity and quality within the analysis area in the short term and the long term.

TES Determinations—Alternatives A and B *may affect, but would not likely adversely affect* the northern Idaho ground squirrel.

Rationale for Determination:

- A 0.26-mile section of the ROW containing 2 structures and a 0.05-mile segment of proposed overland route occur adjacent to modeled potential northern Idaho ground squirrel source habitat just north of High Valley.
- The state conducted an intensive survey in 2006 within High Valley; the survey did not yield any detections. While the lack of detections does not prove absence, the survey results indicate that northern Idaho ground squirrel were not likely within High Valley at that time. And because the nearest known colony (Round Valley) is nearly 9 miles away, with no apparent dispersal pathways linking the 2 areas together, northern Idaho ground squirrel presence within High Valley, and within the analysis area, is highly unlikely. By contrast, the colonies found on the Payette National Forest and surrounding private and state lands are all close to each other and have connective habitat, affording individuals the ability to move from site to site. This habitat structure is not present in the southern extent of the species' range, as the Round Valley colony appears to be completely isolated.
- Because the species is not likely present within the section of power line corridor adjacent to potential source habitat, disturbance from proposed activities under both alternatives—including clearing of the 0.26 miles of ROW, repair and maintenance of the 2 existing structures on that stretch of ROW, removal of snags outside the ROW, and clearing of 0.2 acres for proposed overland routes—is extremely unlikely to occur.
- Because the section of ROW and the proposed overland route adjacent to modeled potential habitat are both small (0.9 acres and 0.2 acres, respectively) and because only 2 structures need service, maintenance and/or clearing activities at this site would be brief, reducing the potential for disturbance, even if individuals were suspected to be present.
- This particular site is already devoid of much vegetation, requiring minimal maintenance clearing and likely much less than the estimated 1 acre. Clearing of vegetation to form linkage pathways between colonies and potential habitat is a common treatment used to expand and enhance the species on the Payette National Forest. Clearing of a small amount of vegetation under either alternative is not expected to reduce the quality of potential source habitat along the ROW

and the overland route and may even improve it, as this species commonly uses stumps as protection for their burrows.

3.2.3.2.7 Bald Eagle

Direct and Indirect Effects

Alternative A

Potential Impacts from Disturbance—Activities under the No Action Alternative that could result in disturbance include mechanical thinning with chainsaws of the 307-acre ROW, activities associated with the repair and replacement of the 284 structures, and removal of snags with chainsaws outside the 70 foot ROW.

The nearest proposed activity occurs 2.2 miles from the Smith's Ferry nest site and primary forage habitat (North Fork Payette River), and 3.5 miles from the Sage Hen nest site and primary forage habitat (Sage Hen Reservoir). Because no activities would occur within the Sage Hen or Smith's Ferry territories, no impacts to these nesting territories or pairs would occur from disturbance or habitat modification.

Bald eagles can perch anywhere; however, the probability is highest within existing territories or along the edges of water bodies outside existing territories used by transient eagles (not associated with a nesting territory) for forage habitat. Places within the analysis area where power line structures could most likely be used and where ground activities have the potential to disturb perched eagles would be a 2-mile section within the Warm Lake nesting territory and along an 8-mile stretch of Johnson Creek where the power line ROW is adjacent to the slow-moving sections of the creek. All of the other sections of the ROW occur away from streams large enough to provide forage habitat and would not likely be used by bald eagles for perches.

A 2 mile section of the ROW with 12-15 structures occurs within the Warm Lake Territory. Because this section of the ROW is over 2.4 miles from the nest site, no impacts to nesting individuals or activities would occur. The only mechanism for effect would be the potential for disturbance to individuals that may use the power lines for perches. All of the proposed activities within and adjacent to the ROW could cause an eagle to leave a power pole perch. However, use of these structures for perches within the Warm Lake territory would be infrequent as the ROW occurs over 0.7 miles from the pair's primary forage habitat (Warm Lake) and 2.4 miles from the nest site. While a few of these structures occur near the South Fork Salmon River, use of the power line is also likely infrequent because of the abundance of natural perches along the river. Furthermore, any disturbance resulting from ground activities would be brief and would consist of an eagle simply flying off if disturbed. As a result, any impacts to this nesting pair from proposed ground activities would be considered negligible.

The only segment of the ROW that would have a high likelihood for use by transient bald eagles would be along the 8.0-mile stretch of Johnson Creek where the power line ROW is adjacent to slow-moving sections of the creek. Ground activities could disturb or displace individuals that happen to be foraging along this stretch of the creek during proposed activities. However, these impacts would be brief and would consist of no more than an

individual leaving the area until activities were completed. As a result, any impacts to transient eagles from proposed activities would be considered negligible.

Potential Impacts from Habitat Modification—None of the proposed activities would impact eagle nesting or forage habitat within existing territories, as all activities would occur between 0.7 and 3.5 miles away from primary forage habitat and nesting habitat. Removal of snags and the maintained clearing of the ROW adjacent to the 8.0-mile section of Johnson Creek road could reduce perching structures along this stretch of habitat. However, in most places the ROW is not right along the creek and removal of snags and live trees within the ROW and close enough to the creek to serve as perches would be minimal, leaving abundant perch structures along this stretch. As a result, any potential impacts from habitat modification would be negligible.

Total Road Density—Road density is not a risk factor for this species.

Alternative B

Potential Impacts from Disturbance—Additional activities under Alternative B not included under the No Action Alternative that would occur within potential bald eagle source habitat and that could result in disturbance include clearing of vegetation using chainsaws and/or heavy equipment within 2 separate sections of the power line corridor that total approximately 6.2 miles (22 acres) of proposed road designation and 0.9 miles (3 acres) of overland access routes.

Because helicopter use is not permitted under this alternative, no impacts to the Warm Lake nesting pair from helicopter use would occur. Clearing of about 1 mile of newly designated roadway could occur within this territory. Because these activities would occur over 2.4 miles from the nest site, no impacts to nesting individuals or activities would result. The only mechanism for effect would be the potential for disturbance to individuals that may use the power lines for perches as described under Alternative A. Any disturbance resulting from ground activities would be brief and would consist of an eagle simply flying off if disturbed. As a result, any impacts to this nesting pair from proposed ground activities would be considered negligible.

The only segment of the ROW that would have a high likelihood for use by transient bald eagles would be along the 8.0-mile stretch of Johnson Creek where the power line ROW is adjacent to slow-moving sections of the creek. However, these impacts would be brief and would consist of no more than an individual leaving the area until activities were completed. As a result, any impacts to transient eagles from proposed activities would be considered negligible.

Potential Impacts from Habitat Modification—Clearing of the additional miles of roadway and overland routes would not impact eagle nesting or forage habitat within existing territories, as all activities would occur between 0.7 and 3.5 miles away from primary forage habitat and nesting habitat. Clearing of the additional miles of roadway and overland routes adjacent to the 8.0-mile section of forage habitat adjacent to Johnson Creek could reduce perching structures along this stretch of habitat. However, in most places these roadways and routes are not right along the creek and removal of snags and live trees within new road prisms that are close enough to the creek to serve as perches would be minimal, leaving

abundant perch structures along this stretch. As a result, any potential impacts from habitat modification would be negligible.

Total Road Density—Road density is not a risk factor for this species.

Cumulative Effects

Alternative A

Past activities that have contributed to the existing condition of source habitat in the analysis area include timber sales and fire suppression. Ongoing and foreseeable future activities within the analysis area that could potentially impact this species or its habitat in conjunction with the activities proposed in this alternative are detailed in the Wildlife Technical Report.

Alternative A would have no negative impacts on 2 of the 3 existing nesting territories but could have negligible impacts to the Warm Lake pair and transient eagles through modification of perch structures and disturbance to foraging individuals within the territory and along a stretch of Johnson Creek. All of the ongoing or foreseeable projects could overlap with the proposed project in time and space, and as a result, could add incrementally to disturbance within the analysis area. However, due to the small footprint and localized nature of the numerous components of the ongoing and proposed projects, the combination of potential impacts would be considered negligible and is not expected to cause changes in habitat use or reconfiguration of territories. Therefore, the cumulative effect of this alternative, when combined with ongoing and future activities within the analysis area, would be maintenance of the current trend in source habitat quantity and quality within the analysis area into the short and long term.

Alternative B

Past activities that have contributed to the existing condition of source habitat in the analysis area include timber sales and fire suppression. Ongoing and foreseeable future activities within the analysis area that could potentially impact this species or its habitat in conjunction with the activities proposed in this alternative are detailed in the Wildlife Technical Report.

Alternative B would have no negative impacts on 2 of the 3 existing nesting territories but could have negligible impacts to the Warm Lake pair and transient eagles through modification of perch structures and disturbance of foraging individuals within the territory and along a stretch of Johnson Creek. All of the ongoing or foreseeable projects could overlap with the proposed project in time and space, and as a result, could add incrementally to disturbance within the analysis area. However, due to the small footprint and localized nature of the numerous components of the ongoing and proposed projects, the combination of potential impacts would be considered negligible and is not expected to cause changes in habitat use or reconfiguration of territories. Therefore, the cumulative effect of this alternative, when combined with ongoing and future activities within the analysis area, would be maintenance of the current trend in source habitat quantity and quality within the analysis area into the short- and long-term.

Determination—Alternatives A and B “may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability” to the population or species for the Bald Eagle.

3.2.3.2.8 Columbia Spotted Frog

Direct and Indirect Effects

Alternative A

Potential Impacts from Habitat Modification - Activities under the No Action Alternative that could result in disturbance include mechanical thinning of the 121 acres of ROW within RCAs, activities associated with the repair and replacement of the 13 structures within RCAs, and removal of snags with chainsaws outside the 70 foot-wide ROW within and adjacent to RCAs. These activities have the potential to impact sediment delivery, and therefore, water quality, as well as RCA habitat, which are important components of spotted frog source habitat.

The fisheries effects analysis (Fisheries Specialists Report) concluded that all watershed condition indicators (WCIs) would either not be influenced or would be maintained under Alternative A (see the Aquatic and Fisheries Resources section for detailed analysis and effects rationale specific to individual WCIs). Consequently, WCIs that are important indicators of source habitat quality for the spotted frog, including sediment, chemical contaminants, streambank condition, floodplain connectivity, change in peak/base flows, change in drainage network, road density and location, disturbance history and riparian conservation areas, would be maintained. As a result, source habitat quality for spotted frogs would not be impacted by this alternative.

There would be no instream work associated with Alternative A that could impact source habitat for the spotted frog.

Within RCA habitat, this alternative would allow continued maintenance of 121 acres of the ROW and 13 structures to be replaced in the RCAs, and would permit the felling of snags outside of the ROW within RCAs. As identified in the Fisheries analyses for the other WCIs this alternative would not impact RCA functions and processes although there would be a low risk of affecting future LWD (Fisheries Specialist Report). Because these potential impacts would not impact RCA functions relevant to the spotted frog and would be spread across 11 subwatersheds, there would be no meaningful impacts to this component of spotted frog source habitat.

In addition, design features that restrict fuel use in RCAs and require sediment control near ford crossings have been incorporated into the project to protect habitat within RCAs, and would further reduce the potential for impacts to spotted frogs from habitat modification or disturbance.

Disturbance or Displacement - Activities under the No Action Alternative that could result in disturbance include mechanical thinning of the 121 acres of ROW within RCAs, activities associated with the repair and replacement of the 13 structures within RCAs, and removal of snags with chainsaws outside the 70 foot-wide ROW within and adjacent to RCAs.

Because no instream work would occur under this alternative, no impacts to overwintering or breeding activities would occur, as these life stage activities occur within or at the fringes of a water body.

Impacts to post-breeding individuals that use RCA habitat to disperse and move along stream corridors could occur within the 121 acres of the ROW within RCAs. However, these

impacts from thinning or repair crews working within RCAs are expected to involve only a few individuals due to the small area of RCAs impacted and the short duration of any proposed activity, as the 121 acres would occur across 11 subwatersheds and proposed activities within RCAs be accomplished in a few hours or days.

While disturbance impacts to a small number of individuals could occur, mortality is not expected from hand crews working along the ROW. In addition, impacts to the local population as a whole would be considered negligible because overwintering and breeding activities and habitat would not be impacted, because of the small total area modified and the small number of individuals impacted, and because spotted frogs are quite mobile and would likely be able to move away from proposed activities.

Alternative B

Potential Impacts from Habitat Modification—Additional activities under Alternative B not included under the No Action Alternative that could result in habitat modification include realignment of 1,060 feet of line along Johnson Creek, and clearing of an additional 5.6 miles (20 acres) of designated road (previously unauthorized routes) and 0.7 miles (2 acres) of overland routes.

The fisheries effects analysis (Fisheries Specialist Report) concluded that Alternative B would improve the sediment WCI, maintain or not influence 6 other WCIs, including chemical contaminants, streambank condition, changes in peak/base flows, drainage network, disturbance history and RCAs, and would degrade the road density and location WCI (see Aquatic and Fisheries Resources section). Although road density would increase and result in increased sediment delivery in the temporary time frame, modeling indicated a measureable decrease in sediment delivery in the short and long terms due to improvements to existing unauthorized routes which were converted to system roads, primarily from better road surface drainage (Fisheries Specialist Report). As a result, the overall impact of Alternative B is an improvement of water quality within spotted frog source habitat.

The new designated roads would require up to 2 new armored fords within perennial streams, one of which is a naturally armored crossing that would not require any improvement. Because of the small amount of actual stream habitat modified, any impacts to spotted frog source habitat would be considered negligible.

Within RCA habitat, this alternative would allow clearing and maintenance on an additional 22 acres of new road designation and overland routes and repair access to 102 additional structures. As identified in the Fisheries analyses for the other WCIs this activity would have negligible negative impacts to the RCA functions and processes with a small reduction in sediment over time (Fisheries Specialist Report). Because these potential negligible impacts would be spread across 11 subwatersheds, any impacts to this component of spotted frog source habitat would also be considered negligible.

In addition, design features that restrict fuel use in RCAs and require sediment control near ford crossings have been incorporated into the project to protect habitat within RCAs, and would further reduce the potential for impacts to spotted frogs from habitat modification or disturbance.

Disturbance or Displacement—Additional activities under Alternative B not included under the No Action Alternative that could result in habitat modification include realignment

of 1,060 feet of line along Johnson Creek, and clearing of an additional 5.6 miles (20 acres) of designated road (previously unauthorized routes) and 0.7 miles (2 acres) of overland routes.

Because instream work would occur at only one site with the construction of an armored ford, any disturbance to overwintering or breeding activities would be extremely unlikely and, as a result, no meaningful impacts to overwintering or breeding activities would occur.

Impacts to post-breeding individuals that use RCA habitat to disperse and move along stream corridors could occur within the additional 22 acres of the new road and overland route clearing within RCAs. However, these impacts from thinning or repair crews working within RCAs are expected to involve only a few individuals due to the small area of RCAs impacted and the short duration of any proposed activity, as the 22 acres would occur across 11 subwatersheds and proposed activities within RCAs be accomplished in a few hours or days.

While disturbance impacts to a small number of individuals could occur, mortality is not expected from crews clearing road and overland route corridors and because instream work would be limited to one crossing. In addition, impacts to the local population as a whole would be considered negligible because overwintering and breeding activities and habitat would not be meaningfully impacted, because of the small total area modified and the small number of individuals impacted, and because spotted frogs are quite mobile and would likely be able to move away from proposed activities.

Cumulative Effects

Alternative A

Past activities that have contributed to the existing condition of source habitat in the analysis area include timber sales and fire suppression. Ongoing and foreseeable future activities within the analysis area that could potentially impact this species or its habitat in conjunction with the activities proposed in this alternative are detailed in the Wildlife Technical Report.

Alternative A would maintain WCIs that are important indicators of source habitat quality for the spotted frog, but could have impacts to source habitat and through disturbance considered negligible due to the small area impacted and short duration of proposed activities. All of the ongoing or foreseeable projects could overlap with the proposed project in time and space, and as a result, could add incrementally to disturbance or habitat modification within the analysis area. However, due to the small footprint and localized nature of the numerous components of the ongoing and proposed projects, the combination of potential impacts would be considered negligible and is not expected to cause changes in habitat use or declines in populations. Therefore, the cumulative effect of this alternative, when combined with ongoing and future activities within the analysis area, would be maintenance of the current trend in source habitat quantity and quality within the analysis area into the short and long term.

Alternative B

Past activities that have contributed to the existing condition of source habitat in the analysis area include timber sales and fire suppression. Ongoing and foreseeable future activities within the analysis area that could potentially impact this species or its habitat in conjunction with the activities proposed in this alternative are detailed in the Wildlife Technical Report.

Alternative B would improve the sediment WCI even with increases in road density and would maintain the remaining WCIs that are important indicators of source habitat quality for the spotted frog, but could have habitat and disturbance impacts considered negligible due to the small area impacted and short duration of proposed activities. All of the ongoing or foreseeable projects could overlap with the proposed project in time and space, and as a result, could add incrementally to disturbance or habitat modification within the analysis area. However, due to the small footprint and localized nature of the numerous components of the ongoing and proposed projects, the combination of potential impacts would be considered negligible and is not expected to cause changes in habitat use or declines in populations. Therefore, the cumulative effect of this alternative, when combined with ongoing and future activities within the analysis area, would be maintenance of the current trend in source habitat quantity and quality within the analysis area into the short- and long-term.

Determinations—Alternatives A and B *may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species for the Spotted Frog.*

3.2.3.2.9 Management Indicator Species

The Wildlife Technical Report assessed the effects of Alternative A on the population trend and habitat trend of Forest Plan MIS potentially present in the analysis area. That report documents that Alternative A would not have any effect on the existing quantity of source habitat for white-headed woodpecker, black-backed woodpecker, or pileated woodpecker and would not affect individuals of these species or the Forest's population. All alternatives would maintain the current population and habitat trends on the Forest for these 3 species.

The effects of Alternative B on the population trend and habitat trend of white-headed woodpecker, black-backed woodpecker, or pileated woodpecker is detailed in section 3.2.3.2.1. Considering the negligible impacts of both alternatives, ongoing and future activities, the overall trend for source habitat would be maintained within the analysis area for the white-headed woodpecker, black-backed woodpecker, and pileated woodpecker.

3.3 Aquatic and Fisheries Resources

Issue: Proposed activities have the potential to affect fish habitat elements and individual fish species.

Indicators:

- Effects to Watershed Condition Indicators
- Effects to threatened species: bull trout and critical habitat, Chinook salmon and critical habitat and essential fish habitat (EFH), steelhead and critical habitat
- Effects to sensitive species: westslope cutthroat trout

The potential for effects on fish species and habitat is documented in the project record (see Fisheries Specialist Report). This section summarizes the effects of the alternatives to fisheries and addresses the issue that proposed management activities may affect individuals, populations, or habitats of fish species and in the project area. Indicators of this issue include effects to WCIs, as well as effects to individual species.

The analysis area used for the assessment of fisheries habitat is 130,318 acres, including Wardenhoff-Bear, Trapper, Halfway, Warm Lake Creek, Two-Bit Roaring, and Curtis Creek subwatersheds and the portion of the Upper Big Creek, Kennedy, High Valley, Tripod-Murray, and Shirts subwatersheds on National Forest Lands (Table 3-7). Subwatershed baselines were developed per guidance in Appendix B, Forest Plan (USDA Forest Service 2010a) for each of the 11 subwatersheds. Complete subwatershed baselines are available in the project record.

For this analysis, it was assumed that all work would be completed within 1 year, and would cause the largest magnitude of effects for the subwatersheds. More likely, all activities would be spread out over the life of the permit (20 years).

Table 3-7. Fisheries analysis area subwatersheds

Subwatershed Name	Subbasin	Subwatershed Number
Wardenhoff-Bear	South Fork Salmon River	170602080501
Trapper	South Fork Salmon River	170602080503
Halfway	South Fork Salmon River	170602080601
Warm Lake Creek	South Fork Salmon River	170602081002
Two-Bit Roaring	South Fork Salmon River	170602080601
Curtis Creek	South Fork Salmon River	170602081103
Upper Big Creek	North Fork Payette River	170501230304
Kennedy	North Fork Payette River	170501221002
High Valley	North Fork Payette River	170501221403
Tripod-Murray	North Fork Payette River	170501230103
Shirts	North Fork Payette River	170501221402

3.3.1 Background

3.3.1.1 Watershed Condition Indicators

WCIs are an integrated suite of aquatic (including biophysical components), riparian (including riparian associated vegetation species), and hydrologic (including uplands) condition measures. There are 26 WCIs outlined in the Forest Plan (USDA Forest Service 2010a, pp. B-12 to B-21) to characterize the effects of land management activities on fish population characteristics, water quality, habitat access, habitat elements, channel conditions and dynamics, flow/hydrology, watershed conditions, and the integration of species and habitat conditions. Each WCI in the Forest Plan is assigned 1 of 3 functionality categories based upon its baseline condition: Functioning Acceptably (FA), Functioning at Risk (FR), and Functioning at Unacceptable Risk (FUR).

3.3.1.2 Fish Species

Table 3-8 displays the federally listed and Intermountain Region sensitive fish species that are analyzed in this section based on habitat or species presence in the analysis area.

Table 3-8. Federally listed and Region 4 sensitive fish species summary

Species	Scientific Name	Status
Spring/summer Chinook salmon	<i>Oncorhynchus tshawytscha</i>	Threatened, designated critical habitat, essential fish habitat
Steelhead trout	<i>Oncorhynchus mykiss</i>	Threatened, designated critical habitat
Bull trout	<i>Salvelinus confluentus</i>	Threatened, designated critical habitat
Westslope cutthroat trout	<i>Oncorhynchus clarkii lewisi</i>	Sensitive

3.3.1.2.1 Spring/Summer Chinook Salmon and Critical Habitat and Essential Fish Habitat and Steelhead and Critical Habitat

The biology, ecology, and current listed status of Chinook salmon and steelhead in the Columbia River Distinct Population for the Forest is described more completely in the Revised Watershed Assessment of the South Fork Salmon River and Johnson Creek (Table 3-9) (USDA Forest Service 2000).

In addition to Chinook salmon, the potential effects on EFH for Chinook salmon that occur in the South Fork Salmon River Subbasin were also analyzed. The Magnuson-Stevens Act, Section 3, defines EFH as “those waters and substrate necessary for fish for spawning, breeding, feeding, or growth to maturity.”

Table 3-9. Summary of watershed and evolutionary significant units (ESU) information for Chinook salmon and steelhead

Species	Local Population Watershed	Local Population Area	Designated Critical Habitat
Chinook salmon	South Fork Salmon River (4 th Field HUC)	838,731 acres (~1,311 square miles)	300 feet each side of all streams of the entire South Fork Salmon River drainage below any natural barriers are listed as Critical Habitat (1,626 miles)
Steelhead	South Fork Salmon River (4 th Field HUC)	838,731 acres (~1,311 square miles)	Steelhead critical habitat (410 miles)

3.3.1.2.2 Bull Trout and Critical Habitat

On June 10, 1998 the USFWS produced a final rule listing the Columbia River Basin distinct population segment (DPS) of bull trout as threatened under the ESA. The bull trout final designation of critical habitat was published in the Federal Register on October 18, 2010, and became effective November 17, 2010 (USDI FWS 2010). The biology and ecology of bull trout in the Columbia River DPS are described in Chapter 1 of the *Bull Trout (Salvelinus confluentus) Draft Recovery Plan* (USDI FWS 2002). Chapter 17 in the Draft Recovery Plan identifies the South Fork Salmon River as part of the Salmon River Core Area, which is comprised of 26 local populations of bull trout. All life history forms of bull trout are assumed to occur in the South Fork Salmon River Subbasin.

3.3.1.2.3 Westslope Cutthroat Trout

The westslope cutthroat trout (*Oncorhynchus clarkii lewisi*) is listed as a Region 4 Sensitive Species. The life history of the westslope cutthroat trout is described in the Upper South Fork

Salmon River and Johnson Creek Watershed Analysis (USDA Forest Service 1995, pp. V-123 through V 125).

3.3.2 Affected Environment

3.3.2.1 Watershed Condition Indicators

Environmental baseline conditions were developed per the guidance in Appendix B of the 2010 Forest Plan to describe the existing conditions for the relevant WCIs in the subwatersheds considered for this analysis (Table 3-10). Further information on environmental baselines, existing condition information for WCIs, and rationale for not including the other WCIs in this analysis can be found in the project record.

Table 3-10. Baseline Summary of Watershed Condition Indicators by Subwatershed

Watershed Condition Indicator	Wardenhoff-Bear	Trapper Creek	Halfway	Warm Lake Creek	Two-bit Roaring	Curtis Creek	Upper Big Creek	Kennedy	High Valley	Tripod-Murray	Shirts
Subpopulation size	FUR	FA	FUR	FR	FUR	FR	NA	NA	NA	NA	NA
Growth and survival	FR	FR	FR	FR	FUR	FR	NA	NA	NA	NA	NA
Life history diversity and isolation	FR	FR	FR	FR	FUR	FR	NA	NA	NA	NA	NA
Persistence and genetic Integrity	FR	FR	FR	FR	FUR	FR	NA	NA	NA	NA	NA
Water Quality											
Temperature (Chinook and Steelhead)	FA	FA	FR	FUR	FUR	FR	NA	NA	NA	NA	NA
Temperature (bull trout)	FA	FA	FR	FUR	FUR	FR	NA	NA	NA	NA	NA
Temperature (redband)	NA	NA	NA	NA	NA	NA	FA	FUR	FUR	FUR	FR
Sediment/ turbidity (Chinook and steelhead)	FR	FR	FR	FR	FR	FR	NA	NA	NA	NA	NA
Sediment/ turbidity (bull trout)	FR	FR	FR	FR	FR	FR	NA	NA	NA	NA	NA
Sediment/ turbidity (redband)	NA	NA	NA	NA	NA	NA	FUR	FR	FUR	FUR	FR
Chemical contaminants/ nutrients	FR	FA	FA	FR	FR	FR	FR	FA	FR	FA	FA
Habitat Access											
Physical barriers	FUR	FUR	FUR	FR	FR	FA	FUR	FR	FUR	FUR	FUR
Habitat Elements											
Substrate embeddedness	FUR	FA	FA	FUR	FUR	FR	FUR	FR	FR	FUR	FA
Large woody debris	FR	FA	FA	FA	FA	FA	FA	FUR	FA	FR	FR
Pool frequency and quality	FA	FA	FA	FR	FR	FA	FR	FR	FA	FR	FR
Large pools/pool quality	FA	FR	FA	FR	FR	FA	FUR	FR	FR	FA	FR
Off-channel habitat	FA	FA	FA	FR	FR	FA	FA	FA	FUR	FR	FR
Refugia (Chinook and steelhead)	FR	FR	FR	FR	FR	FR	NA	NA	NA	NA	NA
Refugia (bull trout)	FR	FR	FR	FR	FR	FR	NA	NA	NA	NA	NA

Watershed Condition Indicator	Wardenhoff-Bear	Trapper Creek	Halfway	Warm Lake Creek	Two-bit Roaring	Curtis Creek	Upper Big Creek	Kennedy	High Valley	Tripod-Murray	Shirts
Channel Conditions and Dynamics											
Wetted width/ maximum depth ratio	FR	FA	FA	FR	FR	FA	FR	FR	FA	FR	FR
Streambank condition	FR	FA	FA	FR	FR	FA	FA	FA	FA	FA	FR
Floodplain connectivity	FUR	FR	FR	FUR	FUR	FUR	FR	FR	FUR	FR	FR
Flow/Hydrology											
Change in peak/base Flows	FUR	FUR	FA	FUR	FUR	FA	FA	FR	FUR	FR	FR
Change in drainage network	FR	FR	FR	FUR	FUR	FUR	FUR	FUR	FR	FUR	FR
Watershed Conditions											
Road density and Location	FR	FR	FR	FR	FUR	FUR	FUR	FUR	FUR	FUR	FUR
Disturbance history	FUR	FUR	FR	FUR	FUR	FUR	FR	FA	FR	FA	FA
Riparian conservation areas	FUR	FR	FR	FUR	FUR	FR	FR	FUR	FR	FR	FR
Disturbance regime	FR	FR	FR	FR	FR	FR	FR	FR	FR	FR	FR
Integration of species and habitat conditions	FUR	FR	FUR	FUR	FUR	FR	FUR	FR	FUR	FUR	FUR

Note: FA – Functioning Appropriately; FR – Functioning at Risk; FUR – Functioning at Unacceptable Risk
Subwatersheds in **bold** are in the South Fork Salmon River Subbasin and the remaining watersheds are in the North Fork Payette River Subbasin

3.3.2.2 Fish Species

3.3.2.2.1 Spring/Summer Chinook Salmon and Critical Habitat and Essential Fish Habitat and Steelhead and Critical Habitat

Within the Project area, only streams within the Curtis Creek, Warm Lake Creek, Two-Bit Roaring, Halfway, Trapper Creek, and Wardenhoff-Bear Subwatersheds are potential habitat for Chinook salmon or steelhead trout with critical habitats in the South Fork Salmon River Subbasin. Streams in the other 5 subwatersheds occur in the North Fork Payette River subbasin, and although were historical habitat, are no longer habitat due to downstream impoundments.

3.3.2.2.2 Bull Trout and Critical Habitat

The South Fork Salmon River has been identified as part of the Salmon River Core Area, which is comprised of 26 local populations of bull trout (USDI FWS 2002). All life history forms of bull trout are assumed to occur in the South Fork Salmon River subbasin. Within the analysis area only Curtis Creek, Warm Lake Creek, Two-Bit Roaring, Halfway, Trapper Creek, and Wardenhoff-Bear subwatersheds found in the South Fork Salmon River subbasin have designated critical habitat.

The Boise National Forest Management Indicator Species Protocol (USDA Forest Service 2010a) identified 9 areas (patches) which have the potential to support individual bull trout populations (Table 3-11). Of those 9 patches, 3 are occupied (Patch 1), 2 are unoccupied but suitable (Patch 2), and 4 are unsuitable (Patch 3).

Table 3-11. Bull trout patches (strata) within the analysis area (unpublished data; USDA Forest Service 2010a)

Subwatershed	Occupied Patches (Patch 1)	Unoccupied/Suitable Patches (Patch 2)	Unsuitable Patches (Patch 3)
Curtis Creek	Curtis Creek	—	—
Two-Bit Roaring	—	—	Roaring Creek
Warm Lake Creek	—	—	Warm Lake Creek
	—	—	Reeves Creek
	Cabin SFS	—	—
Halfway	—	Halfway—Trout	—
Trapper Creek	Trapper Creek SFS	—	—
Wardenhoff-Bear	—	Bear Creek D4	—
	—	—	Wardenhoff Creek

3.3.2.2.3 Westslope Cutthroat Trout

Within the analysis area, westslope cutthroat trout are found in 10 South Fork Salmon River tributaries on the Boise and Payette National Forests. All westslope cutthroat subpopulations rate low in abundance except for Buckhorn and Little Buckhorn Creeks on the Payette National Forest, which rated as moderate and high, respectively.

3.3.3 Environmental Consequences

3.3.3.1 Watershed Condition Indicators

3.3.3.1.1 Direct and Indirect Effects

Table 3-12 summarizes the effects of each alternative to WCIs important to fish species. Detailed analysis for each WCI follows the tables. These discussions describe the effects of the alternatives on the WCIs across subwatershed boundaries, unless specifically stated.

Table 3-12. Summary of alternative effects to watershed condition indicators

Pathways Indicators ^{a, d}	Alternative	Effects ^{b, c}	Temporary trend/effect (0–3 years)	Short-term trend/effect (3–15 years)	Long-term trend/effect (> 15 years)
Bull Trout Subpopulation character					
Local population size	No Action	NI	None	None	None
	Proposed Action	M	–*	–*	–*
Growth and survival	No Action	NI	None	None	None
	Proposed Action	M	–*	–*	–*
Life History diversity and isolation	No Action	NI	None	None	None
	Proposed Action	M	–*	–*	–*
Persistence and genetic integrity	No Action	NI	None	None	None
	Proposed Action	M	–*	–*	–*
Water Quality					
Temperature	No Action	M	–*	–*	–*
	Proposed Action	M	–*	–*	–*
Sediment	No Action	M	–*	–*	–
	Proposed Action	M	–*	+	+
Chemical contaminants/nutrients	No Action	M	–*	–*	–*
	Proposed Action	M	–*	–*	–*
Habitat Access					
Physical barriers	No Action	NI	None	None	None
	Proposed Action	NI	None	None	None
Habitat Elements					
Substrate embeddedness	No Action	M	None	None	None
	Proposed Action	M	–*	+*	+*
Large woody debris	No Action	M	–*	–*	–*
	Proposed Action	M	–*	–*	–*
Pool frequency	No Action	NI	None	None	None
	Proposed Action	NI	None	None	None
Pool quality	No Action	NI	None	None	None
	Proposed Action	NI	None	None	None
Off-channel habitat	No Action	NI	None	None	None
	Proposed Action	NI	None	None	None
Refugia	No Action	NI	None	None	None
	Proposed Action	M	–*	–*	–*
Channel Condition and Dynamics					
Width/depth ratio	No Action	NI	None	None	None
	Proposed Action	NI	None	None	None
Streambank condition	No Action	NI	None	None	None
	Proposed Action	NI	None	None	None
Floodplain connectivity	No Action	NI	None	None	None
	Proposed Action	NI	None	None	None
Flow/Hydrology					
Change in peak/base flows	No Action	NI	None	None	None
	Proposed Action	M	–*	–*	–*
Drainage network increase	No Action	NI	None	None	None
	Proposed Action	M	–	–*	–*

Pathways Indicators ^{a, d}	Alternative	Effects ^{b, c}	Temporary trend/effect (0–3 years)	Short-term trend/effect (3–15 years)	Long-term trend/effect (> 15 years)
Watershed Conditions					
Road density and location	No Action	NI	None	None	None
	Proposed Action	D	—*	—*	—*
Disturbance history	No Action	M	—*	—*	—*
	Proposed Action	M	—*	—*	—*
Riparian conservation areas	No Action	M	—*	—*	—*
	Proposed Action	M	—*	—*	—*
Disturbance regime	No Action	M	—*	—*	—*
	Proposed Action	M	—*	—*	—*
Integration of species and habitat conditions	No Action	M	—*	—*	—*
	Proposed Action	M	—*	—*	—*

a. Matrix checklist adapted from USFWS and NMFS 1998.

b. This displays the potential effects of the action on habitats or individuals, and not on the status of the entire local population watersheds. I = Improve, M = Maintain, D = Degrade, N = No Influence

c. Effects that “Maintain” or “Improve” indicators are compliant with Pacfish and Infish objectives (see USFWS 1998 for crosswalk).

d. Evaluated against local criteria where appropriate and available

* Effect cannot be meaningfully detected, measured, or evaluated. In many situations it is used to identify a potential effect.

Bull Trout Subpopulation Size, Growth and Survival, Life History Diversity and Isolation, and Persistence and Genetic Integrity

Alternative A

Alternative A does not have the potential to directly affect the bull trout population characteristics. No instream work would occur although Line 328 ROW, 35 feet each side of the line, crosses 8 streams that are designated critical habitat (Hanson, Moose, Bear, Trapper, Johnson, Cabin, and Warm Lake Creeks and the South Fork Salmon River). Only the Trapper, Johnson, and Cabin Creeks and the South Fork Salmon River are occupied by bull trout.

Alternative B

Alternative B does not have the potential to directly affect the bull trout population characteristics outside of the South Fork Salmon River Subbasin. Within the South Fork Salmon River subbasin no instream work would occur although the ROW crosses 8 streams that are designated critical habitat (Hanson, Moose, Bear, Trapper, Johnson, Cabin, and Warm Lake Creeks and the South Fork Salmon River). Only the Trapper, Johnson, and Cabin Creeks and the South Fork Salmon River are occupied by bull trout.

Of the 19 miles of routes to be designated as roads and 4 miles of overland access, only 2 stream crossings would be constructed. One crossing would be across an unnamed perennial nonfish bearing stream accessing structures 328-02-107 and 108 in the Curtis Creek subwatershed. This crossing would be reconstructed as a hardened ford. The other stream crossing would occur across Trout Creek, which is not designated critical habitat or potential habitat from downstream barriers. This crossing is currently a naturally armored crossing and no improvement would occur. No direct effects would occur to individual bull trout from these crossings.

Temperature

Alternative A

Overall, this alternative would have no impact on current stream temperatures because no current shade producing vegetation would be removed.

Right-of-way Maintenance—This activity has a low risk of affecting stream temperatures although vegetation treatments would continue to occur in the RCA. The treatments include keeping the vegetation within the ROW cut back to a level to prevent vegetation from growing tall enough to interfere with the line. This treatment would prevent shade-producing vegetation adjacent to stream channels. The ROW occurs over 121 acres of RCA in the 11 subwatersheds. Given that the RCA treated is approximately 0.3% of all RCAs within the project area and that a maximum of <1.5% of the RCA would be treated in any individual subwatershed, the project would not impact stream temperatures.

Structure Maintenance/Replacement—Under this alternative, 23 structures could be replaced and accessed by open system roads. Replacement would require disturbance around the immediate structures but would not require tree removal; therefore, this activity would have no impact on stream temperatures and shading.

Alternative B

This alternative would have negligible immeasurable impacts to stream temperatures or shading throughout the Project area. Vegetation on approximately 141 acres of RCA within the project area would be affected, which is only 0.4% of all RCAs. Of the 141 acres, 121 that are currently maintained would prevent shade-producing vegetation. The new ROW for realignment would remove approximately 12 trees that may provide shade. However, given the isolated location of this ROW and the size of Johnson Creek, stream temperature changes would be negligible.

Right-of-way Maintenance—Effects are the same for this activity as for Alternative A.

Structure Maintenance/Replacement—This activity has a risk of affecting stream temperatures because of the vegetation removal required for access. On the 19 miles of routes to be designated as roads, 5.6 miles occur within the RCA (Table 3-13). The 4 miles of overland access would not affect shade-producing vegetation. Maintenance work, including clearing trees and brush for road designation, may remove shade-producing vegetation. Table 3-13 displays how many acres would be affected in the RCA for each subwatershed. Given the limited RCA acres (<20) that would be affected within the Project area and in each subwatershed, and that the acres affected are spread over a very large area, this activity would have negligible impacts to stream temperatures.

Table 3-13. Line 328 proposed roads

Subwatershed	Subwatershed Size (acres)	No Action		Proposed Action							
		Miles Road	Miles Riparian Conservation Area Road	Closed to Open Road Conv. (miles)	Closed to Open Road Conv. RCA (miles)	IPC Overland Access (miles)	IPC RCA Overland Access (miles)	IPC Roads (miles)	IPC Roads Area (acres) ^a	IPC RCA Roads (miles)	IPC RCA Roads Area (acres) ^a
Curtis Creek	17,482	0.0	0.0	1.15	0.25	0.44	0.02	3.9	13.7	1.3	4.6
Two-Bit Roaring	11,916	0.0	0.0	0	0	0.00	0.00	0.9	3.2	0.0	0.0
Warm Lake Cr	15,064	0.0	0.0	0	0	0.36	0.23	2.2	7.7	0.8	2.8
Halfway	16,266	0.0	0.0	1.04	0.74	0.51	0.18	4.3	15.1	1.5	5.3
Trapper Creek	9,274	0.0	0.0	0	0	0.00	0.00	0.0	0.0	0.0	0.0
Wardenhoff-Bear	24,864	0.0	0.0	0	0	0.89	0.18	4.3	15.1	1.3	4.6
South Fork Salmon River Subbasin Subtotal	94,866	0.0	0.0	2.19	0.99	2.2	0.61	15.6	54.6	4.9	17.2
Upper Big Creek	13,346 ^b	0.0	0.0	1.90	0.08	0.96	0.00	2.0	7.0	0.7	2.5
Kennedy	3,123 ^b	0.0	0.0	0.43	0	0.33	0.00	0.1	0.4	0.0	0.0
High Valley	5,760 ^b	0.0	0.0	0.11	0	0.06	0.05	0.1	.04	0.0	0.0
Tripod-Murray	5,779 ^b	0.0	0.0	1.54	1.09	0.20	0.05	0.0	0.0	0.0	0.0
Shirts	7,444 ^b	0.0	0.0	0	0	0.26	0.00	1.1	3.9	0.0	0.0
North Fork Payette River Subbasin Subtotal	35,452 ^b	0.0	0.0	3.98	1.17	1.81	0.10	3.3	11.6	0.7	2.5
Project Area Total	130,318	0.0	0.0	6.17	1.91	4.01	0.71	18.9	66.2	5.6	19.6

^a Assumed 3.5 acres per mile of road. Same assumption for equivalent clearcut acres (ECA)

^b Only includes NFS lands and roads on NFS Lands in the subwatershed

Realignment—Realigning 1,060 feet of the power line would require the line and ROW to cross Johnson Creek and Johnson Creek Road twice at White Horse Rapids with the ROW remaining in the RCA. For the new ROW, approximately 12 mature trees would need to be felled. Although these trees may provide some shade, they occur on the northwest and northeast side of Johnson Creek and provide minimal stream shading. The majority of shade comes from trees on the southern side of the stream. Figure 2-10 displays the location of the realignment.

Sediment/Substrate Embeddedness

Sediment/substrate embeddedness is analyzed in detail in section 3.4, “Water Quality” within the Water and Soils resource discussion.

Chemical Contaminants/Nutrients

Alternative A

This alternative would result in a low overall risk of chemical contamination due to the limited activities that could occur in the RCAs.

Right-of-way Maintenance—This activity has a low risk of introducing chemical contaminants into Project area streams. This maintenance would be conducted with hand power tools that hold small amounts of petroleum products. Of the 307 acres within the ROW, only 121 occur within the RCA. Refueling would occur in the RCA although fuel for hand power tools is typically hauled in 5-gallon containers. A Project design feature requires refueling hand power tools to occur away from stream channels.

Structure Maintenance/Replacement—This alternative has a low risk of chemical contamination to water bodies. Equipment and vehicles would only be used to replace up to the 23 structures that can be accessed from existing open roads and only 13 of those structures occur in the RCA. A Project design feature requires refueling of all equipment except power hand tools to occur outside the RCAs and all equipment to be inspected for fluid leaks prior to entering NFS lands.

Alternative B

This alternative would have a low overall risk of chemical contamination although the risk would be greater than with the No Action Alternative, because of the increase in activities that occur within the RCAs.

Right-of-way Maintenance—Effects for this activity are the same as for Alternative A.

Structure Maintenance and Realignment—These activities have a low risk of introducing chemical contaminants into Project area streams from heavy equipment and service vehicles accessing power structures. Within the RCA there are 5.6 miles routes to be designated as roads (2 perennial stream crossings), 0.7 miles of overland access, and 1.9 miles of closed to open road conversion where the risk of spill would be highest due to proximity to streams. A Project design feature requires refueling of all equipment except power hand tools to occur outside the RCAs and all equipment to be inspected for fluid leaks prior to entering NFS lands.

Physical Barriers

Alternative A

This alternative would not affect the current existing physical barriers for fish because no stream crossings are required.

Alternative B

This alternative includes 2 new stream crossings in an area to be designated as a road in the Curtis Creek watershed. These crossings would be fords across an unnamed perennial nonfish bearing stream and across Trout Creek. Both crossings would be fords therefore they would not cause fish barriers.

Large Woody Debris

Alternative A

This alternative would have no impact on current LWD but would continue to affect future LWD from ROW maintenance on 121 acres within the RCAs.

Right-of-way Maintenance—This activity has a low risk of affecting current or future LWD although vegetation treatments would continue to occur in the RCA. The treatments include

keeping the vegetation within the ROW cut back to a level to prevent vegetation from growing tall enough to interfere with the line. This treatment would prevent conifers from developing into trees that would meet the LWD criteria. Given the ongoing maintenance, no trees exist within the ROW that meet LWD criteria. The ROW occurs over 121 acres of RCA in the 11 subwatersheds.

Given that the RCA treated is approximately 0.3% of all RCAs within the Project area with a maximum of <1.5% of the RCA treated in any individual subwatershed, this activity would have negligible impacts to current or future LWD.

Structure Maintenance/Replacement—Under this alternative, 23 structures could be replaced and accessed by open system roads. Replacement would require disturbance around the immediate structures but would not require tree removal. Therefore, this activity would have no impact on stream temperatures and shading.

Alternative B

This alternative would have negligible immeasurable impacts to current and future LWD within the Project area. Trees would be removed on approximately 20 acres of RCAs within the project area and trees would not be able to develop into future LWD on 121 acres of RCA in the ROW. Specifically, within the Halfway subwatershed, up to 12 trees would be felled that could be future LWD.

Additionally, the 2007 Cascade Complex Wildfire will increase current and future LWD. Burton (2000) monitored 2 wildfires on the Forest 6 years post-wildfire and found instream LWD levels increased in both wildfire areas even with rain or snow mass erosion events. Bragg (2000) used 2 models (FVS [a forest growth and yield model] and coarse woody debris model) to predict LWD recruitment to stream channels after a wildfire event. His simulation identified a peak in LWD delivery immediately after the fire and another large peak several decades later. The LWD simulation peaked approximately 45 years (4 fold increase) after the wildfire, and then dramatically decreased until recovering vegetation matured. In his modeling, areas that burned at a low severity retained LWD recruitment more consistently than areas with moderate-to-high severity wildfire. LWD in the analysis area is expected to increase since the 2007 Cascade Complex Wildfire, once trees begin to fall.

Right-of-way Maintenance—Effects for this activity are the same as for Alternative A.

Structure Maintenance/Replacement—This activity has a risk of affecting current and future LWD because of the vegetation removal required for access. On the 19 miles of unauthorized routes to be designated as roads, 5.6 miles occur within the RCA (Table 3-13). The 4 miles of overland access would not affect LWD because trees would not be felled. Maintenance work including clearing trees and brush for road designation would occur which would remove conifers. Given the limited RCA acres (<20) that would be affected within the Project area and in each subwatershed, and that the acres affected are spread over a very large area, this activity would have negligible impacts to current and future LWD. Therefore this alternative is consistent with SWST10.

Realignment—This activity would require the line and ROW to cross Johnson Creek and Johnson Creek Road twice at White Horse Rapids with the ROW remaining in the RCA of the Halfway subwatershed. For the new ROW, approximately 12 mature trees would need to be felled. Although these trees would provide future LWD if left standing, with the activity

they could not become future LWD. The majority of shade comes from trees on the southern side of a stream. Figure 3-1 is an aerial image of the realignment that displays the few trees within the new ROW that would need to be removed. Therefore this alternative is consistent with LSST07 and LSST09.

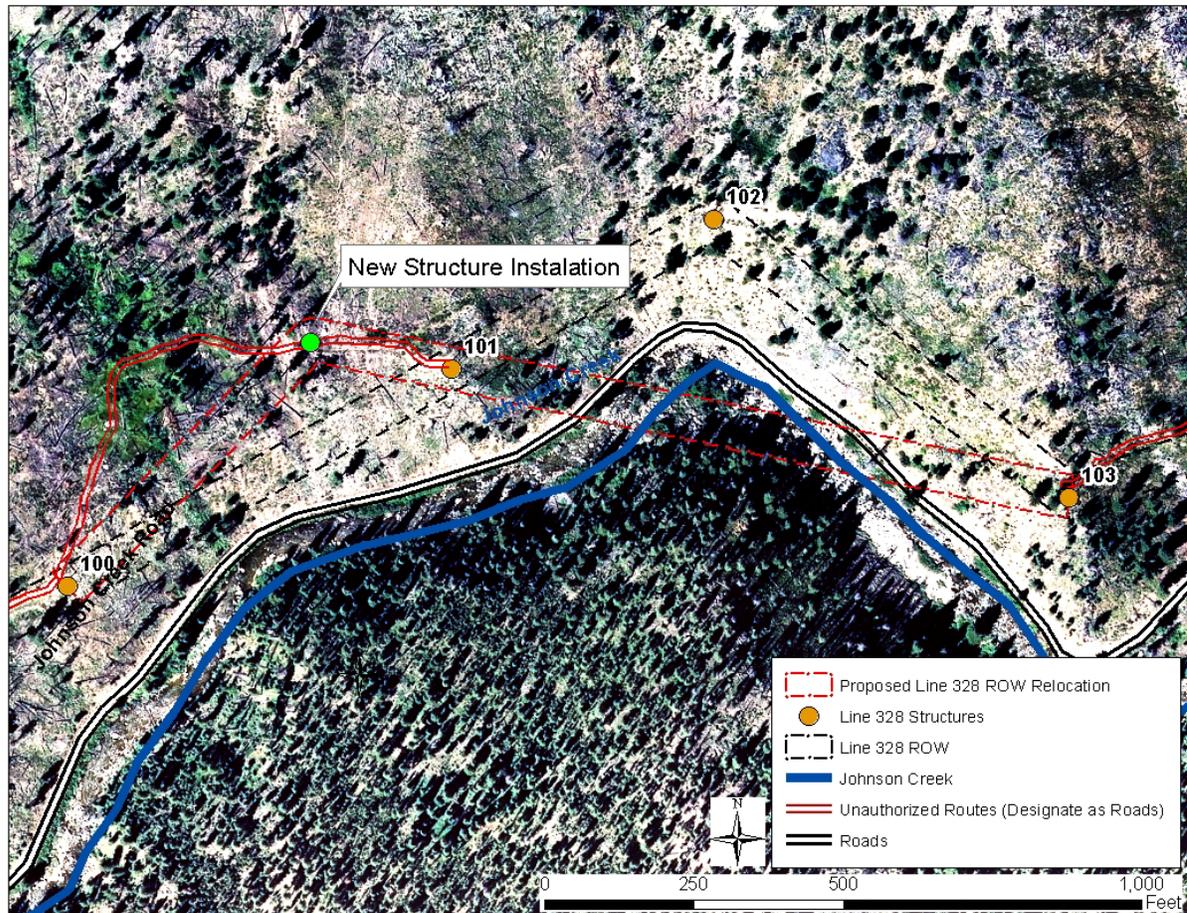


Figure 3-1. Aerial image of Idaho Power Company line 328 re-alignment

Pool Frequency and Large Pools/Pool Quality and Off-channel Habitat

Alternative A

This alternative would have no impact on pool frequency or pool quality or off-channel habitat because it does not have any instream work and has minimal disturbance from replacing 23 structures. ROW maintenance work would occur on 121 acres and 13 structures could be replaced within the RCA. The sediment, temperature, and LWD analyses show no impacts; therefore, there would be no impact to pool characteristics or off-channel habitat.

Alternative B

This alternative would have no impact on pool frequency or quality or off-channel habitat because the activities would not add sediment to project area streams. This alternative would actually reduce current sediment being delivered from the unauthorized routes once the maintenance/reconstruction work was completed. The sediment analysis using WEPP:Road Model shows the unauthorized routes currently produce 0.28 tons of sediment per year to

Project-area streams. Once the Project is complete, this sediment would be reduced to 0.04 tons per year. The 102 structures, 121 acres, and 5.6 miles of road to be designated in the RCAs would have no impact on stream channel characteristics in the Project area.

Refugia

Refugia are defined as those areas capable of supporting strong populations at the watershed scale. For bull trout, Chinook salmon, and steelhead, refugia is limited to the South Fork Salmon River subbasin. For bull trout these areas (>5,000 hectares) are identified through the Boise National Forest MIS Monitoring Protocol and include only 2 areas (patches): Curtis Creek and Halfway-Trout (Table 3-10). Chinook salmon refugia occurs in the South Fork Salmon River, Johnson Creek, and the lower portions of the larger tributary streams. Steelhead are found throughout the subwatersheds in the South Fork Salmon River subbasin.

Alternative A

This alternative would have no impact on the refugia for bull trout in Curtis Creek or the Halfway subwatersheds or for Chinook salmon and steelhead because analyses of the other WCIs show no impact from this alternative.

Alternative B

This alternative would have negligible impacts on refugia for bull trout, Chinook salmon, and steelhead trout because analyses of the other WCIs show at most negligible negative impacts from this alternative. For bull trout, the Curtis Creek subwatershed is functioning at risk and the Halfway subwatershed is functioning appropriately for overall watershed conditions. For Chinook salmon and steelhead trout, current spawning conditions provide good egg survival in the South Fork Salmon River and Johnson Creek. Given that this alternative would not measurably impact any of the other WCIs, refugia conditions would be maintained.

Width to Depth Ratio

Alternative A

This alternative would have no impact on stream channel width to depth ratios because it does not have any instream work and does not cause ground disturbance.

Alternative B

This alternative would have no impact on stream channel width to depth ratios because it does not have any instream work and does not cause ground disturbance. Sediment delivery for the entire project is modeled to be approximately 0.04 tons per year, which would not cause any changes to stream channel characteristics.

Streambank Condition

Alternative A

This alternative would have no impact on streambank condition because no ground disturbance would occur immediately adjacent to stream channels.

Alternative B

This alternative would have no impact on streambank condition because no ground disturbance would occur immediately adjacent to stream channels except 2 ford crossings. One crossing is on an unnamed perennial non-fish bearing stream to access structures 328-02-107 and 108 in the Curtis Creek subwatershed. This crossing would be reconstructed as a hardened ford. The other stream crossing would occur across Trout Creek and is currently a naturally armored crossing, and no improvement is needed.

Floodplain Connectivity

Alternative A

This alternative would have no impact on floodplain connectivity because it does not have any instream work and minimal disturbance from replacement of 23 structures. ROW maintenance work would occur on 121 acres within the RCA and 13 structures could be replaced within the RCA. The sediment, temperature, and LWD analyses show no impacts; therefore, there would be no impacts to the floodplain.

Alternative B

This alternative would have no impact on floodplain connectivity. Although 102 structures, 121 acres, and 5.6 miles of road would be designated in the RCAs, this alternative would actually reduce current sediment being delivered from the unauthorized routes once the maintenance/reconstruction work was completed. The sediment analysis using WEPP:Road Model shows the unauthorized routes currently produce 0.28 tons of sediment per year to the project area streams. Once the project is complete, this sediment would be reduced to 0.04 tons per year.

Change in Peak/Base Flows

Alternative A

This alternative would not affect the existing peak or base flows in the subwatersheds because it does not increase the Equivalent Clearcut Areas (ECAs).

Alternative B

Although the ECA increases by 66 acres for the Project area, the increase to individual subwatersheds is a maximum 1%. This change would not increase peak or base flows or affect the timing of those flows.

Drainage Network Increase

Alternative A

This alternative would not alter the natural or human caused drainage network within the Project area because it does not cause ground disturbance that would route surface flows to stream channels.

Alternative B

Right-of-way Maintenance and Realignment—This activity would not change the natural or human-caused drainage network because it does not cause ground disturbance that would route surface flows to stream channels.

Structure Maintenance/Replacement—This activity has the potential to modify the existing natural and human-caused drainage network within the Project area by adding roads to the system. The 19 miles of roads to be designated have existed since line construction in 1943 and add to the existing drainage network. As shown in the sediment analysis, these 19 miles of unauthorized routes are modeled by WEPP:Road to deliver 0.28 tons of sediment per year. This modeled delivery shows that several of these unauthorized routes add to the drainage network and route sediment to stream channels. Once the maintenance/repair work is completed on the 19 miles, WEPP:Road models 0.04 tons of sediment per year would be continue to be delivered to stream channels. Given the work required and long-term drainage improvement that would occur, the drainage network would be reduced.

Road Density and Location

Alternative A

The alternative would have no impacts on road densities within the project area because no roads would be added or removed.

Alternative B

This alternative would have a negative impact on road densities within the subwatersheds because it would designate 19 miles of unauthorized routes as roads. These routes currently exist and were originally constructed during line construction in 1943 but were never added to the National Forest Transportation System. Table 3-14 shows the changes to the road densities and RCA road densities for each subwatershed.

Road densities increase in all subwatersheds except for Trapper Creek and Tripod-Murray. All subwatersheds maintained the existing functional ratings even with the road density increases.

Road densities are used as an indicator of risk to a watershed and can be directly related to sediment delivery to streams. Although road densities and RCA road densities increase, WEPP:Road modeling shows that sediment delivery to stream channels decreases over the existing condition.

Table 3-14. Road and road density changes

Subwatershed	No Action Alternative							Proposed Action Alternative					
	6 th HU Size (acres)	NFS Lands (acres)	Miles Road	Road Density (mi/mi ²)	RCA Acres	Miles RCA Road	RCA Road Density (mi/mi ²)	Proposed New Roads	Proposed New Roads in RCA	Road Density (mi/mi ²)	RCA Road Density (mi/mi ²)	Road Density Change	RCA Road Density Change
Curtis Creek	17,482	17,482	37.3	1.37	2,937	10.3	2.24	+3.9	+1.3	1.51	2.52	+0.14	+0.27
Two-Bit Roaring	11,916	11,916	27.3	1.47	2,002	6.3	2.00	+0.9	0.0	1.51	2.00	+0.05	0.00
Warm Lake Cr	15,064	15,055	26.5	1.13	2,929	9.1	1.98	+2.2	+0.8	1.22	2.15	+0.09	+0.17
Halfway	16,266	16,266	19.9	0.78	3,219	8.3	1.66	+4.3	+1.5	0.95	1.95	+0.17	+0.30
Trapper Creek	9,274	9,274	12.9	0.89	1,815	3.0	1.05	0.0	0.0	0.89	1.06	0.00	0.00
Wardenhoff-Bear	24,864	24,361	31.1	0.80	4,651	16.1	2.22	+4.3	+1.3	0.91	2.40	+0.11	+0.18
South Fork Salmon River subbasin	94,866	94,354	155.0	1.05	17,553	53.0	1.93	+15.6	+4.9	1.15	2.11	+0.11	+0.18
Upper Big Creek	25,528 ^a	13,346	59.1	2.83	2,067	20.9	6.47	+2.0	+0.7	2.93	6.68	+0.10	+0.21
Kennedy	17,294 ^a	3,123	24.5	5.02	528	5.4	6.51	+0.1	0.0	5.04	6.51	+0.02	0.00
High Valley	17,660 ^a	5,760	56.1	6.23	1,416	23.8	10.76	+0.1	0.0	6.24	10.76	+0.01	0.00
Tripod-Murray	21,330 ^a	5,779	40.4	4.47	1,567	26.0	10.61	0.0	0.0	4.48	10.61	0.00	0.00
Shirts	14,435 ^a	7,444	41.2	3.54	1,517	12.7	5.35	+1.1	0.0	3.64	5.35	+0.09	0.00
North Fork Payette River subbasin	96,247	35,452	221.3	4.00	7,095	88.8	8.0	+3.3	+0.7	4.06	8.07	+0.06	+0.06
Project area	191,113	130,318	376.3	1.85	24,648	141.8	3.68	+19.0	+5.6	1.94	3.82	+0.09	+0.14

^a Only includes NFS lands and roads on NFS lands in the subwatershed.

Disturbance History

Disturbance history is measured by ECA and is discussed in detail in section 3.4.1.1, “Water Yield” within the Water and Soils resource discussion.

Riparian Conservation Areas

Table 3-15 displays the acres and percent of the respective subwatersheds in which the 70-foot-wide ROW is located within the 300 feet perennial and 150 feet intermittent RCAs.

Table 3-15. Line 328 right-of-way (ROW) within riparian conservation areas (RCAs)

Subwatershed	Subwatershed RCA (acres)	ROW (acres)	No Action/Proposed Action	
			ROW RCA (acres)	Percent ROW within RCA (%)
Curtis Creek	2,937	49.2	19.0	0.65
Two-Bit Roaring Creek	2,002	9.5	1.9	0.09
Warm Lake Creek	2,929	48.2	23.0	0.79
Halfway	3,219	71.2	38.7	1.20
Trapper	1,815	0.8	0.8	0.04
Wardenhoff-Bear	4,651	58.7	19.3	0.41
South Fork Salmon River Subbasin Subtotal	17,554	237.6	102.7	0.59
Upper Big Creek	2,067 ^a	38.1	13.5	0.32
Kennedy	528 ^a	7.4	0.0	0.00
High Valley	1,416 ^a	4.8	1.4	0.03
Tripod-Murray	1,567 ^a	9.1	3.3	0.06
Shirts	1,517 ^a	9.7	0.0	0.00
North Fork Payette River Subbasin Subtotal	7,095 ^a	69.1	18.2	0.08
Project Area Total	24,649	306.7	120.9	0.31

^a Only includes NFS lands and roads on NFS lands in the subwatershed.

Alternative A

This alternative would allow continued maintenance of 121 acres for the ROW and 13 structures would be replaced within the RCAs. As identified in the analyses for the other WCIs, this alternative would have no impacts to the RCA functions and processes although there would be a low risk of affecting future LWD and streamside shading. Given that the 121 acres and 13 structures are spread over 11 subwatersheds, there would be no impact to those characteristics.

Alternative B

This alternative would maintain RCA conditions with risks to stream shading and LWD, with a reduction of sediment delivery and realignment of a line to more stable area within the RCA. Therefore this alternative is consistent with SWST10.

ROW Maintenance—This activity would allow continued maintenance of 121 acres if the ROW occurring within the RCA. As identified in the analyses for the other WCIs, this activity would have no impacts to the RCA functions and processes although there would be a low risk of affecting future LWD and streamside shading. Given that the 121 acres are spread over 11 subwatersheds, there would be no impact to those characteristics.

Structure Maintenance/Replacement—This activity would allow 102 structures and an associated 5.6 miles of unauthorized route to be designated as road and 0.7 miles of overland access to occur within the RCAs. The analysis for the other WCIs, this activity would have negligible negative impacts to the RCA functions and processes with a small reduction in sediment over time.

Realignment—This activity would realign 1,060 feet of power line and ROW already in the RCA to another piece of the ROW. According to the analyses for the other WCIs, this activity would have negligible negative impacts to the RCA functions and processes from removing up to 12 trees. This realignment prevents a road from being constructed in the RCA to structure 328-04-102, which would cross a hillslope with an 80% slope and a highly erosive landtype that has been identified as landslide prone that occurs immediately above Johnson Creek and Johnson Creek Road. Efforts have occurred since the 1980s to stabilize the area between the structure and Johnson Creek road with marginal results. Therefore this alternative is consistent with LSST07 and LSST09.

Disturbance Regime

Alternative A

This alternative would have negligible effects to the resiliency of the subwatersheds to recover from natural and human-caused disturbances. Line 328 was built in the 1940s and although the ROW maintenance and access to the structures does cause disturbances within the subwatersheds, the acres disturbed are very small within each subwatershed. All Project activities occur on 307 acres across 11 subwatersheds, and, given the isolated nature of activities in any subwatershed, the disturbance regime would be maintained.

Alternative B

This alternative would have the same effects as the Alternative A, although the acres disturbed would be 375 acres.

Integration of Species and Habitat Conditions

Alternative A

This alternative would not affect the integration of species and habitat conditions because there would be no impact on habitat conditions or direct impacts on the species.

Alternative B

This alternative would maintain the integration of species and habitat conditions throughout the Project area with a small measurable reduction in sediment in the short- and long-term, and an immeasurable reduction of potential shade and LWD from the continued maintenance of the ROW and road maintenance. Existing conditions for spawning/rearing habitat is in good condition in the South Fork Salmon River subbasin (Chinook salmon, steelhead, bull trout, and westslope cutthroat trout) for egg survival in spawning areas. Given that this alternative will have a small reduction in sediment those conditions in the South Fork Salmon River and North Fork Payette River subbasins would be maintained.

3.3.3.1.2 Cumulative Effects

Alternative A

This alternative would have a continued negligible impact on stream temperatures and LWD recruitment in all timeframes. Any increase would incrementally add to the impacts resulting from other activities. The incremental increase with this alternative would be immeasurable due to the spatial scale of the project.

Alternative B

This alternative would cause a risk of increased sediment delivery in the temporary timeframe, but modeling identifies that in the short and long terms, sediment delivery would be measurably reduced at the project level scale. Any increase in the temporary timeframe would incrementally add to sedimentation resulting from other activities. Incrementally, in the short and long term, sediment delivery would be reduced, with a slight beneficial effect to fish at the subwatershed scale.

This alternative would also have a continued negligible impact on stream temperatures and LWD recruitment in all timeframes. Any increase would incrementally add to the impacts resulting from other activities. The incremental increase with this alternative would be immeasurable due to the spatial scale of the project.

3.3.3.2 Fisheries Effects Summary

This section displays the summary of the analysis of the effects of the alternatives to federally listed and Intermountain Region Sensitive fish species. Additional information regarding this analysis can be found in the Fisheries Technical Report in the project record. Determinations of effects to fisheries species can be found in Table 3-16. The determinations for each federally listed species are “may affect but not likely to adversely affect”, and the determination for the sensitive species, westslope cutthroat trout, is “may impact individuals or habitat but not likely to cause trend toward federal listing or reduce viability for the population or species” for all alternatives based on the minimal effects to the WCIs as detailed above. Further analysis of effects for all species can be found in the project record, as noted above.

Table 3-16. Determination of effects of alternatives to fish species

Species and Status	Alternative A	Alternative B
Threatened Species: Chinook Salmon and Critical Habitat and Essential Fish Habitat, Bull Trout and Critical Habitat, Steelhead and Critical Habitat	NLAA	NLAA
Sensitive Species: Westslope Cutthroat Trout	MII	MII

Note:NLAA = Not likely to adversely affect; MII= May impact individuals but is not likely to cause a trend to federal listing or loss of viability

3.4 Water and Soil Resources

Issue: Proposed activities have the potential to affect soil and water resources.

Indicators:

- Water Quality—Tons of Sediment Delivery to Streams
- Water Yield—Percent ECA
- Slope Stability—Acres of landslide prone areas affected by activities
- Soil Quality—Detrimental disturbance and total soil resource commitment
- Effects to Wetlands/Floodplains
- Effects to Municipal Watersheds

The potential for effects on soil and water resources is documented in the project record (see Soil and Water Resources Technical Report). This section provides a summary of that analysis. This section focuses on effects of the alternatives to soil and water resources, and addresses the issue that proposed management activities have the potential to affect the resource indicators.

The analysis area used for the assessment of soil and water resources is based on the subwatersheds, but the exact analysis area varies depending on the scope of each specific resource concern.

3.4.1 Background

3.4.1.1 Water Quality

Section 303(d) of the CWA requires States to identify waters not meeting State water quality standards (i.e., Water Quality Limited Waterbodies). The prescribed remedy for these waterbodies is for the States to determine the Total Maximum Daily Load (TMDL) for pollutants, and to develop a plan to reduce these pollutants.

In 2000, the Boise and Payette National Forests completed the South Fork Salmon River Subbasin Review (USDA Forest Service 2000). The purpose of the document was to identify key watershed issues, characterize the ecological and social conditions and trends, and provide information to be used to prioritize future management opportunities and/or ecosystem analysis at the watershed level within the South Fork Salmon River subbasin. The analysis summarized that future efforts should improve water quality and limit erosion by reducing roads within Riparian Habitat Conservation Areas (now known as Riparian Conservation Areas or RCAs), reducing road density, reducing the amount of 303(d) listed streams, and reducing ECAs.

In 2002, the Idaho DEQ completed the *South Fork Salmon River Subbasin Assessment* (IDEQ 2002). The assessment was to validate streams within the subbasin on the 1998 303(d) list. Prior to that assessment, the Environmental Protection Agency approved a TMDL for percent fines and cobble embeddedness (USDI EPA 1992). The data used for the analysis suggested that the watershed has attained the target and has an improving trend for cobble embeddedness, but has not attained the target for percent fines. All waterbodies (tributary streams to the South Fork Salmon River, the South Fork Salmon River, Johnson Creek, and East Fork South Fork Salmon River) were removed from the 303(d) list for sediment. However, due to remaining uncertainty combined with highly valued threatened and endangered species and beneficial uses, the 1991 TMDL should continue to be implemented.

Temperature was added as a pollutant of concern for the fourth-order segment of Johnson Creek in the Idaho DEQ 2010 Integrated Report (IDEQ 2011, p. 48).

Table 3-17 identifies water quality support status for analysis area streams

Table 3-17. Water quality support status

Stream	Support Status	Pollutant of Concern	Total Maximum Daily Load
South Fork Salmon River	Fully Supporting	None	Sediment
Upper Johnson Creek 1 st -2 nd order,	Not fully supporting	Combined Biota/Habitat Assessments	–
Lower Johnson Creek 1 st -2 nd order	Fully Supporting	None	–
Johnson Creek 3 rd order	Fully Supporting	None	–
Johnson Creek 4 th Order	Not fully supporting	Water temperature	–
Trapper Creek	Fully Supporting	–	–
Curtis Creek	Fully Supporting	–	–
Trail Creek	Fully Supporting	–	–
Warm Lake Creek	Fully Supporting	–	–
Cabin Creek	Fully Supporting	–	–
Upper Big Creek	Fully Supporting	–	TMDL for Lower Big Creek-Sediment
Little Squaw Creek	Fully Supporting	–	–

3.4.1.1.1 Total Maximum Daily Loads

The North Fork Payette River Subbasin Assessment and TMDL document (IDEQ 2005) set a TMDL for sediment in Big Creek in 2005. This document identifies that Upper Big Creek above its confluence with Horsethief Creek as fully supporting beneficial uses and is not contributing to the pollutant of sediment and siltation in lower Big Creek. The lower Big Creek sediment problem was attributed largely to past dredge mining leading to current streambank erosion.

The South Fork Salmon River has a TMDL for sediment designated in 1991. Though the South Fork Salmon River Subbasin Assessment (IDEQ 2002) discloses that the South Fork Salmon River shows attainment of water quality criteria for sediment and metals, the high road density in many tributary watersheds warrants continued implementation of the TMDL.

3.4.1.1.2 Erosion and Sedimentation

The Project area lies largely in the central Idaho batholith, well known for its high sedimentation rates following natural and human-induced disturbances. Of particular concern in this case, are those effects related to the 2007 Cascade Complex Wildfire (USDA Forest Service 2007). Accelerated erosion caused by wildfire has been suggested as the largest productivity loss in the northern Rocky Mountains because of the large area involved (Clayton and King 1995).

Sediment delivered to streams influences fish habitat and channel morphology. Increased levels of sediment can disrupt fish population viability (Goetz 1991; Horowitz 1978; Poff and Ward 1989, Schlosser 1982; Weaver and White 1985).

Spring snowmelt in 2008 resulted in flooding that resulted in high peak flows in the South Fork Salmon River at Krassel. Peak flows were approximately 5,540 cubic feet per second (cfs) on May 21, 2008. In June 2010, approximately 2.5 inches of rain in 3 days and the accompanying snowmelt resulted in a peak flow of over 6,000 cfs in the South Fork Salmon

River at Krassel. Both of these events resulted in substantial erosion and sediment delivery from road surfaces in the analysis area.

Road reconstruction may contribute sediment to streams within the analysis areas. Though sediment is an essential component of healthy streams, a large increase in sediment may affect stream channel characteristics such as width/depth ratio, streambank stability, pool frequency and quality, as well as fish habitat.

3.4.1.1.3 Sediment Models Use and Assumptions

Several sediment delivery models were used to define the baseline condition for sediment delivery. All closed roads in the South Fork Salmon River subbasin on the Boise National Forest were inventoried using the Forest Service WEPP Road on-line software interface in 2009 (Elliot et al. 2000). The WEPP Road Model uses site-specific data to predict sediment delivery to streams from roads (District Data).

The WEPP:Road Model is a physical model based on an understanding of storm run-off and erosional processes. Inputs to this model are relatively simple and somewhat limited. Studies have found this model to be a relatively good predictor of erosion and sediment yield at some sites and not at others (Dube et. al. 2008). The GRAIP Model is an empirical model based on data collected at actual field sites. It is one of the best predictors of sediment yield at many sites included in studies, but is a poor predictor of some sites (Dube et. al. 2008). The GRAIP Model is data intensive and is difficult to use on closed roads, particularly those with heavy vegetation.

Though these models arrive at their outputs using very different formulae and inputs, the outputs were added together to compare the predicted effects of various management alternatives, the best use for either model (Dube et. al. 2008).

No data have been collected for existing open or closed NFS roads within the analysis areas outside of the South Fork Salmon River subbasin. WEPP:Road data was collected or developed from GIS data for the access roads included in the Proposed Action, but not for other roads in the analysis area.

Baseline sediment delivery data was generated for the headwaters of the Upper Big Creek subwatershed using the BOISED Model, a model developed for predicting the cumulative effects of sediment delivery from activities within a watershed. This model is also best used to compare the overall effects of various management actions within a watershed. Outputs are in tons per year. For this analysis the tons per year of sediment from roads was used as a baseline from which to compare alternatives.

3.4.1.1.4 Clean Water Act Permits

The following permits may be required to implement the Proposed Action under the Clean Water Act:

- Part 401 Compliance from the Idaho Department of Environmental Quality.
- Part 402 Stream Alteration Permit from the Idaho Department of Water Resources
- Part 404 Permit from the U.S. Army Corps of Engineers

- National Pollutant Discharge Elimination System (NPDES) permit from the U.S. Environmental Protection Agency

These agencies have been informed of this Project through scoping. These agencies, as well as the public, will be provided the opportunity to comment on the Project. The necessary permits for implementing this project would be requested and obtained by the Permittee.

3.4.1.2 Water Yield

For the purposes of this analysis, ECA was used as a means of quantifying the effects of past and proposed activities, as well as any large fires, on water yield. ECA is a method of determining the percent of a subwatershed's vegetation in a "hydrologically immature" condition. The "hydrologically immature" designation indicates forested stands in which root structures and canopy closure have not reached the level of water use and influence created by mature timber stands. The percent ECA of an area is based on the percent tree crown cover removed by management activities or natural events such as wildfire reduced by any recovery that may have occurred over time.

3.4.1.3 Slope Stability

The SINMAP model (Stability Index Mapping; Pack et al 1998) was used as a preliminary tool to identify locations in the Project area that may be landslide prone. This model uses a digital elevation model coupled with the infinite slope stability equation to identify potential landslide hazards associated with shallow surface failures (debris slides). The primary output of this modeling approach is a stability index that can be used to categorize the terrain stability. Although the SINMAP model can be calibrated using the locations of existing landslides within a particular analysis area, site-specific calibration was not done for this assessment. Instead the Forest-wide coverage developed concurrently with the Revised Forest Plan was used in this analysis.

The selection of breakpoints for the various SINMAP stability index classes is subjective, requiring both judgment and interpretation. For the purposes of this analysis, the "stable", "moderately stable", and "quasi-stable" classes are considered stable areas and should not fail (i.e., none to low risk). The terms "lower threshold" (i.e., moderate risk), "upper threshold" and "undefended" (i.e., high risk) characterize areas where the probability of a landslide is less than or greater than 50% following a 100-year storm event, respectively.

3.4.1.4 Soil Quality

Soil quality was analyzed in terms of detrimental disturbance (DD) and total soil resource commitment (TSRC).

3.4.1.4.1 Detrimental Disturbance

Management activities can detrimentally alter the natural soil characteristics, resulting in the immediate and/or prolonged degradation of onsite resources or biomass productivity. This impact, referred to as DD, is generally associated with soil puddling, compaction, and/or displacement resulting from the use of ground-based equipment.

A significant portion of the fine organic material and duff layer was lost to wildfire in areas of high severity burns. Low severity burns consumed some of the fine organic material on the

soil surface but the productivity remains unaltered for the most part and the normal nutrient cycling processes should continue.

Severely burned soils are also considered to be detrimentally disturbed due to the associated loss of soil productivity. Soils that burn at a high severity are vulnerable to high soil erosion rates.

Another fire effect occurs when volatilized organics move downward into the soil along the abrupt temperature gradient and condense on soil particles to form a water repellent layer, which generally occurs just below the soil surface. This layer, known as the hydrophobic layer, impedes water infiltration into the soil. This water repellency generally breaks down naturally within 1–8 years. However, based on the relatively shallow hydrophobic conditions observed in the project area, natural recovery is estimated to occur over 1–3 years post-fire. In the Cascade Complex Wildfire, hydrophobic soils resulting from moderate-to-severe fire are expected to recover within 3 years (USDA Forest Service 2007). Hydrophobic soils have already recovered based on field observations as well as the Burned Area Emergency Response (BAER) assessment.

The Forest Plan (Standard SWST02) stipulates that management activities that may affect DD shall meet the following requirements:

- 1) In an activity area where the existing conditions of DD are below 15% of the area, management activities shall leave the area in a condition of 15% or less DD following completion of the activities.
- 2) In an activity area where existing conditions of DD exceed 15% of the area, management activities shall include mitigation and restoration so that DD levels are moved back toward 15% or less following completion of the activities.

Detrimental soil disturbance (DD) is the alteration of natural soil characteristics that results in immediate or prolonged loss of soil productivity and soil-hydrologic conditions. At least 85% of an activity area should be in a non-detrimentally disturbed condition. Stated another way, no more than 15% of an activity area should have detrimentally disturbed soil after the management activity is completed. DD can occur from soil that has been displaced, compacted, puddled or severely burned. Determination of DD excludes existing or planned classified transportation facilities, dedicated trails, and landings, mining dumps or excavations, parking areas, developed campgrounds, and other dedicated facilities (USDA Forest Service 2010a, pg GL-12). DD is represented by any or all of the 4 characteristics described below.

1. Detrimental Soil Displacement—Areas of 1 meter by 1 meter or larger that exhibit detrimentally displaced soil as described below:
 - (a) The loss of either 5 cm or half of humus-enriched top soil (A horizon), whichever is less, or
 - (b) The exceeding of the soil loss tolerance value for the specific soil type.
2. Detrimental Soil Compaction—Soil compaction is generally evaluated from 5 to 30 centimeters below the mineral soil surface. Specific depths for measurement are dependent upon soil type and management activities. Detrimental soil compaction is increased soil density (weight per unit volume) and strength that hampers root growth, reduces soil aeration, and inhibits water movement.

- Measurements of potential detrimental soil compaction may be qualitative or quantitative.
3. **Detrimental Soil Puddling**—Puddling is generally evaluated at the mineral soil surface. Visual indicators of detrimental puddling include clearly identifiable ruts with berms in mineral soil, or in an Oa horizon of an organic soil. Detrimental puddling may occur in conjunction with detrimental compaction. The guidelines for soil compaction are to be used when this occurs. Detrimentially puddled soils are not always detrimentally compacted. Infiltration and permeability are affected by detrimental soil puddling. Puddling can also alter local groundwater hydrology and wetland function, and provide conduits for runoff.
 4. **Severely Burned Soil**—Severely burned soil applies to prescribed fire and natural fires that are managed for resource benefits. Severely burned soils are identified by ratings of fire severity and the effects to the soil. A severely burned soil is generally soil that is within a High Fire Severity burn. An example of a High Fire Severity rating is provided below. Soil humus losses, structural changes, hydrophobic characteristics and sterilization are potential effects of severely burned soil.

Standards for detrimentally disturbed soils are to be applied to existing or planned activities that are available for multiple uses. These standards do not apply to areas with dedicated uses such as mines, ski areas, campgrounds, and administrative sites (USDA Forest Service 2010a, p. GL-12).

Page GL-1 of the Forest Plan (USDA Forest Service 2010a) defines the activity area for DD as “the specific area where proposed activities may have detrimental soil impacts, such as harvest units within a timber sale area, an individual pasture unit within a grazing allotment, or a burn block within a prescribed burn project area. Existing designated uses such as classified roads and trails, developed campgrounds, and buildings, are not considered DD within an activity area” (USDA Forest Service 2010a).

3.4.1.4.2 Total Soil Resource Commitment

The Forest Plan (USDA Forest Service 2010a) defines TSRC as the conversion of a productive site to an essentially nonproductive site for a period of >50 years. Examples include classified or unclassified roads, inadequately restored haul roads, designated skid roads, landing areas, parking lots, mining dumps or excavations, dedicated trails (skid trails also), developed campgrounds, other dedicated facilities, and some stock driveways. Productivity on these areas ranges from 0% to 40% of natural.

The Forest Plan (Standard SWST03) stipulates that management activities that may affect TSRC shall meet the following requirements (USDA Forest Service 2010a):

- 1) In an activity area where the existing conditions of TSRC are below 5% of the area, management activities shall leave the area in a condition of 5% or less DD following completion of the activities.
- 2) In an activity area where existing conditions of TSRC exceed 5% of the area, management activities shall include mitigation and restoration so that TSRC levels are moved back toward 5% or less following completion of the activities.

Page GL-1 of the Forest Plan (USDA Forest Service 2010a) defines the activity area for TSRC as the area where, “Effects are generally measured across an all-inclusive activity area, like a timber sale area, or a grazing allotment, where effects to soil commitment could occur or are occurring”.

3.4.1.5 Wetlands and Floodplains

Wetland communities support a unique variety of vegetation that provide food and cover for many mammals, birds, and amphibians, and have an important influence on aquatic habitat conditions. Protection of these areas is required by direction in the Forest Plan, as well as EOs 11988 and 11990.

The goal of EO 11988 is that the proposed activities must not increase flood hazards and must preserve the resource benefit of floodplains (i.e., their ability to dissipate flood flows and moderate peak flows) (US President 1977a). The goal of EO 11990 is that the proposed activities must preserve the resource benefits of wetlands (i.e., their ability to produce abundant diverse biota, buffer water quality, and recharge groundwater) (US President 1977b).

3.4.2 Affected Environment

3.4.2.1 Water Quality

For the purposes of this analysis, the analysis area consists of the Curtis Creek, Warm Lake, Two-Bit-Roaring, Halfway, Trapper Creek, and Wardenhoff-Bear subwatersheds in their entirety, the headwaters of the Upper Big Creek subwatershed (the area that drains the all project-related activities within the Upper Big Creek subwatershed), and the portions of the Tripod-Murray, High Valley, Kennedy, and Shirts subwatersheds contained in NFS lands. Each subwatershed, or portion of a subwatershed, will be analyzed as a separate analysis area. The Curtis Creek, Warm Lake, Two-Bit Roaring, Halfway, Trapper, and Wardenhoff-Bear subwatersheds are included in their entirety because most of the proposed project-related activities are scattered across these subwatersheds, or are concentrated in the lower portion of these drainages. Only the headwaters of Upper Big Creek Subwatershed is identified as an analysis area because all of the project-related activities are located within this area and modeling indicates that project-related sediment delivery is unlikely to be identifiable past this point. Similarly, project related activities within the Tripod-Murray, Kennedy, High Valley, and Shirts subwatersheds are scattered in the headwater drainages within NFS lands and would have impacts limited to these drainages. The total acreage of the sediment delivery analysis areas for the Project is roughly 127,793 acres. The Soil and Water Technical Report contains detailed information about acreages in each analysis area.

The tributary streams within the analysis areas are functioning at unacceptable risk for sediment/turbidity except for the Shirts Creek subwatershed, which is functioning at risk due to stable banks, though fine sediment <6 millimeter (mm) is greater than 20%, and the Kennedy subwatershed which is functioning at risk with 1 Wolman Pebble count survey with fine sediment <6 mm of 20%. All the other subwatersheds have stream substrates that contain at least 20% sediment less than 6 mm (USDA Forest Service 2010a, pg. B-14).

Many roads constructed in association with previous timber sales still exist within the area and continue to be a chronic source of sedimentation (IDEQ 2002). Low-standard open and

closed roads are notable sources of sediment delivery to streams based on inventories of sediment plumes measured in 2008 (District data).

Routes built in 1943 to construct Idaho Power Line 328 still exist on the landscape. Some of these routes were maintained more recently when they were used to repair or replace existing power line structures. For the most part, these routes were not put into storage with adequate drainage and therefore some of them are generating sediment that is delivered to adjacent streams. Many of these routes have not been used since the powerline was constructed in 1943. Other routes have been used to access some of the structures more recently, but many of the drainage features constructed in these routes have failed because they were either too far apart or were not constructed in a manner that would provide effective drainage over time without maintenance.

These routes are delivering a modeled 0.28 tons of sediment to streams per year. Two routes are delivering approximately 84% of this sediment. The route that accesses Structures 328-02-107 and 328-02-108 generates a modeled 0.21 tons, or 75% of the sediment delivered to streams from the existing routes. The route that accesses structures 328-04-87 through 328-04-90 generates 0.02 tons of sediment per year, or 9% of the sediment delivered from these existing routes. Each of these routes are intercepting overland flows and springs and routing them at least 500 feet down the routes. The route that accesses structures 328-02-107 and 328-02-108 is delivering sediment laden water directly to a non-fish-bearing perennial stream.

Some of the overland routes identified in the proposed action have been used in the past to access powerline structures for repair. A field review of these routes did not identify any obvious ground disturbance from these routes. These routes are not delivering sediment to streams.

Based on the WEPP:Road Model, closed NFS roads within the analysis area contribute 13.8 tons per year of sediment to analysis area streams. Table 3-18 summarizes sediment delivery from closed roads by subwatershed as predicted by the WEPP:Road Model (Elliot et al. 2000) for closed roads, the GRAIP Model for open roads, and BOISED where data for these models is unavailable.

Based on GRAIP Modeling in the South Fork Salmon River subbasin, and BOISED modeling in the headwaters of Big Creek, open roads generate 405.65 tons of sediment to streams. Table 3-18 displays modeled sediment delivery for each analysis area subwatershed.

Table 3-18. Modeled road-generated sediment delivery by 6th field subwatershed

Subwatershed	Alternative A					Alternative B		
	Access Routes WEPP:Rd Model (tons/yr)	Open Roads GRAIP Model (tons/yr)	Closed Roads WEPP:Rd Model (tons/yr)	Total Modeled Sediment Delivery (tons/yr)	Percent Road-Generated Sediment from Access Routes (%)	Access Roads WEPP:Rd Model (tons/yr)	Percent Reduction in Sediment Delivery Access Routes/Roads (%)	Percent Reduction Sediment Delivery for All Roads (%)
Upper Big Creek ^a	0.00	69.28	11.62	80.90	0.00	0.00	0.00	0.00
Curtis Creek	0.22	69.60	0.62	70.44	0.31	0.02	90.91	0.28
Two-Bit Roaring	0.00	30.30	1.37	31.67	0.00	0.00	0.00	0.00
Warm Lake Creek	0.02	64.20	0.00	64.22	0.03	0.01	50.00	0.02
Halfway	0.03	55.26	0.21	55.50	0.05	0.01	66.67	0.04
Wardenhoff-Bear	0.01	39.90	0.00	39.91	0.03	0.00	100.00	0.03
Trapper Creek	0.00	77.11	0.00	77.11	0.00	0.00	0.00	0.00
Shirts	0.00	N/A	N/A	0.00	0.00	0.00	0.00	0.00
Kennedy	0.00	N/A	N/A	0.00	0.00	0.00	0.00	0.00
High Valley	0.00	N/A	N/A	0.00	0.00	0.00	0.00	0.00
Tripod-Murray	0.00	N/A	N/A	0.00	0.00	0.00	0.00	0.00
Total/Average	0.28	405.65	13.82	419.75	0.08	0.04	85.82	0.06

^a Open and closed roads were modeled with the BOISED Model in Big Creek where neither WEPP:Road nor GRAIP Model data was available.
N/A= Data not available

3.4.2.2 Water Yield

ECA was determined for the Project Water Resources Analysis Area. Each of the eleven 6th field subwatersheds was identified as a separate activity area for ECA. For the Upper Big Creek, Tripod-Murray, High Valley, Kennedy, and Shirts subwatersheds, only those acres within the NFS ownership were included in this ECA analysis. Table 3-19 identifies the acreage of ECA for each subwatershed in the analysis area. For a detailed methodology and the assumptions used in analyzing the ECA, see the Soil and Water Technical Report (available in the project record).

Table 3-19. Existing equivalent clearcut acres (ECA) estimate for the Idaho Power Company Line 328 Project

Subwatershed	Subwatershed Acres	Acres ECA w/o Powerline ROW	Powerline ROW Acres	Total ECA Acres	Percent ECA (%)
Curtis Creek	17,482	1,542	49	1,591	9.1
Two-bit Roaring	11,916	5,807	10	5,817	48.8
Warm Lake Creek	15,064	6,476	48	6,524	43.3
Halfway	16,266	1,140	71	1,211	7.4
Trapper Creek	9,274	2,320	1	2,321	25.0
Wardenhoff-Bear	24,864	11,685	59	11,744	47.2
Upper Big Creek	13,346 ^a	940	38	978	7.3
Tripod-Murray	5,779	580	9	589	10.2
High Valley	5,760 ^a	460	5	465	8.1
Kennedy	3,123 ^a	115	7	122	2.1
Shirts	7,444 ^a	125	10	135	4.3
Total	130,318	31,190	307	31,497	24.3

^a Only acres within National Forest System are included

3.4.2.3 Slope Stability

The analysis area used in this assessment consists of that area where project activities could affect slope stability. These areas include the area crossed by proposed access roads and routes, as well as the existing powerline ROW clearing, the 6 miles of existing NFS roads that would be converted from closed roads (in long-term storage) to open roads (accessible for administrative use only), the proposed ROW for the powerline re-route between Structures 328-04-101 and 328-04-103, encompassing roughly 2.5 acres. Access roads and existing closed roads proposed to be converted to open roads all are assumed to have a clearing width of 29 feet, or 3.5 acres per mile. The access routes are expected to affect a width of approximately 10 feet, or approximately 1.2 acres per mile. Table 3-20 displays the acreage of each activity, and number of structures on landslide prone areas, that comprises the activity area for slope stability for this project. This analysis area was chosen because project-related activities would affect landslide risk in the immediate vicinity of these activities.

Table 3-20. Slope Stability Ratings by Activity Type

Activity	Miles	Acres	High Landslide Risk (acres)	Moderate Landslide Risk (acres)	Percent Landslide Prone (%)
Structures	284 ^a	—	10 ^a (0.1 acres)	6 ^a (0.06 acres)	5.7%
Structures Accessible from Open Roads	23 ^a	—	0 ^a (0.00 acres)	2 ^a (0.02 acres)	8.7%
Existing ROW Clearing	36.1	307	11	5	5.2%
ROW Clearing for Proposed Powerline Re-route	0.2	2.5	0.6	0.3	36.0%
ROW Clearing Replaced by Reroute	0.4	3.2	2.1	0.1	68.8%
Proposed Access Roads	18.9	66	3.9	1.8	8.6%
Proposed Access Routes	4.0	5	0.0	0.0	0.0%
Proposed Conversion from Closed to Open Roads	1.9	7	0.0	0.0	0.0%
Total for Project	61.5	387.5	17.6	7.2	6.4%

^aNumber of structures

Mass instability, or landslides, is naturally occurring disturbances that have had, and will continue to have, an influence on the analysis area. Landslides have been documented as the dominant form of sediment delivery to streams in the Idaho batholith (Arnold 1988). The rapid delivery of high volumes of sediment can result in major negative short and long term impacts to riparian systems, water quality, and fish habitat (Helvey 1972; Maloney et. al. 1995; Shultz et al. 1986). However, landslides also provide a critical source of rock and organic material to stream systems that is necessary to maintain the integrity of the systems and aquatic habitat. Although landslides are naturally occurring events, man-caused disturbances such as road construction, and to a lesser extent timber harvest, can increase the potential for and occurrence of landslides.

Based on the SINMAP modeling effort, roughly 1.8% (7.2 acres) of the 387.5-acre analysis area is categorized as being in the moderate risk category (probability of instability 0 to 50% following a 100-year storm event), with an additional 4.5% (17.6 acres) identified as being in the high risk category (probability of instability 50 to 100% following a 100-year storm event). Overall, the analysis area has a relatively low amount (6.4%) of land prone to shallow landslides. Table 3-20 displays the acres by risk category as modeled by SINMAP.

The existing powerline ROW has an increased risk of landslide on 16 acres of landslide prone area. Cutting trees to prevent the grounding of electricity from the powerlines would reduce the effect of conifer roots buttressing soils on this site; however the shrubs would still be present to reduce the potential for rill erosion. Rill erosion has the potential to trigger debris flow landslides by concentrating water from rainfall or snowmelt.

Structure 328-04-102 was constructed on an extremely steep hillslope subject to continual dry ravel and is at high risk of landslides.

3.4.2.4 Soil Quality

This section of the document describes the existing conditions of long-term soil productivity. The assumptions and calculations for estimating existing DD and TSRC for the analysis area or activity area are in the *Soil Technical Report* in the project record.

3.4.2.4.1 Detrimental Disturbance

Since access roads would be located from the nearest available road system, the analysis area for DD would be that area from the nearest NFS road that includes a junction with the proposed access roads and would extend to the powerline ROW, farther limit of the proposed access road, or to the nearer edge of an existing NFS road that provides access to the powerline structures on the far side of the powerline from the first NFS road, whichever is provides the greatest distance. As defined in page GL-50 of the Forest Plan (USDA Forest Service 2010a), the standards for TSRC "...do not apply to areas with dedicated uses such as mines, ski areas, campgrounds, and administrative sites". The 70-foot wide powerline ROW is a dedicated use area and therefore the ROW is excluded from DD calculations. Each polygon is identified as a separate analysis area. The activity areas for DD total approximately 806 acres.

The existing condition includes areas of soil disturbance identified on the 1-meter resolution 2011 aerial photography; primarily skid trails and unauthorized routes. Existing access routes used to construct and maintain the powerline in the past are currently considered DD because these routes are not authorized and would be allowed to recover soil productivity in the future.

The Forest Plan identifies the existing powerline ROW as a designated utility corridor (USDA Forest Service 2010a, pages I-1 and I-2), so even if Idaho Power were to abandon this facility, it would continue to be dedicated to this use and excluded from consideration for DD calculations.

DD Unit 26 does not currently meet Forest Plan Standard SWST02, with DD at 22.7%. All other activity areas currently meet this standard with DD between 0% and 10.3%.

3.4.2.4.2 Total Soil Resource Commitment

Since access roads would be located from the nearest available road system, the analysis area for TSRC would be that area from the nearest NFS road that includes a junction with the proposed access roads and would extend to the powerline ROW, farther limit of the proposed access road, or to the nearer edge of an existing NFS road that provides access to the powerline structures on the far side of the powerline from the first NFS road, whichever is provides the greatest distance. Figure 3-2 displays the Analysis Area (action area) for TSRC.

As defined in page GL-50 of the Forest Plan (USDA Forest Service 2010a), the standards for TSRC "...do not apply to areas with dedicated uses such as mines, ski areas, campgrounds, and administrative sites". The 70-foot powerline ROW is a dedicated use area and therefore the ROW is excluded from TSRC calculations. The activity area for TSRC includes approximately 806 acres.

Existing TSRC includes National Forest System roads that cross the Activity Area, unauthorized roads that cross the Activity Area, designated campgrounds that may be

managed for multiple uses, and dispersed campsites within the Activity Area. Existing access routes used to construct or maintain the powerline are not part of the Forest transportation system and would be abandoned under the No Action Alternative, therefore these routes would not be included in TSRC calculations, but are instead calculated as detrimentally disturbed soils.

Based on the condition of roads that were abandoned soon after construction of Line 328, these roads are considered detrimental soil disturbance for both the Existing Condition and the No Action Alternative. Roads that have not been used for 50 years or more have trees that are from 6 inches to 14 inches in diameter growing in the old travelway surface, indicating that soil productivity has largely recovered.

Assumptions for TSRC calculations include:

- Existing Roads were determined from the Forest Transportation Layer found on sde:oracle10g::G_04_BOF and feature class: S_R04_BOF.TransRoadINFRA_GI accessed in March 2012.
- Soil disturbed area for roads is 29 feet wide with a 12 foot travelway.
- Areas of TSRC were identified on 1-meter resolution 2011 National Agricultural Imagery Program (NAIP) photography. NAIP acquires aerial imagery during the agricultural growing seasons in the continental U.S. A primary goal of the NAIP program is to make digital ortho photography available to governmental agencies and the public within a year of acquisition.

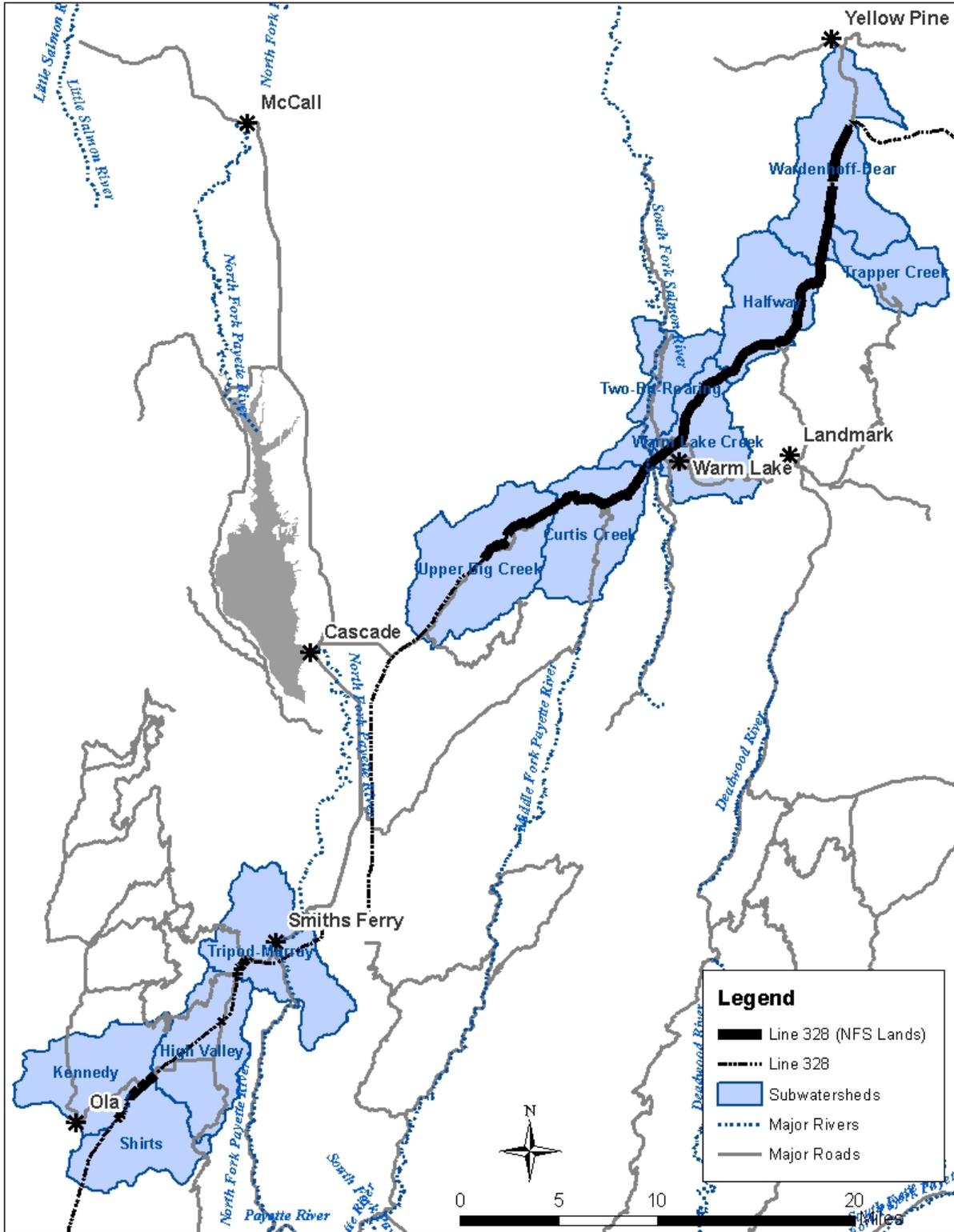


Figure 3-2. Water resources analysis area watersheds water resources analysis area watersheds

3.4.2.5 Wetlands and Floodplains

The analysis area used in this assessment consists of that area where project activities could affect wetlands and Floodplains. This area encompasses approximately 388 acres. The analysis area includes the area crossed by proposed access roads and routes, as well as the existing powerline ROW clearing, the 6 miles of existing National Forest System Roads that would be converted from closed roads (in long-term storage) to open roads (accessible for administrative use only), and the proposed ROW for the powerline reroute between Structures 328-04-101 and 328-04-103, encompassing roughly 2.5 acres. Access roads and existing closed roads proposed to be converted to open roads all are assumed to have a clearing width of 29 feet, or 3.5 acres per mile. The access routes are expected to affect a width of approximately 10 feet, or approximately 1.2 acres per mile. This analysis area was chosen because project-related activities would affect wetlands and floodplains in the immediate vicinity of these activities.

3.4.2.5.1 Wetlands

Based on the Forest Wetland GIS layer, there are no wetlands within the analysis area.

3.4.2.5.2 Floodplains

Floodplains within the analysis area are limited. The steep, narrow terrain within most of the analysis area limits the width of most floodplains. Though some of the existing facilities exist within floodplains, most notably within the Trout Creek drainage, the effect of these structures on floodplains is negligible. Structure 328-04-75 includes 1 post within an overflow channel of Trout Creek, but it does not impede flows or risk damage to downstream facilities.

Though existing access routes include a number of fords, the fords do not impede flood flows or risk damage to downstream facilities.

3.4.3 Environmental Consequences

Table 3-21 displays a summary of the effects of each alternative to each water and soil indicator.

Table 3-21. Effects of each alternative to the soil and water indicators

Issue Indicator	Alternative A	Alternative B
Water Quality: Tons of Sediment Delivery to Streams	0.28 tons/year	0.04 tons/year
Water Quantity: ECA %	24.3%	24.4%
Slope Stability: Acres of landslide prone areas affected by activities	16 acres	23 acres temporary 22 acres short & long term
Long Term Soil Productivity: % detrimentally disturbed soils	0-22.71%	0-7.3%
Long Term Soil Productivity: % TSRC	1.2%	4.2%
Wetlands/Floodplains:	No effect	No effect
Municipal Watersheds	No effect	No effect

3.4.3.1 Water Quality

3.4.3.1.1 Direct and Indirect Effects

Alternative A

Power line Right-of-way Vegetation Management—The power line ROW would continue to be maintained using chainsaws, leaving the slash in place. This activity would not change sediment delivery in the temporary (0–3 years), short-term (4–15 years), or long-term (>15 years) time frames because no ground disturbance would occur with this activity.

Structure Maintenance—No measurable sediment delivery would occur from this activity. Maintenance of the 23 structures accessible from open roads would require a small amount of ground disturbance. No more than 500 square feet (0.01 acres) would need to be disturbed per structure based on a platform 25 feet long and 20 feet wide. The 261 structures not accessible from open roads would either not be maintained, or would be maintained by a combination of aerial and hand work. This work would result in minimal ground disturbance. Erosion control seeding and mulching would be required on all disturbed soils.

Existing Access Routes—Existing access routes would not be maintained with Alternative A. Several of these routes are currently delivering sediment to streams because of poor drainage and lack of maintenance. These routes would continue to deliver sediment to streams at approximately the existing rate (0.28 tons/year) in the temporary, short-term and long-term time frames.

Though routes in the headwaters of Big Creek deliver a small amount of sediment to streams, they deliver less than 0.005 tons per year and therefore these rates are not displayed in Table 3-18, where sediment delivery rates are displayed to 2 significant digits. The Two-Bit Roaring, Trapper, Tripod-Murray, Kennedy, High Valley, and Shirts subwatersheds do not generate any modeled sediment delivery to streams, due to the distance between these routes and streams, and/or the gentle slopes between these routes and streams (Table 3-18).

Alternative B

Compared to Alternative A, Alternative B would result in a risk of increased sediment delivery in the temporary time frame (0–2 years), and a decrease in sediment delivery in the short-term (3–15 years) and long-term (over 15 year) time frames.

For the purpose of this analysis, it is assumed that all activities would occur in the year 2013, which would produce the greatest potential for impacts to streams from sediment delivery, and thus would be the “worst case scenario”. It is most likely that project activities would occur periodically through the 20-year life of the project, thus spreading the effects of the project over that time period.

Power Line Right-of-way Vegetation Management—The powerline ROW would continue to be maintained using chainsaws, leaving the slash in place. This activity would not change sediment delivery in the temporary, short-term, or long-term time frames because no ground disturbance would occur with this activity.

Overland Access—Using these routes would not contribute measurable amounts of sediment to streams. A field review of existing overland routes does not show evidence of current or

past soil disturbance or erosion. These routes would only be used when major repairs or replacement of structures is needed. It would be expected that 1 or 2 pieces of heavy equipment would take a single round trip to access a structure only once or twice during the 20-year life of the project. This limited and infrequent use would minimize the risk of soil compaction that could otherwise lead to erosion and possible sediment delivery from these routes.

Road Designation—Designating 19 miles of road in 115 segments would result in a risk of a slight increase in sediment delivery in the temporary time frame with a reduction in sediment delivery in the short-term and long-term time frames when compared to the existing condition or Alternative A.

Some risk of increases in sediment delivery is possible from the 5.6 miles of access roads within the RCAs in the temporary time frame. These RCA roads are within 300 feet from a waterbody. The effects of ground disturbance from road maintenance are not reflected in the inputs for the WEPP:Road Model for outsloped roads, which include nearly all of the proposed access roads. A slight risk of sediment delivery would occur when rainstorms would erode disturbed soil from the recently maintained road surface. Improvements in road drainage and revegetation of all disturbed soils, including the road surface, would minimize the potential of sediment delivery from recently maintained roads.

Sediment delivery from access roads designated with Alternative B would be reduced in the short-term to long-term time frames. Sediment reductions would be largely due to improvements in road drainage. The access routes proposed in Alternative B would follow existing routes used to access these structures in the past. Those routes currently delivering sediment to waterbodies would have drainage improvements. These improvements would include large waterbars or dips not designed to be drivable by high clearance vehicles. The waterbars would be designed to continue to function without maintenance. Drainage structures would be constructed at the frequency displayed in Table 3-22.

Table 3-22. Drainage Feature Spacing—Alternative B

Road Grade (%)	Distance Between Drainage Features
0-2	100 feet
2-5	75 feet
5-10	50 feet
>10	30 feet

The WEPP:Road Model predicts sediment from these routes to reduce from 0.28 tons per year to 0.04 tons per year, a reduction of 0.24 tons per year, or a reduction of 86% of the sediment delivered from these access routes.

Though the WEPP:Road Model displays the benefit of reduced sediment delivery in the short-term (3-15 years) to long-term (over 15 years) time frames, this reduction is minimal when compared to the total sediment delivery from roads within the analysis areas. The total change in modeled sediment delivery from Alternative B compared with all NFS roads in the analysis areas would be a reduction of 0.06%. A change of this magnitude would be negligible. Table 3-23 displays the short-term to long-term change in sediment delivery from the proposed access routes and the percent change from all roads by subwatershed.

Table 3-23. Change in Sediment Delivery from Roads by Subwatershed for Alternative B

Subwatershed	Sediment from Access Routes – Alternative A (tons/year)	Sediment from Access Roads- Alternative B (tons/year)	Percent Change Sediment Delivery from Access Routes/Roads (%)	Sediment from All Roads (tons/year)	Percent Change Sediment Delivery from All Roads (%)
Upper Big Creek	0.00	0.00	0.0	80.90	0.00
Curtis Creek	0.22	0.02	-90.91	70.44	-0.28
Two-Bit Roaring	0.00	0.00	0.0	31.67	0.00
Warm Lake Creek	0.02	0.01	-50.0	64.22	-0.02
Halfway	0.03	0.01	-66.7	55.50	-0.04
Wardenhoff-Bear	0.01	0.00	-100.00	39.91	-0.03
Trapper Creek	0.00	0.00	0.0	77.11	0.00
Shirts	0.00	0.00	0.0	0.00	0.00
Kennedy	0.00	0.00	0.0	0.00	0.00
High Valley	0.00	0.00	0.0	0.00	0.00
Tripod-Murray	0.00	0.00	0.0	0.00	0.00
Total/Average	0.28	0.04	-85.82%	419.75	-0.06

Converting Closed Roads to Open Roads—Converting 6 miles of closed roads to open roads would have a discountable risk of a negligible effect on sediment delivery.

Approximately 1.91 miles of these roads occur within RCAs. These roads include NFS roads 420, 420A, 497E, 497K, 644Z, 644Z2, 644Z3, 644E, 644AB, 644B, and 467P. Except for NFS road 467P, which would be opened for motor vehicle use, these roads would remain closed to the public and be opened exclusively for administrative use by Idaho Power and the Forest Service. Unauthorized use would be discouraged on most of these roads by physical closures including gates and earthen berms.

Assumptions for this portion of the proposed action include that only that portion of each road that is needed to access powerline structures would be maintained for use. Only that portion of the road actually needed to access powerline structures would be cleared, graded, and have drainage improvements constructed.

Sediment delivery would be expected to decrease on NFS roads 420 and 420A with Alternative B. A physical review of NFS roads 420 and 420A has identified drainage problems that include rills in the road surface. Road drainage would be improved on these roads for structure access.

NFS road 467P currently has drainage problems because portions of the road are lower than the surrounding landscape. This road will have improvements made on the grade in order to make it drivable, thus improving drainage and reducing sediment delivery to streams.

Approximately 0.08 miles of NFS road 497E would be opened with Alternative B. This road is a minimum of 280 feet at 18% hillslope to Hargrave Creek. A minor increase in sediment delivery is possible from NFS road 497E in the temporary time frame (0-3 years) from ground disturbance resulting from grubbing, blading, and construction of drainage features.

This risk of increase in sediment delivery would only be expected to occur in the temporary time frame because all disturbed soils would be fertilized, seeded and mulched. Motorized use of this road would be limited to infrequent repair or replacement of the 4 structures so continued ground disturbance is unlikely. No change in sediment delivery from NFS road 644Z would be expected to occur within the short-term to long-term time frames.

NFS road 497K was reviewed for this project in 2011. The road surface and drainage is in good condition. No changes to this road would be expected to occur and sediment delivery should remain the same as the existing condition with Alternative B in all time frames.

Though the entire length of NFS road 644Z would be designated a Level 2 road with Alternative B, only approximately 3,000 feet of this 1.5-mile long road would be needed to access the 4 structures accessible from this road. Structures 328-00-235 through 328-00-237 are accessible from approximately 2,500 feet of NFS road 644Z accessed from the junction with NFS road 644E. Structure 328-00-242 is accessible from 500 feet of NFS road 644Z accessed from the junction of this road with FS Road 644.

This risk of increase in sediment delivery would only be expected to occur in the temporary time frame because all disturbed soils would be fertilized, seeded and mulched. Motorized use of this road would be limited to infrequent repair or replacement of the 4 structures so continued ground disturbance is unlikely. No change in sediment delivery from FS Road 644Z would be expected to occur within the short-term to long-term time frames.

No sediment delivery would be expected from changing NFS road 644Z2 from a level 1 to a level 2 road in the temporary, short-term, or long-term time frames. The nearest this road is to a stream channel is approximately 990 feet with approximately 10% slope. A study of 3 watersheds in eastern Washington found that 200-foot buffers would be effective to remove sediment in most situations, if the buffer were measured from the edge of the floodplain (USDA Forest Service 1993, pg. V28).

No sediment delivery would be expected from changing NFS road 644Z3 from a level 1 to a level 2 road in the temporary, short-term, or long-term time frames. The nearest this road is to a stream channel is approximately 880 feet with approximately 10% slope. A study of 3 watersheds in eastern Washington found that 200-foot buffers would be effective to remove sediment in most situations, if the buffer were measured from the edge of the floodplain (USDA Forest Service 1993, pg. V28).

No sediment delivery would be expected from changing NFS road 644E from a level 1 to a level 2 road. Approximately 0.05 miles of NFS road 644E would need to be opened to access Structure 328-02-278. The buffer between this road and the nearest downslope stream channel is approximately 3,900 feet with a hillslope of 15%. A study of 3 watersheds in eastern Washington found that 200-foot buffers would be effective to remove sediment in most situations, if the buffer were measured from the edge of the floodplain (USDA Forest Service 1993, pg. V28).

No sediment delivery would be expected from changing NFS road 644E from a level 1 to a level 2 road. Approximately 0.1 miles of NFS road 644A would need to be opened to access structure 328-00-176. The buffer between this road and the nearest stream channel is approximately 1,400 feet with 14% hillslope. A study of 3 watersheds in eastern Washington

found that 200-foot buffers would be effective to remove sediment in most situations, if the buffer were measured from the edge of the floodplain (USDA Forest Service 1993, pg. V28).

No sediment delivery would be expected from changing NFS road 644B from a level 1 to a level 2 road. Approximately 0.2 miles of NFS road 644A would need to be opened to access structure 328-00-174. The buffer between this road and the nearest stream channel is approximately 1,260 feet with 16% hillslope. A study of 3 watersheds in eastern Washington found that 200 foot buffers would be effective to remove sediment in most situations, if the buffer were measured from the edge of the floodplain (USDA Forest Service 1993, pg. V28).

Structure Maintenance and Replacement—No measurable sediment delivery would occur from this activity. Maintenance of the 23 structures accessible from open roads would require a small amount of ground disturbance. No more than 500 square feet (0.01 acres) would need to be disturbed per structure. Erosion control seeding and mulching would be required on all disturbed soils.

Realignment and ROW between structures 101 and 103—No measurable sediment delivery would be expected from realigning 1,060 feet of line. Chainsaws would be used to clear the ROW and would not result in ground disturbance.

Adding 1 structure between structures 100 and 101 would require up to a 20-foot by 25-foot pad, disturbing up to 0.01 acres of soil. This structure would be built approximately 350 feet from Johnson Creek on a hillslope of approximately 50%. Based on the WEPP:Road model, less than 1 pound per year of sediment would be delivered to Johnson Creek from constructing this structure. This sediment delivery would be limited to the temporary time frame because disturbed soil would be seeded and mulched immediately after construction and use.

Clean Water Act Compliance

Implementing Alternative B may require the Permittee to obtain necessary permits under the CWA. These permits may include Part 401 compliance from the Idaho Department of Environmental Quality, Part 401 Stream Alteration permitting from the Idaho Department of Water Resources and Part 404 permitting from the Army Corps of Engineers. These permits may be required where project related activities would require in-stream work at stream crossings. Also NPDES permitting may be required where generated sediment would be delivered to live streams. Field notes and WEPP:Road modeling included in the Project Record (District data) identifies those road segments proposed for designation in Alternative B that cross streams or adjacent to streams, which may deliver sediment to live streams.

3.4.3.1.2 Cumulative Effects

For the purposes of this analysis the cumulative effects area includes the sixth field subwatersheds within the South Fork Salmon River subbasin, as well as that portion of the sixth field subwatersheds outside of the South Fork Salmon River on National Forest Lands. Total acreage for the cumulative effects area is roughly 130,318 acres. Due to the negligible amount of sediment delivery expected from the Proposed Action, effects would not be expected except within the vicinity of the project in the 11 subwatersheds. No sediment delivery was modeled from activities in the High Valley, Tripod-Murray, Shirts, and Kennedy subwatersheds, except a negligible amount of sediment delivery possible from

grubbing and blading activities on NFS road 644Z and these effects limited to the temporary time frame.

Alternative A

Alternative A would continue to result in a small increase in sediment delivery to streams in conjunction with these projects in the temporary, short-term, and long-term time frames. This potential increase is due to cumulative increases in ground disturbance combined with continued erosion on unmaintained existing routes used to construct powerline structures.

Alternative B

In combination with past, ongoing, and foreseeable future activities, cumulative risks to increased sediment delivery in the temporary time frame (0-3 years) would be discountable due to the small extent of the ground disturbance in each subwatershed. In the short-term (3-15 years) and long-term (over 15 years) time frames, benefits of reduced sediment delivery, though expected, would be negligible at the subwatershed scale when combined with the effects of the other activities occurring and expected to occur within the cumulative effects area.

For Alternatives B, the slight temporary risk of sediment delivery would be expected due to ground disturbance associated with road maintenance, including drainage improvements on unauthorized routes that would be designated as forest development roads would be negligible. Opening level 1 NFS roads to access powerline structures would include a slight risk of sediment delivery due to grubbing and blading vegetated roads. This risk of temporary increases in sediment delivery would be largely mitigated by the use of sediment control BMPs as identified in Volume 1: National Core BMP Guide.

In the short-term to long-term time frames, Alternative B would reduce sediment delivery when effects are combined with other activities within the cumulative effects area. The improvements identified in Table 3-23, which displays the relative sediment delivery of each alternative, would result in a negligible improvement when combined with the other activities occurring and expected within the cumulative effects area.

3.4.3.2 Water Yield

3.4.3.2.1 Direct and Indirect Effects

Alternative A

Alternative A is not expected to affect ECA or water yield in any of the 11 subwatersheds within the analysis area. No access roads or routes would be opened for structure access. The following is an analysis of activities included in Alternative A:

Right-of-way Vegetation Maintenance—The existing ROW clearing would continue to be maintained periodically to keep vegetation from encroaching on the powerlines. As a result, this ROW would continue to contribute 307 acres to ECA.

Maintenance or Replacement of Existing Structures—Twenty-three of the existing structures would be maintained, repaired, or replaced using heavy equipment from existing open roads. The other 261 structures would only be repaired or replaced as needed without

the use of ground-based motorized equipment. Since these structures are within the ROW clearing, this activity would not change ECA.

Alternative B

Alternative B would have a negligible effect on ECA in the temporary (0–3 years) and short-term (3–15 years) time frame. This alternative would have no effect to ECA in the long-term time frame. Total ECA increase would be 0.0% to 0.1% for each subwatershed in the analysis area.

Right-of-way Vegetation Maintenance—The existing ROW clearing would continue to be maintained periodically to keep vegetation from encroaching on the powerlines. As a result, this ROW would continue to contribute 307 acres to ECA.

Maintenance or Replacement of Existing Structures—Maintenance or replacement of the 284 structures would not change ECA. These structures are all within the existing powerline ROW which is already identified as ECA.

Road Designation: The 115 separate segments (totaling 19 miles) that would be designated as National Forest System Roads would contribute a total of 403 acres of ECA across the project area, based on 3.5 acres per mile of road. Table 3-24 identifies the acres and percent ECA change for each subwatershed.

Overland Road Access—Providing 4 miles of overland road access would not contribute to ECA. Based on field observations of overland routes that have been used to repair structures within the last 20 years, no change in canopy would occur because only small trees were removed. All overstory trees were avoided. Thus the trees removed for these routes are primarily understory trees and would not measurably contribute to ECA.

Converting Closed Roads to Open Roads—Since the 11 segments of closed roads (totaling 6 miles) are already identified as ECA, opening these roads would not affect ECA.

Realignment and Right-of-way between Structures 101 and 103—The ROW clearing for this re-alignment would add 1.7 acres (1,060 feet by 70 feet), or 0.01%, to ECA in the Halfway subwatershed. Approximately 1,935 feet of existing ROW would be abandoned with the realignment. In the short-term to long-term time frame, this abandoned ROW would recover vegetatively. Over the next 100 years, ECA would be reduced by roughly 3.1 acres. Therefore, in the long range time frame the realignment would result in a net reduction of 1.4 acres, or 0.01%, ECA in the Halfway subwatershed.

Table 3-24. Acres and Percent Change in Effective Clearcut Acres by Alternative

Subwatershed	Subwatershed Size (acres)	Existing Condition		Alternative A		Alternative B				
		Existing ECA (Acres)	Existing ECA (%)	Change in ECA (acres)	ECA (%)	Closed to Open Road Conv. ECA (acres)	IPC Overland Access (acres)	IPC Roads Area (acres)	Change in ECA (%)	ECA Post Implementation (%)
Curtis Creek	17,482	1,591	9.1	0.0	9.1	0.0	0.0	13.7	0.1	9.2
Two-Bit Roaring	11,916	5,817	48.8	0.0	48.8	0.0	0.0	3.2	0.0	48.8
Warm Lake Cr	15,064	6,524	43.3	0.0	43.3	0.0	0.0	7.7	0.1	43.4
Halfway	16,266	1,211	7.4	0.0	7.4	0.0	0.0	15.1	0.1	7.5
Trapper Creek	9,274	2,321	25.0	0.0	25.0	0.0	0.0	0.0	0.0	25.0
Wardenhoff-Bear	24,864	11,744	47.2	0.0	47.2	0.0	0.0	15.1	0.1	47.3
Upper Big Creek	13,346 ^a	978	7.3	0.0	7.3	0.0	0.0	7.0	0.1	7.4
Kennedy	3,123 ^a	589	10.2	0.0	10.2	0.0	0.0	0.4	0.0	10.2
High Valley	5,760 ^a	465	8.1	0.0	8.1	0.0	0.0	.04	0.0	8.1
Tripod-Murray	5,779 ^a	122	2.1	0.0	2.1	0.0	0.0	0.0	0.0	2.1
Shirts	7,444 ^a	135	4.3	0.0	4.3	0.0	0.0	3.9	0.1	4.4
Project Area Total	130,318	31,497	24.3	0.0	24.3	0.0	0.0	66.2	0.1	24.4

^aOnly includes NFS lands and roads on NFS lands in the subwatershed.

Alternative B would add from 0.0% to 0.1% ECA to each subwatershed. There would be no measurable change in ECA in the Two-Bit Roaring, Trapper Creek, Kennedy, High Valley and Tripod-Murray subwatersheds. In the Curtis Creek, Warm Lake Creek, Halfway Creek, Wardenhoff-Bear, Upper Big Creek, and Shirts Creek subwatersheds, ECA change from Alternative B would be negligible, no more than 0.1% in each subwatershed. Curtis Creek, Halfway, Upper Big Creek, Kennedy, High valley, Tripod-Murray, and Shirts subwatersheds would continue to meet the Forest Plan desired condition of less than 15% ECA. The Two-Bit roaring, Warm Lake Creek, Trapper Creek and Wardenhoff-Bear subwatershed would still not meet the Forest Plan desired condition for ECA in the temporary to short-term time frames (Table 3-24).

Alternative B would not be expected to degrade or retard attainment of the desired condition for ECA in any subwatershed. ECA recovery from the Cascade Complex Wildfire in the temporary, short-term and long-term time frames would be expected to recover desired conditions at the same rate as Alternative A. Of the 11 subwatersheds in the analysis area, only the Warm Lake Creek and Wardenhoff-Bear subwatersheds show any increase in ECA among the subwatersheds that do not meet Forest Plan desired conditions.

The 0.0% to 0.1% increase in ECA from Alternative B would not affect the recovery rate from the Cascade Complex Wildfire. ECA generated by the 2007 wildfire would be expected to recover at a rate of 35% over the next fifteen years (USDA Forest Service 1974, Figure 11).

3.4.3.2.2 Cumulative Effects

The effects of either alternative on water yield/ECA would be limited to the eleven 6th field analysis areas. Therefore the area used to assess cumulative effects consists of the area that comprises these 6th field subwatersheds (Figure 3-2).

Alternative A

Since Alternative A would have no effect ECA in any of the 11 subwatersheds, this alternative would contribute to the cumulative effects for ECA or water yield.

Alternative B

There would be a negligible increase in ECA from Alternative B. When added to the existing and foreseeable future activities, this increase would still be negligible. The only cumulative changes in ECA, including Alternative B, in addition to the direct and indirect effects of the project, would be 0.2% in the Wardenhoff-Bear subwatershed and 0.3% in the Halfway subwatershed.

The 0.1% change in the Halfway subwatershed would result in a total ECA in this subwatershed of 7.8%, meeting the Forest Plan desired condition of less than 15% ECA.

The 0.1% change expected from all ongoing and foreseeable future activities in the Wardenhoff-Bear would be negligible in the temporary to short-term time frame and no affect in the long-term time frame. Alternative B would not retard attainment of desired conditions because ECA recovery from the Cascade Complex Wildfire would occur at the same rate, expecting approximately 35% recovery in 15 years of those acres burned in the wildfire.

3.4.3.3 Slope Stability

3.4.3.3.1 Alternative A

Slope stability would remain roughly the same under Alternative A as the existing condition. The slight increased risk from ground disturbance due to power pole maintenance, repair, or replacement would be limited to 2 structures on landslide prone areas, or a total of 0.02 acres.

Right-of-Way Vegetation Maintenance—As displayed in Table 3-25, the existing acres of powerline right of way on landslide prone area would remain the same.

Maintenance or Replacement of Existing Structures—Maintenance, repair, or replacement of structures with ground-based motorized equipment on landslide prone areas would be reduced to 2 structures, slightly reducing the risk of landslides due to excavation of a 20-foot by 25-foot flat area for the equipment to set on while working on the structure. Construction of these areas would result in a slight increase in landslide risk on 0.02 acres. Table 3-25 displays the effects of each alternative on slope stability as defined by acres of activities on landslide areas.

Table 3-25. Acres of Activities on Landslide Prone Areas by Alternative

Activity	Existing Condition	Alternative A	Alternative B
Powerline Right of Way	16 acres	16 acres	Temporary: 17 acres Short-term/long-term:16 acres
Proposed Access Roads	0.0 acres	0.0 acres	6 acres
Proposed Access Routes	0.0 acres	0.0 acres	0.0 acres
Number of Structures	Total: 16 Maintainable: 2	Total: 16 Maintainable: 2	Total: 15 Maintainable: 15
Total Landslide Prone	16 acres	16 acres	Temporary: 23 acres (6.1%) Short-term/long-term:22 acres (5.7%)

3.4.3.3.2 Alternative B

There would be a negligible increase in landslide risk with Alternative B. Project-related activities on landslide prone areas would total 23 acres, or roughly 6.1% of the analysis area in the temporary time frame, compared to 5.5% for Alternative A or the existing condition. Landslide risk would be minimized by frequent drainage structures that would be self-maintaining. These waterbars and dips would be large, since they would not be required to provide access for passenger vehicles. Also, disturbed soil would be immediately revegetated with certified weed free seed and mulch, preventing rill erosion.

Right-of-way Vegetation Maintenance—This project would continue to maintain the existing powerline ROW, except for approximately 1,900 feet of powerline corridor that currently accesses Structure 328-04-102. With the exception of this portion of the corridor, landslide risks from maintaining the powerline on 16 acres of landslide prone area would remain roughly the same as the existing condition.

Maintenance or Replacement of Existing Structures—This activity would have a negligible impact on landslide risk on 0.16 acres. Fifteen of the existing structures that would be maintained with Alternative B are on landslide prone areas as identified using the SINMap Model. When these are maintained, a slight risk of landslides could occur due to soil disturbance related to construction of a flat area for powerline maintenance and construction equipment. This equipment needs a flat area roughly 20 feet by 25 feet, or approximately 500 square feet (0.01 acres). Thus the total extent of landslide prone area affected by this activity would be 0.16 acres.

Road Designation—Designating 19 miles of road would result in a negligible increase in landslide risk on roughly 5.7 acres modeled as landslide prone. Potential landslide risk would be minimized by frequent drainage structures reducing concentration of water on landslide prone areas, the entire disturbed area would be revegetated using certified weed-free erosion control seed and mulch immediately, and these roads would be closed immediately after use, only opened again in the infrequent need of additional powerline maintenance.

Overland Road Access—Overland road access (4 miles) would not contribute to landslide risk. None of the proposed access routes cross identified landslide prone areas.

Conversion of Closed Roads Converted to Open Roads—Converting 6 miles of closed roads to open roads would not contribute to landslide risk. None of the closed (Level 1) roads proposed to be managed as open (Level 2) cross identified landslide prone areas.

Realignment and Right-of-way between Structures 101 and 103—This realignment would have a negligible impact on landslide risk on 0.9 acres of landslide prone areas in the temporary (0–3 years) time frame, with a net reduction of landslide risk on 1.3 acres in the short-term (3–15 years) and long term (>15 years) time frames. This activity would cut the trees on a right-of way corridor 70 feet wide on 0.9 acres of landslide prone area. Cutting these trees would reduce the effect of conifer roots buttressing soils on this site; however the shrubs would still be present to reduce the potential for rill erosion.

The existing powerline ROW from Structure 328-04-101 to 328-04-103 would be abandoned. This portion of the ROW crosses roughly 2.2 acres of landslide prone area. In the short-term to long-term time frames conifer overstory would be restored over time and thus the beneficial buttressing effect of deep roots would be restored on this area.

Structure 328-02-102, which is in an area that at extremely high risk of landslides, would be abandoned and an additional structure would be constructed west of Structure 328-04-101 in an area that is not at risk of landslides.

Forest Plan Standard LSST09, that requires proposals for utility and communication facilities outside designated communication sites or utility corridors shall be considered only after improvement of existing facilities to accommodate expanded use is analyzed and determined to be unreasonable, would be met. The existing location of Structure 328-04-102 is unsuitable due to an unstable hillslope. It would be unfeasible to construct an access road to this structure due to the steep slope and unstable soil conditions. Continuous dry ravel occurs at this site. This location is also a safety concern for both access to the structure and that its location is immediately above the Johnson Creek Road, a heavily traveled open road where rocks dislodged from this slope would come to rest. By relocating Structure 238-04-102 to a more stable site, access to the structure would be assured and safety hazards to travelers on the Johnson Creek Road reduced.

3.4.3.3.3 Cumulative Effects

The effects of any alternative on slope stability would be limited to the analysis area. Therefore the area used to assess cumulative effects consists of the 387.5-acre analysis area. The effects of all past activities were considered in disclosing the existing conditions and the direct and indirect effects presented above. Ongoing or foreseeable future activities that could potentially affect slope stability within the cumulative effects analysis area include Juniper Mountain Outfitters, Miscellaneous Salvage Sales, the Upper South Fork Salmon River Resource Management Project, The Salmon Fishing Season, the Johnson Creek Watershed Improvement Project, the Johnson Creek Rock Source, Personal Fuelwood Gathering, Activities on Private Land, the Lower Johnson Project, The Rustican Fuels Project and Tree Planting.

Overall, these projects would have a beneficial effect on slope stability, primarily due to the beneficial effects of reforestation, the Johnson Creek Watershed Improvement Project, and the Upper South Fork Salmon River Resource Management Project.

Alternative A

This alternative would have the same effects on slope stability as the baseline condition. Overall, the activities within the cumulative effects area would have a net beneficial effect

due to restoration activities identified in the Tree Planting, Johnson Creek Watershed Improvement Project and the Upper South Fork Salmon River Resource Management Project. The slight increased landslide risk of ROW clearing would be outweighed by the cumulative benefits of these projects.

Alternative B

Alternative B would have a negligible effect on slope stability. Activities in the cumulative effects area are expected to have a beneficial effect on slope stability over time, and Alternative B would not be expected to affect these benefits.

The benefits of reforestation would be outside of the activities proposed for Alternative B; however road obliteration proposed in the Johnson Creek Watershed Improvement Project and the Upper South Fork Salmon River Resource Management Project, as well as reforestation uphill of project-related activities would reduce the risk of water being concentrated on the cumulative effects area, reducing the risk of landslides.

3.4.3.4 Soil Quality

This section of the document summarizes the effects of the alternatives on long term soil productivity, with the discussions focusing on DD, and TSRC within the analysis areas.

3.4.3.4.1 Detrimental Disturbance

Alternative A

In the temporary (0–3 years) to short term (3–15 years), the No Action Alternative would continue to have 1 action area that does not meet Forest Plan Standard SWST02 (Unit 26) (Table 3-26). Over time, as the abandoned routes recover soil productivity in the long-term time frame, leaving DD from this project within Forest Plan Standards.

Alternative B

The Proposed Action would designate existing access routes as National Forest System Roads. Since these roads would be maintained as part of the Boise Forest transportation system, they would be considered TSRC rather than detrimentally disturbed. Existing detrimentally disturbed areas excluding these roads would continue to exist at least through the short-term time frame.

In the long-term time frame, existing uses that generate DD would be expected to continue, resulting in similar rates of DD.

Based on these assumptions that the powerline access routes would become TSRC and the other existing DD would continue near current rates, DD would range from 0% to 7.3% (Table 3-26). All activity areas for this project would meet Forest Plan Standard SWST02.

Table 3-26. Detrimental disturbance (DD)

DD Unit	Percent DD from Map	Percent DD Existing Access Routes	Total Percent DD	Meets SWST02?	Percent DD from Map	Percent DD Proposed Access Routes	Total Percent DD	Meets SWST02?
	Alternative A				Alternative B			
1	0	3.13	3.13	Yes	0	0.14	0.14	Yes
2	0	0	0	Yes	0	2.59	2.59	Yes
3	0.02	0.93	0.95	Yes	0.02	0.35	0.37	Yes
4	0	0.66	0.66	Yes	0	0.15	0.15	Yes
5	0	0.86	0.86	Yes	0	0	0	Yes
6	0	10.26	10.26	Yes	0	1.07	1.07	Yes
7	0	1.11	1.11	Yes	0	0	0	Yes
8	0.67	0.37	1.04	Yes	0.67	1	1.67	Yes
9	0.41	0.91	1.32	Yes	0.41	0.19	0.6	Yes
10	0	2.41	2.41	Yes	0	0	0	Yes
11	0	0	0	Yes	0	3.3	3.3	Yes
12	0	0	0	Yes	0	1.17	1.17	Yes
13	0	1.63	1.63	Yes	0	0.18	0.18	Yes
14	2.14	0.01	2.15	Yes	2.14	0	2.14	Yes
15	0.62	4.4	5.02	Yes	0.62	0.67	1.29	Yes
16	0	1.54	1.54	Yes	0	0	0	Yes
17	1.84	0.04	1.88	Yes	1.84	0	1.84	Yes
18	0	0.01	0.01	Yes	0	0	0	Yes
19	0	0.32	0.32	Yes	0	0.68	0.68	Yes
20	0	0.45	0.45	Yes	0	0.29	0.29	Yes
21	0.21	1.33	1.54	Yes	0.21	0.03	0.24	Yes
22	0	0	0	Yes	0	8.6	8.6	Yes
23	0	0.34	0.34	Yes	0	0.42	0.42	Yes
24	0	0	0	Yes	0	0	0	Yes
25	0.2	0.58	0.78	Yes	0.2	0	0.2	Yes
26	0	22.71	22.71	No	0	0	0	Yes
27	0	0.52	0.52	Yes	0	0	0	Yes
28	0.04	2.07	2.11	Yes	0.04	0.1	0.14	Yes
29	0	3.11	3.11	Yes	0	0	0	Yes
30	1.48	1.2	2.68	Yes	1.48	0	1.48	Yes
31	0	0	0	Yes	0	0.3	0.3	Yes
32	0.28	1.07	1.35	Yes	0.28	0.3	0.58	Yes
33	0	3.17	3.17	Yes	0	0	0	Yes
34	0	1.06	1.06	Yes	0	0	0	Yes
35	0	2.44	2.44	Yes	0	0	0	Yes
36	0	0	0	Yes	0	7.27	7.27	Yes
37	0.67	0	0.67	Yes	0.67	1.34	2.01	Yes
38	0	0	0	Yes	0	2.22	2.22	Yes
39	0	0.63	0.63	Yes	0	0.63	0.63	Yes

3.4.3.4.2 Cumulative Effects

The cumulative effects area for DD is the area combining the 39 analysis areas, a total of 806 acres. This area was chosen because site-specific soil conditions effects would be limited to the area of disturbance. Activities in the cumulative effects area that could affect DD include Miscellaneous Salvage Sales, the Lower Johnson Project, Personal Fuelwood, the Salmon Fishing Season, and the Johnson Creek Rock Source.

Alternative A

Alternative A, in combination with other activities within the cumulative effects area, would meet SWST03 with the exception of DD Unit 26, which currently has 22.71% DD. DD would continue to exceed Forest Plan Standard SWST02 within this unit in the temporary to short-term time frame due to DD from the old powerline access routes. Ongoing and foreseeable future activities within the cumulative effects area would not contribute measurably to DD.

Alternative B

Alternative B, in combination with other activities within the cumulative effects area would continue to meet Forest Plan Standard SWST02 in the temporary, short-term, and long-term time frames. Activities within the cumulative effects area would have limited effects to DD and Alternative B would result in a maximum DD of 7.27%, well within the 15% threshold for DD required by Standard SWST02.

3.4.3.4.3 Total Soil Resource Commitment

Alternative A

TSRC would be expected to continue at near the existing rate of 1.2% in the temporary (0-3 years), short-term (3-15 years), and long-term (>15 years) time frames (Table 3-27). The existing routes used to access the powerline would continue to be considered detrimentally disturbed. The existing transportation system would continue to exist, producing most of the existing TSRC.

Alternative B

Proposed roads are described as TSRC because they will be part of the National Forest System road network. These roads would be managed as part of the transportation system for the Forest. Since these roads would have a travelway width of only 10 to 12 feet, estimated area for these roads would be approximately 3.5 acres/mile (29 x 5,280/43,560). There are approximately 7.0 miles of proposed National Forest System road outside of the powerline ROW, or approximately 24.5 acres in a TSRC condition (Table 3-27).

TSRC from the proposed road system would be approximately 2.0% of the activity area.

Table 3-27 displays TSRC for the Action Area by alternative. Alternative B would meet Forest Plan Standard SWST03.

3.4.3.4.4 Cumulative Effects

The cumulative effects area for TSRC is the analysis area, a total of 806 acres. This area was chosen because site-specific soil conditions effects would be limited to the area of disturbance. Activities in the cumulative effects area that could affect TSRC include special use permitting, miscellaneous recreation and road use and maintenance. All alternatives would meet SWST03, which requires that TSRC be no more than 5% of an activity area, or that any activity area that currently has more than 5% TSRC would be restored toward 5% TSRC.

Activities in the cumulative effects area that could affect TSRC include Miscellaneous Salvage Sales, Personal Fuelwood, the Salmon Fishing Season, and the Johnson Creek Rock Source.

Alternative A

TSRC would still be within the requirements of STST03. TSRC would continue to occupy less than 5% of the Cumulative Effects Area. Alternative A, the No Action Alternative, would not propose any new activities.

Alternative B

TSRC would still be within the requirements of STST03. TSRC would continue to occupy less than 5% of the Cumulative Effects Area.

Table 3-27. Total soil resource commitment (TSRC)

Activity Area (acres)	Alternative A			Alternative B			
	Existing Roads (acres)	TSRC Area (acres)	Total Existing Condition/No Action Alternative TSRC (%)	Existing Roads (acres)	TSRC Areas (acres)	Proposed Roads (acres)	Total Proposed Action TSRC (%)
806	7.3	2.0	1.2	7.3	2.0	24.5	4.2

3.4.3.5 Wetlands and Floodplains

3.4.3.5.1 Direct and Indirect Effects

Alternative A

There are no wetlands within the analysis area, based on the Boise National Forest wetland GIS layer; therefore Alternative A can have no effect on wetlands.

Alternative A would have no effect on floodplains. No changes from the existing condition would occur with this alternative except that existing access routes would be abandoned and the associated fords would continue to recover riparian vegetation.

Alternative B

There are no wetlands within the analysis area, based on the Boise National Forest wetland GIS layer; therefore Alternative B can have no effect on wetlands.

Alternative B would not affect floodplains. The fords that exist on access routes would be maintained when needed for access to structures for maintenance, repair, or replacement. No change in the location of these structures would occur, with the exception of the replacement of Structure 328-04-102 with a structure on the other side of Structure 328-04-101. Neither of these structure sites is within a floodplain.

3.4.3.5.2 Cumulative Effects

Alternatives A and B

Since neither Alternative A nor Alternative B would affect wetlands or floodplains, there can be no cumulative effects from either of these Alternatives on wetlands or floodplains.

3.5 Botanical Resources

Issue: Proposed activities have the potential to affect botanical resources.

Indicators:

- Effects to Threatened Species: Spalding’s catchfly and Ute ladies’-tresses
- Effects to Candidate Species: whitebark pine (*Pinus albicaulis*)
- Effects to Sensitive Species: Idaho primrose (*Douglasia idahoensis*), Sacajawea’s bitterroot (*Lewisia sacajaweanana*), small phacelia (*Phacelia minutissima*)
- Effects to Forest Watch Species: linear-leaved moonwort (*Botrychium lineare*), least moonwort (*Botrychium simplex*), evergreen leathery grape-fern (*Botrychium multifidum*), scalloped moonwort (*Botrychium crenulatum*), and rattlesnake fern (*Botrychium virginianum*)

The potential for effects on botanical species is documented in the project record (see Biological Evaluation and Botanical Specialist Report). This section summarizes that analysis, focuses on effects of the alternatives to botanical resources, and addresses the issue that proposed management activities have the potential to affect botanical resources.

The analysis area used for the assessment of Threatened, Endangered, Proposed, Candidate, Sensitive, or Forest Watch species (TES/W) consists of the 36.8 miles of power line that would be affected under the action alternative. The analysis area for the Project used an additional 100-foot buffer beyond the Project area boundary to include those documented TES/W plant locations that are within a reasonable distance of the Project area or those found in nearby habitat that may occur in the Project area.

3.5.1 Affected Environment

No known populations of any TES/W occur within the project area. The closest known documented TES/W plants are just outside the project area—Sacajawea’s bitterroot, Idaho primrose, and whitebark pine. Sacajawea’s bitterroot and Idaho primrose are found just outside the analysis area along the high elevation ridges that surround and cross the project area. Whitebark pine are found within short distances of the analysis area. These species have the highest potential to occur within the analysis area. Other TES/W plant species with high likelihood of potential habitat in the project area are summarized in Table 3-28. Nine rare plant species were identified as possibly having potential habitat in the project area: narrow

leaf moonwort, least moonwort, scalloped moonwort, leathery grapefern, rattlesnake fern, small phacelia, Idaho primrose, Sacajawea's bitterroot, and whitebark pine.

Although there is potential habitat in the project area, a limited field survey in 2012 revealed no whitebark pine. Proposed activities of the Project may impact unknown plants. Project activities will take place at lower elevations in the watersheds than is typical of this species. While habitat or populations of whitebark pine may be impacted, this would not contribute to a loss of viable populations or biodiversity

Table 3-28. Rare Plant Survey List with Potential Habitat and Status for the Boise National Forest (U.S. Fish and Wildlife Service [USFWS] Listed, Proposed and Candidate Species, Region 4 Sensitive species, and Boise National Forest Watch species)

USFWS Listed/Proposed/ Candidate Species	Habitat Description	Habitat Present in Project Area?
<i>Pinus albicaulis</i> Whitebark Pine (Candidate)	Thin, rocky, cold soils at or near timberline of montane forests; 5,900–12,140 feet	YES ^a
<i>Silene spaldingii</i> ^b Spalding's catchfly (Threatened)	Mesic, perennial grassland/prairie habitats, especially canyon grasslands with Idaho fescue/prairie junegrass; deep-mod deep soil, granitic to basalt; 1,500–5,000 feet	NO
<i>Spiranthes diluvialis</i> ^b Ute ladies'-tresses (Threatened)	Wetland and riparian habitat, including springs, wet meadows, and river meanders from 700-7,000 feet; usually open forb or shrub habitats adjacent to riverine systems where soil moisture is close to the surface	NO
Region 4 Sensitive Species	Habitat Description	Habitat Present in Project Area?
<i>Allium tolmiei</i> var. <i>persimile</i> Tolmie's onion	Mixed semiarid shrub and grasslands in swales or ephemeral watercourses or seep areas with basaltic soils; seasonally wet soil but dry by mid-to-late summer; perched seeps or saturated sites mainly on south aspect slopes; 3,000–5,000 feet	NO
<i>Bryum calobryoides</i> Beautiful bryum	Low gradient wetlands, moist soil or rocks at montane-to-subalpine elevations; meadows-to-moist cliff sides; 5,000 feet or higher	NO
<i>Douglasia idahoensis</i> Idaho primrose	North and east facing slopes on open, subalpine ridges in whitebark pine and subalpine fir forests; 7,200–9,000 feet.	YES ^a
<i>Lepidium papilliferum</i> Slickspot peppergrass	Small-scale openings in sagebrush-steppe habitat; occurs in microsites where soils have a higher clay and sodium content than adjacent areas; low-to-mid elevation (up to 5,300 feet)	NO
<i>Lewisia sacajawean</i> Sacajawea's bitterroot	Relatively sparse upper slopes and ridgetops; may have overstory; fractured bedrock, granitic soils near late snowbanks; 5,400–9,500 feet	YES ^a
<i>Phacelia minutissima</i> Small Phacelia	Sagebrush and aspen stands with late snow banks or seeps; dense false hellebore patches; downslope from aspen; open understory; 5000–8200 feet	YES ^a
<i>Pinus albicaulis</i> Whitebark pine (Candidate)	Thin, rocky, cold soils at or near timberline of montane forests; 5,900–12,140 feet	YES ^a
<i>Pyrrcoma insecticurus</i> Bugleg goldenweed	Vernally wet meadows and flats with shallow, basalt soils; grassland/sagebrush communities; 5,000–6,500 feet.	NO
Forest Watch Species	Habitat Description	Habitat Present in Project Area?
<i>Allium madidum</i> Swamp onion	Coniferous forest zones, 3,800–6,500 feet; seasonally moist meadows, watercourses, and around vernal pools; usually found on basalt substrate	NO
<i>Allium validum</i> Tall swamp onion	Mid-to-high elevation riparian areas, forested seeps, margins of streams in subalpine fir habitat, boggy subalpine lake edges; 5,500–8,100 feet	YES ^a
<i>Allotropa virgata</i> Sugarstick	Llodgepole pine (<i>Pinus contorta</i>) stands with grouse huckleberry (<i>Vaccinium scoparium</i>) understory; gentle-to-moderate slopes with southeast to southwest aspects; soils coarse granitic; 5,000–7,000 feet.	NO

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<i>Ancistrocarphus filagineus</i> (<i>Stylocline filaginea</i>) Woolly stylocline	Open, dry, or vernal moist places at mid-elevations; also found on shallow basalt soils with cindery gravel on the surface; sometimes with low sagebrush; 2,000–6,000 feet. (No longer on Conservation Data Center list and not addressed in analysis; but still listed in Forest Plan.)	NO
<i>Astragalus atratus</i> var. <i>inseptus</i> Mourning milkvetch	Flats-to gentle slopes in thin, clay soil over basalt or rocky plains with clay and clay loam soil. <4,800 feet.	NO
<i>Botrychium crenulatum</i> Scalloped moonwort	Moist meadows, creek banks, shrub- or tree-dominated wetlands, springy spots, and wet roadside areas; 3,900–8,200 feet	YES ^a
<i>Botrychium lineare</i> Narrow leaf moonwort	Wide variety of habitats, including meadows and forested types; known from sea level to 10,000 feet	YES ^a
<i>Botrychium multifidum</i> Leathery grapefern	Evergreen; widespread, mainly in fields; sea level to 9,800 feet; is an indicator for other <i>Botrychium</i> spp.	YES ^a
<i>Botrychium simplex</i> Least moonwort	Wide variety of habitats, including meadows and forested types; 4,000–6,600 feet or more; may be at lower elevations on the Boise National Forest	YES ^a
<i>Botrychium virginianum</i> Rattlesnake fern	Deciduous; common to abundant, especially in shaded forests and shrubby second growth; rare or absent in arid regions; sea level to 4,900 feet (5,200 feet on Boise National Forest); most geographically widespread <i>Botrychium</i> sp. in North America and is an indicator for other <i>Botrychium</i> spp.	YES ^a
<i>Carex buxbaumii</i> Buxbaum's sedge	Swamps, meadows, peatlands, bogs, marshes and other wetlands; loose colonies around edge of wetland habitats; 6,400–9,500 feet	NO
<i>Carex flava</i> Yellow sedge	Moist-to-wet habitats, such as open meadows, fens, partially shaded shrub carrs, swamps, on lime-rich soils; sea level to 6,500 feet	NO
<i>Carex livida</i> Pale sedge	Calcareous sphagnum peatlands, fens, bogs, and swampy forested riparian types; 2,800–6,000 feet or higher; also mid-to-high elevation subalpine types	NO
<i>Carex parryana</i> var. <i>brevisquama</i> (<i>C. aboriginum</i>) Indian Valley sedge	Small grass-dominated gaps in mixed scrub–shrub riparian habitat; soils ephemerally moist, seasonal sub-irrigation; silty clay loam to sandy, gravelly; 2,800–3,400 feet	NO
<i>Carex stramineiformis</i> Mt. Shasta sedge	Open, rocky, gravelly slopes often near persistent snowbanks, near or above timberline; 6,500–12,000 feet or higher	NO
<i>Cicuta bulbifera</i> Bulb-bearing water hemlock	Floating hummocks in marshes, bogs, wet meadows, lake margins, shallow standing water; 4,000–6,000 feet; mid-to-lower elevation lake or peatland habitats on Boise National Forest	NO
<i>Cypripedium fasciculatum</i> Clustered lady's slipper	Open, mixed conifer forest, mostly in western hemlock and western red cedar in Idaho; in duff or along shaded streams; elevation limits unknown	NO
<i>Drosera intermedia</i> Spoon-leaved sundew	Bogs, sphagnum-dominated fens, and moist acid, sandy soils; often with livid sedge (<i>Carex livida</i>), fewflower spikerush (<i>Eleocharis pauciflora</i>); 5,000–7,000 feet	NO
<i>Epilobium palustre</i> Marsh willowherb	Wet meadows along streams, lake shores; imperfectly drained moist areas	NO
<i>Epipactis gigantea</i> Giant helleborine orchid	Springs and seeps, often thermal; 1,700–6,500 feet	NO
<i>Helodium blandowii</i> Blandow's helodium	Mats and hummocks in montane peatlands, fens, and bogs; under sedges and shrubs in mires or along streams in mires	NO
<i>Hierochloa odorata</i> Sweetgrass	Moist slopes, meadows, and streambanks from the foothills to subalpine elevations	NO
<i>Mimulus clivicola</i> Bank monkeyflower	Open pockets of moist, exposed mineral soil created by disturbance; southern exposures, steep slopes (generally >60%), and spring moisture; associated species are variable; basalts; 2,500–7,300 feet	NO
<i>Rhynchospora alba</i> White beakrush	Sphagnum bogs and peatlands; 2,000–6,000 feet	NO

<i>Sanicula graveolens</i> Sierra sanicle	Open or lightly wooded slopes or flats; found on both granitics and basalts; 2,000–6,500 feet	NO
<i>Scheuchzeria palustris</i> Pod grass	Sphagnum bogs and peatlands; 2,000–7,000 feet	NO
<i>Schoenoplectus subterminalis</i> Swaying bulrush	Mat-forming, rhizomatous aquatic (can be terrestrial); found near rivers, ponds, lakes, streams, bogs, standing water, valleys, foothills, and montane; near sea level to more than 7,000 feet	NO
<i>Sedum leibergii</i> Leiberg stonecrop	Cliffs and rocky slopes with west-northwest aspect; often with Douglas-fir (<i>Pseudotsuga menziesii</i>); 5,000–9,000 feet	NO
<i>Triantha occidentalis</i> ssp. <i>brevistyla</i> (<i>Tofieldia glutinosa</i> ssp. <i>brevistyla</i>) Sticky tofieldia	Wet meadows, streambanks, peatlands, and marshes; sea level to 7,900 feet; found in Alta., British Columbia; Alaska; Idaho, Oregon, and Washington	NO
<i>Vesicarpa</i> (<i>Sphaeromeria</i>) <i>potentilloides</i> var <i>nitrophilum</i> Cinquefoil tansy/Fivefinger chickensage	Clay or clay loam soils on edges of vernal pools or vernal moist alkaline flats and seeps; <6,500 feet	NO

^aNo documented sites are known from project area, but potential habitat/or populations may occur in project area.

^bInformation on these species/ potential habitat is for project file only, no ESA Section 7 Consultation with USFWS is required at this time.

3.5.2 Environmental Consequences

Table 3-29 displays a summary of the effects of each alternative to each botanical indicator.

Table 3-29. Effects of each alternative to the botanical indicators

Vegetation Indicator	Alternative A	Alternative B
Threatened Species: Spalding’s catchfly and Ute ladies’-tresses	NE	NE
Candidate Species: Whitebark pine Sensitive Species: Idaho primrose and Sacajawea’s bitterroot Forest Watch Species: narrow leaf moonwort, least moonwort	MII	MII
Sensitive Specie: small phacelia Forest Watch Species: evergreen leathery grape-fern, scalloped moonwort, and rattlesnake fern	NI	NI

Note: NE=No effect; MII= May impact individuals but is not likely to cause a trend to federal listing or loss of viability; NI=No impact

3.5.2.1 Direct, Indirect, and Cumulative Effects

For the 2 threatened species, 1 of the sensitive species, and 3 of the Forest Watch species, no effects or no impacts are expected for either Alternative A or B. For 1 candidate species, 2 of the sensitive species, and 2 of the Forest Watch species, project activities from both Alternatives A and B may impact individuals but is not likely to cause a trend to federal listing or loss of viability.

No potential habitat exists for any federally listed plant species in the Project area. Therefore, no effects (NE) and no cumulative effects to any populations or potential habitat for any listed plant species are expected as a result of implementing the alternatives. There should be no loss of population viability or habitat for any candidate, sensitive, or Forest Watch plant species. There would be no cumulative effects to any populations or potential habitat for any candidate, sensitive or Forest Watch plant species.

3.6 Cultural Resources

3.6.1 Background

The NHPA requires federal agencies to consider the effects of their activities and programs on historic properties. Federal activities and programs are defined as “undertakings” by the implementing regulations (36 CFR 800).

Historic properties are significant cultural resources (i.e., sites) that are included in or eligible for inclusion in the National Register of Historic Places. Direct and indirect effects to historic properties from an undertaking are determined by applying NHPA’s criteria of effect. The NHPA defines an Adverse Effect as one that diminishes the integrity of a historic or prehistoric site’s location, design, setting, materials, workmanship, feeling, or association. Adverse effects include physical destruction, damage, or alteration to all or part of a site, and/or the introduction of visual, audible, or atmospheric elements that are out of character with the site, or alter its setting (36 CFR 800.5[a][2][i-vii]). Criteria of effect are only applied to those sites determined eligible for the National Register.

If an undertaking will not alter the characteristics of a historic property that make it eligible for listing on the National Register then a No Effect determination may be reached. No Adverse Effect determinations are applied when the Forest Service, in consultation with SHPO, determine that the effects do not meet the criteria of adverse effect or the undertaking is modified or conditions are imposed to avoid adverse effects. Should a federal agency determine that an activity will have an adverse effect on a historic property, a Memorandum of Agreement (MOA) is developed with consulting parties to resolve (i.e., mitigate) the effect.

3.6.2 Affected Environment

Line 328 traverses lands rich with cultural resources, ranging from Native American campsites to homesteads, ranches, mining camps, ranger stations, and Civilian Conservation Corps camps. One of the more well-known historic sites associated with Line 328 is the Stibnite mining complex east of Yellow Pine.

In 1939, President Franklin D. Roosevelt signed the Strategic Materials Act in anticipation of World War II. This bill authorized \$100 million to be spent over the next 4 years for the purchases of stockpiles of mineral commodities that the Army and Navy Munitions board classified as strategic. The bill also authorized exploration of domestic resources of these minerals. That year, the U.S. Geological Survey and U.S. Bureau of Mines began separate projects to investigate the antimony deposits at Yellow Pine Mine.

During the war years, Stibnite operated year-round. In 1944, the mine was the largest producer of antimony and tungsten in the country and the largest producer of gold in Idaho. Tungsten was used to make steel alloys for cutting tools, magnets, valves and valve seats, armor-piercing projectiles, and erosion-resistant gun liners. It was also used in lamp and radio-tube filaments, X ray targets, and electrical contact points.

Line 328 was constructed in 1943 to support Stibnite and the war effort. It originally traveled from Emmett to Stibnite, although that segment of the line from Yellow Pine to Stibnite has been removed. Today, the primary purpose of the line is to provide power to the Warm Lake and Yellow Pine areas.

Approximately 9 miles of the Idaho Power ROW have been surveyed for cultural resources. These surveys have documented 28 cultural resources sites within the Project area. Of these, 15 sites are eligible and 8, including Line 328 itself, are potentially eligible for listing on the National Register of Historic Places. Line 328 is eligible because of its association with World War II strategic metal production at Stibnite. Five sites are ineligible for the National Register but may be of concern to Indian tribes.

In 2012, Idaho Power archeologists completed condition assessments for selected previously recorded sites within the Area of Potential Affect (APE) for this project. They also completed new survey along sections of the route where there is a high probability for cultural resources. The APE is the geographic area within which an undertaking (i.e., maintenance activities) may indirectly or directly affect historic properties.

These assessments confirmed that Line 328 structures (i.e., wood poles) were constructed on several eligible and potentially eligible sites. Maintenance activities, specifically overland access to structures and structure replacements on sites, can cause ground disturbance that affects characteristics that make them eligible for the National Register and /or important to Indian tribes.

3.6.3 Environmental Consequences

3.6.3.1 Direct and Indirect Effects

3.6.3.1.1 Alternatives A and B

Under both alternatives, historic properties with Idaho Power structures within their site boundaries would require protection during certain maintenance activities that may occur over the course of the 20-year permit. At a minimum, if cultural resources are encountered during implementation of this project, all ground-disturbing activities would cease until the Forest Archeologist is notified and the Idaho SHPO and potentially affected Indian tribes are consulted.

Structure replacements on historic properties would require additional site specific consultation with the Idaho SHPO and potentially affected Indian tribes prior to implementation. Furthermore, a qualified archeologist would be required to monitor the implementation of structure replacements on these sites.

3.6.3.2 Cumulative Effects

3.6.3.2.1 Alternatives A and B

No cumulative impacts from implementing either alternative are expected if the design features for the protection of historic properties are implemented over the course of the 20-year special use permit.

3.7 Noxious Weeds

Issue: Proposed activities have the potential to increase noxious weed spread.

Indicators:

- Potential weed introduction and expansion risk

The potential for effects for noxious weeds is documented in the project record (see Noxious Weeds Report). This section summarizes that analysis, focuses on effects of the alternatives to noxious weeds, and addresses the issue that proposed management activities have the potential to increase noxious weed spread.

The analysis area used for the assessment of noxious weeds consists of the Project area.

3.7.1 Affected Environment

Noxious weeds exist within the Project area on both the Cascade and Emmett Ranger Districts. Those of concern include rush skeleton weed (*Chondrilla juncea*), spotted knapweed (*Centaurea stoebe*), houndstongue (*Cynoglossum officinale*), and Canada thistle (*Cirsium arvense*). Mostly, they occur on roadsides and trails and in developed and dispersed camping areas. Other populations may occur where there are areas of ground disturbance.

3.7.2 Environmental Consequences

Table 3-30 displays a summary of the effects of each alternative to each noxious weed indicator.

Table 3-30. Effects of each alternative to the noxious weeds indicators

Indicator	Alternative A	Alternative B
Potential weed introduction and expansion risk	No change	No change (mitigation)

3.7.2.1 Direct and Indirect Effects

3.7.2.1.1 Alternative A—No Action

Under this alternative, no new effect to the distribution and status of noxious weeds in the Project area would occur given that there would be no new ground-disturbing management activities or changes to the transportation system. Ongoing activities that affect noxious weeds, such as fuelwood gathering, would continue. The Integrated Weed Management approach, which includes prevention, treatments, restoration, and monitoring for a weed treatment program, would continue. No direct increase in suitable habitat for noxious weeds from Project-related activities would occur under Alternative A.

3.7.2.1.2 Alternative B

Implementing this alternative would increase the potential for introducing new noxious weed species and/or spreading known noxious weed species in the Project area based on the proposed ground-disturbing activities and modification of the transportation system. Ground-disturbing activities, including road construction, and overland access would occur with implementation of this alternative. Road activities, including new construction, reconstruction, maintenance, and decommissioning, would be expected to create new establishment sites for noxious weeds. Additionally, the miles of NFS roads open to motorized wheeled vehicles would increase with this alternative, thereby increasing the potential of noxious weed spread along these road corridors in the Project area.

The degree of these impacts is difficult to estimate because it depends on factors such as weather, proximity of existing weed sources, transportation of weed seeds, and unpredictable disturbances created either naturally or by man. However, Forest Plan standards, as well as the design features that ensure appropriate off-road equipment is cleaned and that seed mixes, organic matter, and aggregate brought into the project area are weed-free, would minimize the potential for noxious weed introduction, dispersal, or establishment. The design features would also be expected to lessen the potential for noxious weed introduction or spread because they require applying approved seed and/or mulch to disturbed areas following road activities and landing reclamation activities. In addition, the Boise National Forest Noxious Weed monitoring and treatment program is anticipated to continue.

3.7.2.2 Cumulative Effects

3.7.2.2.1 Alternatives A and B

Since Alternative A would not have a direct or indirect effect, there would be no cumulative effects.

The ongoing and reasonably foreseeable Projects in the analysis area have the potential to cumulatively impact noxious weed conditions as a negative result from ground-disturbing activities that will create additional establishment sites and additional miles of NFS routes, as well as human and wildlife activities providing the mechanism for seed dispersal. The above described design features would minimize potential impacts.

3.8 Inventoried Roadless Areas

Issue: Proposed activities have the potential to affect inventoried and Idaho Roadless areas.

Indicators:

- Changes to natural integrity, apparent naturalness, and remoteness
- Changes to solitude, or opportunities for primitive recreation
- Consistency with Idaho Roadless Rule

The potential for effects on roadless areas is documented in the project record (see Roadless Resource Technical Report). This section provides a summary of that analysis. This section focuses on effects of the alternatives to roadless resources, and addresses the issue that proposed management activities have the potential to affect inventoried and Idaho Roadless areas.

The analysis area used for the assessment of roadless resources includes a 15,058-acre area encompassing those portions of IRAs that are within 0.5 miles of the power line corridor (Figure 3-3). A distance of 0.5 miles was selected because this is the approximate distance that the sounds associated with implementation could travel and potentially affect wilderness attributes. The section of the power line located to the southwest on the Emmett Ranger District does not occur within 0.5 miles of any IRA and, therefore, is not included in this analysis area and not reflected in Figure 3-3.

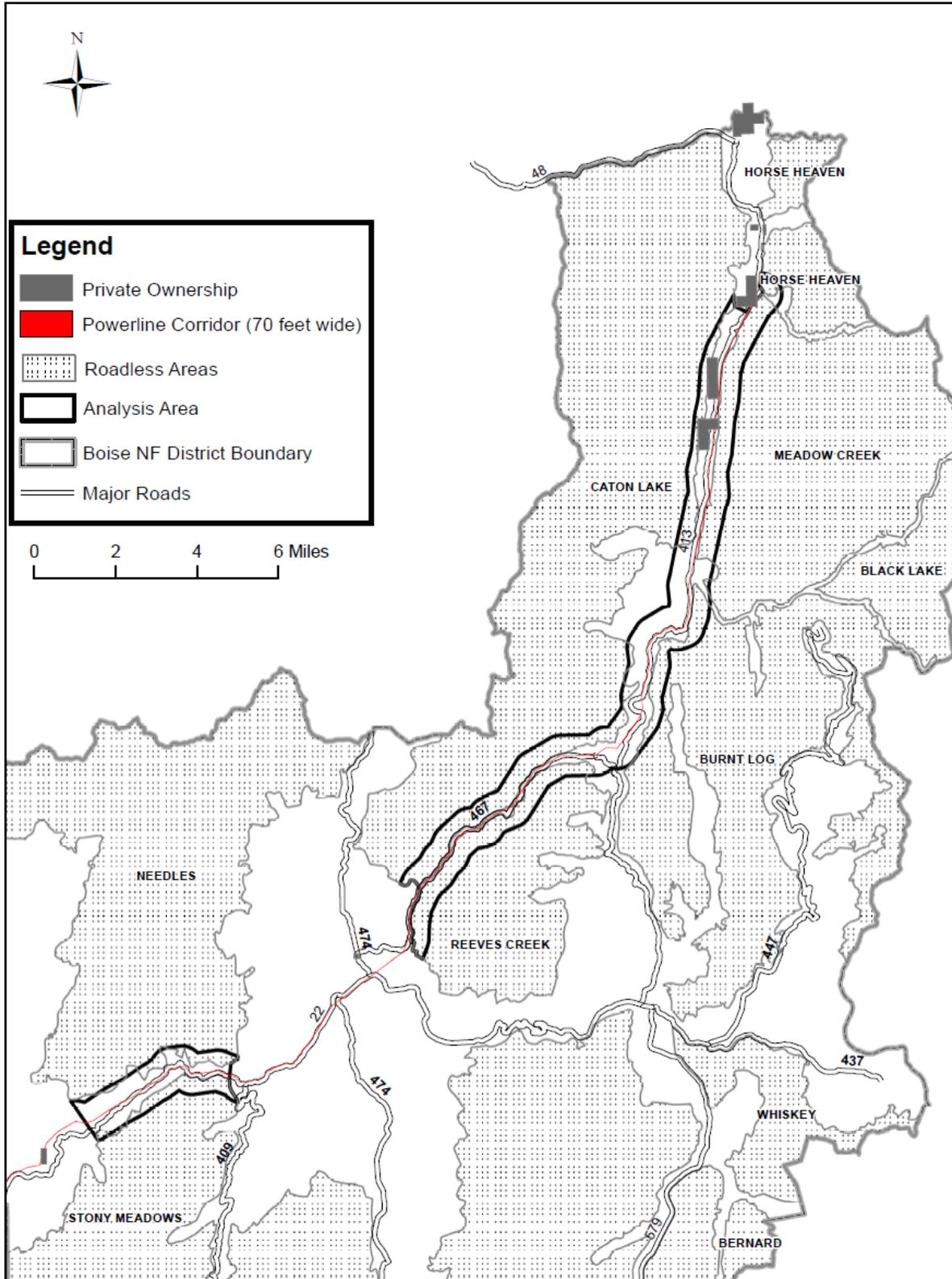


Figure 3-3. Location of power line corridor and analysis area for inventoried roadless areas

3.8.1 Affected Environment

Small portions of several different IRAs occur in the analysis area: Horse Heaven, Meadow Creek, Caton Lake, Burnt Log, Reeves Creek, Needles, and Stony Meadows IRAs. Appendix C (USDA Forest Service 2003, pp. C-209, C-217, C-172, C-47, C-122, C-222, and C-139) of the Final EIS for the Southwest Idaho Ecogroup Land and Resource Management Plans (July 2003) provides an overview description of the various IRAs in the analysis area.

The discussions that follow focus on the effects of the alternatives on the wilderness attributes of the various IRAs, with a separate discussion specific to compliance/noncompliance of the alternatives with the Idaho Roadless Rule.

In 2005, the Forest Service developed a monitoring protocol for wilderness character (Landres et al. 2005) using the “wilderness qualities” of natural, undeveloped, untrammeled, and opportunities for primitive recreation or solitude. These qualities are very similar to, and correlate closely with, the wilderness attributes described in the 2010 Forest Plan (USDA Forest Service 2010a). Table 3-31 provides a crosswalk for the wilderness qualities described in the 2005 monitoring protocol with the wilderness attributes discussed in this assessment.

Table 3-31. Crosswalk of wilderness qualities to wilderness attributes

Wilderness Qualities from Wilderness Character Monitoring Protocol (Landres et al. 2005)	Wilderness Attributes from Wilderness Attribute Rating System
Untrammeled —monitors modern human activities that directly control or manipulate the components or processes of ecological systems inside wilderness	Natural Integrity
Natural —monitors both intended and unintended effects of modern people on ecological systems inside wilderness since the time the area was designated	Natural Integrity Apparent Naturalness
Undeveloped —monitors the presence of structures, construction, habitations, and other evidence of modern human presence or occupation	Apparent Naturalness Remoteness
Outstanding opportunities for solitude or a primitive and unconfined type of recreation —monitors conditions that affect the opportunity for people to experience solitude or primitive, unconfined recreation in a wilderness setting	Solitude Opportunities for Primitive Recreation

Natural Integrity/Apparent Naturalness/Remoteness—Natural integrity, apparent naturalness, and remoteness are generally intact on the majority of those IRA acres within the 15,058-acre analysis area with evidence of human activities within the IRAs generally unnoticeable. Although the majority of the power line corridor and its numerous access routes do not occur within any IRA, the presence of 0.12 miles of the power line corridor, 2 power line structures, and 0.32 miles of existing unauthorized roads have impacted natural integrity, apparent naturalness, and remoteness on roughly 2.0 acres of IRAs.

The majority of the trees within the 70-foot-wide power line corridor were cut and removed during the initial installation of the power line in 1943. Over the years, natural regeneration of conifers within this corridor has been periodically felled to prevent damage to the power line. In addition, numerous access routes were established in 1943 to facilitate installation of the power line structures. In some cases, these routes were physically constructed and

resemble a typical forest road with cut and fill slopes evident. These roads still exist on the landscape as both authorized and unauthorized roads. In other cases, the topography was gentle enough that motorized equipment was “walked” cross-country to the structure location (i.e., overland access routes). These constructed authorized and unauthorized roads and unconstructed overland access routes have been used periodically over the years as necessary to replace or maintain structures.

Solitude/Opportunities for Primitive Recreation—With the exception of providing visual evidence of man’s activities, the power line corridor and its associated access routes are currently having little impact on solitude or opportunities for primitive recreation within any IRA. Historically, the sights and sounds of activities associated with maintenance of the power line have been temporary in nature and infrequent. However, as portrayed in Figure 3-3, the power line corridor parallels and lies near several authorized roads. The presence and use of these authorized roads are impacting solitude and opportunities for primitive recreation on the IRA acres within the analysis area.

NFS road 413 in the northern portion of the analysis area is a main route into the community of Yellow Pine. This road receives a high amount of use during the snow-free season. NFS road 467, located in the center of the analysis area, receives a low amount of use in comparison, but is visually apparent because of sparse vegetation. Forest Highway 22 in the southern part of the analysis area is a two-lane paved road that receives a high amount of use year-round. Given the juxtaposition to these authorized roads, it is likely difficult to escape the sights and sounds of civilization within any portion of any IRA in the analysis area.

3.8.2 Environmental Consequences

Table 3-32 displays a summary of the effects of each alternative to each roadless resource indicator.

Table 3-32. Effects of each alternative to the roadless resource indicators

Roadless Resource Indicator	Alternative A	Alternative B
Changes to natural integrity, apparent naturalness, and remoteness	No change	No change
Changes to solitude, or opportunities for primitive recreation	No change	No change
Consistency with Idaho Roadless Rule	Consistent (per Idaho Roadless Commission)	Consistent (per Idaho Roadless Commission)

3.8.2.1 Roadless Resource

3.8.2.1.1 Direct and Indirect Effects

3.8.2.1.1.1 Alternative A

Alternative A would have a negligible effect on the wilderness attributes of natural integrity, apparent naturalness, and remoteness. Any impacts on solitude or opportunities for primitive recreation would be temporary in nature and likely inconsequential considering the effects associated with adjacent authorized roads. Alternative A would not result in the development

of any portion of any IRA nor would it affect the potential designation of any IRA in its entirety as wilderness under the Wilderness Act of 1964.

Natural Integrity/Apparent Naturalness/Remoteness—Since these features already exist on the landscape, the continued maintenance of 0.12 miles of power line corridor, totaling roughly 1.0 acre, and replacement/maintenance of 2 power line structures within an IRA would have little effect on the existing natural integrity, apparent naturalness, or remoteness of any IRA.

Under this alternative, using 0.32 miles of existing unauthorized roads in an IRA would not be allowed. Over time, trees and vegetation on these roads would continue to grow, ameliorating the effects on natural integrity, apparent naturalness, and remoteness on approximately 1.0 acre of IRAs. However, existing cut and fill slopes associated with these road segments would continue to detract from the natural integrity and apparent naturalness of the area.

No overland access routes would be designated or their use allowed under this alternative, nor would the 1,060 feet of power line be realigned.

Solitude/Opportunities for Primitive Recreation—Noise associated with maintenance activities would reduce or diminish feelings of solitude and opportunities for primitive recreation within those portions of IRAs in the analysis area. However, effects on these attributes would be temporary in nature. Given the juxtaposition of adjacent authorized roads (e.g. NFS road 413, NFS road 467, and Forest Highway 22) and use patterns on these roads, any effects of this alternative on solitude and opportunities for primitive recreation would be inconsequential.

Replacement/maintenance of a structure typically takes no more than 1 or 2 days. Corridor maintenance (e.g., tree felling) generally occurs in 1 vicinity for perhaps 2–3 days after which the crew would relocate to another section of the power line. Although inspection of the structures and corridor typically occurs every year, the actual maintenance of these features would occur only as needed, on average every 5 to 15 years.

3.8.2.1.1.2 Alternative B

Alternative B would have a negligible effect on the wilderness attributes of natural integrity, apparent naturalness, and remoteness. Any impacts on solitude or opportunities for primitive recreation would be temporary in nature and likely inconsequential considering the effects associated with adjacent authorized roads. Alternative B would not result in the development of any portion of any IRA, nor would it affect the potential designation of any IRA in its entirety as wilderness under the Wilderness Act of 1964.

Natural Integrity/Apparent Naturalness/Remoteness—Since these features already exist on the landscape, the continued maintenance of 0.12 miles of power line corridor, totaling roughly 1.0 acre, and replacement/maintenance of 2 power line structures within an IRA would have little effect on the existing natural integrity, apparent naturalness, or remoteness of any IRA.

Under this alternative 19 miles of existing unauthorized roads would be added to the Forest's transportation system, 0.32 miles of which would occur in an IRA (Figure 3-4 and Figure 3-5). Adding these roads to the transportation system would, in and by itself, have no

effect on natural integrity, apparent naturalness, or remoteness. Performing maintenance (e.g., clearing brush, blading the road surfaces) on these roads would have a negligible effect on these attributes because these 0.32 miles, totaling approximately 1.0 acre, currently resemble a typical forest road and are visually evident on the landscape. Clearing brush and/or blading the road surfaces would not measurably detract from the existing natural integrity, apparent naturalness, or remoteness of any IRA.

This alternative also includes the designation of roughly 0.06 miles of overland access routes within an IRA. Overland access routes would be situated to limit disturbance of vegetation and no earth movement would be involved, with the possible exception of removing and reinstalling cross-ditches. Visual evidence of overland access routes would be limited to primarily trampled vegetation and perhaps tire/track impressions on the ground and should be generally unnoticeable within 3–5 years.

None of the existing authorized roads that would be opened under this alternative to provide access to the power line occur within any IRA nor would the 1,060 feet of power line realignment occur within any IRA.

Solitude/Opportunities for Primitive Recreation—Noise associated with maintenance activities and use of motorized equipment on access roads and overland access routes would reduce or diminish feelings of solitude and opportunities for primitive recreation within those portions of IRAs in the analysis area. However, effects on these attributes would be temporary in nature. Given the juxtaposition of adjacent authorized roads (e.g., NFS road 413, NFS road 467, and Forest Highway 22) and use patterns on these roads, any effects of this alternative on solitude and opportunities for primitive recreation would be inconsequential.

Replacement/maintenance of a structure typically takes no more than 1 to 2 days. The actual maintenance of individual unauthorized roads added to the Forest's transportation system would also take no more than a couple of days. Corridor maintenance (e.g., tree felling) generally occurs in 1 vicinity for perhaps 2–3 days after which the crew would relocate to another section of the power line. Although inspection of the structures and corridor typically occurs every year, the actual maintenance of these features and individual roads would occur only as needed, on average, every 5–15 years.



Figure 3-4. Locations of Power Line Corridor, Authorized Roads, Proposed Roads, and Overland Routes in Inventoried Roadless Areas along Johnson Creek

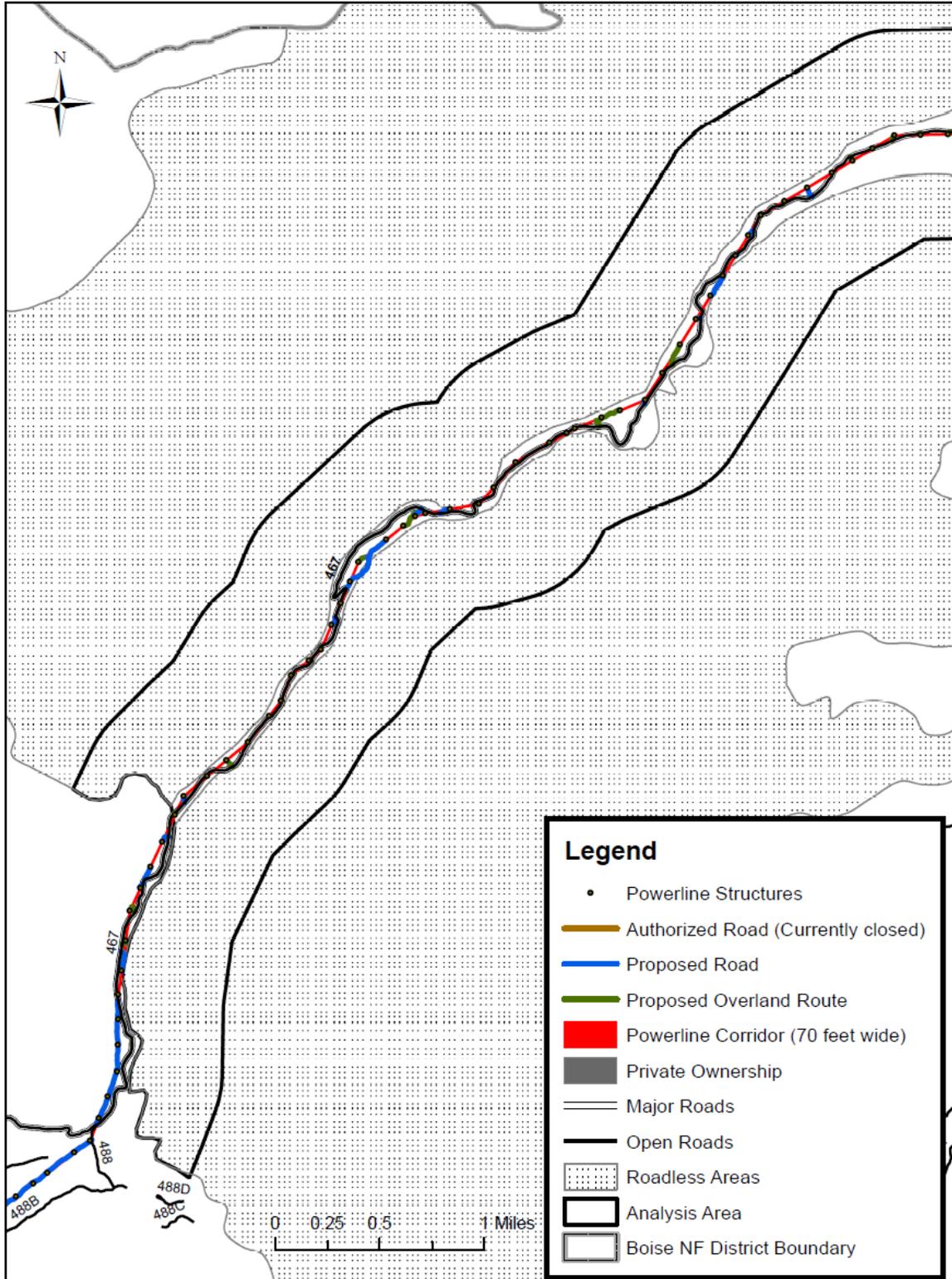


Figure 3-5. Locations of Power Line Corridor, Authorized Roads, Proposed Roads, and Overland Routes in Inventoried Roadless Areas along Cabin Creek

3.8.2.1.2 Cumulative Effects

3.8.2.1.2.1 Alternatives A and B

Neither Alternative A nor B would be expected to have a measurable effect on the attributes of natural integrity, apparent naturalness, or remoteness. Therefore, regardless of the effects of past, ongoing, or foreseeable future activities, neither Alternative A nor B would be expected to add incrementally to those effects.

Both Alternative A and B have the potential to result in minor temporary effects on solitude and opportunities for primitive recreation. The incremental effect of either alternative, in combination with the sounds of ongoing activities, could result in a slight temporary cumulative effect on these 2 attributes.

3.8.2.2 Consistency with the Idaho Roadless Rule

In October 2008, the USDA adopted a state-specific, final rule establishing management direction for designating roadless areas in Idaho (36 CFR §294; 73 Federal Register 61456–61496). The final rule designates 250 Idaho Roadless Areas and establishes 5 management themes. These management themes provide prohibitions with exceptions or conditioned permissions that govern road construction, timber cutting, and discretionary mineral development within IRAs. In an effort to simplify the analysis, the same 15,058-acre analysis area discussed in section 3.8 (Figure 3-3) was used for determining compliance/noncompliance of the alternatives with the Idaho Roadless Rule.

Four different management themes occur within the analysis area: Primitive, Backcountry/Restoration, Special Area, and General Forest. No existing authorized or unauthorized roads, overland access routes, or sections of the power line corridor occur within the Primitive or Special Area themes, nor does any alternative propose any activities within either of these themes. Therefore, the remainder of this discussion will focus on compliance/noncompliance of the alternatives with direction for the Backcountry/Restoration and General Forest Management themes.

3.8.2.2.1 Direct and Indirect Effects

3.8.2.2.1.1 Alternative A

Under this alternative, maintenance (e.g., cutting trees) would continue to occur on 0.12 miles of the power line corridor, roughly 1.0 acre, in the Backcountry/Restoration theme. Felled trees would be lopped and retained on site. However, 36 CFR §294.24(c)(1)(vii) states that the cutting, sale, or removal of timber is permissible in the Backcountry/Restoration theme where incidental to the implementation of a management activity not otherwise prohibited. Since the trees would be cut to prevent damage to the overhead power line, this action would be consistent with the Idaho Roadless Rule.

This alternative would not allow the use of existing unauthorized roads or overland access routes within any IRA, nor would the 1,060 feet of power line be realigned.

3.8.2.2.1.2 Alternative B

Under this alternative, maintenance (e.g., cutting of trees) would be allowed on 0.12 miles of the power line corridor, roughly 1.0 acre, in the Backcountry/Restoration theme. Felled trees would be lopped and retained on site. However, 36 CFR §294.24(c)(1)(vii) states that the cutting, sale, or removal of timber is permissible in the Backcountry/Restoration theme where incidental to the implementation of a management activity not otherwise prohibited. Since the trees would be cut to prevent damage to the overhead power line, this action would be consistent with the Idaho Roadless Rule.

Approximately 0.12 miles of existing unauthorized roads in the Backcountry/Restoration theme and another 0.2 miles in the General Forest theme would be added to the Forest's transportation system, road management objectives assigned, and road maintenance activities permitted. The administrative action of adding 0.32 miles of existing roads to the transportation system is not prohibited by the Idaho Roadless Rule, nor is performing maintenance (e.g., clearing brush, blading the road surfaces) on authorized roads. In addition, 36 CFR §294.23(e) states that maintenance of temporary and forest roads is permissible in Idaho Roadless Areas, and 36 CFR §294.21 defines road maintenance as the ongoing upkeep of a road necessary to retain or restore the road to the approved road management objective.

Under Alternative B, roughly 0.06 miles of overland access routes would be designated in the Backcountry/Restoration theme. Overland access routes would be situated to limit disturbance of vegetation and no earth movement would be involved, with the possible exception of removing and reinstalling cross-ditches. The Idaho Roadless Rule (36 CFR §294.26(c)) states that nothing in this subpart shall be construed as affecting the use of motorized equipment and mechanical transport in Idaho Roadless Areas.

None of the existing authorized roads that would be opened under this alternative to provide access to the power line occur within any IRA nor would the 1,060 feet of power line realignment occur within any IRA.

This Project was introduced to the Idaho Roadless Commission on April 5, 2012, and discussed in depth on June 28, 2012, where the Commission concluded the Project would be consistent with the Idaho Roadless Rule (Commission Meeting Notes, April 5, 2012 and Commission Meeting Notes, June 28–29, 2012, both available in the project record).

3.8.2.2.2 Cumulative Effects

3.8.2.2.2.1 Alternatives A and B

As explained in discussions above, both Alternatives A and B would comply with direction in the Idaho Roadless Rule. Therefore, regardless of the effects of past, ongoing, or foreseeable future activities, neither Alternative A nor B would be expected to add incrementally to those effects.

3.9 Scenic Environments

Issue: Proposed activities have the potential to affect the scenic environment.

Indicators:

- Change in visual quality
- Visual Quality Objective (VQO) consistency

The potential for effects on visual quality is documented in the project record (see Scenic Environment Technical Report). This section summarizes that analysis, focuses on effects of the alternatives to scenic resources, and addresses the issue that proposed management activities have the potential to affect the scenic environment.

The analysis area used for the assessment of the scenic environment includes the 36.8-mile-long power line corridor in its entirety, all unauthorized access roads, and the 1,060 feet of power line corridor realignment as seen from sensitive viewing locations identified in the Forest Plan.

3.9.1 Affected Environment

The 36.8-mile-long power line corridor has been identified through the land and resource management planning process for use as a designated utility corridor. This designation constitutes a long-term allocation of affected acres and, as such, would not be expected to provide the same level of scenic quality as adjacent forested stands. Further, the power line corridor and its numerous access routes existed on the landscape when the various visual quality objectives and sensitive viewing locations were established in the 2010 Forest Plan (USDA Forest Service 2010a).

3.9.2 Environmental Consequences

Table 3-33 displays a summary of the effects of each alternative to each scenic environment indicator.

Table 3-33. Effects of each alternative to the scenic environment indicators

Scenic Environment Indicator	Alternative A	Alternative B
Visual Quality	Negligible effect	Negligible effect
Visual Quality Objective	Consistent or met	Consistent or met

3.9.2.1 Direct and Indirect Effects

3.9.2.1.1 Alternative A

This alternative would have a negligible effect on visual quality. Since the power line corridor has been in place for close to 70 years, its continued maintenance would not be expected to dominate the viewshed or result in noticeable changes to the landscape. Although some alteration of the scenic environment would occur, the VQOs would be met.

Allowing maintenance (e.g., cutting trees) of the power line corridor would effectively maintain the existing visual contrast between the 36.8-mile-long power line corridor and adjacent forested stands. Trees on the 12 miles of unauthorized roads that occur within the power line corridor would continue to be cut down during maintenance of the designated utility corridor and continue to reflect the existing visual contrast. Trees on the remaining 7 miles of unauthorized roads outside of the corridor would continue to grow. Over time, the visual contrast between these 7 miles of roads and adjacent stands would decrease.

No section of the power line would be relocated under this alternative.

Specific to Burntlog Creek and its VQO of Foreground Preservation, the power line corridor occurs upslope of and near the outer limits of the 0.25-mile corridor associated with this eligible Wild and Scenic River. In addition, stands situated between the NFS road 413 and Burntlog Creek in this area were not affected by recent wildfires. As a result, views of the power line corridor from Burntlog Creek are screened by dense vegetation.

3.9.2.1.2 Alternative B

This alternative would have a negligible effect on visual quality. Since the power line corridor and unauthorized roads have been in place for close to 70 years, their continued maintenance and use would not be expected to dominate the viewshed or result in dramatic changes to the landscape. Although some alteration of the scenic environment would occur, the VQOs would be met.

Allowing maintenance (e.g. cutting trees) of the power line corridor would effectively maintain the existing visual contrast between the 36.8-mile-long power line corridor and adjacent forested stands.

Adding 19 miles of existing unauthorized roads to the Forest's transportation system and allowing maintenance and use of these roads would convert the current grass/forb/seedling or sapling tree size classes to a non-forested condition and result in some noticeable ground disturbance in the short term. However, this action should not dominate the viewshed from any sensitive area or travelway. All of these roads are currently present on the landscape, consisting of 115 different short segments, averaging around 900 feet in length, and are scattered along the 36.8 miles of power line corridor. Roughly 12 of the 19 miles would actually occur within the power line corridor itself and most lie parallel to the adjacent sensitive travelways. Unless the road surface is located at a lower elevation, the angle of sight from the sensitive travelway would partially obscure the view of the road. In addition, design features stipulate that seed, straw mulch, and fertilizer would be applied to all disturbed areas, including these 19 miles of road, thus minimizing the period of time wherein bare ground would be visible.

Realignment of 1,060 feet of the power line corridor in the vicinity of Whitehorse Rapids is expected to have a negligible effect on the scenic environment. The new location would occur in an area affected by past wildfires and would currently be described as being in the grass/forb/seedling or sapling tree size class. Over time, this new section of the power line corridor would be maintained in the existing condition, with only the actual structures representing a noticeable but subtle change to the existing viewshed.

Specific to Burntlog Creek and its VQO of Foreground Preservation, all proposed activities would occur upslope of and near the outer limits of the 0.25-mile corridor associated with

this eligible Wild and Scenic River. In addition, stands situated between the NFS road 413 and Burntlog Creek in this area were not affected by recent wildfires. As a result, views of the power line corridor from Burntlog Creek are screened by dense vegetation.

3.9.2.2 Cumulative Effects

3.9.2.2.1 Alternatives A and B

The incremental effect of Alternative A or B in combination with past, ongoing, or foreseeable future activities would be additional subtle changes in the viewsheds. The cumulative effects area, in particular the foreground viewing distances from the various sensitive travelways, would continue to reflect evidence of recent wildfires and management activities in many locations.

3.10 Recreation Opportunity Spectrum

Issue: Proposed activities have the potential to affect the Recreation Opportunity Spectrum (ROS).

Indicators:

- Recreational Opportunity Spectrum classification changes

The potential for effects on the ROS is documented in the project record (see Congressionally Designated Areas, RNAs, and ROS Technical Report). This section summarizes that analysis, focuses on effects of the alternatives to the ROS, and addresses the issue that proposed management activities have the potential to change ROS classifications.

The analysis area used for this assessment includes the 36.8-mile-long power line corridor in its entirety and all overland access routes, all unauthorized roads that would be added to the transportation system, and all existing authorized roads that would be opened under Alternative B. The analysis area also includes the 1,060 feet of power line corridor that would be created to realign the power line in the vicinity of Whitehorse Rapids.

3.10.1 Affected Environment

The ROS provides a framework for defining the types of outdoor recreation opportunities and experiences that the public might desire, as well as the mix of the spectrum that a given National Forest might be able to provide. It also provides a context and tool for estimating and describing recreation resources as well as effects to those resources from alternative management strategies and actions.

Three different ROS classifications occur within the analysis area: Roded Natural (RN); Roded Modified (RM), and Rural (R). The following paragraphs describe these 3 classifications but are limited to the summer ROS classifications that occur within the analysis area and that could potentially be impacted by proposed activities. None of the alternatives considered in this analysis would have any effect on winter access, recreational opportunities in the winter months, or winter ROS classifications.

Roded Natural (RN) areas provide for a wide range of recreation activities that are generally focused along the primary and secondary travel routes in a natural-appearing, roded, motorized setting. Recreational facilities are provided to facilitate recreational use. A

moderate-to-high degree of user interaction may occur, as well as the sights and sounds of other users, depending upon the facilities provided. Seasonal or year-round recreational facilities are provided for user comfort and convenience. Although structures may be designed to accommodate numerous users, they generally convey a rustic theme and blend with the natural landscape. There may be considerable onsite user controls or restrictions. Opportunities for isolation, challenge, or risk are generally not very important, although opportunities for practicing outdoor skills may be important.

Roaded Modified (RM) areas provide for a range of recreation experiences that are consistent with substantially modified, motorized settings in which the sights and sounds of humans are readily evident and the interaction between users can be from low to high. Camping experiences are relatively primitive, with few onsite facilities provided. The area is very accessible using the numerous roads. Ample evidence of human activity exists, including roads, extensively logged timber stands, skid trails, and log landings. The general forest visitor has a low probability of experiencing solitude and risk but a moderate chance of enjoying a sense of closeness to nature, depending on the timing of their visit. The opportunities for challenge and risk are minimal.

Rural (R) areas are typically characterized by recreation sites that can be utilized by large numbers of people at one time. High quality and quantity recreational use characterize these areas. While natural conditions usually do not dominate the activity centers, scenic values are often critical elements of the landscape seen as middleground and background from such areas. Surrounding scenic values are often a valued resource in the adjacent Forest landscape. The recreation opportunities offered are usually managed, regulated, and numerous but also in harmony with nature. The onsite vegetation is often in a manicured or managed state.

3.10.2 Environmental Consequences

Table 3-34 displays a summary of the effects of each alternative to each recreation opportunity spectrum indicator.

Table 3-34. Effects of each alternative to the recreation opportunity spectrum indicators

Indicator	Alternative A	Alternative B
Recreation Opportunity Spectrum classification changes	No change	No change

3.10.2.1 Direct and Indirect Effects

3.10.2.1.1 Alternatives A and B

Alternative A or B would result in some level of road use and vegetation manipulation within the Roaded Natural, Roaded Modified, and Rural summer ROS classifications within the analysis area. However, these activities would be consistent with the current settings and characteristics that exist along the power line corridor and associated access routes. In the case of these ROS classifications, a wide range of management activities and objectives may occur. Given that neither alternative would result in any meaningful changes to summer recreational access, opportunities, or settings, both Alternative A and B would be consistent with applicable Forest Plan standards, guidelines, and objectives.

3.10.2.2 Cumulative Effects

3.10.2.2.1 Alternatives A and B

Neither Alternative A nor B is expected to have any meaningful effects on summer ROS classifications, or recreational access, opportunities, or settings. Therefore, regardless of the effects of past, ongoing, or foreseeable future activities, neither Alternative A nor B would be expected to add incrementally to those effects.

Chapter 4–Consultation and Coordination

4.1 Introduction

This chapter includes a list of the preparers of this document; changes made to Review EA in preparation of this EA; and a list of those receiving copies of the EA and Decision Notice (DN). Chapter 1, section 1.8, details the scoping and public involvement efforts.

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4.3 Changes Made to the Review EA in Preparation of the EA

In addition to minor edits, the following changes were made to the Review EA in preparation of this EA.

Chapter 1, Section 1.3 – The list of sections where the proposed activities would occur was corrected to separate those sections located in Gem County from those located in Valley County and eliminate those sections located in Township 19 N., Range 8 E. which are portions of a power line authorized under another special use permit.

Chapter 1, Section 1.7 – Updates and clarifications made to consistency statements for the various laws, rules and policies addressed in this section

Chapter 2, Section 2.5.1.2 – The list of section was updated to clarify the purpose of designating the 1.02 mile segment of NFS road 467P as open to public motorized use to not only meet access needs for the proponent, but also to address public access needs and resource issues due to changes made along NFS Road 467; designating the 0.75 miles of unauthorized road between NFS road 427 and NFS road 474 near the Warm Lake substation to provide both access to the proponent for maintenance and repair of the power line, as well as to address a public safety need for motorized access in this area.

Chapter 3, Sections 3.2.2.2.2 and 3.2.3.2.2– Discussion specific to the wolverine were corrected to reflect the changes in effects terminology for the species as a result of the recent change in the status of wolverine from a candidate species to a proposed threatened species.

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Environmental Assessment (EA)

APPENDIX A

Comments received on the Review EA and Agency Responses

Comment #	Comment Letter	Response #	Response
1 2	<p>Bingman, Mark -FS</p> <p>From: Dimmett, Michael -FS on behalf of FS-comments-intermtn-boise-cascade Sent: Monday, December 17, 2012 3:11 PM To: Bingman, Mark -FS; Giambra, Trisha L -FS; Brown, Carol P -FS Subject: FW: high valley line 328 project</p> <p>-----Original Message----- From: Ken Pratt [mailto:kenpratt2@comcast.net] Sent: Sunday, December 16, 2012 4:25 PM To: FS-comments-intermtn-boise-cascade Subject: high valley line 328 project</p> <p>Mark Bingman,</p> <p>I recieved the packet in the mail explaining the work. I was reading section 1.3 and know the power line does not travel on Pratt Holdings Property in High Valley (valley co.). Talks about activities will occur on the following sections and our sections are not listed.</p> <p>Wondering why I was sent the packet? Does not appear you will be traveling on any of our roads to do repair?</p> <p>It's a large book when will the repairs take place?</p> <p>Ken</p> <p>--</p>	1 2	<p>This comment email was received outside of the 30-day notice and comment period; December 19th to January 17th.</p> <p>1 A telephone conversation with Mr. David Pratt on February 2, 2013 confirmed Line 328 is about one mile away from and does not travel through Pratt Holdings LLC property.</p> <p>2 Mr. Ken Pratt provided comment during the Proposed Action scoping period and requested the Forest keep him informed. Therefore, the Forest mailed him a copy of the Review EA.</p>

<p style="text-align: right;"> An IDACORP Company</p> <p>January 11, 2013</p> <p>Mr. Mark Bingman, Project Leader Cascade District Ranger PO Box 696 Cascade, ID 83611</p> <p>Subject: Idaho Power Company Line 328 Project</p> <p>Dear Mr. Bingman,</p> <p>I have received and reviewed the notice regarding the Idaho Power Company Line 328 Project and appreciate the opportunity to comment. As we discussed on January 8, 2013, there appears to be a discrepancy between the legal description (Page 1-2) for project-specific activities and the Project Vicinity Map (Figure 1-1). The legal description includes Township 19N, Range 08E, Sections 33, 32, 29, and 28, Valley County, ID; however, Figure 2-9 (Map 9 from figure 1-1) shows the project terminating in T18 N, Range 8E, Section 16. Would you please clarify which portions of Idaho Power's lines were included in the NEPA analysis and which portions would be covered by the amended Special Use Permit.</p> <p>Please contact me at 208-388-6438 or rpiston@idahopower.com if you have any questions.</p> <p>Respectfully,  Ron Piston Environmental Affairs</p> <p>cc: Dale Welch, IPC Greg Yano, IPC Joe Samer, IPC Stacey Baezkowski, IPC</p> <p style="text-align: right;"><small>P.O. Box 70 (83707) 1221 W. Idaho St. Boise, ID 83702</small></p>	<p style="text-align: center;">1</p> <p>The project area description provided in Chapter 1.3 of the Review EA was provided by Idaho Power in their application and legal descriptions contained in the special uses permit file. A review of GIS data revealed several townships, ranges, and sections were incorrectly included in the project description. The sections in Township 19 N., Range 8 E. are portions of a power line authorized under another special use permit, which connect to Line 328, but were not included in this analysis. However, this analysis did include the entire length of Line 328 within National Forest System lands as it currently exists on the ground. The correct legal description will be updated in the EA and included in the new special use permit</p>
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Idaho Power Company Line 328 Project



Mark Bingman
Cascade Ranger District
PO Box 696
Cascade, ID 83611
comments-intermtn-boise-cascade@fs.fed.us

January 18, 2013

RE: Idaho Power Company Line 328 Project

Thank you for considering our comments on the Idaho Power Company Line 328 Project. Since 1973 the Idaho Conservation League has had long history of involvement with both habitat protection and statewide energy issues. As Idaho's largest statewide conservation organization, we represent over 20,000 supporters who want to ensure that energy development and infrastructure is consistent with natural resource protection.

We are submitting these comments after the close of the official comment period but hope that they will still be helpful to the Forest Service when finalizing a decision. We understand that in order to adequately serve utility customers and to increase energy distribution efficiency, it is important that Idaho update and improve much of its aging transmission infrastructure. These upgrades are also opportunities to try to reduce environmental effects, avoid future effects and provide for much-needed mitigation.

In the case of the Idaho Power Company Line 328 Project, we appreciate having had the opportunity to discuss this project with you in person. We appreciate the overall intent to use existing roads and the existing Right of Way. As mitigation, we had suggested that the Proposed Action be modified to include removal of an additional 9.3 miles of unauthorized roads within the MPC 3.2 to offset the roads being converted to authorized roads. The Forest Service decided not to develop this alternative. While the Forest Service points out that no new road construction would occur under the proposed action, there are effects that we believe should still be avoided, minimized and mitigated.

These effects include the permanent clearing of 19 miles of unauthorized routes which could impact up to 66.5 acres, the permanent clearing of 6 miles of closed roads to open roads which could impact up to 21 acres, and the permanent clearing of vegetation along 4 miles of overland routes which could impact 14 acres. We also have concerns regarding the effects of designating a 1.02-mile segment of NFS road 467P and the 0.75-mile route between NFS road 427 and NFS road 47 as public motor vehicle use roads. We also oppose constructing a new span across Johnson Creek at Whitehorse Rapids. Our concerns and alternate suggestions are described in more detail below.

Idaho Conservation League comments on Idaho Power Company Line 328 Project, page 1 of 3.

This comment letter was received outside of the 30-day notice and comment period; December 19th to January 17th.

1	<p>Below are our recommendations to the Boise National Forest Supervisor regarding the following questions:</p> <p><i>Should the special-use permit for Idaho Power Company Line 328 be renewed for another 20-year term.</i></p> <p>We have no objections, as long as the Forest Service avoids, minimizes and mitigates environmental impacts.</p> <p><i>Should Idaho Power be permitted to open, perform maintenance on, and use 6 miles within 11 authorized road segments that are currently in a state of storage?</i></p> <p>Idaho Power needs to utilize best management practices for road maintenance, consistent with Forest Service regulations.</p>	1	<p>Chapter 3 of the EA states where appropriate, additional best management practices (BMPs) would be implemented as identified in National Best Management Practices for Water Quality Management on National Forest System Lands Volume 1: National Core BMP Guide. A list of National Core BMPs applicable to this project may be found in Appendix A of the EA.</p>
2	<p><i>Should the Forest Service designate 19 miles within 115 segments of existing unauthorized roads as system roads and add them to the Forest Transportation system, and should Idaho Power be permitted to open, perform maintenance on, and use these roads.</i></p> <p>We recommend that these roads be closed except for administrative use. Idaho Power needs to utilize best management practices for road maintenance, consistent with Forest Service regulations.</p>	2	<p>The EA states the currently unauthorized road segments would be added to the transportation system and managed as Level 2 roads for administrative use only. These road segments would not be included on the District Motor Vehicle Use Map (MVUM), thus closed to public use (EA, Section 1.5).</p>
3	<p><i>Should the existing NFS road 467p (102 miles) and the 0.75-mile unauthorized road (between Road 427 and Road 474) near the Warm Lake substation both be designated as maintenance level 2 roads open to public use and added to the MVUM?</i></p> <p>We are concerned about the effects from designating a 1.02-mile segment of NFS road 467P and the 0.75-mile route between NFS road 427 and NFS road 47 as public motor vehicle use roads. While these routes currently exist, they are not open to the public. Public access to these routes on motorized vehicles will dramatically increase the usage of these routes compared to the administrative access required by Idaho Power. We are concerned that additional motorized use could further impact wildlife such as elk, increase sedimentation to streams, increase litter, loss of snags from firewood collectors, spread additional noxious weeds. We point out that while Idaho Power has an enforceable requirement to clean vehicles of noxious weeds and seeds, the general public does not. In addition, we are concerned about the proliferation of illegal motorized trails and dispersed campsites in inappropriate areas as a result of this conversion. Encouraging public motorized use along these routes may also reduce the opportunities for non-motorized recreation in the area. As such, we recommend that these routes remain closed to public motorized vehicle access.</p>	3	<p>The determination for elk (species of interest) is "habitat will be maintained" for all alternatives (EA Section 3.2.1.2) An increase in open road density by definition would incrementally reduce the quality of source habitat within two of the nine subwatersheds by increasing overall vulnerability. However, the increases are small and not expected to be meaningful at the scale of the subwatershed. Because both segments of new open road are within 0.1 miles (324 feet) of existing open roads, including Warm Lake Highway and Johnson Creek road, they are already within the existing influence of major road corridors. As a result, vulnerability is expected to remain similar to existing levels. The other nine subwatersheds would not change open road density and, therefore, would not see any changes in elk vulnerability (Wildlife Technical Report page 72).</p>
4	<p><i>Where vegetation and terrain allow, should the Forest Service designate 4 miles within 68 segments of overland access routes? And should Idaho Power be permitted to "walk" motorized equipment cross-country within the confines of the overland access routes to the power line corridor and/or structures?</i></p> <p>We generally support the adoption of these overland access routes. Depending on the frequency of use, overland travel may have fewer environmental effects than a constructed route. We recommend that this same type of access be considered for some of the 19 miles within 115 segments. We also recommend regular monitoring to ensure that trail or road improvements are not needed. If these routes receive frequent routes, the only way to address sediment concerns may be constructing a more formal route with specific erosion control features.</p> <p>Idaho Conservation League comments on Idaho Power Company Line 328 Project, page 2 of 3.</p>		<p>NFS road 467P currently has drainage problems because portions of the road are lower than the surrounding landscape. This road will have improvements made on the grade in order to make it drivable, thus improving drainage and reducing sediment delivery to streams. (EA Section 3.4.3.1.1). The 0.75 mile route was included in the analysis of the other access roads in the EA. However, the WEPP Road model summary documented in the project record (Soils Technical Report) predicts 0 pounds of sediment delivery per year in either the No-Action Alternative or the Proposed Action due to flat ground and the distance to the nearest waterbody (over 300 feet).</p> <p>The number of snags that may be felled has not been estimated but is expected to be relatively low and not substantial enough to change existing snag densities at the stand level or meaningfully impact nesting or forage opportunities for snag-dependent wildlife species. (EA Section 3.2.3.1.2)</p> <p>In consultation with the Cascade Ranger District, Idaho Power would develop a Noxious Weed Abatement Plan. The Noxious Weed Abatement Plan will ensure actions are in compliance with Forest Plan direction for this project. (EA Section 2.4.2.1.3) The Boise</p>

		4	<p>National Forest Noxious Weed monitoring and treatment program addresses noxious weeds potentially introduced by public use of Forest lands and is anticipated to continue. (EA Section 3.7.2.1.2)</p> <p>The road prisms for 19 miles of unauthorized roads already exist on the ground (EA Section 1.5). These road segments will receive only the minimum amount of maintenance necessary to allow Idaho Power equipment/vehicles to gain access. Clearing of vegetation from access road prisms would be completed using hand tools and not heavy equipment. Trees and tall brush would be cut at ground level with root wads left in place. Low-growing brush, grasses, and forbs would be left in place (EA Section 2.4.2.1.6). Erosion control features such as installation of water bars and/or rolling dips would be installed on all unauthorized roads added to the Forest transportation system in order to reduce the current amount of sedimentation (EA Section 2.4.2.1.5). As documented in the Water and Soils Technical Report, control of the season of use is important for several roads. Season of use and maintenance of the road facilities would be identified for each specific road segment in the annual operation plan. Idaho Power and Forest personnel would inspect the roads during their annual monitoring of the powerline structures or inspection for permit compliance. Site specific work plans must be approved by the Forest Service before maintenance activities can occur (EA Section 2.4.2.1.1).</p>
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<p>5</p> <p>6</p> <p>7</p> <p>8</p>	<p><i>Should a portion of the overhead power line be relocated between Structures 101 and 103 near Whitehorse Rapids?</i></p> <p>We do not support spanning the transmission line between the new 101 structure and structure 103 because of impacts to trees in the riparian area, reduction of shade and coarse woody debris, and the aesthetics of having a transmission line cross the river twice, when existing structures are in place to accommodate this use. According to the EA, this would require <i>permanently</i> clearing approximately 2,060 feet of vegetation within the power line corridor, all of it within the RCA. According to the EA, the majority of the shade comes from trees on the southern side of the stream, which would be the side permanently affected by the realignment.</p> <p>Johnson Creek is a critically important forest resource for both fisheries and recreationists. Much of the landscape in Idaho, even near streams, has been visually impacted by human features such as roads, structures, power lines and other infrastructure. One of the special attributes of streams in this area is the relative lack of such infrastructure. A power line crossing here is not worth the visual or resource impacts, especially since an existing alternative is available and clearly feasible. While we appreciate the efficiency of this alternative from an engineering perspective, the Forest Service is mandated to consider multiple uses, including vegetation, fisheries, recreation and aesthetics. As such, we recommend rejecting this alternative and retaining the original ROW.</p> <p><i>Should a site-specific non-significant amendment of the Forest Plan be prepared to allow adding existing unauthorized routes to the transportation system in MPC 3.2 for the purposes of maintaining the power line and its structures only?</i></p> <p>This is a unique circumstance and may warrant such an amendment if additional mitigation features and design features are added.</p> <p><i>What design features, mitigation measures, and/or monitoring should be applied to the project?</i></p> <p>We suggest that the Forest Service work with Idaho Power to address the above concerns with additional design features. These design features could include additional noxious weed surveys along roads open to the public, additional public outreach and education on travel management, and potentially developing appropriate portions of the remaining closed routes as non-motorized trails as a replacement if 1.77-miles of routes are converted to public motorized routes. The Forest Service should also consider some potential off-site mitigation options for affected resources. For example, the permanent clearing of 101.5 acres could be mitigated by restoring an equivalent area not currently in production, such as obliterating, ripping and reseeding other non-vegetated areas such as unauthorized roads, trails and old log landings. These opportunities may already have been identified and analyzed in this watershed and may only need funding to complete.</p> <p>Sincerely,</p>  <p>John Robison Public Lands Director (208) 345-6942 x 13 jrobison@idahoconservation.org</p> <p>Idaho Conservation League comments on Idaho Power Company Line 328 Project, page 3 of 3.</p>	<p>5</p> <p>6</p> <p>7</p>	<p>The existing road prism accessing Structure 102 traverses across a highly erosive landtype on slopes approaching 80 percent and exhibits evidence of being highly erosive and unstable. Roughly half of the road prism originally established has sloughed/raveled away. Relocation of the powerline corridor was considered, and eventually incorporated into the Proposed Action, only after thorough review of the existing road prism, consideration of alternative methods to stabilize the site, and the conclusion that its reuse was not practical.</p> <p>Section 3.3.3.1.1 of the EA discloses that approximately 12 mature trees would need to be felled to realign the 1,060 feet of powerline. Although these trees may provide some shade, they occur on the northwest and northeast side of Johnson Creek and provide minimal stream shading. Regarding coarse woody debris recruitment, all felled trees would be retained on-site unless located on steep slopes above the #413 road and considered a hazard to the road, in which case they would be bucked and moved downslope of the road.</p> <p>The effects of relocating this portion of Line 328 are summarized in the EA for vegetation (Section 3.1.1.1), fisheries (Section 3.3), and water and soils (Section 3.4) and determined to have negligible effects on these resources. As reflected in Figure 3-1 of the EA, this particular segment of Johnson Creek lies 50 to 150 feet from Forest Road 413 which is highly visible from the creek itself. This segment of Johnson Creek and Forest Road 413, have established VQOs of foreground partial retention. Although some alteration of the scenic environment would occur, the VQOs would be met (EA, Section 3.9.2.1.2). Realignment of 1,060 feet of the power line corridor in the vicinity of Whitehorse Rapids is expected to have a negligible effect on the scenic environment. The new location would occur in an area affected by past wildfires and would currently be described as being in the grass/forb/seedling or sapling tree size class. Over time, this new section of the power line corridor would be maintained in the existing condition, with only the actual structures representing a noticeable but subtle change to the existing viewshed (EA, Section 3.9.2.1.2).</p> <p>The addition of existing unauthorized roads to the Forest’s transportation system in MPC 3.2 would fail to comply with the standard. A site-specific non-significant Forest Plan amendment has been prepared and included in the DN/FONSI. This amendment waives application of the MPC 3.2 standard to allow adding existing unauthorized roads to the transportation system in MPC 3.2 for the purposes of maintenance of the power line corridor and its structures only.</p> <p>The MPC 3.2 road standard to be waived was included in the plan to avoid or minimize impacts of management activities implementing the Forest Plan on watershed restoration and ESA fisheries resources. As stated in the concurrence letter from the US-FWS (January 18, 2013):</p> <p>“Service concurrence that the Project is not likely to adversely affect bull trout or bull trout critical habitat is based on the following rationales.</p> <ol style="list-style-type: none"> 1) No direct impacts to bull trout or bull trout critical habitat will occur because no instream work occurs within occupied or critical habitat. 2) Road maintenance, designation, and opening the two routes to the public will not
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		8	<p>result in increased sediment delivery to streams. Modeling, as described in the Assessment, shows the maintenance that will occur on the roads and unauthorized routes will reduce the sediment delivery to streams channels by 0.24 tons per year in the short- and longterms. While this is not considered a significant reduction in sediment, it will allow maintenance or slight improvement in watershed conditions. Design features are also included to minimize the risk of chemicals or fuel from equipment entering a stream.</p> <p>3) Project activities would either maintain or have no influence on the Watershed Condition Indicators and associated primary constituent elements of critical habitat, as described in the [Forest Service] Assessment. Analysis shows that treatment within RCAs of the South Fork Salmon River subbasin will have negligible impacts to stream temperature and large woody debris. Although road densities will increase in some subwatersheds, due to the change in status of existing roads from unauthorized to authorized, the miles of roads occurring on the landscape will not change. In addition, the sediment delivery to streams derived from roads will be decreased due to the prescribed road maintenance that will now occur.”</p> <p>Similar findings were also provided in the NOAA fisheries concurrence letter dated January 11, 2013. Both concurrence letters were based on the Agencies Aquatic and Fisheries Resource analysis summarized in section 3.3 of the EA and the Water and Soil Resources analysis summarized in section 3.4 of the EA. The detailed technical reports for these resources are located in the project record.</p> <p>Refer to Appendix C of the DN/FONSI for the detailed rationale and Responsible Official’s determination of a non-significant amendment.</p> <p>Chapter 2 of the EA summarizes why some alternatives were eliminated from detailed study. Most of the remaining closed routes are less than 0.25 miles long and would not lend themselves to development as non-motorized trails. The clearing of 101.5 acres of land would be scattered over the entire length of the 36.8 mile long power line corridor. Since 2010, 51 miles of maintenance level 1 Forest System roads and 15 miles of unauthorized routes have been obliterated in the South Fork Salmon River watershed. Pending funding, an additional 10 to 20 miles of Forest System roads and unauthorized routes are expected to be obliterated in this watershed in 2013.</p> <p>The Boise National Forest Noxious Weed monitoring and treatment program addresses survey and monitoring of noxious weeds potentially introduced by public use of Forest lands and is anticipated to continue. (EA Section 3.7.2.1.2). The Motor Vehicle Use Map (MVUM) is a requirement of the 2005 Final Travel Management Rule and is a product of the 1997 revision of the Forest Plan and travel management decisions on each Ranger District. Information on these ongoing programs is also available to the public on the Forest webpage.</p>
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