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Bureau of Land Management
Upper Snake River District
Idaho Falls, Idaho

Bureau of Reclamation
Snake River Area Office
Boise, Idaho

Boise to Borah Transmission-line Rights-of-Way Transfer

Environmental Assessment



August 2003

IDAHO POWER COMPANY BOISE TO BORAH RIGHTS-OF-WAY TRANSFER

Project No.: IDI-34349

Proposed action: Idaho Power Company proposes to transfer the authorization for rights-of-way on five existing transmission lines from Federal Energy Regulatory Commission hydroelectric licenses to a Bureau of Land Management Federal Land Policy and Management Act grant.

Type of statement: Environmental Assessment

Lead agency: Bureau of Land Management, Upper Snake River District

Cooperating agency: Bureau of Reclamation, Snake River Area Office

For further information: Scott Powers, Project Manager
Bureau of Land Management, Montana State Office
5001 Southgate Dr.
PO Box 36800
Billings, MT 59107-6800
(406) 896-5319

SUMMARY

The Idaho Power Company (Idaho Power) proposes to transfer the rights-of-way (ROW) authorization on federal lands for five existing transmission lines from the Federal Energy Regulatory Commission (FERC), under authority of the Federal Power Act, to the appropriate federal agency that has jurisdiction of these lands, either the Bureau of Land Management (BLM) or Bureau of Reclamation (BOR), as appropriate. The transmission lines extend from Boise to American Falls along the Snake River Plain, a distance of approximately 180 miles. This action was promulgated by a decision by the FERC that it no longer has jurisdiction over these non-primary transmission lines.

In 2002, Idaho Power applied for a joint ROW grant with the BLM and BOR. As the lead federal agency, the BLM determined an Environmental Assessment (EA) would be required to identify potential resource impacts, pursuant to the National Environmental Policy Act (NEPA) of 1969. The BOR is a cooperating agency.

As required by NEPA, the BLM conducted scoping activities to identify potentially significant issues to be analyzed in the EA. The following list summarizes the issues and concerns raised during the scoping process:

- Impacts to botanical resources
- Impacts to wildlife resources
- Impacts to historic and archaeological resources
- Concerns related to Native American Indian interest and rights

The analysis completed during the preparation of the EA found a low level of impact to specific botanical, wildlife, and historic and archaeological resources. Protection measures would be effective in eliminating or reducing most of these impacts. For example, spatial and temporal constraints to ground disturbing operation and maintenance activities in the vicinity of sensitive resources would be implemented to reduce or eliminate potential impacts. No impacts to land use would occur as a result of the proposed project.

The EA will be available for a 30-day public review and comment period. If no significant impacts are identified and the proposed action is approved, the BLM and BOR will issue a joint Finding of No Significant Impact (FONSI) for lands crossed by the project. If the agencies determine that the EA does not sufficiently address alternatives and potential impacts, an Environmental Impact Statement may be required for the project to proceed.

TABLE OF CONTENTS

Summary.....	ii
List of Tables	vi
List of Figures.....	vi
List of Appendices	vi
1. Purpose of and Need for Action.....	1
1.1. Purpose of Actions	1
1.2. Need for Action.....	3
1.3. Project Objectives	3
1.3.1. Provide for Safe and Reliable Transmission of Electricity.....	3
1.3.2. Minimize Impacts to the Environment and Conduct Operation and Maintenance in a Manner that Complies with BLM Land-Use Plans.....	4
1.4. Authorizations, Permits, Reviews and Approvals	4
1.4.1. Consistency with Management Plans	5
1.5. Decision to be Made	5
1.6. Scoping	6
1.6.1. Key Issues to be Addressed	6
2. Alternatives Including the Proposed Action	9
2.1. Introduction.....	9
2.2. Description of the Proposed Action and No-Action Alternatives	9
2.2.1. Actions Common to the Proposed Action and No-Action Alternatives	9
2.2.3. Proposed Action.....	13
2.2.4. No-Action Alternative	17
2.3. Description of Alternatives Considered but Eliminated from Detailed Study	18

2.4. A Comparison of Environmental Consequences	19
3. Affected Environment.....	21
3.1. General Project Setting	21
3.1.1. Physiography and Geology.....	21
3.1.2. Soils.....	23
3.1.3. Climate.....	23
3.1.4. Vegetation.....	23
3.1.5. Land Use.....	24
3.2. Archaeological and Historical Resources	24
3.2.1. Historical and Archaeological Inventories.....	25
3.2.2. Prehistoric and Historic Sites.....	26
3.2.3. Native American Indian Concerns.....	26
3.3. Threatened, Endangered, and Sensitive Plant Species.....	27
3.3.1. Federally Listed Plant Species.....	28
3.3.2. BLM Sensitive Plant Species.....	30
3.4. Threatened, Endangered, and Special Status Wildlife Species.....	31
3.4.1. Listed and Candidate Wildlife Species.....	32
3.4.2. Other Special Status Species.....	35
4. Environmental Consequences.....	43
4.1. Elements of the Human Environment.....	43
4.2. Archaeological and Historical Resources	43
4.2.1. Proposed Action.....	44
4.2.2. No-Action Alternative	44
4.3. Threatened, Endangered, and Sensitive Plant Species.....	45
4.2.1. Listed and Candidate Species	45

4.2.2. Sensitive Species.....46

4.4. Threatened, Endangered, and Special Status Wildlife Species.....49

4.4.1. Listed and Candidate species49

4.4.2. Other sensitive species53

5. List of Preparers.....60

6. List of Agencies, Organizations, and Persons to Whom Copies of the Statement are Sent61

Appendices.....62

Literature Cited77

LIST OF TABLES

Table 1-1. BLM Resource Areas, line lengths, and ROW width for the Boise-to-Borah transmission lines	1
Table 1-2. Federal authorizations, permits, reviews, and approvals required for the project.....	5
Table 1-3. USFWS listed species from the BLM Four Rivers, Jarbidge, Burley, and Shoshone Field Office 90-Day Species Lists, dated January 4, 2003	8
Table 2-1. Number of structures, by type, present on the Boise-to-Borah transmission lines	9
Table 2-2. Length, width, and area of ROW on federal lands for the Proposed Action and No Action Alternative	10
Table 3-1. Number of prehistoric and historic sites within the Boise to Borah line ROW on federal lands	26
Table 3-2. Bureau of Land Management sensitive plant species with potential for occurrence within Boise to Borah transmission-line rights-of-way.....	28
Table 3-3. State and federal designations for wildlife species of special concern known, or suspected to occur, in the Boise to Borah transmission lines project area	31
Table 4-1. Temporal periods of nesting raptor species during which non-patrol operation and maintenance activities would be reviewed, and may be restricted, within 400 meters of the Borah-to-Boise transmission lines.....	56

LIST OF FIGURES

Figure 1-1. Idaho Power Boise to Borah Transmission Lines Project Area	2
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LIST OF APPENDICES

Appendix 1. Critical Elements of the Human Environment	63
Appendix 2. Determination of Significance and Impact.....	64
Appendix 3. Comments from the Idaho State Historic Preservation Office.....	65
Appendix 4. Prehistoric and historic sites associated with Boise to Borah transmission-line rights-of-way	68

1. PURPOSE OF AND NEED FOR ACTION

1.1. Purpose of Action

On December 2, 2002, Idaho Power Company (Idaho Power) filed an application for a rights-of-way (ROW) grant with the Bureau of Land Management (BLM) for the continued operation and maintenance of five existing transmission lines—three 230 kilovolt (kV) lines and two 345 kV lines (Table 1-1). The purpose of this action is to authorize the continued transmission of electricity across rights-of-way on federal lands administered by the BLM and Bureau of Reclamation (BOR). Such authorization will ensure the reliable supply of electrical power while maintaining a harmonious relationship with adjoining land uses and the environment. The transmission lines extend across approximately 283 mi of federal land, 276 mi on BLM, 7 mi on BOR, and 1 mi on Army Corp of Engineers (COE). The COE, through a categorical exclusion, will issue a separate ROW outgrant. The transmission lines are located in Ada, Elmore, Gooding, Twin Falls, Lincoln, Jerome, Minidoka, Blaine, and Power counties of Idaho, approximately between the towns of Boise and American Falls (Figure 1-1). The Boise Bench to Midpoint #1 and Midpoint to Borah #1 lines were built in 1950; the Boise Bench to Midpoint #2 and Midpoint to Borah #2 lines were built in 1961; and the Boise Bench to Midpoint #3 line was built in 1966. Collectively, these lines are referred to as the Boise to Borah lines.

In essence, this is an administrative action, since the lines exist and no modifications to transmission-line infrastructure are proposed. Idaho Power proposes to expand the right-of-way for the Midpoint to Borah #1 line from the existing 80 ft to 150 ft to meet current National Electric Safety Code (NESC) reliability standards, and reduce the ROW for the Boise Bench to Midpoint #2 and #3 lines from 150 ft to 100 ft.

Table 1-1. BLM Resource Areas, line lengths, and ROW width for the Boise-to-Borah transmission lines.

Line No. ¹	Line Name	BLM Resource Areas	Line Length on BLM Lands (mi)	Line Length on other Federal Lands ² (mi)	Total Line Length (mi)	ROW Width ³ (ft)
902	Boise Bench to Midpoint #1 – 230 kV	Four Rivers, Jarbidge, Shoshone	57.4	0.8	108	80
906	Boise Bench to Midpoint #2 – 230 kV	Four Rivers, Jarbidge, Shoshone	53.9	0.5	105	100
912	Boise Bench to Midpoint #3 – 230 kV	Four Rivers, Jarbidge, Shoshone	75.0	2.4	107	100
950	Midpoint to Brady #1– 345 kV	Shoshone, Burley	45.1	0.5	79	150
951	Midpoint to Borah #2 – 345 kV	Shoshone, Burley	44.7	3.5	78	150

¹ Line numbers may change when no longer licensed with a FERC project.

² Other federal lands include those administered by the BOR and COE.

³ Width of rights-of-way for the Proposed Action.

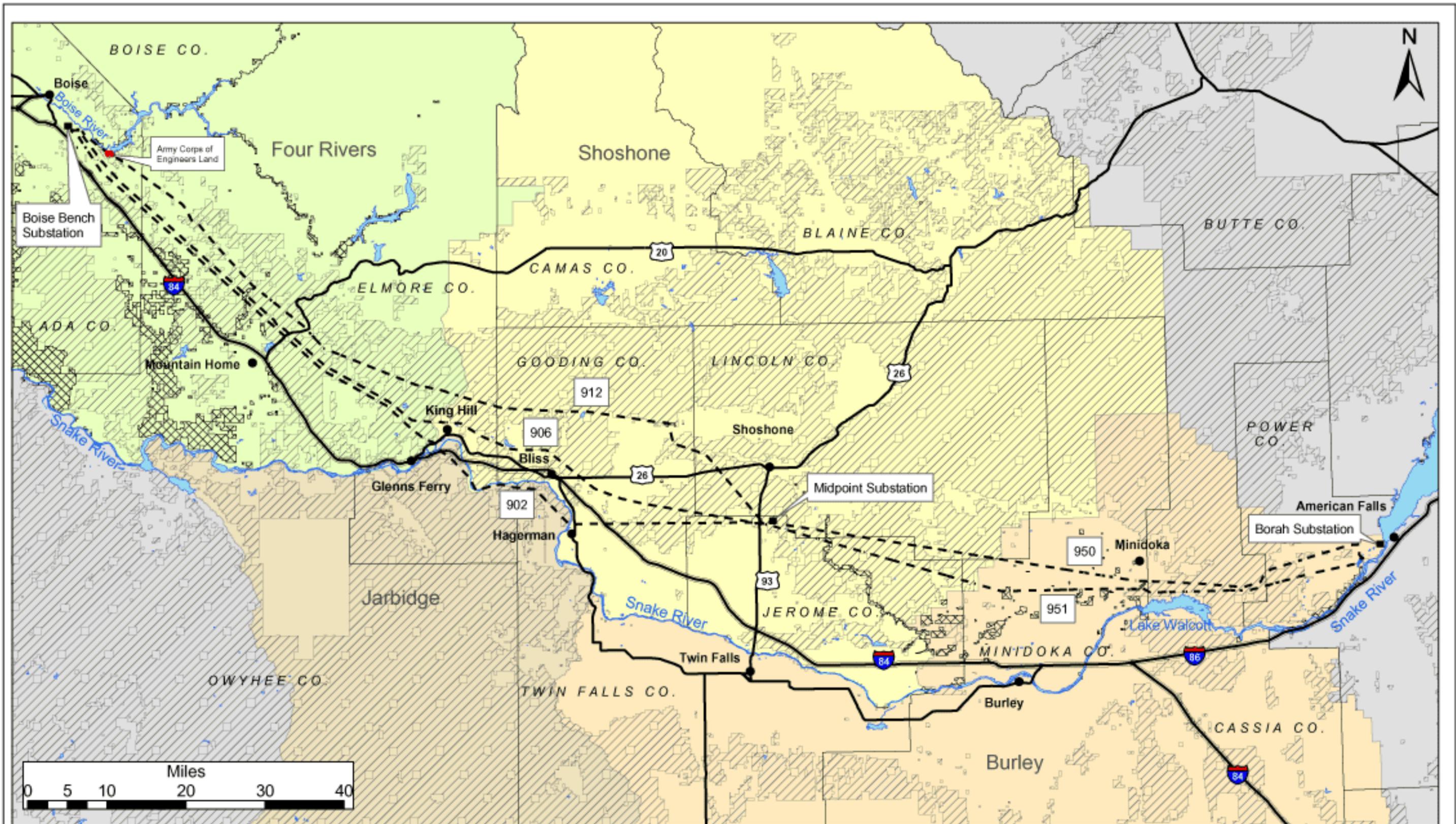
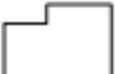


Figure 1-1. Idaho Power Boise to Borah Transmission Lines Project Area.



-  Bureau of Land Management Lands
-  Bureau of Reclamation Lands

-  Counties
-  Bureau of Land Management Field Offices, various colors

-  Project Transmission Lines
-  Interstate Highways
-  U.S. Highways

Line No.	Line Name
902	Boise Bench to Midpoint # 1
906	Boise Bench to Midpoint # 2
912	Boise Bench to Midpoint # 3
950	Midpoint to Brady # 1
951	Midpoint to Brady # 2

1.2. Need for Action

Idaho Power's need to transfer the ROW authorization from the Federal Energy Regulatory Commission (FERC) to the appropriate federal agency arose from a decision by the FERC that the Boise Bench to Midpoint #1 and Midpoint to Borah #1 are not primary lines. Thus these lines are not under the jurisdiction of the FERC and would not be included in the new license for the Bliss Hydroelectric Project (FERC Project No. 1975). Since construction, these lines have been licensed as part of the Bliss Project. The ROW for these lines were granted under a Federal Power Act (FPA) withdrawal. This action will continue to satisfy domestic and business demands for electrical power, allow for economic growth, and provide for national security.

Pursuant to Section 4(e) of the FPA, the Commission licenses "dams, water conduits, reservoirs, powerhouses, transmission lines, or other project works necessary or convenient for the development, transmission, and utilization of power..." FPA Section 3(11) defines a "project" as including "the primary line or lines transmitting power therefrom to the point of junction with distribution system or with interconnected primary transmission system." The test applied by the Commission to define what is a "primary transmission line" for FPA Part I purposes is that primary lines are:

"...those necessary to ensure the 'viability' of the project in the event of Federal takeover. If a line is "used solely to transmit power from [Commission] licensed projects to load centers," and if, without it "there would be no way to market the full capacity of the project, then that line is primary to the project."

The three additional lines (Boise Bench to Midpoint #2 and #3, Midpoint to Borah #2) are currently licensed under Idaho Power's Hells Canyon Hydroelectric Project (FERC Project No. 1971). Idaho Power expects that the FERC will determine that these lines are not primary lines, and will not be included in a new license. Permitting these Bliss and Hells Canyon Project lines together, given the common project area and issues involved, would result in administrative and operational efficiencies.

1.3. Project Objectives

1.3.1. *Provide for Safe and Reliable Transmission of Electricity*

Electric utilities are charged by state and federal regulatory agencies with the responsibility to provide safe, reliable electric service to their customers. Customers may include homeowners, businesses, factories, municipalities, government, and other utilities. Electricity is essential for domestic use, economic growth, providing for national security, and other vital services.

Idaho Power maintains its transmission lines to ensure the structural and engineering integrity of the system. Providing safe, reliable power to customers requires an effective and timely operation and maintenance (O&M) program. This must be accomplished, to the greatest extent

possible, while maintaining a harmonious relationship with adjoining land uses and the environment.

1.3.2. Minimize Impacts to the Environment and Conduct Operation and Maintenance in a Manner that Complies with BLM Land-Use Plans

It is intended that project related O&M activities minimize impacts to the environment and comply with BLM land-use plans and other applicable environmental laws and policies. Specific objectives related to this include:

- Define approved work areas
- Conduct road maintenance as necessary to minimize direct and indirect impacts to resources
- Minimize potential impacts of vegetation clearing within the rights-of-way
- Rehabilitate disturbed areas
- Minimize the spread of noxious weeds
- Protect streams and associated riparian and wetland habitats
- Protect federally listed and Idaho BLM sensitive plant species
- Protect federally listed and Idaho BLM sensitive wildlife species and their habitat
- Protect cultural resources
- Minimize aesthetic impacts of the project

1.4. Authorizations, Permits, Reviews and Approvals

The BLM has administrative responsibilities on the public lands where the transmission-line ROW and related facilities are located. Title V of the Federal Land Policy and Management Act (FLPMA) (43 U.S.C. 1761), as amended, authorizes the granting and renewing of rights-of-way crossing public lands administered by the BLM. The BOR's authorities stem from the Act of Congress June 17, 1902 (ch. 1093, 32 Stat. 388; 43 U.S.C. 391), and acts amendatory thereof or supplementary thereto, particularly Sec. 10 of the 1939 Reclamation Project Act (43 U.S.C. 485), all of which acts are commonly referred to as the Federal Reclamation Laws. The BLM and BOR will collectively be referred to as "the Agencies". Table 1-2 documents the federal agency approvals, reviews, and permitting requirements for the project.

Table 1-2. Federal authorizations, permits, reviews, and approvals required for the project.

Action Requiring Permit, Approval, or Review	Permit/Approval	Accepting Authority/ Approving Agency	Statutory Reference
Right-of-Way (ROW) over land under federal management	ROW Grant	BLM	FLPMA 1976 (PL94-579) USC 1761-1771 and 43 CFR 2800
		BOR	Act of Congress June 17, 1902 (ch. 1093, 32 Stat. 388: 43 USC sec. 391), <i>and</i> Sec. 10 of the 1939 Reclamation Project Act (ch. 418, 53 Stat. 1187; USC sec 485)
National Environmental Policy Act (NEPA) compliance to grant ROW	Environmental Assessment (EA)	BLM, BOR	NEPA, CEO 40 CFR Park 1500-et.seq.
Grant of ROW	Endangered Species Act compliance by BLM and US Fish and Wildlife Service (USFWS)	USFWS	Endangered Species Act Section 7 Consultation
Grant of ROW	National Historic Preservation Act Compliance Section 106	BLM, as lead agency, and State Historic Preservation Office	National Historic Preservation Act of 1966, 36 CFR part 800, 16 USC 47

1.4.1. Consistency with Management Plans

Boise-to-Borah transmission lines traverse four BLM planning areas (Figure 1-1). The proposed project falls within the jurisdiction of the following BLM resource management plans (RMP) and management framework plans (MFP):

- Kuna MFP (USDI 1983)—Boise Bench to Midpoint #1, #2, and #3
- Jarbidge RMP (USDI 1987)—Boise Bench to Midpoint #1, #2, and #3
- Bennett Hills/Timmerman Hills MFP (USDI 1976)—Boise Bench to Midpoint #2 and #3
- Monument RMP (USDI 1985)—Boise Bench to Midpoint #1, #2, and #3 and Midpoint to Borah #1 and #2

The proposed project conforms to all of the BLM land-use plans described above.

1.5. Decision to be Made

The Agencies must decide if they are going to issue a grant for the rights-of-way and, if so, what conditions would be included in the grant issued. In doing so, the Agencies must comply with requirements promulgated by the National Environmental Policy Act (NEPA) of 1969 (as amended), as well as other federal laws (Table 1-2).

This Environmental Assessment (EA) presents an analysis of the potential environmental impacts on federal lands that may result from implementation of the Proposed Action. The deciding officer would also determine if the proposed action is a “major federal action” requiring the development of an Environmental Impact Statement (EIS) by assessing the significance of the Proposed Actions based on context and intensity (40 CFR 1508.27). Issuing a new grant for the ROW would allow Idaho Power to continue to operate and maintain the transmission lines for the duration of the new grant term.

1.6. Scoping

Several issues were identified as a result of BLM interdisciplinary team discussions, consultation with the US Fish and Wildlife Service (USFWS), tribal consultations, and Idaho Power. Key issues identified are assessed throughout the analysis of effects. Details relating to alternatives considered for this Project are included in Chapter 2.

1.6.1. Key Issues to be Addressed

As a result of the scoping process for the Project, the BLM identified several key issues to be analyzed in detail in the EA. These key issues are summarized below and discussed in more detail in Chapter 3—Affected Environment and Chapter 4—Environmental Consequences.

Cultural Resources

Federal agencies are required to consider the effects of the proposed undertaking on historic properties, which include archaeological and historical sites. Historic and pre-historic cultural resources occur in the project area. Idaho Power’s O&M activities, especially those involving ground disturbance, potentially could impact the integrity of cultural resources. In addition, traditional cultural properties, if identified by Native American tribes, could be at risk due to O&M activities.

Sensitive Plant Resources

The USFWS reported two proposed or listed plant species either known to occur or that have the potential to occur in the vicinity of the proposed project (Table 1-3). Ute ladies’-tresses (*Spiranthes diluvialis*) is listed as threatened and slickspot peppergrass (*Lepidium papilliferum*) is currently proposed for listing as endangered. BLM is obligated to protect listed species and determine if its actions are likely to affect these species.

In addition to federally listed species, the BLM maintains a list of sensitive species that it must consider when making management decisions. Plant species on the BLM sensitive species list that have the potential to occur in the transmission-line ROW are presented in Chapter 3. Idaho Power O&M activities could directly or indirectly impact these species.

Individuals or populations of these species could be trampled by vehicles or personnel, dug up, or otherwise impacted during ground disturbing O&M activities. These species could be secondarily affected by impacts to site productivity. For example, O&M activities potentially

may cause soil compaction, accelerated erosion, or introduce noxious weeds that could competitively exclude sensitive species.

Sensitive Wildlife Resources

The USFWS reported 15 animal species on their project species list (Table 1-3). BLM is obligated to protect listed species and determine if its actions are likely to affect these species. Of the reported species, 8 are either known to occur or have the potential to occur in the vicinity of the project: gray wolf (*Canis lupus*), bald eagle (*Haliaeetus leucocephalus*), yellow-billed cuckoo (*Coccyzus americanus*), Utah Valvata snail (*Valvata utahensis*), Bliss Rapids snail (*Taylorconcha serpenticola*), Idaho springsnail (*Pyrgulopsis idahoensis*), Banbury Springs limpet (*Lanx* spp.), and Snake River physa snail (*Physa natricina*). Gray wolves are concentrated well to the north of the project area, however they may incidentally stray near the Boise Bench to Midpoint #3 line, the northern-most transmission line. Bald eagles winter in the project area. Disturbance from O&M activities, either directly to the birds or indirectly to roosting or perching habitat, could impact this species. Although very small portions of the project area represent historical habitat for the yellow-billed cuckoo, no observations of the birds have been reported in the project area. However, impacts from O&M activities do have the potential to limit habitat critical to the reestablishment of the species. The five snail species, which occur in the Snake River or are associated with springs in the Snake River canyon, are in the vicinity of the four river crossings of the Boise Bench to Midpoint #1 line. Several other species included on the USFWS species list were determined to not be in the project area. Thus, the Proposed Action would have no effect on these species (Table 1-3), and are not considered further in this EA.

Table 1-3. USFWS listed species from the BLM Four Rivers, Jarbidge, Burley, and Shoshone Field Office 90-Day Species Lists, dated January 4, 2003.

Species	Latin Name	Listing Status ¹	Project Area Determination ²
Mammals			
Gray wolf	<i>Canis lupus</i>	XN	Potential to occur
Canada lynx	<i>Lynx canadensis</i>	T	Not present
Northern Idaho ground squirrel	<i>Spermophilus brunneus brunneus</i>	T	Not present
Southern Idaho ground squirrel	<i>Spermophilus brunneus endemicus</i>	C	Not present
Birds			
Bald eagle	<i>Haliaeetus leucocephalus</i>	T	Occurs
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	C	Potential to occur
Fishes			
Bull trout	<i>Salvelinus confluentus</i>	T	Not present
Bull trout	<i>Salvelinus confluentus</i>	PCH	Not present
Amphibians			
Columbia spotted frog	<i>Rana pretiosa</i>	C	Not present
Invertebrates			
Utah Valvata snail	<i>Valvata utahensis</i>	E	Occurs
Bliss Rapids snail	<i>Taylorconcha serpenticola</i>	T	Occurs
Idaho springsnail	<i>Pyrgulopsis idahoensis</i>	E	Occurs
Banbury Springs limpet	<i>Lanx spp.</i>	E	Potential to occur
Snake River Physa snail	<i>Physa natricina</i>	E	Occurs
Bruneau hot spring snail	<i>Pyrgulopsis bruneauensis</i>	E	Not present
Plants			
Slickspot peppergrass	<i>Lepidium papilliferum</i>	PE	Potential to occur
Ute ladies'-tresses	<i>Spiranthes diluvialis</i>	T	Potential to occur

¹ Listing status: E=endangered, T=threatened, C=candidate, PE=proposed as endangered, XN=experimental population, PCH=proposed critical habitat

² Project area is defined as the transmission-line rights-of-way, which vary from 80-150 ft.

In addition to federally listed species, the BLM maintains a list of sensitive species that it must consider when making management decisions. The BLM list for plant and animal species that have the potential to occur in the transmission-line ROW is presented in Chapter 3. Idaho Power O&M activities could directly or indirectly impact these species. These species could be disturbed or killed by O&M activities, or habitat could be impacted and thus no longer support the species during one or more periods of its life cycle.

2. ALTERNATIVES INCLUDING THE PROPOSED ACTION

2.1. Introduction

To fulfill the stated Purpose and Need of providing safe and reliable electrical power while minimizing impacts to the environment, two alternatives are considered for management of the ROW—the Proposed Action and No-Action Alternative.

2.2. Description of the Proposed Action and No-Action Alternatives

2.2.1. Actions Common to the Proposed Action and No-Action Alternatives

The Proposed Action and the No-Action Alternative would grant rights-of-way on about 284 miles (Table 1-1) of federally administered public land for five existing Idaho Power transmission lines and associated appurtenances, including service roads within the rights-of-way (BLM ROW Application #IDI-34249). Rights-of-way on those portions of the transmission lines on private and state lands have previously been secured by Idaho Power through perpetual easements.

2.2.2.1. Description of Transmission Lines

The three 230-kV lines and two 345-kV lines consist primarily of H-framed wood structures (Table 2-1). Specific line descriptions are provided below. Dead-end or tangent structures may require three or four pole H-frame structures or guy wires for support. Recently, as the wood pole structures have degraded, H-frame tubular steel pole structures have been used as replacements. The steel pole structures require less maintenance and are resistant to destruction from wildfire, which is common in the project area. In addition, there are some steel lattice structures present.

Table 2-1. Number of structures, by type, present on the Boise-to-Borah transmission lines.

Line No.	Line Name	Wood H-Frame	Tubular Steel H-Frame	Laminated Wood H-Frame	Steel Lattice
902	Boise Bench to Midpoint #1 – 230 kV	863	11	0	5
906	Boise Bench to Midpoint #2 – 230 kV	868	0	0	17
912	Boise Bench to Midpoint #3 – 230 kV	474	0	224	24
950	Midpoint to Brady #1– 345 kV	624	48	0	0
951	Midpoint to Borah #2 – 345 kV	538	87	0	8

Safety is a primary concern with the project. The transmission lines are protected with power circuit breakers and line relay protection equipment. If conductor failure were to occur, the line would automatically be de-energized. The overhead ground wires above the conductors provide lightning protection.

The ROW for the Proposed Action and No-Action Alternatives are similar in length, but differ in amount of acreage encompassed because of varying ROW widths (Table 2-2).

Table 2-2. Length, width, and area of ROW on federal lands for the Proposed Action and No-Action Alternative.

Line No.	Line Name	Line Length (mi)		ROW Width (ft)		ROW Area ¹ (ac)	
		Total	Federal Lands	Proposed Action	No-Action Alternative	Proposed Action	No-Action Alternative
902	Boise Bench to Midpoint #1 – 230 kV	108	58	80	80	582	582
906	Boise Bench to Midpoint #2 – 230 kV	105	54	100	150	659	989
912	Boise Bench to Midpoint #3 – 230 kV	107	77	100	150	938	1,407
950	Midpoint to Borah #1– 345 kV	79	46	150	80	828	442
951	Midpoint to Borah #2 – 345 kV	78	48	150	150	875	875

¹approximate values, may not include additional acreage for guy wires

Boise Bench to Midpoint #1 line

The Boise Bench to Midpoint #1 line was constructed in 1950 with wooden two-pole H-frame structures. Some three-pole structures are used at angle points. The structures have a nominal height of 80 ft. The line extends easterly from Idaho Power’s Boise Bench Substation in Ada County to Idaho Power’s Midpoint Substation in Jerome County (Figure 1-1). The line was authorized under the Bliss Project FERC license with an 80 ft ROW plus additional width at guy wires. The same width is requested under the Proposed Action and No-Action alternatives. Approximate length on federal land is 58.2 miles—57.4 mi on BLM lands and 0.8 mi on BOR lands. The ROW encompasses about 582 acres, including area for anchors, on federal lands—574.5 acres on BLM and 7.8 acres on BOR lands.

Boise Bench to Midpoint #2 line

The Boise Bench to Midpoint #2 line was constructed in 1961 with wooden two-pole H-frame structures. Some five-pole structures are used at various locations such as angle points. The structures are typically 70 to 80 ft tall. The line extends easterly from Idaho Power’s Boise Bench Substation in Ada County to Idaho Power’s Midpoint Substation in Jerome County (Figure 1-1). The line was authorized under the Hells Canyon Project FERC license with a 150 ft ROW. A 100 ft ROW is requested under the Proposed Action alternative. Approximate length on federal lands is about 54.4 miles—53.9 mi on BLM and 0.5 mi on BOR lands. The ROW would

encompass about 659 acres on federal lands under the Proposed Action—653.8 ac on BLM and 5.8 ac on BOR lands.

Boise Bench to Midpoint #3 line

The Boise Bench to Midpoint #3 line was constructed in 1966 with wooden two-pole H-frame structures and some steel structures. Some five-pole structures are used at various locations such as angle points. The structures are typically 70 to 100 ft tall. The line extends easterly from Idaho Power's Boise Bench Substation in Ada County to Idaho Power's Midpoint Substation in Jerome County (Figure 1-1). The line was authorized under the Hells Canyon Project FERC license with a 150 ft ROW width. A 100 ft width is requested under the Proposed Action alternative. Approximate length on federal lands is about 77.4 miles—75.0 mi on BLM, 1.4 mi on BOR, and 1.0 mi on COE lands. The ROW encompasses about 938 acres on federal lands under the Proposed Alternative—909.5 ac on BLM, 16.9 ac on BOR, and 11.8 on COE lands.

A fiber optic communication wire replaces one of the two overhead ground wires. The fiber optic line is considered a separate use, authorized by BLM grant IDI-32607.

Midpoint to Borah #1 line

The Midpoint to Borah #1 line was constructed in 1950 with wooden two-pole H-frame structures and some steel structures. Some three-pole structures are used at angle points. The structures have a nominal height of 80 ft. The line extends easterly from Idaho Power's Midpoint Substation in Jerome County to Idaho Power's Borah Substation in Power County (Figure 1-1). The line was authorized under the Bliss Project FERC license with an 80 ft ROW width plus additional width at guy wires. A 150 ft width is requested under the Proposed Action alternative. This line was originally built as a 138-kV line. The width of the ROW was not expanded proportionally to the increase in capacity. The expanded ROW is proposed to meet current reliability and safety standards. Approximate length on federal lands is 45.6 miles—45.1 mi on BLM and 0.5 mi on BOR lands. Under the Proposed Action, the ROW encompasses about 828 acres on federal lands—819.6 ac on BLM and 8.6 ac on BOR lands.

Midpoint to Borah #2 line

The Midpoint to Borah #2 line was constructed in 1961 with wooden two-pole H-frame structures and some steel structures. Some five-pole structures are used at various locations such as angle points. The structures are typically 70 to 80 ft tall. The line extends easterly from Idaho Power's Midpoint Substation in Jerome County to Idaho Power's Borah Substation in Power County (Figure 1-1). The line was authorized under the Hells Canyon Project FERC license with a 150 ft right-of-way width. The same width is requested under the Proposed Action and No-Action alternatives. Approximate length on federal lands is 48.1 miles—44.7 mi on BLM and 3.5 on BOR. The right-of-way encompasses about 875 acres on federal lands—811.9 ac on BLM and 63.0 on BOR lands.

2.2.2.2. Operation and Maintenance Requirements

Idaho Power performs O&M activities to keep the project transmission lines operational and in good repair. These activities are either planned—such as those for routine patrols, inspections, scheduled maintenance, and scheduled emergency maintenance—or unplanned—such as those

for emergency maintenance in cases where public safety and property are threatened. O&M activities are the same for both the No-Action and Proposed Action Alternatives.

Typical O&M Activities for the Boise Bench to Midpoint #1, #2, and #3 lines

These lines run between the Boise Bench and Midpoint substations. They consist of a single 230-kV circuit primarily on H-frame wood structures. Occasional steel lattice structures also occur on the lines. Vegetation management is limited on these lines because of the lack of tall shrubs or trees in the ROW. Line clearing activities are conducted on less than 700 linear feet of ROW along each line. A ground patrol by a patrolman using a pickup or ATV occurs annually between April and October. The patrolman identifies line and structure conditions in need of repair. The ground patrol takes about 13 days to complete for each line. Follow-up, annual maintenance on each line would take about five days for a six-person crew to complete. A detailed climbing or aerial inspection of the structures, conductors, and associated hardware takes place approximately once every 10 years. During this inspection structural hardware is checked and tightened. It would take one four-person crew about 30 days to complete a line. Inspections can take place from April through October. Follow-up maintenance to the detailed inspection usually occurs the following year. A six-person crew may take up to 20 days to complete the follow-up maintenance. An inspection of the wood pole integrity takes place about once every 10 years. The inspection would take place between April and October or as soil conditions allow. It requires a single six-person crew about 20 days to complete each line. The follow-up replacement of deteriorated poles typically would take one six-person crew about 20 days to complete.

Typical O&M Activities for the Midpoint to Borah #1 and #2 lines

These lines run between the Midpoint and Borah substations in eastern Idaho. The lines consist of a single 345-kV circuit on H-frame wood or tubular steel structures. Vegetation management is limited on these lines because of the lack of tall shrubs or trees in the ROW. Line clearing activities are conducted on less than 300 linear feet of ROW along each line. A ground patrol by a single person using a pickup or ATV occurs annually between April and October. The ground patrol takes about 8 days to complete a line. Follow-up, annual maintenance would take about five days for a six-person crew to complete. A detailed aerial or climbing inspection of the structures, conductors, and associated hardware takes place approximately once every 10 years. Such an inspection can take place from January to May or from September through December, depending on weather. Follow-up maintenance to the detailed inspection usually occurs the following year. A six-person crew typically takes about 20 days to complete the follow-up maintenance. This maintenance requires the lines to be out of service. An outage window is available between May and August. An inspection of the wood pole integrity takes place about once every 10 years. The inspection can take place from April through October and requires about 15 days for a single six-person crew to complete each line. The follow-up replacement of deteriorated poles would likely take a six-person crew about 25 days to complete.

Emergency Situations

Emergency situations are those conditions that may result in eminent or direct threats to public safety or threaten or impair Idaho Power's ability to provide power to its customers. The following examples include, but are not limited to, real and potential emergency situations:

- Failure of conductor splices
- Lightning strike or wildfire resulting in burned wood pole structures
- Damage to structures from high winds, ice, or other weather-related conditions
- Line or system outages or fire hazards caused by trees falling into conductors
- Breaking or eminent failure of crossarms or insulators, which could, or does cause conductor failures
- Vandalism to structures or conductors from shooting or other destructive activities
- Idaho Power estimates about 3 emergency incidents per 10-year period on the 230-kV lines and about 5 incidents per 10-year period on the 345-kV lines, based on line age and prior incidences for these lines. The most common source of emergency situations is wildfire burning poles or the smoke causing flashover between the conductors.

2.2.3. Proposed Action

The Proposed Action is to grant rights-of-way on federally administered public land for five existing Idaho Power transmission lines (BLM ROW Application #IDI-34249). The Proposed Action would include expanding the ROW for the Midpoint to Borah #1 line from 80 ft to 150 ft to meet current NESC reliability standards and reducing the ROW for the Boise Bench to Midpoint #2 and #3 lines from 150 ft to 100 ft. The reduced ROW width would still meet NESC reliability standards.

In addition to typical O&M activities, as described above, the Proposed Action would include two options for reducing the threat of wildfire to destroy wood poles. One or both elements may be used. One element of the protection plan would be to reduce fuel loads around wood poles in fire prone areas. This would entail use of approved herbicides and vegetation clearing to control fuels within a 10-ft radius of wood poles. Herbicide treatments would be consistent with the Record of Decision on Vegetation Treatment on BLM Lands in Thirteen Western States (USDI 1991) or subsequent decisions regarding the use of herbicide on BLM managed lands. The second element of the treatment would be to apply a fire retardant covering to the base of wood poles. This treatment entails applying a water-based, heavy-duty coating designed to help protect wood utility poles from fire damage. It is hand applied. The treatment material would not contain any hazardous materials. One or both of the treatments may be applied, depending on site-specific circumstances. The specific treatment and materials used would be detailed on a site-specific basis in the Plan of Development (POD) and must be approved by the Authorized Officer prior to treatment. Herbicides would not be used in areas containing slickspot peppergrass and its habitat.

2.2.3.1. Permitted Uses

Land uses that are compatible with safety regulations may be permitted by the BLM in and adjacent to the ROW. Existing land uses such as agriculture and grazing generally have been permitted within the ROW. Incompatible land uses within transmission line ROW include construction and maintenance of structures or dwellings, and any use requiring changes in

surface elevation that would affect existing facilities. Compatible uses of the ROW on public lands would have to be approved by the BLM.

2.2.3.2. Applicant-Committed Environmental Protection Measures

The committed protective measures discussed in this section are measures that Idaho Power would include as part of the Proposed Action. These measures, designed to avoid or reduce the impacts of the Proposed Action, are organized by resource topics and discussed in Chapter 4 – Environmental Consequences.

These measures, and other specific plans, would be incorporated in the POD, which provides details on how O&M activities would be conducted and resources protected in the project area. The POD details additional measures required to minimize potential project impacts on natural resources and human safety. Plans typically include reclamation and revegetation of the ROW, resource protection measures, noxious weed control, fire prevention, hazardous spill prevention, and water pollution prevention.

Mitigation Measures Common to Several Resources

- 0-1. Idaho Power would provide an environmental inspector on projects that Idaho Power and the BLM mutually agree that such inspection is needed.
- 0-2. Roads would be maintained to have crossroad drainage in order to minimize the amount of channeling or ditches needed. Water bars would be installed at all alignment changes (curves), significant grade changes, and as requested by the BLM Authorized Officer.
- 0-3. All existing road drainage structures would be maintained or repaired by Idaho Power during O&M periods.
- 0-4. O&M activities would be temporarily halted where wet conditions cause excessive rutting of roads and/or work areas.

Cultural Resources

- 1-1. Before a ground disturbing O&M activity begins, known cultural sites would be marked to ensure that they be avoided and protected during the O&M activity. Marking would be coordinated with the BLM on a project basis. Personnel appointed by Idaho Power would mark the sites before maintenance or construction begins. After the project was complete or no longer posed a threat to the cultural resources, the stakes would promptly be removed to protect the site's significance and location from unwanted attention.
- 1-2. Any cultural and/or paleontological resource [fossil(s) or historic or prehistoric site or object] discovered by Idaho Power, or its designated contractor, on BLM land would be immediately reported to the Authorized Officer. Idaho Power would suspend all operations in the immediate area of such discovery until written authorization to proceed was issued by the Authorized Officer. Idaho Power would be responsible for the cost of evaluation. The Authorized Officer would make any decision as to proper mitigation measures after consulting with Idaho Power.

- 1-3. All human interments would be treated with the respect accorded them by state and federal laws applying to human remains. If the discoveries were unanticipated, state law does not distinguish between historic or prehistoric burials as far as what steps are required for initial notification or disinterment. If human remains were discovered during O&M activities, Idaho Power would stop all work in the immediate area to protect the integrity of the find and notify the county sheriff and BLM as soon as possible. In addition, the location of the find would be flagged or fenced off to protect it from further impacts. The BLM would determine what mitigation was necessary and, once the mitigation was complete, work could resume in the impacted area.
- 1-4. Prior to ground disturbing activities:
 - All sites that were evaluated as “potentially eligible” for the National Register of Historic Places (NRHP) would be re-evaluated as either eligible or ineligible
 - All sites that were evaluated as “eligible” for the NRHP, either in the survey report or by future reevaluation of potentially eligible sites, would have that designation resolved by additional work, including:
 - A nomination to the NRHP
 - An appropriate mitigation plan and determination of affect to assess a no affect, no adverse affect, or adverse affect as a result of the ROW, maintenance activity, or other future work
 - All site forms submitted would be updated as appropriate and sent to the appropriate BLM office and the State Historic Preservation Officer, particularly those mentioned in the above text

Botanical Resources

- 2-1. When ground disturbing O&M activities occur in areas harboring threatened, endangered, or sensitive (TES) plant species, the known sites would be marked on the ground to ensure that the species be avoided and protected. Marking would be coordinated with the BLM on a project basis. After the project was complete or no longer posed a threat to the sensitive resources, the stakes would promptly be removed to protect the site’s significance and location from unwanted attention.
- 2-2. If sensitive species were found before or during ground disturbing O&M activities, Idaho Power would establish a 100-ft buffer zone around the species or population and then contact the BLM immediately. Until the BLM authorized Idaho Power to proceed, either orally or in writing, all activities would cease within the 100-ft buffer zone.
- 2-3. To decrease chances of incidental disturbance and spread of weeds, personal vehicles, sanitary facilities, and staging areas would be confined to a limited number of specified locations. For prolonged O&M projects, maintenance equipment, materials, and vehicles would be stored at the sites where activities would occur or at specified maintenance yards.

- 2-4. To reduce the potential for introduction or spread of undesirable exotic vegetation, the responsible party would clean all equipment that may operate off-road or disturb the ground before beginning O&M activities within the project area. Preferably, the cleaning would occur at an Idaho Power operation center, commercial car wash, or similar facility. Vehicles traveling only on established roads would not be required to be cleaned.
- 2-5. To help limit the spread and establishment of a noxious weed community within the disturbed areas, prompt establishment of the desired vegetation would be required. Seeding would occur as soon as possible during the optimal period after construction. Certified “noxious weed-free” seed would be used on all areas to be seeded. Other construction material, such as fill, would also be free of noxious weed seed.
- 2-6. For major O&M activities requiring ground disturbance, Idaho Power would prepare a revegetation plan in consultation with the BLM. The plan would specify appropriate revegetation techniques to be applied. Techniques could include reseeding native or other acceptable plant species.
- 2-7. Highly competitive nonnative plant species, such as crested wheatgrass, intermediate wheatgrass, and forage kochia, would not be used in revegetation actions occurring in areas that contain slickspot habitat.

Wildlife Resources

- 3-1. Idaho Power would follow the same project-level protocols for TES wildlife species as for rare plants (2-2), where applicable. After consultation with the BLM the 100-ft buffer would be adjusted to fit the species and situation.
- 3-2. With the exception of emergency repair situations, O&M activities in designated areas would be modified or curtailed during sensitive periods (e.g., nesting and breeding periods) for known locations of candidate, proposed, threatened, and endangered, or other BLM listed sensitive animal species. This would include raptor species listed in Table 4-1. The Authorized Officer listed in the POD would approve sensitive areas and timeframes.
- 3-3. No major O&M activities shall occur between November 15 and March 15 within 0.25 mi (400 m) of wintering bald eagle perch trees or roost locations within the project area ROW without primary consultation with the BLM and the USFWS.
- 3-4. No major O&M activities shall occur between March 1 and June 1 within 0.62 mi (1 km) of active sage grouse leks. Fall reseeding is preferred near leks. If spring reseeding is necessary, activity should not occur before 11:00 am from March 1 to May 1. In addition, spring helicopter flights within 0.62 mi would be done after 11:00 am.
- 3-5. Reports of avian collision with project lines would result in a follow-up evaluation by Idaho Power. Guidelines in APLIC (1994) would be followed if corrective action is needed.

Land Use

- 4-1. If existing improvements are damaged by construction activities they would be repaired or replaced, as agreed to by the parties involved.

- 4-2. If fences and gates are damaged or destroyed by O&M activities, they would be replaced to their original condition as required by the BLM.

Visual Resources

- 5-1. No permanent paint or discoloring agents would be applied to rocks or vegetation to indicate limits of survey or O&M activity.
- 5-2. If conductor replacement were necessary, non-specular conductors would be used to reduce visual impacts.

2.2.4. No-Action Alternative

The No-Action Alternative is defined as the continuation of present management. For this project, the No-Action Alternative would be the granting of rights-of-way for the project transmission lines with the same conditions as are presently in the FERC licenses. The No-Action Alternative would result in three major differences from the Proposed Action: 1) no new conditions to protect the environment and associated resources from potential O&M impacts, 2) no change in the width of ROW, and 3) no fuel reduction or wood pole treatment for protection against fire. Federal regulations on threatened and endangered species would protect some resources regardless of the alternative.

2.2.4.1. Conditions of the FERC Licenses

The Hells Canyon (Project No. 1971) and Bliss (Project No. 1975) FERC licenses included several articles intended to protect resources from transmission-line related O&M impacts. The following are articles of the original FERC licenses concerning transmission lines:

Hells Canyon License, Article 12 and Bliss License, Article 15—The Licensee shall clear such portions and only such portions of transmission line right-of-way across lands of the United States as are designated by the officer of the United States in charge of the lands; shall conduct its clearing operations in conformity with the specifications provided by such officers; shall keep the designated areas clear of new growth, all refuse and inflammable material to the satisfaction of such officer; shall trim all branches of trees in contact with or liable to contact the transmission lines; shall cut and remove all dead or leaning trees which might fall in contact with transmission lines; and shall take such other precautions against fire as may be required by such officer. No fires for the burning of waste material shall be set except with the prior written consent of the officer of the United States in charge of the lands as to time and place, and burning shall be in accordance with the burning permit or instructions issued by that officer. All stems over three inches in diameter would be cut from the stump as close to the ground as practical. The stems and stumps would not be pushed over prior to cutting. No stumps would be removed unless absolutely necessary for the construction of towers, access roads or erosion control structures.

Licensee may dispose of the debris crated in clearing either by chipping or burning. If chipped, chips shall be spread outside the area immediately under the wires in such a manner that their loose depth does not exceed six (6) inches. If burned, the piles shall be constructed free of dirt so as to readily burn, and shall be placed at or near the center of the cleared area to prevent damage

to trees or other vegetation. Any burning shall be done in conformity with the requirements of any applicable Federal, State or local air pollution control ordinances and regulations.

Hells Canyon License, Article 50 and Bliss License, Article 36—The Licensee shall minimize disturbances of natural ground. The Licensee shall be responsible for and shall minimize soil erosion and siltation on lands within and adjacent to the project resulting from construction and operation thereof. The Commission upon request, or upon its own motion, may order the Licensee to construct and maintain such preventive works to accomplish this purpose and to revegetate exposed soil surface as the Commission may find to be necessary after notice and opportunity for hearing.

All areas of United States land where the soil has been disturbed by clearing or construction would be reseeded with suitable grass seed and selected browse species. To control soil movement and assist the establishment of vegetative cover, terracing, cross ditching and/or water spreading ditches may be required. All soil erosion structures and revegetated areas shall be maintained by the Licensee until they become stabilized. Licensee would protect revegetated areas from grazing use during establishment and for three years thereafter.

Hells Canyon License, Article 61—If any previously unrecorded archeological or historic sites are discovered during the course of construction or development of any project works or other facilities at the project, construction activity in the vicinity shall be halted, a qualified archeologist shall be consulted to determine the significance of the sites, and the Licensee shall consult with the State Historic Preservation Officer (SHPO) to develop a mitigation plan for the protection of significant archeological or historic resources.

Hells Canyon License, Article 401—The Licensee shall design and construct the transmission line in accordance with guidelines set forth in *Suggested Practices for Raptor Protection on Power Lines* (Olendorff et al. 1981).

The Licensee shall consult with the U.S. Fish and Wildlife Service and the U.S. Forest Service in adopting these guidelines, and shall develop and implement a design that would provide adequate separation of energized conductors, groundwires, and other metal hardware, adequate insulation, and other measures necessary to protect raptors from electrocution hazards.

Bliss License, Article 17—The Licensee shall do everything reasonably within its power and shall require its employees, contractors, and employees of contractors to do everything reasonably within their power, both independently and upon request of officers of the agency concerned, to prevent, make advanced preparations for suppression, and suppress fires on lands occupied under the license.

2.3. Description of Alternatives Considered but Eliminated from Detailed Study

Two other transmission-line rights-of-way alternatives were considered in addition to the proposed project:

1. Continue the authorization of the rights-of-way under FERC pursuant to a FPA withdrawal
2. Terminate the need for the rights-of-way by decommissioning the transmission lines

The first alternative was eliminated from further consideration based on a decision that the lines no longer meet the criteria of a primary transmission line as defined by FERC. This decision by the FERC promulgated the Proposed Action.

The second alternative to remove the lines was eliminated from detailed study because it does not meet the objective of providing safe, reliable power to customers in Idaho Power's service territory. These lines are critical to Idaho Power's transfer of bulk electrical power to meet electrical load demands in Idaho Power's service territory. The Midpoint to Borah lines are the primary lines that bring in bulk power from the Jim Bridger thermal plant in Wyoming to the eastside of Idaho Power's service territory. The Boise Bench to Midpoint lines are critical to providing bulk power to the Treasure Valley, particularly in low water years. In addition, these lines are critical to system stability and security because they provide for a parallel path in the event that Pacificorp's Midpoint to Summer Lake 500-kV line has a fault or is de-energized for any reason. Decommissioning these lines would result in insufficient, and therefore unreliable, power delivery to a large portion of Idaho Power's customers. It would also result in instability to the entire interconnected, western system transmission grid, causing impacts to power delivery and reliability throughout the Northwest.

2.4. A Comparison of Environmental Consequences

Measurement	No-Action Alternative	Proposed Action Alternative
<i>1. Potential to provide safe and reliable electrical transmission</i>	Moderate due to the increased risk of emergencies from wildfire burning wood poles.	High due to reduction of risk to wood poles from wildfire because of fuel treatment and pole protection.
<i>2. Potential impacts to the environment</i>	Moderate opportunity for impact or destruction of critical resources from O&M activities by not identifying resource sites of concern prior to actions and from less restricted timing and location of activities.	Low due to increased measures to protect resources, including restricting the timing and location of potential impacting O&M activities and identification of sensitive sites prior to activities commencing.
2a. Cultural resources	Moderate. Less comprehensive and direct protection would be afforded to sites that have NRHP determinations in question (i.e., sites that are potentially eligible have not had a determination of effect made and no mitigation plan developed to protect the site).	Low. Identified cultural sites would be staked and protected prior to ground disturbing O&M activities. O&M activities that potentially may disturb a cultural site would have an authorized protection or mitigation plan.

Measurement	No-Action Alternative	Proposed Action Alternative
2b. Sensitive plant resources	Moderate. No site-specific protection measures would be incorporated to protect populations in the ROW.	Low. All activities occurring near sensitive plant sites would be reviewed prior to O&M activities occurring. Protection measures include creating exclusion areas around sensitive plant populations when ground-disturbing activities may be occurring.
Utes ladies'-tresses	None. No populations occur in the project area and no impacts to potentially suitable habitat are expected.	None. No populations occur in the project area and no impacts to potentially suitable habitat are expected.
Slickspot peppergrass	Moderate potential exists for inadvertent impacts to suitable habitat from O&M activities.	Low. Protection measures include conducting site-specific surveys prior to ground disturbing O&M activities in potential habitat. All identified populations and habitat would be considered an exclusion area. Any unavoidable impacts would require consultation with the BLM and USFWS.
2c. Sensitive wildlife species and habitat	Moderate for non-threatened and endangered species. No protection of resources, including restricting the timing and location of potentially impacting O&M activities or identification of sensitive sites prior to activities commencing.	Low for non-threatened and endangered species due to increased protection of resources by including restricting the timing and location of potentially impacting O&M activities and identification of sensitive sites prior to activities commencing.
Bald eagle	Low due to implementation of federally mandated protective measures for nests, roosts, and perches, including restricting the timing and location of potentially impacting O&M activities near sensitive sites.	Low due to protection of nests, roosts and perches by restricting the timing and location of potentially impacting O&M activities and identification of sensitive sites prior to activities commencing.
Gray wolf	None. Extremely unlikely to be present. If found, federal policy would include restricting the timing and location of potential impacting O&M activities.	None. Extremely unlikely to be present. If found, project protective measures would include restricting the timing and location of potential impacting O&M activities.
Aquatic snails (Utah valvata, Snake River Physa, Banbury Springs limpet, Bliss Rapids snails, and Idaho springsnail)	None. No aquatic O&M activity. and Measures to protect water quality during off-site activities would prevent negative effects.	None. No aquatic O&M activity. Measures to protect water quality during off-site activities would prevent negative effects.
Yellow-billed cuckoo	None. Extremely unlikely to be present. If found, federal policy would include restricting the timing and location of potential impacting O&M activities.	None. Extremely unlikely to be present. If found, project protective measures would include restricting the timing and location of potential impacting O&M activities.

3. AFFECTED ENVIRONMENT

This section presents a description of the existing environmental setting that may be affected by operation and maintenance of the Boise-to-Borah transmission lines (Proposed Action). Potential resource impacts from the Proposed Action and suggested protective measures are described in Chapter 4. This chapter is organized as follows:

- 3.1. General Project Setting
- 3.2. Cultural Resources
- 3.3. Threatened, Endangered, and Sensitive Plant Species
- 3.4. Threatened, Endangered, and Special Status Wildlife Species

3.1. General Project Setting

3.1.1. Physiography and Geology

The five transmission lines (cumulatively referred to as the *project corridor*) run mostly north of the Snake River, following the arc of the Snake River plain, which makes up roughly half of the Columbia Intermontane geomorphic province. This province extends from northeast Idaho, south and west across a wide portion of the lower part of the state to the Oregon border, where it curves north to follow Idaho's western border as far as southeast Washington. A dominant feature of the project corridor is the expansive level plains formed by multiple flows of relatively recent basalt. In addition, the province contains mountains formed by block-faulting and other more complex geologic processes, as well as numerous types of older rocks and thick deposits of loess (Ross & Savage 1967).

The Midpoint to Borah #1 and #2 lines, in their entirety, run from just west of the town of American Falls to the Midpoint substation, south of Shoshone, passing through the Eastern Snake River plain section (Figure 1-1). Elevations rise and fall gradually from west to east on this homogeneous lava plateau, however the region is so large that it appears basically flat, with only occasional relief provided by low shield volcanoes, cinder cones, and lava ridges. The basalt flows that characterize the Eastern Snake River plain are all relatively recent depositions of Neocene age. Due to the porous nature of these lavas, the plain remains mostly unmarked by stream channels, and, other than the Snake River, few perennial streams are present (Ross & Savage 1967).

Starting from the Midpoint substation, the Boise Bench to Midpoint #1, #2, and #3 lines head west (Figure 1-1), passing through the northern part of the Malheur-Boise-King Hill section. Most of this section is also characterized by essentially flat topography, rising gradually from west to east. However, the basalt flows in this region are generally older than those of the Eastern Snake River plain section, and exhibit complex interbedding with thick Miocene and

Pliocene lacustrine and fluvial sediments. In addition, the network of stream channels in the Malheur-Boise-King Hill section is relatively dense, and perennial streams include portions of the Snake, Bruneau, Boise, and Payette rivers (Ross & Savage 1967).

The topography associated with the project corridor reflects these general geomorphic divisions. For about 75 miles, from American Falls west to Shoshone, the Midpoint to Borah #1 and #2 lines travel down a very gradual west-facing plain, with only gentle slopes and minor undulations in terrain, apart from the steeper slopes of Kimama Butte. The elevation at the easternmost segment of public lands, 7.3 air mi west of American Falls, is approximately 4,000 ft above mean sea level. At the western end, the elevation at Midpoint Substation is 3,900 ft. The high elevation point of the entire project corridor is located on the north slope of Kimama Butte, at approximately 4,870 ft. A few shallow, dry draws occur within this portion of the project area, however man-made canals are the only perennial water courses present.

In the central section of the project corridor the Boise Bench to Midpoint #1, #2, and #3 lines head west from the Midpoint Substation (3,900 ft), travel in separate directions for about 50 mi, and then come within about 5 mi of each other west of King Hill Creek. Many ephemeral and perennial streams are present throughout this section of the project corridor. The Boise Bench to Midpoint #1 line passes through abrupt changes in topography, as it travels up and down steep slopes and across flat benches, crossing the Snake River four times. Elevations on the various benches range from 2,900 to 3,400 ft. The low elevation point of the project corridor, 2,575 ft, is located on the east bank of the Snake River at river mile 557, where the lines exit a segment of BLM lands to cross the river into Swiss Valley. The Boise Bench to Midpoint #3 line heads northwest from the substation and changes little in elevation as it crosses Little Wood River, Big Wood River, Clover Creek, and King Hill Creek. Finally, at Little Canyon Creek it is at its highest elevation for this section at 4,000 ft. The Boise Bench to Midpoint #2 line heads west from the substation and later northwest, crossing the Malad River and King Hill Creek. The southern shore of Pioneer Reservoir is within 800 ft of the line on BLM lands in this part of the corridor. At Little Canyon Creek, the #2 line is within 1 mi of the Boise Bench to Midpoint #1 line and they are both at 3,400 ft.

The western section of the project corridor covers about 50 mi northwest from Little Canyon Creek (a point north of Glens Ferry, Idaho) to Boise, Idaho. The project corridor cuts across an expansive, undulating southwest-sloping plain that is incised by numerous gentle- to steep-walled stream draws, which are also aligned along a southwest-northeast axis. Average elevations in this section of the project area are about 3,500 ft. High elevation points are located on top of Lucky Mountain (4,100 ft) and across Slater's Flat (3,900 ft). A low elevation of 3,000 ft is found at the westernmost segment of BLM lands, 0.5 mi southeast of the Boise Bench substation. The substation, which is located on private lands, marks the low elevation point for this portion of the project corridor, at 2,840 ft. Many ephemeral and perennial streams are present throughout this section of the project corridor, including Alkali, Canyon, Indian, Soles Rest, and Black's creeks. The eastern shore of Hot Springs Creek Reservoir is also located on BLM lands in this part of the corridor.

3.1.2. Soils

As a result of Idaho's complex geological history, and varied topography, climate, and vegetation, there are numerous types of soils found in the state. The Columbia Intermontane geomorphic province is characterized by a range of grassland soils, with light colored arid soils prevalent across the southern half of the region (Ross & Savage 1967). The soils within the majority of the project corridor fall into the Aridisols Order (soils which lack sufficient moisture for most types of plants, and which tend to become salty). The majority of the project Aridisols can be further classed into four suborders, which are defined by their accumulation of, or action on, materials such as carbonates (Calcids), clay (Argids and Cambids), or silica (Durids). The eastern end of the project area is dominated by Calcids, which give way to Argids and Cambids in the central section of the project area. Durids are the leading soil suborder in the west half of the project area, with inclusions of Cambids (NRCS 1999).

The only other major soil order present in the project corridor is a relatively small area of Entisols near the eastern end, southeast of the Wapi lava flow. Entisols are soils with no definite soil horizons, generally due to active erosion or deposition. Two entisolic suborders, mainly Orthents but also Psamments, are present. Both of these suborders contain sand at all depths, but Orthents tend to have finer sand, as well as some gravel (NRCS 1999).

3.1.3. Climate

A number of weather reporting stations are located in the vicinity of the project area. Temperature and precipitation data from five of these stations, representing various points along the length of the project area, are summarized (Western Regional Climate Center 2002a, b, c, d, e). From east to west, these stations are: American Falls (at the east end of project area); Minidoka (approximately 32 mi west of American Falls); Hagerman (approximately 104 mi west of American Falls); Mountain Home (approximately 143 mi west of American Falls); and Boise Airport (just beyond the west end of the project area). Average annual maximum temperatures range from 15.4°C at Minidoka to 19.7°C at Hagerman. This is likely due to differences in elevation between the stations (4,291 ft above mean sea level at Minidoka, and 2,880 ft at Hagerman). Average minimum temperatures range from -1.0°C at Minidoka to 4.1°C at the Boise Airport station (also much lower than Minidoka). For all five stations, January is the coldest month (except at Hagerman where December is the coldest), and July is the hottest.

The average annual precipitation for these stations ranges from 24 centimeters (cm) at Minidoka to 30 cm at Boise. Peak precipitation months vary from east to west, with highest average precipitation occurring in May for American Falls and Minidoka, and in January or December for Boise, Mountain Home, and Hagerman. Average annual snowfall varies greatly between the five stations from a low of 9 cm at Hagerman to 74 cm at American Falls.

3.1.4. Vegetation

The entire project area is in the Shrub-Steppe vegetation province, with the largest portion occurring in the Big Sagebrush zone, as defined by Frenkel (1992). Vegetation within the Big Sagebrush zone is dominated by *Artemisia tridentata* (big sagebrush), as well as other shrubs,

over a grass layer dominated by bunchgrasses (predominantly *Poa secunda* [Sandberg's bluegrass] within the project area). In many areas, disturbance has produced communities where *Bromus tectorum* (cheatgrass) or *Taeniatherum caput-medusae* (medusahead) dominate the grass layer. A small portion at the eastern end of the project area is in the Desert Shrub Zone Complex, and is dominated by plant communities that tolerate sandy soils.

Several riparian areas associated with rivers, springs, seeps, and small creeks are also present in the project area. These habitats are typically degraded from heavy cattle use, and much of the riparian vegetation has been removed. Common riparian associates include *Typha latifolia* (cattail), *Elaeagnus angustifolia* (Russian olive), *Dipsacus sylvestris* (teasel), and various *Veronica* (speedwell) species.

3.1.5. Land Use

Approximately 62% of the 477 miles of ROW are located on federal lands. These federal lands are managed primarily by the BLM, although less than 1% of the total ROW length is on lands under the jurisdiction of the BOR. Much of the management of BOR lands is administered by the BLM. On these federal lands, cattle grazing is the primary land use, although numerous other activities take place. Dispersed recreation activities (primarily hunting) occur throughout the project area. Some fishing also occurs, principally in the Hagerman Valley and other areas near the Snake River, where water is relatively plentiful. Non-consumptive activities, such as hiking and camping, also take place throughout the project area, although, these activities are primarily associated with the areas near the Snake River. Other activities occur on a limited basis, associated with particular geographic features. These include rock hounding, spelunking, and target shooting.

Off-road vehicles use the public lands throughout the project area, although no areas of heavy, concentrated use are located near the lines. The service roads and access roads associated with the lines are also used for other purposes such as stock maintenance, hunter access, and general recreational driving. County and other roads also cross the project corridor in limited locations.

3.2. Archaeological and Historical Resources

The BLM is responsible for identifying, protecting, managing, and enhancing archaeological, historic, architectural, and traditional lifeway values located on BLM lands, as well as those that might be affected by BLM undertakings on non-federal lands. Some of the legislation and implementing regulations governing cultural resource management include the following: the National Historic Preservation Act of 1966 (NHPA), as amended; the Archaeological Resources Protection Act of 1979 (ARPA); the American Indian Religious Freedom Act of 1978 (AIRFA); and the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA). The Federal Land Policy Management Act of 1976 (FLPMA) states that public lands would be managed in a manner “that would protect the quality of...historical...and archaeological values”; the National Environmental Policy Act of 1969 (NEPA) and NHPA provide the objective to coordinate plans and functional programs and resources so as to preserve and protect important cultural resources early in the project planning process. Traditional lifeway values are usually

identified through consultation with tribal officials. The AIRFA, NHPA, and certain treaty rights guarantee access, use, and protection of traditional cultural properties, religious sites, and sacred objects. The identification and evaluation of traditional cultural properties is described in “Bulletin 38” (Parker and King 1994).

The BLM has a National Programmatic Agreement with the Advisory Council on Historic Preservation and the National Conference of State Historic Preservation Officers and Idaho BLM’s State Protocol Agreement with the Idaho State Historic Preservation Office that provide further guidance on BLM’s responsibilities for implementation of the NHPA and Section 106.

Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties, and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment. The historic preservation review process mandated by Section 106 is outlined in regulations issued by the Council. These regulations, “Protection of Historic Properties” (36 CFR 800), became effective June 17, 1999.

3.2.1. Historical and Archaeological Inventories

Idaho Power conducted class III archaeological and historical resource surveys on the five transmission lines in 1997. In addition, a supplemental class III survey was conducted in 2002 on the Midpoint to Borah #1 line to include the proposed ROW expansion from 80 ft to 150 ft. The surveys and subsequent results are described in the following reports:

- Cultural Resources Survey of Idaho Power Company Transmission Line 902 between Boise Bench Substation and Midpoint Substation—Ada, Elmore, Gooding, Twin Falls, and Jerome Counties, Idaho (Gross and Wildt 1997)
- Cultural Resources Survey of Idaho Power Company Transmission Lines 906 and 912: Boise Bench to Midpoint Substation—Ada, Elmore, Gooding, and Lincoln Counties, Idaho (Chatters and Ferguson 1997)
- Cultural Resources Survey for Idaho Power Transmission Line 950: Midpoint to Borah—Jerome, Lincoln, Minidoka, Blaine, and Power Counties (Mauser 1997a)
- Cultural Resources Survey of Idaho Power Company Transmission Line 950: Midpoint to Borah—Jerome, Lincoln, Minidoka, Blaine and Power Counties, Idaho (Mauser and Parvey 2003)
- Cultural Resources Survey of Idaho Power Transmission Line 951: Midpoint to Borah—Jerome, Lincoln, Minidoka, Blaine and Power Counties (Mauser 1997b)

The BLM and Idaho SHPO assessed these surveys in a report titled “Compliance Report Review for the Idaho Power/FERC Power Line Right-of-Way Transfer.” The BLM compliance report and the survey reports are on file with the Idaho SHPO and BLM; however, they are exempt from Freedom of Information Act requests to protect the confidentiality of archaeological and historical resource sites. The Idaho SHPO comments are provided in Appendix 3 and all historic and prehistoric sites are listed in Appendix 4.

3.2.2. Prehistoric and Historic Sites

The BLM and Idaho SHPO reviewed the transmission-line survey reports, as well as previously conducted surveys in the project area, and determined that 29 early Native American sites and 6 historical sites are eligible for the NRHP. Six early Native American sites and two historic sites are potentially eligible. Six eligible sites and five potentially eligible sites that were recorded during previous surveys are not identified as to whether they are early Native American or historical features. In total, 41 eligible sites and 13 potentially eligible sites occur in the project area (Table 3-1). Early Native American sites included resources such as lithic scatters, shelters, cairns, hunting blinds, and projectile points. Historical sites included resources such as canals, railroads, rock walls, and diversion dams. Sites described as ‘unevaluated’ in the survey reports are included here as potentially eligible sites.

Table 3-1. Number of prehistoric and historic sites within the Boise to Borah line ROW on federal lands.

Line No.	Line Name	Class III Survey Area (Percent ¹)	Prehistoric and Historic Sites ^{2,3}		
			Eligible	Potentially Eligible	Ineligible
902	Boise Bench to Midpoint #1 – 230 kV	100	—	9	10
906	Boise Bench to Midpoint #2 – 230 kV	100	6	5	4
912	Boise Bench to Midpoint #3 – 230 kV	100	16	4	19
950	Midpoint to Brady #1– 345 kV	100	9	—	32
951	Midpoint to Borah #2 – 345 kV	100	10	—	20
Total			41	13	85

¹area covered on federal lands

²eligibility for the National Register of Historic Places

³these include new and previously recorded sites

3.2.3. Native American Indian Concerns

Public lands within the project area managed by the BLM are the ancestral homelands of the Shoshone-Paiute Tribes of the Duck Valley Reservation in Nevada and some of the bands/tribes of the Shoshone-Bannock Tribes in southeastern Idaho (collectively referred to as “the Tribes” in this document). The project lines do not cross any of the Indian Reservations. Federally recognized Indian tribes, including the Tribes, have rights to and/or interests in public lands administered by the BLM. The Tribes are dependent upon the lands for a myriad of uses. The lands provide social and economic value to the American Indian people as well as spiritual and cultural uses. Through past discussions with the Tribes, the BLM is aware of their desire to capitalize on opportunities that maintain or enhance resources critical to the exercise of treaty rights, traditional customs, subsistence, and cultural use purposes.

The Shoshone-Paiute Tribes’ current reservation includes 294,242 acres in Idaho and Nevada. The reservation is headquartered in Owyhee, Nevada, and the Tribal government resides there. The principal revenue sources of the Shoshone-Paiute Tribes are farming and ranching. Business and land leases and grazing permits also provide income to the Shoshone-Paiute Tribes. The area

is geographically isolated and economically depressed. The people are tied culturally and spiritually to the land, and they are very interested and involved in helping to shape how the land is managed by the BLM. The Shoshone-Paiute Tribes are particularly concerned about cultural resources on public land, as well as subsistence, spiritual, and traditional uses. In 2003, the Shoshone-Paiute Tribes reported 1,918 members (pers. comm. Shoshone-Paiute Tribal Enrollment Office, April 2003).

The Shoshone-Bannock Tribes have reserved treaty rights under the Fort Bridger Treaty of 1868 which extend to unoccupied federal lands off-reservation. Reserved treaty rights typically include hunting, fishing, pasturing of animals (grazing), erecting of curing structures, trapping, and gathering. Their current reservation includes 544,000 acres in southeast Idaho. The Tribal government is headquartered in Fort Hall, Idaho. The Shoshone-Bannock Tribes derive income from leases (business and land), mineral rights, and some agriculture. There are a number of tribal industries, and grazing permits also provide income to the Shoshone-Bannock Tribes. The Shoshone-Bannock Tribes are extremely interested in protection of the public lands and resources related to the exercise of their reserved treaty rights, as well as cultural resources, subsistence, spiritual, and traditional uses. In 2003, the Shoshone-Bannock Tribes reported approximately 4,561 members (pers. comm., Shoshone-Bannock Tribal Enrollment Office, April 2003); about 75 percent live on the reservation.

The BLM contacted all of the Tribes upon receiving Idaho Power's application. The BLM discussed the Proposed Action with the Shoshone-Paiute Tribes at the February, March, and July 2003 "Wings and Roots" meetings, a forum for BLM-Tribal coordination. The Shoshone-Bannock Tribal Council was also represented at the March 2003 meeting by Adrian Seaman, Tribal Council Member and by Yvette Tuell, Environmental Program Manager. Numerous additional attempts, through telephone calls, emails, and visits to the Fort Hall Reservation, have been made by the BLM to discuss the project in more detail with the Shoshone-Bannock tribal council and staff. No issues related to traditional cultural use areas or places or sacred sites have been received to date.

3.3. Threatened, Endangered, and Sensitive Plant Species

Idaho Power conducted rare plant surveys on public lands within the ROW of the five transmission lines. The Boise Bench to Midpoint #2, #3, and Midpoint to Borah #2 lines were surveyed in 1999 and 2000 (Dumas et al. 2002). The Boise Bench to Midpoint #1 and Midpoint to Borah #1 lines were surveyed in 2002 (Krichbaum and Horvath 2002). All plant species on the USFWS list (Table 1-3) were included in the surveys, and all but one species on the BLM sensitive plant species list were surveyed (Table 3-2). Idaho Power field surveys did not locate any USFWS endangered, threatened, proposed, or candidate plant species. Two plant species on the BLM sensitive species list were identified in the project area.

Table 3-2. Bureau of Land Management sensitive plant species with potential for occurrence within Boise to Borah transmission-line rights-of-way.

Latin Binomial	Common Name	FWS ¹	BLM ²	INHP ³
<i>Allium anceps</i>	two-headed onion		3	2
<i>Astragalus atratus</i> var. <i>inseptus</i>	mourning milkvetch	SC	3	3
<i>Astragalus diversifolius</i>	meadow milkvetch		3	2
<i>Astragalus oniciformis</i>	Picabo milkvetch		3	3
<i>Astragalus purshii</i> var. <i>ophiogenes</i>	Snake River milkvetch		3	3
<i>Astragalus tetrapteris</i>	four-wing milkvetch		3	1
<i>Chaenactis stevioides</i>	desert pincushion		4	2
<i>Cuscuta denticulata</i>	sepal-tooth dodder		3	1
<i>Cymopterus acaulis</i> var. <i>greeleyorum</i>	Greeley's wavewing		3	2
<i>Downingia bacigalupii</i>	Bacigalupi's downingia		4	2
<i>Eatonella nivea</i>	white eatonella		4	3
<i>Epipactis gigantea</i>	chatterbox orchid		3	3
<i>Eriogonum ochrocephalum</i> var. <i>calcareum</i>	calcareous buckwheat		3	2
<i>Eriogonum shockleyi</i> var. <i>packardiae</i>	Packard's buckwheat		3	2
<i>Eriogonum shockleyi</i> var. <i>shockleyi</i>	Shockley's matted buckwheat		3	2
<i>Ipomopsis polycladon</i>	spreading gilia		3	2
<i>Penstemon janishiae</i>	Janish's penstemon		3	2
<i>Sporobolus asper</i>	tall dropseed		3	1
<i>Stanleya confertiflora</i>	Malheur princesplume		2	1
<i>Teucrium canadense</i> var. <i>occidentale</i>	American wood sage		3	2
<i>Texosporium sancti-jacobi</i>	woven-spore lichen	SC	2	2

1) US Fish and Wildlife Service status: SC = species of concern.

2) Bureau of Land Management types: 2 = rangewide/globally imperiled - high endangerment, 3 = rangewide/globally imperiled - moderate endangerment, 4 = species of concern.

3) Idaho Natural Heritage Program ranks: 1 = Critically imperiled because of extreme rarity or because some factor of its biology makes it especially vulnerable to extinction (typically 5 or fewer occurrences), 2 = Imperiled because of rarity or because other factors demonstrably make it very vulnerable to extinction (typically 6 to 20 occurrences), 3 = Rare or uncommon but not imperiled (typically 21 to 100 occurrences).

3.3.1. Federally Listed Plant Species

3.3.1.1. Ute ladies'-tresses

Status

Spiranthes diluvialis (Ute ladies'-tresses) was listed as threatened under the Endangered Species Act by the USFWS in 1992 (Federal Register, Vol. 57, No. 12). The orchid was discovered in Idaho in 1996 along the South Fork of the Snake River, downstream of Palisades Dam.

Currently, over 20 small populations have been identified in this area. Other populations occur in Utah, Colorado, Wyoming, Washington, Montana, Nevada, and Nebraska.

Habitat Requirements

Ute ladies'-tresses is found in moist soils near springs, lakes, or perennial streams at elevations of 1,800-7,000 feet. It may also occur in meadows or near riparian woodlands (USFWS 1995a).

Occurrence in Project Area

Marginal habitat was found along several riparian corridors for *Spiranthes diluvialis*. However, this habitat was found to be heavily degraded, greatly reducing the potential for occurrence of the species. No populations of *S. diluvialis* were found in the project area. In fact, no populations are reported in proximity to the project area (ICDC 2002).

3.3.1.2. Slickspot Peppergrass

Status

The USFWS proposed listing *Lepidium papilliferum* (slickspot peppergrass) as an endangered species on July 15, 2002 (Federal Register, Vol. 67, No. 135). This species is found along the Snake River Plain and Owyhee Plateau in Ada, Canyon, Gem, Elmore, Payette, and Owyhee Counties. There are currently 88 known existing or historical occurrences of *Lepidium papilliferum* (Moseley 1994, Mancuso 2000, ICDC 2002; as cited in USFWS 2002). The total amount of habitat containing interspersed slickspots that have existing occurrences of *L. papilliferum* is about 12,356 ac (USFWS 2002).

This species is threatened by a variety of activities, including urbanization, gravel mining, irrigated agriculture, habitat degradation due to livestock grazing, fire and fire rehabilitation activities, and continued invasion of habitat by non-native plant species (Moseley 1994, Mancuso and Moseley 1998; as cited in USFWS 2002).

Habitat Requirements

Lepidium papilliferum is endemic to sagebrush-steppe habitat at approximately 2,200 ft to 5,400 ft elevation in southwestern Idaho. It is restricted to small areas known as slickspots or miniplayas. These slickspots range from less than 1 m² to about 10 m² within communities dominated by other plants (Mancuso 1998, as cited in USFWS 2002). These sparsely vegetated microsites are very distinct from the surrounding shrubland vegetation, and are characterized by relatively high concentrations of clay and salt (Fisher et al. 1996, as cited in USFWS 2002). The microsites also have reduced levels of organic matter and nutrients due to the lower biomass production compared to surrounding habitat areas. The majority of the slickspot peppergrass population is expressed as a persistent seed bank, with above ground expression of the plant dependent on annual precipitation patterns. Slickspot peppergrass seeds may remain viable for up to 12 years.

Occurrence in Project Area

Numerous occurrences of slickspot habitats were found in the western part of the project area, although most were degraded from cattle grazing and other disturbances. These slickspots, although lightly vegetated, contained a large proportion of weedy species—primarily *Lepidium*

perfoliatum (clasping peppergrass). Each of these slickspots was searched intensively to determine the presence of *L. papilliferum*, with negative results.

3.3.2. BLM Sensitive Plant Species

Idaho Power surveys located 27 new occurrences of *Astragalus atratus* var. *inseptus* (mourning milkvetch), a plant species on the BLM Sensitive list. In addition, the surveys relocated one previously known occurrence of a BLM Sensitive species within the ROW—*Eriogonum shockleyi* var. *shockleyi* (matted cowpie buckwheat).

***Astragalus atratus* var. *inseptus* (mourning milkvetch):** This species is endemic to the north edge of the Snake River Plain, with known occurrences in Blaine, Camas, Elmore, Gooding, and Lincoln counties in Idaho. Habitats include grassy *Artemisia tridentata* communities on stony flats with clay and clay-loam soils below 4,290 ft (Barneby 1989, Beck and Cole 2000).

This taxon is currently ranked as a species of concern by the Snake River Basin Field Office of the USFWS and as a sensitive species by the BLM. The ICDC lists it as globally secure, and, in Idaho, as rare or uncommon, but not imperiled. The variety is listed as rare or uncommon across the range of the species.

The occurrences were found along the Boise Bench to Midpoint #1, # 2, and #3 at elevations ranging from 3,150 to 4,840 ft. Several occurrences were extensive, with the largest running 2 mi along the corridor and covering a total area of 67 acres (within the ROW). The smallest occurrence covered less than three square feet. The occurrences were found primarily in *Artemisia tridentata*/*Poa secunda*-*Bromus tectorum* shrub-steppe habitat. Shrub cover for most of the occurrences was relatively high, and the individual *A. atratus* v. *inseptus* plants were often found under the shrub canopies. Common associates included *Purshia tridentata*, *Allium acuminatum* (tapertip onion), *Balsamorhiza hookeri* (Hooker's balsamroot), *Bromus tectorum*, and *Taeniatherum caput-medusae* (medusahead wildrye).

***Eriogonum shockleyi* var. *shockleyi* (matted cowpie buckwheat):** The one previously known occurrence of *E. shockleyi* v. *shockleyi* within the project area is located along the Boise Bench to Midpoint #1 line on the west rim of the Snake River Canyon about 2 mi northwest of the town of Hagerman. According to ICDC Element Occurrence data, the population contains 369 individual plants and covers approximately 2 acres.

Only a small portion of this occurrence (approximately 1,076 ft²) is located within the Boise Bench to Midpoint #1 line ROW. Approximately 35 individual genets are present within the ROW, all located to the north of the centerline. The *Eriogonum shockleyi* v. *shockleyi* plants are growing in sparsely vegetated openings, surrounded by *Artemisia tridentata* steppe habitat. The openings are covered with white, caliche/calcified rocks forming a pavement-like surface.

3.4. Threatened, Endangered, and Special Status Wildlife Species

The USFWS reported seven listed threatened, endangered, or candidate animal species either known to occur or have the potential to occur in the project area (Table 1-3). In addition to federally listed species, the BLM maintains a list of sensitive species that it must consider when making management decisions. Table 3-3 is based on the BLM list (specifically for species with potential to occur within the project area) and on any additional species that were listed with special concern status from the USFWS species list. Species on the USFWS lists, but not expected to be found in the project area, were not included.

Table 3-3. State and federal designations for wildlife species of special concern known, or suspected to occur, in the Boise to Borah transmission lines project area.

Taxon / species	Scientific name	FWS ¹	BLM ²	IDFG ²	INHP ³
Amphibian/ Reptile					
N. Leopard frog	<i>Rana pipiens</i>	SC	S	SSC	3
Western toad	<i>Bufo boreas</i>	W/SC	S	SSC	4
Woodhouse's toad	<i>Bufo woodhousii</i>	W	S		3
Ground snake	<i>Sonora semiannulata</i>	SC	S	SC	3
Mohave black-collared lizard	<i>Crotaphytus bicinctores</i>	SC	S	SC	2
Longnose snake	<i>Rhinocheilus lecontei</i>	W	S	SSC	3
Bird					
Trumpeter swan ⁴	<i>Cygnus buccinator</i>	W	S	SSC	1
American white pelican ⁴	<i>Pelecanus erythrorhynchos</i>		S	SSC	1
Black tern ⁴	<i>Chlidonias niger</i>		S	SSC	2
White-faced ibis ⁴	<i>Plegadis chihi</i>		S	P	2
Long-billed curlew	<i>Numenius americanus</i>	SC		P	3
Sage grouse	<i>Centrocercus urophasianus</i>	SC	S		
Mountain quail	<i>Oreortyx pictus</i>	SC	S	SSC	2
Ferruginous hawk	<i>Buteo regalis</i>	W	S	SSC	3
Peregrine falcon	<i>Falco peregrinus</i>	DM		E	1
Prairie falcon	<i>Falco mexicanus</i>		S		
Bald eagle	<i>Haliaeetus leucocephalus</i>	LT		T	3
Burrowing owl	<i>Athene cunicularia</i>	SC		P	3
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	CE	S	SSC	3
Willow flycatcher	<i>Empidonax traillii</i>		S		
Loggerhead shrike	<i>Lanius ludovicianus</i>	SC	S	SSC	3
Brewer's sparrow	<i>Spizella breweri</i>		S		

Taxon / species	Scientific name	FWS¹	BLM²	IDFG²	INHP³
Sage sparrow	<i>Amphispiza belli</i>		S		
Grasshopper sparrow	<i>Ammodramus savannarum</i>		S		
Mammal					
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	SC	S	SSC	2
Western pipistrelle	<i>Pipistrelus hesperus</i>	W		SSC	1
Spotted bat	<i>Euderma maculatum</i>	SC	S	SC	2
Pygmy rabbit	<i>Brachylagus idahoensis</i>	W	S	SSC	3
Kit fox	<i>Vulpes macrotis</i>	W	S	SSC	1
Gray wolf	<i>Canis lupus</i>	XN		E	1
Invertebrates					
Idaho springsnail	<i>Pyrgulopsis idahoensis</i>	LE			1
Utah valvata snail	<i>Valvata utahensis</i>	LE			1
Snake River Physa snail	<i>Physa natricina</i>	LE			1
Banbury Springs limpet	<i>Lanx spp.</i>	LE			1
Bliss Rapids snail	<i>Taylorconcha serpenticola</i>	LT			1

1) US Fish and Wildlife Service status: CE = candidate endangered, DM = delisted with monitoring, LE = listed endangered, LT = listed threatened, SC = species of concern, W = watch species, XN = experimental research of a listed endangered

2) Idaho Department of Fish and Game and Bureau of Land Management ranks: E = endangered, GSC = game species of special concern, P = protected, S = sensitive, SSC = species of special concern, T = threatened

3) Idaho Natural Heritage Program ranks: 1 = critically imperiled, 2 = imperiled because of rarity, 3 = very rare and local throughout its range or found locally, 4 = apparently secure

4) Species identified as at medium to high risk of collision by SAIC (2000).

3.4.1. Listed and Candidate Wildlife Species

3.4.1.1. Bald Eagle

Status

The bald eagle is a federally threatened species that was proposed for downlisting by the USFWS in 1999 (64 FR 128, July 6, 1999). Populations have recovered significantly since it was listed as endangered in 1978. In Idaho the number of occupied territories has increased steadily since 1979 and was at 113 in 2000 and 2001 (Sallabanks 2002).

Habitat Requirements

In Idaho, bald eagles are most often found along rivers, lakes, and marshes with nearby tall trees or cliffs for perching, roosting, and nesting. There are no bald eagle nests near the project area (Sallabanks 2002, ICDC 2002). However, eagles winter throughout the Snake River Plain wherever there are ice-free rivers and lakes from about November through March.

Occurrence in Project Area

Wintering bald eagles are known to regularly use three main areas near the transmission lines; Barber Pool on the Boise River, the Snake River at the Boise Bench to Midpoint #1 line, and Lake Walcott near the Midpoint to Borah #2 line.

Barber Pool is likely the most important habitat for wintering bald eagles in the Boise River corridor (Kaltenecker et al. 1994). Barber Pool parallels the Boise Bench to Midpoint #1, #2, and #3 where they come into the Boise substation. The current roost, which is used by up to 30 eagles (Kaltenecker et al. 2003), is 1 mi from the Boise Bench to Midpoint #3 line, about 2.5 mi from the Boise substation. There are two regularly used perch trees within 1,312 ft (400 m) of the Boise Bench to Midpoint #3 line and several more within 1 mi. The lines do not cross the Boise River.

In the mid-Snake River area, the Boise Bench to Midpoint #1 line passes through wintering bald eagle areas near Bliss. At the highest count, Holthuijzen (1995a) found less than 30 bald eagles wintering along the Snake River near the four Snake River crossings of the Boise Bench to Midpoint #1 line. According to ICDC records there are no roosts within 12 mi of the line. However, there may be a roost near Thousand Springs, about 5 mi south of the Boise Bench to Midpoint #1 line (Holthuijzen 1995a).

Bald eagles are common winter and spring residents at Minidoka National Wildlife Refuge, which encompasses Lake Walcott on the Snake River. The Midpoint to Borah #2 line parallels the lake for a few miles, coming within 1,150 ft of it for a short span (at this point it is 300 ft from the refuge boundary). The ICDC does not have any records of roosts near the line.

3.4.1.2. Gray Wolf

Status

In the Rocky Mountain region gray wolves are listed as threatened, but those in the Yellowstone and central Idaho reintroduction areas are designated as "non-essential, experimental" populations. This designation allows federal and state officials additional flexibility in managing this population, although federal agencies are still required to confer with the USFWS if their actions are likely to adversely affect the continued existence of gray wolves (50 CFR 17.83). The wolf is increasing throughout the Rocky Mountain Recovery Area. Wolves in the Northern Rocky Mountains (Idaho, Montana and Wyoming) continue to increase in distribution and numbers. There were an estimated 251 wolves in the state of Idaho at the end of 2001 (USFWS 2003).

Habitat Requirements

Wolves were once found throughout Idaho but are currently restricted to mostly forested habitat. They require areas with low human population, low potential for human interactions, high prey densities, and secluded denning sites (Groves et al. 1997). Wolf packs typically occupy a specific territory and defend that territory from other wolves. Their annual range may reach several hundred km². In addition individuals may move several hundred km, especially when dispersing (Groves et al. 1997).

Occurrence in Project Area

The closest known wolf pack to the project area is about 34 mi north of the Boise Bench to Midpoint #3 line (40 mi to the north of Shoshone, Wildhorse pack) (USFWS 2003). Wolves might range into the project area on an extremely rare basis. The low elevation of the project area, in general, indicates that the habitat and prey base the wolf needs would not be present.

3.4.1.3. Aquatic Snails

Status

Four aquatic snails classified by the USFWS as endangered species (Federal Register, Vol.57, No. 240) have the potential to be in the project area: the Idaho springsnail, the Utah valvata snail, Banbury Springs limpet, and the Snake River Physa snail. The USFWS also determined a threatened status for the Bliss Rapids snail, which is known to be in the project area. These species have declined over all but a small fraction of their historical range, primarily due to fragmentation of remaining free-flowing habitats and deteriorating water quality (USFWS 1995b).

Habitat Requirements

Ecologically, the five listed species in the project area share many characteristics, and in some locations two or more can be found sharing the same habitat (USFWS 1995b). Their habitat requirements generally include cold, clean, well-oxygenated flowing water of low turbidity. Despite these affinities, each species has slightly different habitat preferences. The Idaho springsnail and Snake River physa are found only in the free-flowing mainstem Snake River. The Bliss Rapids snail and Utah valvata occur in both cold-water springs and mainstem habitats, while the Banbury Springs lanx only occurs in cold-water springs.

Occurrence in Project Area

These five snail species are currently restricted to a few isolated free-flowing reaches or spring alcove habitats in the middle Snake River. The "middle" Snake River is defined as extending from C.J. Strike Reservoir (river mile 517.6) upstream to Milner Dam (river mile 639.1). All five species have the potential to occur in the vicinity of the Boise Bench to Midpoint #1 line Snake River crossings, either in the Snake River or associated springs.

3.4.1.4. Yellow-billed Cuckoo

Status

The yellow-billed cuckoo was classified by the USFWS as a candidate for listing as a threatened or endangered species on July 18, 2001 (Federal Register, Vol. 66, No. 143). The USFWS declared it warranted listing as threatened but it was precluded by higher priority species. Western populations suffered catastrophic range reductions in the twentieth century due to loss of riparian habitat (Hughes 1999). It is an accidental summer visitor to southern Idaho and is considered a peripheral species (Engle and Harris 2001).

Habitat Requirements

The cuckoo prefers open woodland with clearings and low, dense, scrubby vegetation; often associated with watercourses (Hughes 1999). Recommended habitat includes dense stands of cottonwood and willow with an average tree height of 10-15 m (Engle and Harris 2001). With European settlement riparian vegetation has been greatly reduced due to livestock grazing, land use conversion, burning, stream channelization, and flood control projects (Hughes 1999).

Occurrence in Project Area

Most Idaho records of yellow-billed cuckoos are of isolated, non-breeding individuals. Five cuckoos were heard on the South Fork of the Snake River between Blackfoot and American Falls Reservoir on the Fort Hall Indian Reservation in an ungrazed mixed-cottonwood stand in 1985; and on June 22, 1985 a possible migrant was heard in southwest Idaho at Swan Falls Dam, 15 mi south of Boise (Center for Biological Diversity, CBD 1998). A mail survey by Dr. Kerry Reese of the University of Idaho revealed only 14 records between 1970-1986, most from the southern part of the state. Records were from Canyon, Ada, Elmore, Minidoka, and Twin Falls counties. Several birds were reported on Lawyers Creek in Lewis County in 1979 and six were reported at Cartier Wildlife Management Area in 1980. No nesting attempts or young were observed, and, as a result, breeding populations of yellow-billed cuckoos in Idaho are believed to be extirpated (CBD 1998).

The nearest sighting of the species to the transmission lines was May 23, 1985 on the South Fork of the Boise River, 7.5 mi north of the Boise Bench to Midpoint #1 line (ICDC 2002). This species occupies forested riparian areas with thick understory. The species would not be expected to occur in the project area, as there are no significant amounts of riparian habitat on federal lands along the lines.

3.4.2. Other Special Status Species

In addition to the listed and candidate species discussed in section 3.4.1, several other special status wildlife species have the potential to occur in the project area (Table 3-3). A species' potential to be found in the project area was based on locations from the ICDC (2002), recent distribution maps (Groves et al. 1997, Digital Atlas of Idaho, DAI 2003) and wildlife data from previously conducted Idaho Power wildlife studies (Idaho Power 1995, Carpenter and Dumas 2002, Dumas and Carpenter 2002, Turley and Holthuijzen 2002). The following section discusses each species' habitat requirements, reasons for decline or concern, and the likelihood and location of occurrence within the project area. When not otherwise specified the "project area" includes only the transmission-line rights-of-way (ROW). For state and federal status rankings the reader is referred to Table 3-3.

3.4.2.1. Amphibians and Reptiles

The **northern leopard frog** (*Rana pipiens*) prefers marshes and meadows from which they may range into hay fields and grassy woodlands. Anecdotal information exists for their decline in Idaho (Groves et al. 1997). Threats include habitat loss, competition/predation by introduced species, and agricultural contaminants. This species is very rare and has an extremely low to no

potential to occur in the ROW. Although habitat is present throughout the Snake River basin, ICDC records are east of the project area.

Woodhouse's toads (*Bufo woodhousii*) are restricted to the western portion of Idaho, particularly along the Snake River and its associated drainages. They are typically found in habitats such as prairies, agricultural areas, and brushy flats often associated with a water source. The water source may vary from irrigation ditches, ponds, and small lakes to backwaters of the Snake River. Even though there is generally water in the area, they may forage quite a distance from the water source where they mate and lay eggs (DAI 2003). This species is not tracked by the ICDC and locations within the project area are unknown. Distribution maps indicate they could be present near the Boise Bench to Midpoint #1 line near the Snake River (Groves et al. 1997).

Western toads (*Bufo boreas*) are largely terrestrial but can generally be found within a fair proximity to water and move to water for breeding (Nussbaum et al. 1983). They use a wide variety of habitats including desert springs and streams, meadows, and woodlands, ponds, lakes, and reservoirs. The species has adapted to human-modified environments such as irrigation canals, but has disappeared from areas in Oregon where it was once common (Csuti et al. 1997). Western toads are likely common in appropriate habitat of the project area. It is likely that the species is declining south of the Snake River, but is stable elsewhere (Engle and Harris 2001). Genetic studies indicate that the species could be separated into at least two species or subspecies. Subpopulations in the project area would be considered stable (Engle and Harris 2001). The ICDC has records near the Boise Bench to Midpoint #1 line on the Snake River and at the eastern end of the Midpoint to Borah #1 and #2 lines.

Long-nosed snakes (*Rhinocheilus lecontei*) have been reported from Canyon, Ada, Elmore, and Owyhee counties in Idaho (Diller and Wallace 1981). The species was collected in areas adjacent to various agricultural lands, rocky and sandy areas, open desert, and riparian habitats (Diller and Wallace 1981). The snake appeared to be more abundant on the south side of the Snake River than on the north side (Diller and Johnson 1982). The ICDC has records in the project area near Gooding and Bliss (the Boise Bench to Midpoint #1, #2, #3 lines). Conversion of shrub-steppe to exotic annual grasslands is thought to have played a role in declines observed in the Snake River Birds of Prey Natural Area (Engle and Harris 2001).

Ground snakes (*Sonora semiannulata*) are found in arid habitats usually having loose or sandy soil, ranging from rocky areas (talus slopes, canyon rims and outcroppings) to low desert shrub areas. In Idaho, ground snakes are restricted to the southwestern portion of the state, along the Snake River and surrounding drainages (DAI 2003). The closest ICDC record to the project area is just downstream from the farthest downstream Snake River crossing of the Boise Bench to Midpoint #1 line (Engle and Harris 2001). Threats to ground snakes include habitat loss and possibly the collection of rock for landscaping.

Mojave black-collared lizards (*Crotaphytus bicinctores*) are associated with arid habitats, and a critical component of the habitat appears to be the presence of rocks and boulders. The surrounding vegetation is generally sparse. Mojave black-collared lizards are found in the southwestern portion of the state, along the Snake River Plain and surrounding Owyhee foothills (DAI 2003). Most ICDC records for the species are southwest of the project area but there are

old records from the Snake River just downstream from the farthest downstream Snake River crossing of the Boise Bench to Midpoint #1 line (Engle and Harris 2001). Presently the range has been reduced to a limited area within Owyhee County. This species is mostly threatened by collection, off-road vehicle use, and land use changes.

3.4.2.2. Waterbirds

Four waterbird species of special concern have the potential to be present in the project area where transmission lines are near, or cross, major water bodies. This includes the western end of the Boise Bench to Midpoint #1, #2, and #3 lines at the Boise River, near the Boise Bench to Midpoint #1 line at the Snake River crossings, near the Midpoint to Borah #2 line at Lake Walcott, and at the end of the Midpoint to Borah #1 and #2 lines near the Snake River at American Falls. Most of the species would not be nesting near the lines but may use the river areas for breeding season foraging and during migration or winter periods.

The **trumpeter swan** (*Cygnus buccinator*) was formerly abundant and geographically widespread. However, its numbers and distribution were greatly reduced during the early fur trade and European settlement (Mitchell 1994). The trumpeter swan breeds in areas of eastern Idaho, well east of the project area (Groves et al. 1997). It prefers emergent vegetation in freshwater and winters along shallow, slow moving water. It is a common winter visitor to White Arrow Pond (pers. comm., Gary Wright, BLM Wildlife Biologist). This pond is located about 8 mi north of Bliss, Idaho. The Boise Bench to Midpoint #3 line passes within less than a mile of White Arrow Pond. The swan also likely occurs during winter near the Boise Bench to Midpoint #1 line crossings of the Snake River.

The **American white pelican** (*Pelecanus erythrorhynchos*) needs shallow water for foraging, such as open areas within marshes, along lake or river edges, on or below rapids, and less commonly in deep water of rivers and lakes (Evans and Knopf 1993). The species requires both permanent water and isolation from human disturbance and mammalian predators for successful breeding (Groves et al. 1997). Idaho has had nesting colonies of white pelicans at Lake Walcott, near the Midpoint to Borah #2 line, on the Snake River near Glens Ferry, downstream of the Boise Bench to Midpoint #1 line crossing, and east of the project area on the Blackfoot Reservoir (Trost and Gerstell 1994). Between 1990 and 1992, Holthuijzen (1995b) surveyed nesting colonial waterbirds in the Hagerman area (in the area of the Boise Bench to Midpoint #1 line Snake River crossings). Pelicans were commonly observed in the study area, but they did not nest there.

The **black tern** (*Chlidonias niger*) requires aquatic habitats with extensive stands of emergent vegetation and large areas of shallow open water (DeGraaf and Rappole 1995). Black terns nest in scattered marshes of eastern Idaho, including the Lake Walcott area near the Midpoint to Borah #2 line. Overall state numbers are low (68–91 nesting pairs), but the population appears to be stable (Trost and Gerstell 1994). The species migrates along the Snake River in spring and fall (USDI 1995). Non-nesting individuals were observed in the Hagerman Valley (Holthuijzen 1995b).

The **white-faced ibis** (*Plegadis chihi*) reaches its northern limit of breeding at the northern boundary of the Snake River Plain (Trost and Gerstell 1994). It inhabits primarily freshwater

wetlands, especially *Typha* spp. (cattail) and *Scirpus* spp. (bulrush) marshes, although it also feeds in flooded hay meadows and agricultural fields (Ryder and Manry 1994). In the arid Great Basin region, the white-faced ibis breeds in semi-permanent wetlands, which are susceptible to naturally-occurring droughts and floods. The white-faced ibis is highly nomadic and able to compensate for poor conditions at traditional colony sites by moving among colonies and rapidly colonizing newly available wetlands (Earnst et al. 1998). The number of colonies in Idaho has increased from five to seven from 1984 through 1994 (Trost and Gerstell 1994), at which point the total number of nests in Idaho was estimated between 3,300 and 4,700. There are an unknown, but low, number of nests at Lake Walcott (Dumas and Carpenter 2002). This species is known to forage at the terminus of the Midpoint to Borah #1 and #2 lines, which is not on BLM land. In addition, non-nesting individuals were observed in the Hagerman Valley (Holthuijzen 1995b).

3.4.2.3. Upland birds

The **long-billed curlew** (*Numenius americanus*) is a grassland nester in the project area from late March through mid-July. It prefers open, recently-grazed shrub-steppe containing short vegetation near water for nesting and it often feeds in agricultural areas (Groves et al. 1997). The ICDC lists only three locations from the 1980s that are within 0.6 mi of the lines. However, this species is no longer tracked by the ICDC (Engle and Harris 2001) and distribution maps indicate it could be present throughout the project area (Groves et al. 1997). There are no BLM designated nesting areas near the transmission lines.

The **mountain quail** (*Oreortyx pictus*) was petitioned for listing with the USFWS in 2000. The petitioners requested that mountain quail that historically occupied portions of Idaho, northern and western Nevada, eastern Oregon and southeastern Washington be listed as a distinct population segment (DPS) because of dramatic population declines resulting from extensive loss of habitat. On January 22, 2003 the USFWS ruled that there was insufficient evidence that quail in these areas constitute a DPS for the species. In Idaho, mountain quail historically occupied narrow, riparian habitats in the lower elevations of the Boise, Snake, Salmon, and Clearwater river drainages (Murray 1938; Ormiston 1966; Brennan 1989; Robertson 1989 and 1990). Recent surveys indicate mountain quail are commonly found only in the lower Salmon River drainage. There is a potential for mountain quail to occur very rarely in the project area from King Hill Creek west to Boise in riparian drainages (Groves et al. 1997). King Hill Creek, near the Boise Bench to Midpoint #3 line, was identified by the Shoshone Field Office BLM as a potential reintroduction site (USDI 2002). No quail have been documented here since the late 1970s. This area is about 25 mi east of an extensive habitat range.

Western sage grouse (*Centrocercus urophasianus*) were historically abundant in shrub-steppe habitats of the western United States but have exhibited population declines throughout their range. Population declines are largely attributed to the loss and degradation of sagebrush habitats. Other factors influencing declines are livestock grazing (Willis et al. 1993, Beck and Mitchell 2000), changes in natural fire regimes (Fischer et al. 1996b, Pyle and Crawford 1996, Nelle et al. 2000), hunting (Crawford 1982), and predation (Willis et al. 1993). Sage grouse rely on sagebrush habitats throughout the year. The eastern subspecies, whose range intersects the Boise to Borah transmission lines, has exhibited population declines, but is considered stable (Drut 1994).

Most of the documented sage grouse leks near the project area are between Mountain Home and Shoshone. There are 7 historical leks within 0.62 mi (1 km) of project area lines, none of which were active in 2000 (Bruce Palmer, IDFG pers. comm.) or 2002 (Rocklage and Edelman 2002). The leks are between 1,800 to 3,150 ft from either the Boise Bench to Midpoint #2 or #3 line. These leks are all within 7.5 mi of Blair Trail Reservoir, north of King Hill. The area north of the Boise Bench to Midpoint #3 line in the Bennett Hills is considered a sage grouse source habitat and a stronghold for sage grouse (USDI 2002). The transmission lines intersect 24 mi of key habitat, most of it (18 mi) along the Boise Bench to Midpoint #3 line (Dumas and Carpenter 2002).

3.4.2.4. Raptors

In addition to the bald eagle, other raptor species of special concern for the Boise-to-Borah lines are the peregrine falcon (*Falco peregrinus*), prairie falcon (*Falco mexicanus*), ferruginous hawk (*Buteo regalis*), and burrowing owl (*Athene cunicularia*). Locations noted below are from ICDC records and Idaho Power line-inspection records, unless otherwise noted.

The **peregrine falcon** is an Idaho endangered species. Peregrine falcon populations decreased due to pesticide accumulation that caused eggshell thinning. The species is now recovering and objectives for the minimum number of breeding pairs and productivity have been met or exceeded. On August 25, 1999 the peregrine falcon was removed from the federal list of endangered wildlife but will continue to be monitored through 2004. Critical nesting habitat components for this species are suitable nest sites, usually cliffs, overlooking open areas with an adequate food supply (Csuti et al. 1997). There are no nesting areas near the transmission lines (ICDC 2002). Peregrines may use portions of the project area with suitable prey for foraging during fall and spring migrations.

In Idaho the **prairie falcon** breeds on cliffs in shrub-steppe and dry mountainous habitat, and winters at lower elevations. In 1990 Holthuijzen (1995c) documented three nesting territories on Snake River cliffs between Bancroft Springs and Lower Salmon Falls Dam (which includes three of the four Boise Bench to Midpoint #1 line river crossings). This number is similar to that documented by the BLM from 1976-1978 (two to five nests, Holthuijzen 1995c). None of the nests were within 0.25 mi (400 m) of the line crossings. The species is fairly common in southwest Idaho and could be expected to nest in any areas where project lines cross rocky canyons, particularly if tall cliffs are present.

The **ferruginous hawk** breeds in arid, semi-arid, and grassland regions and is reported to be in decline throughout much of their range. This decline has been attributed to the conversion of grasslands for agricultural purposes, loss of nesting sites, control of natural fires, declines in prey populations, and human disturbances (Harlow and Bloom 1987, Marshall et al. 1996). It is especially sensitive to human activity near its nest site (White and Thurow 1985). This species will nest on the ground as well as on utility structures, tall rock outcrops, and artificial nesting structures.

In April 1998 Idaho Power surveyed the Boise Bench to Midpoint #2 and #3 and the Midpoint to Borah #2 lines for raptor nests. The Boise Bench to Midpoint #2 and #3 lines each had one occupied ferruginous hawk nest and five other poles had perched birds (Idaho Power unpubl.

data). In addition, there were 14 nest locations within 1 mi of the Boise Bench to Midpoint #1 line in the 1990s (ICDC 2002). These occur primarily on towers of a 500-kV line owned by Pacific Power and Light Co.

The **burrowing owl** nests and forages in open grasslands, deserts, agricultural lands, and urban areas (Marti and Marks 1987). The Idaho population is stable (Marti and Marks 1987). Burrowing owls appear to do well in disturbed habitats and may be one of the raptors least affected by man-made environmental changes. However, large-scale conversion of sagebrush-steppe habitat creates highly unfavorable conditions for the species. Distribution maps indicate it could be present throughout the project area (Groves et al. 1997, DAI 2003) and the ICDC has one record each near the Boise Bench to Midpoint #1 and #2 lines.

3.4.2.5. Riparian passerines

The **willow flycatcher** (*Empidonax traillii*) occurs in a variety of habitats ranging from brushy fields to willows, thickets along streams, as well as the edges of gallery forests along rivers or streams (DeGraaf and Rappole 1995). These birds are neotropical migrants that leave their breeding grounds to go to Mexico or further south each winter. It uses riparian habitat for nesting. Declines of this species are largely thought to be due to loss or degradation of riparian habitat. The species is not tracked by the ICDC so nesting locations near the ROW are unknown. Dumas and Carpenter (2002) considered the willow flycatcher rare with low potential to occur in appropriate habitat in the ROW near all lines.

3.4.2.6. Shrub-steppe passerines

This section includes three shrubland inhabitants that are dependent on sagebrush and related shrub-steppe species for nesting: the **loggerhead shrike** (*Lanius ludovicianus*), **Brewer's sparrow** (*Spizella breweri*), and **sage sparrow** (*Amphispiza belli*). All are BLM sensitive species but only the shrike is tracked by the ICDC. Locations for these species in the project area are largely unknown. Distribution maps in Groves et al. (1997) indicate all would be found throughout the project area in suitable shrubland habitat. The conversion of sage shrub-steppe habitat to exotic annual grassland is the greatest threat to these species.

The loggerhead shrike appears to be the most adaptable of the three species as it also uses many other open habitat types. This species nests along ecotones, in grasslands, and in other open habitats. It does not avoid human developments as it is commonly found near fences, old orchards, mowed roadsides, cemeteries, golf courses, and agricultural fields (Yosef 1996).

3.4.2.7. Grassland passerines

The **grasshopper sparrow** (*Ammodramus savannarum*) is a BLM sensitive species found in prairies, old fields, open grasslands, cultivated fields, and savannas (Groves et al. 1997). In Idaho it is an uncommon to rare breeder that could be present throughout the project area in suitable habitat.

3.4.2.8. Mammals

The **Townsend's big-eared bat** (*Corynorhinus townsendii townsendii*) is widely distributed throughout the intermountain region. It uses juniper/pine forests, shrub-steppe habitats, deciduous forests, and mixed coniferous forests. The species does not migrate, but remains at hibernacula from October through February. Townsend's big-eared bats are one of the better-studied bats despite the fact that it is relatively rare and populations are declining (Csuti et al. 1997). There are two records for the species near the project area. One is about 4 mi west of the western terminus of the lines in Boise. The second is about 1 mi south of the Boise Bench to Midpoint #3 line at the McKinney Butte nominated ACEC/Research Natural Area, with 13 caves. Significant hibernating bat populations of Western small-footed myotis (*Myotis ciliolabrum*) and Townsend's big-eared bat have been documented in several of the caves since 1987. At least one cave is suspected to be a maternity roost (USDI 2002). The Idaho population of Townsend's big-eared bats is thought to be declining with human disturbance as the greatest cause (Engle and Harris 2001).

The **western pipistrelle** (*Pipistrellus hesperus*) is found in desert flats and rocky canyons. It roosts in caves, on cliffs, and in crevices near water (Groves et al. 1997). Very little specific information is available on this species in Idaho. ICDC has one record in the project area between the Boise Bench to Midpoint #1 and #2 lines near Gooding (Engle and Harris 2001). The greatest threat to the species is disturbance of roost sites, especially maternity colonies.

Spotted bats (*Euderma maculatum*) are found in various habitats from desert to montane coniferous forest, up to 8,000 ft in elevation. They have been collected in desert piñon-juniper woodlands near sandstone cliffs or over streams and water holes in coniferous forests with rock cliffs nearby. Individuals normally roost in deep rock crevices of canyon and cliff walls but specific roost characteristics are not well documented. The distribution of spotted bat populations is highly patchy, likely as a result of the habitat requirements of this species. In Idaho, the majority of the populations appear to occur in the southwestern corner of the state in canyons of Owyhee County (DAI 2003). The closest records to the project area are along the Snake River downstream of the Boise Bench to Midpoint #1 line. Spotted bats use native sagebrush habitat for foraging so sagebrush loss or fragmentation may be their greatest threat (Engle and Harris 2001).

The **pygmy rabbit** (*Brachylagus idahoensis*) is endemic to the Great Basin and surrounding intermountain areas. It appears to be an extreme habitat specialist preferring structurally diverse stands of sagebrush habitats with a forb component and sandy soils (Heady et al. 2001). This is a rare species with low potential to occur throughout the project area in sagebrush habitat. Specifically, the rabbit has predicted habitat in the project area in the vicinity of Minidoka to American Falls and King Hill to Boise (University of Idaho 2003). There are a few, dated, rabbit locations about 2.5 mi from the Midpoint to Borah #1 line and one location about 9 mi south of the Boise Bench to Midpoint #1 line near Hagerman (ICDC 2002). There are many ICDC locations for the rabbit about 3.4 mi from the Midpoint to Borah #2 line. The major threat to the species is the loss of sagebrush in areas with suitable deep soils (Engle and Harris 2001).

The **kit fox** (*Vulpes macrotis*) is a desert species that reaches its northern limit in southeastern Oregon (Csuti et al. 1997). It is considered a peripheral species in Idaho. There are only 12 recorded locations in Idaho and only 3 since 1992 (Engle and Harris 2001). One record was

within 3 mi of the Boise Bench to Midpoint #2 line. This peripheral species has extremely low to no potential to occur in the project area.

4. Environmental Consequences

4.1. Elements of the Human Environment

The BLM considered all of the following elements of the human environment when analyzing the impacts of the proposed Idaho Power transmission-line ROW. Some of the listed elements of the human environment are subject to specific requirements specified in statutes, regulations, executive orders, or policy (see Appendix 1). Others are included because they are among the resources and land uses managed by the BLM field offices. Elements checked with an “X” are not affected (or are only minimally affected) by the Proposed Action and would receive no further consideration.

<input checked="" type="checkbox"/>	Air Quality	<input type="checkbox"/>	Special Status Species (threatened, endangered, sensitive, proposed)
<input type="checkbox"/>	Floodplains/Wetlands/Riparian Areas	<input checked="" type="checkbox"/>	Wilderness Study Areas
<input checked="" type="checkbox"/>	Prime/Unique Farm Lands	<input checked="" type="checkbox"/>	Wild and Scenic Rivers
<input checked="" type="checkbox"/>	Existing ACECs/Natural Areas	<input checked="" type="checkbox"/>	Soil Resources
<input type="checkbox"/>	Native American Religious Concerns/Traditional Uses	<input checked="" type="checkbox"/>	Water Quality (Drinking or Ground)
<input type="checkbox"/>	Tribal Rights/Indian Trust Resources	<input checked="" type="checkbox"/>	Off-highway Vehicle Use
<input type="checkbox"/>	Cultural Resources	<input checked="" type="checkbox"/>	Cave Resources
<input type="checkbox"/>	Paleontological Resources	<input checked="" type="checkbox"/>	Visual Resources
<input checked="" type="checkbox"/>	Environmental Justice	<input checked="" type="checkbox"/>	Forest Resources
<input checked="" type="checkbox"/>	Wastes (Hazardous or Solid)	<input checked="" type="checkbox"/>	Mineral Resources
<input type="checkbox"/>	Economic/Social Values Wildlife	<input checked="" type="checkbox"/>	Other Special Designations (National Monument, Wilderness, National Recreation Trails)
<input type="checkbox"/>	Wildlife	<input checked="" type="checkbox"/>	Fisheries
<input checked="" type="checkbox"/>	Availability of Access/Need to Reserve Access	<input type="checkbox"/>	Recreation Use, Existing and Potential
<input checked="" type="checkbox"/>	Livestock Grazing/Rangeland Resources Inv	<input type="checkbox"/>	Vegetation Types/Communities
<input type="checkbox"/>	Invasive/Non-native Species	<input checked="" type="checkbox"/>	Agricultural Entry
<input type="checkbox"/>	Migratory Birds	<input type="checkbox"/>	

4.2. Archaeological and Historical Resources

The prehistoric and historic resources within the ROW have been well characterized. Class III cultural surveys were completed for the entire project area. These surveys, and past surveys, have identified several sites that, based on a preliminary evaluation, are eligible or potentially eligible for the NRHP. Although the final eligibility status for the NRHP has not been determined for the identified sites, determinations of impacts are based on standards and regulations set out under the NRHP.

Determinations of "adverse effect" most commonly are associated with undertakings that impact cultural properties determined eligible for National Register listing for values other than information potential, or in cases where disturbance of human remains is anticipated. "No adverse effect" determinations ordinarily are made when properties (usually archaeological sites) valued solely for their information potential would be impacted, but where data recovery would precede the disturbance. A determination of "no effect" is made when (1) the undertaking can be redesigned to entirely avoid effects to eligible properties, or (2) when only elements of eligible properties that do not contribute to their importance would be affected.

The determination of significance and effect, as certified by the BLM and reviewed by the Idaho SHPO, is included in Appendices 2 and 3, respectively.

4.2.1. Proposed Action

Several historic or prehistoric archaeological sites have been identified in the project area. O&M activities that cause ground disturbance may impact these sites. Such impacts would be considered significant if they adversely affect a historic or prehistoric archaeological site that is potentially eligible to the NRHP, or a property of historic or cultural value to a community or ethnic or social group. Consequently, implementation of the Proposed Action, in the absence of protection measures, could result in adverse impacts to these resources.

The Proposed Action, being an administrative action, will not affect the condition of these sites. It will trigger the additional evaluation of future activities that potentially could disturb a site. Formal nomination to the NRHP would be pursued for sites determined to be eligible based on future evaluation. The evaluation process will include consultation with the BLM, SHPO, and affected Indian Tribes.

Applicant proposed protection measures include marking and avoiding cultural sites prior to ground disturbing activities (Protection Measure 1-1). If a ground disturbing activity is unavoidable and may impact sites, the eligibility status of the sites considered potentially eligible would be determined through data recovery and additional analysis (Protection Measure 1-4) prior to any O&M activity occurring that may result in surface disturbance. In addition, an appropriate mitigation plan on sites determined to be eligible would be completed to assess a no effect, no adverse effect, or adverse effect determination prior to any surface disturbing activity occurring. Therefore, no impacts to cultural sites are anticipated if the Proposed Action with protection measures is implemented.

No Traditional Cultural Properties were identified during the cultural resources investigations or BLM Tribal consultations. Therefore, no adverse effects on Traditional Cultural Properties are anticipated.

4.2.2. No-Action Alternative

Although under the No-Action Alternative cultural sites would be protected from authorized uses under federal law (e.g., NHPA), it does not provide as comprehensive and direct a level of protection as the Proposed Action with protective measures. This is particularly applicable to

potentially eligible sites, since these sites may or may not be eligible for the NRHP, and thus afforded increased protection of an affect determination and an associated mitigation plan. Thus, the No-Action Alternative would likely have a low impact on historic and archaeological sites as a whole, with moderate impacts to sites potentially eligible for the NRHP.

4.3. Threatened, Endangered, and Sensitive Plant Species

This section presents an analysis of the potential environmental impacts to plant species on federal lands that may result from implementation of the Proposed Action and No-Action alternatives. It also presents protective measures (also detailed in section 2.2.3.2) that, when followed, would eliminate or greatly reduce the impacts of the project.

The impact analysis of the two federally listed or candidate species is presented first, followed by the three BLM sensitive species that occur in the project area. The species presented in 3.0 but not discussed here have little to no potential to be impacted because they do not occur in the ROW.

4.3.1. Listed and Candidate Species

Project impacts to federally listed or candidate plant species can be placed in three categories. High (direct) impacts would result from the take of individual plants or populations, or a reduction in health or condition of occupied habitats. Moderate (indirect) impacts would result from a reduction in health or condition of suitable but unoccupied habitat. Low (indirect) impacts would result from reduction in health or condition of unoccupied habitat not currently suitable to support the species.

4.3.1.1. Utes ladies'-tresses

Proposed Action

Project Impacts

Idaho Power field surveys did not locate any populations of *Spiranthes diluvialis* (Ute ladies'-tresses) within the project area. In addition, the potential for *S. diluvialis* to be present in suitable habitat within the project area is low. Therefore, no impacts to this species are anticipated to occur from implementing the Proposed Action.

Determination of Effect

The Proposed Action would have “no effect” on *Spiranthes diluvialis*.

No-Action Alternative

Under the No-Action Alternative, no direct or indirect impacts to *Spiranthes diluvialis* are expected to occur as a result of the project. The No-Action Alternative would have “no effect” on *Spiranthes diluvialis*.

4.3.1.2. Slickspot Peppergrass

Proposed Action

Project Impacts

Idaho Power field surveys did not locate any populations of *Lepidium papilliferum* (slickspot peppergrass) in the project area. However, numerous slickspots, which represent habitat of undetermined occupancy, were encountered. The undetermined occupancy status stems from the inconsistent germination ecology of slickspot peppergrass. A single survey may not detect the presence of this species. An assessment of the suitability of these slickspots to support *L. papilliferum* was not conducted in conjunction with the surveys. Therefore, without mitigation the Proposed Action may cause moderate impacts to *L. papilliferum*.

Mitigation Measures

To reduce the potential impact of O&M activities to *L. papilliferum* or its habitat, Idaho Power has proposed the following protection measures in addition to general protection measures described in section 2.2.3.2.:

- Prior to ground disturbing or fuel treatment O&M activities, surveys for *L. papilliferum* and slickspots would be conducted in the work area. Identified habitat or populations would be marked as an exclusion area.
- If impacts to *L. papilliferum* or slickspots were unavoidable, Idaho Power would consult with the BLM and USFWS before commencing activities.
- When emergency O&M activities occur within the potential range of *L. papilliferum*, Idaho Power would assess whether impacts to *L. papilliferum* or slickspot habitat occurred. If so, Idaho Power would consult with the BLM and USFWS on a mitigation plan.
- No herbicide treatments would be applied in or near slickspot habitat without prior approval by the BLM and USFWS.

Determination of Effect

The Proposed Action with mitigation “may affect, but is not likely to adversely affect” *L. papilliferum*.

No-Action Alternative

The No-Action Alternative, without protective measures, would result in a “may affect, likely to adversely affect” *L. papilliferum* because of the increased potential for O&M activities to inadvertently impact suitable habitat or future populations that may be present in the project area.

4.3.2. Sensitive Species

Possible effects of the project transmission lines on special status plants may be described in two categories: direct effects and indirect effects. Direct effects would primarily result from ground

or vegetation disturbance related to O&M activities. Disturbance within special status plant populations might occur when Idaho Power crews access the lines and conduct maintenance on structures or conductors, particularly if ground disturbance is required. As the existing road network provides relatively good access to most of the lines on federal lands, this type of disturbance would primarily be confined to the existing roadways and the structure bases. However, it is occasionally necessary to travel cross-country to reach a structure base or other facility.

Indirect effects of the project lines on special status plant species are those impacts that are removed in either time or space from the O&M activity that caused the effect. The primary potential indirect effects on special status plant species are noxious weed impacts, fire impacts, and access-related impacts. Noxious weed impacts can occur if O&M activities contribute to the introduction and/or spread of non-native, invasive plant species. Ground disturbing activities can remove native vegetation, creating a fertile ground for the establishment of noxious weeds, and maintenance vehicles can unintentionally bring in and deposit new noxious weed propagules to an area. Fire effects can result if O&M of the project lines changes fire frequency and intensity patterns in the project area. This can occur, for example, if a maintenance vehicle starts a range fire, or if Idaho Power access roads act as firebreaks, decreasing the size of wildfires.

For both direct and indirect effects, it is difficult to determine what proportion is produced by project operations, and what proportion is produced by non-Idaho Power activities. Some of the disturbances are specific to Idaho Power's operations, such as ground disturbance around structure bases. Other disturbances are clearly out of Idaho Power's jurisdiction, such as cattle grazing and recreation. Many other disturbances, however, are the result of several users (including Idaho Power) utilizing the same area or facility. For example, most of the roads in the project area are multiple-use, providing access for ranchers, BLM personnel, residents, and recreationists, as well as Idaho Power crews.

All of these Idaho Power and non-Idaho Power activities may potentially impact the special status plant populations within the project area. However, because little is known about how any of these species respond to particular disturbances, it is difficult to determine which factors are influencing which populations, and to what extent. Recorded disturbances at a particular occurrence may be negatively or positively influencing a population's viability. However, based on general vegetative responses to disturbance, and observational evidence for the specific species, it is possible to derive some general conclusions regarding special status plant impacts within the project area.

Applicant Committed Environmental Protection Measures

Six measures to protect plant resources are described in the Proposed Action (section 2.2.3.2.) These include measures to avoid impacts near sensitive plant populations (Protective Measures 2-1, 2-2). In addition, general habitat protection measures (Protective Measures 2-3 through 2-7) are intended to protect habitat, and thus sensitive species, by reducing the threat of noxious weed invasion and rehabilitating sites disturbed by O&M activities. These measures are expected to protect both of the following sensitive plant species from significant impacts from transmission-line related O&M activities.

4.3.2.1. Mourning milkvetch

Proposed Action

Direct project-related effects to *Astragalus atratus* var. *inseptus* (mourning milkvetch) are likely limited to a small proportion of the overall local population. Many of the populations are extensive and extend far beyond the edge of the ROW. Even within the ROW, many of the plants are located well away from the structure bases and access roads, in areas that appeared to receive little or no direct project-related disturbance. It is likely that direct project impacts have not significantly limited the viability of the species within the project area. Proposed protective measures would further protect these populations, thus impacts from project related activities would be unlikely.

Indirect effects are more difficult to determine. Cattle grazing within the project area has produced widespread effects, which, observational evidence suggests, may detrimentally impact *Astragalus atratus* var. *inseptus* populations. In addition, it is safe to assume that, like most native species, increased noxious weed densities would have a negative effect on the populations.

No-Action Alternative

Given the location of existing *Astragalus atratus* var. *inseptus* populations in relation to the ROW, impacts from the No-Action Alternative would be unlikely, even without additional protection measures.

4.3.2.2. Shockley's matted buckwheat

Moseley and Reveal (1995) conclude that direct habitat disturbance is likely the greatest threat to the long term viability of *Eriogonum shockleyi* var. *shockleyi* (Shockley's matted buckwheat). They note that the taxon's habitat is resistant to impacts from factors such as noxious weed invasion, fire, and cattle grazing, although these disturbances may play a role in certain populations.

Proposed Action

The single *E. s.* var. *shockleyi* occurrence in the project ROW is located near an access road, which runs along the rim of the Snake River Canyon. At one point (outside of the ROW) individual plants are located in the middle of the access road. Other developments in the area (communication antenna cluster and agricultural fields) also attract users to this road. Given the multiple uses of this road, the *E. s.* var. *shockleyi* population has the potential to be directly impacted. Upgrades to the road, off-road driving, and erosion related to the road are all examples of potential adverse impacts to this population. However, Idaho Power activities in the area are primarily limited to ingress and egress along this road. The *Eriogonum* plants are not located around tower bases or other areas where maintenance activities would be likely to disturb individuals. The Proposed Action with protection measures would have a low potential to impact *E. s.* var. *shockleyi*.

Lesser impacts are possible to this population from factors such as noxious weed invasion, changes in fire frequency patterns, and cattle grazing. However, as noted previously, these would be expected to be less harmful to the population than direct habitat impacts.

No-Action Alternative

Given the location of *E. s. var. shockleyi* in the access road, O&M activities would have a low potential to impact this population. Thus, the level of impact would be expected to be similar to that in the Proposed Action. The existing condition of the road is such that maintenance requirements are expected to be low to non-existent.

4.4. Threatened, Endangered, and Special Status Wildlife Species

This section presents an analysis of the potential environmental impacts to wildlife on federal lands that may result from implementation of the Proposed Action and No-Action alternatives. It also presents protective measures (also detailed in section 2.2.3.2) that would eliminate or greatly reduce the impacts of the project.

Eleven of the species listed in Table 3-3 have some potential to be impacted by O&M activities. These will be discussed in the following order: federally listed, candidate, then remaining species of special concern, based on impact type. The species not discussed have very little to no potential to be impacted, mostly due to their extreme unlikelihood to be present in the line ROW. For those that may be present, but have no potential to be impacted, it is assumed they would not be significantly affected by O&M activities (e.g. snails, bats, small birds). For most species the brief air and ground patrols would not cause a disturbance. Line maintenance occurs infrequently, is typically conducted for only a few spans, and for a few days. The general protective measures listed in section 2.2.3.2 should protect the habitats of the species (e.g. minimal ground disturbance, protection of water quality, fire prevention, and control of weeds).

4.4.1. Listed and Candidate species

4.4.1.1. Bald eagle

The resources that are essential to bald eagles, and thus must be managed for, include nest sites, communal night roosts, and perch sites adjacent to foraging areas (Anthony et al. 1995). The Pacific bald eagle recovery plan provides guidelines for establishing buffer zones around these important areas and restricting activities during critical periods of eagle use (USFWS 1986). In general, transmission lines and associated O&M activities that are greater than 0.5 mi from nests, roosts, or frequently used foraging perches should not impact the species.

Impacts to bald eagles from the Boise-to-Borah project can be placed in three categories. High (direct) impacts would result from the take of individual eagles, the prevention of successful reproduction, or a reduction in critical habitat (primarily trees). Moderate (indirect) impacts would result from a short-term reduction of critical habitat. Low (indirect) impacts would result from minor and short-term loss or reduction of bald eagle habitat or temporary displacement of bald eagles from use areas.

Proposed Action

Project Impacts

Currently, there are no bald eagle nests near the project area. However, bald eagles could be temporarily displaced from day perches or roosts near lines while Idaho Power personnel are present. The lines, by themselves, should not pose a risk as bald eagles have excellent vision and collisions with transmission lines are very rare. Electrocution is not a risk with the bald eagle for lines greater than 69 kV due to conductor and groundwire spacing. Boise-to-Borah lines are 230 and 345 kV.

Bald eagles roosting and perching in the Barber Pool area of the Boise River use areas from 0.25 to 1 mi (400 to 1600 m) from the lines. There is no tall vegetation, suitable for perching by eagles, in the ROW. There could be a low impact from temporary displacement due to O&M activities, but these activities should not significantly disturb the birds.

Bald eagles foraging in the Lake Walcott area, near the Midpoint to Borah #2 line, and in the mid-Snake River area near the Boise Bench to Midpoint #1 line should not be significantly disturbed by O&M activities. Line maintenance and pole replacement for these lines typically occur from April to October when eagles are not present. Even if present, the displacement would be temporary and only for a small area. No roosts or perch areas are known near these lines.

Mitigation Measures

The bald eagle recovery plan recommends that construction, habitat improvement, and other potentially disturbing activities should not be allowed up to 0.25 mi from nests or roosts and that activities should be regulated within 0.5 mi where eagles have line-of-sight vision (USFWS 1986). The plan also states that key wintering areas need protection from about 15 November to 15 March. Therefore, in order to reduce the potential for a temporary disturbance due to O&M activities Idaho Power would not allow major O&M activities between November 15 and March 15 within 0.25 mi (400 m) of wintering bald eagle perch trees or roost locations within the project area (Protective Measure 3-3). Major O&M actions include annual scheduled maintenance, detailed structure inspections and replacement, and vegetation clearing. Emergency maintenance would not be restricted, however utmost precautions should be taken to prevent impacts. In addition, Idaho Power would consult with agencies prior to scheduled O&M activities in bald eagle areas to confirm current roost or perch locations.

The bald eagle recovery plan recommends that low level aircraft operations should not be allowed within 0.25 mi of roosts and that flights should be regulated up to 0.5 mi where eagles have line-of-sight vision (USFWS 1986). Kaltenecker et al. (1994) recommended that all helicopter and fixed-wing overflights of Barber Pool below 1,000 ft should be prohibited from 15 November to 15 March. However, aerial inspection of the lines occur only every ten years and, at present, stay 0.25 mi or greater from the eagle use areas. These lines do not have an annual aerial patrol. If they are scheduled in the future, they should follow the 0.25 mi recommendation.

In order to prevent significant impacts, any bald eagle nest that becomes established near the project area would be protected by spatial and temporal restrictions. Idaho Power would consult with the BLM and USFWS as to the appropriate restrictions on O&M activities.

Determination of Effect

When protective measures are applied, the Proposed Action “may affect, but is not likely to adversely affect” bald eagles or their preferred habitat. Long and short-term effects (if any) of the project on bald eagles may be limited to the temporary displacement of a few, if any, individuals.

No-Action Alternative

The Proposed Action and No-Action alternative would have the same effects. Mitigation measures for both actions need to be the same as federal law protects the species. Therefore the determination of effect is the same for the proposed and no-action alternatives.

4.3.1.2. Gray wolf

High (direct) impacts would occur to the gray wolf if direct take occurred, if there was a prevention of successful reproduction, or if there was a reduction in critical habitat (such as denning sites). Moderate impacts would result from a short-term reduction of critical habitat. Low (indirect) impacts would result from temporary displacement of individuals during O&M activities.

Proposed Action

Project Impacts

The closest known wolf pack to the project area is about 34 mi to the north of the project lines. Single or small pairings of wolves might range into the project area on an extremely rare basis. The open plain habitat is not suitable for establishment of a pack’s core area. No direct or indirect impacts to the gray wolf are expected to occur as a result of this project.

Mitigation Measures

No mitigation measures are required.

Determination of Effect

There should be “no effect” of the project on the gray wolf.

No-Action Alternative

Under the No-Action Alternative no direct or indirect impacts to gray wolf are expected to occur as a result of the project. There should be “no effect” of the project on the gray wolf.

4.4.1.3. Aquatic snails

High (direct) impacts would occur to aquatic snails if direct take occurred or if there was a significant reduction in habitat quality (cold, well-oxygenated, unpolluted water). Moderate to low impacts would result from a short-term reduction of quality habitat.

Proposed Action

Project Impacts

The Idaho springsnail, Utah valvata snail, Snake River physa snail, Banbury Springs limpet, and Bliss Rapids snail may be present in the Snake River, or associated springs, in the area of the four Boise Bench to Midpoint #1 line crossings. Height of wires over the river range from 50 to 115 ft. Distances from towers to cliff edges or river banks range from about 60 to 400 ft. O&M activities do not involve aquatic activities, and as such, no direct or indirect impacts to aquatic snails are expected to occur as a result of this project.

Mitigation Measures

No mitigation measures are required.

Determination of Effect

There should be “no effect” of the project on the Idaho springsnail, Utah valvata snail, Snake River physa snail, Banbury Springs limpet, and Bliss Rapids snail.

No-Action Alternative

Under the No-Action Alternative no direct or indirect impacts to aquatic snails are expected to occur as a result of the project. There should be “no effect” of the project on the Idaho springsnail, Utah valvata snail, Snake River physa snail, Banbury Springs limpet, and Bliss Rapids snail.

4.4.1.4. Yellow-billed cuckoo

Impacts to yellow-billed cuckoos from the project can be placed in three categories. High (direct) impacts would result from the take of individual cuckoos, the prevention of successful reproduction, or a reduction in critical habitat. Moderate (indirect) impacts would result from a short-term reduction of critical habitat. Low (indirect) impacts would result from minor and short-term loss or reduction of yellow-billed cuckoo habitat or temporary displacement of cuckoos from use areas.

Proposed Action

Project Impacts

Breeding populations of yellow-billed cuckoos in Idaho are believed to be extirpated (CBD 2003). As the species occupies forested riparian areas with thick understory, and there are no significant amounts of riparian habitat on public land along the lines, the species would not be expected to occur in the project area. Therefore, no direct or indirect impacts to yellow-billed cuckoos are expected to occur as a result of this project

Mitigation Measures

No mitigation measures are required.

Determination of Effect

There should be “no effect” of the project on the yellow-billed cuckoo.

No-Action Alternative

Under the No-Action Alternative no direct or indirect impacts to cuckoos are expected to occur as a result of the project. There should be “no effect” of the project on the yellow-billed cuckoo.

4.4.2. Other sensitive species

Nine sensitive bird species and the pygmy rabbit have the potential to be directly or indirectly impacted by O&M activities. Five of the bird species and the rabbit could be directly impacted through disturbance to the nests or the individuals, and indirectly through disturbance to their habitats. The main concern for the remaining four bird species is line collision. In most cases actual nesting or other critical areas are unknown within the project area. However, if occurrences in the ROW are discovered, species specific timing of O&M activities and spatial buffers as outlined below should eliminate any serious project impacts to the species.

Applicant Committed Environmental Protection Measures

Measure 3-1 states that if sensitive species were found before or during O&M activities, Idaho Power would establish a 100-foot buffer zone around the species or population and then contact the BLM immediately. Until the BLM authorized Idaho Power to proceed all activities would cease within the zone. Measure 3-2 states that O&M activities in designated areas would be modified or curtailed during sensitive periods (e.g., nesting and breeding periods) for known locations of candidate, proposed, threatened, and endangered, or other sensitive animal species. The Authorized Officer listed in the POD would approve sensitive areas and timeframes. Exceptions to both of these rules would be emergency repair situations.

4.4.2.1. Long-billed curlew

Long-billed curlews are known to nest within the general vicinity of the project area. However, there are no BLM designated long-billed curlew nesting areas near the lines. The BLM Jarbidge Resource Management Plan guidelines recommend that major construction and O&M work be scheduled prior to 15 March or after 30 June, within designated long-billed curlew nesting areas, to avoid or minimize disturbance (USDI 1987). In southwestern Idaho territory sizes average about 35 acres in the most densely populated areas and, typically, an unoccupied buffer zone of 984-1,640 ft (300-500 m) exists around the edge of suitable habitat (Dechant et al. 2001).

Proposed Action

If long-billed curlew nests were discovered within 0.25 mi (400 m) of the lines, limiting O&M activities to patrols from mid-March to late June would significantly reduce the potential for disturbance.

No-Action Alternative

Under the No-Action alternative O&M activities would not be restricted spatially or temporally and there would be no effort to prevent disturbances to long-billed curlews.

4.4.2.2. Sage grouse

O&M activities on the Borah-to-Boise transmission lines could cause direct impacts to sage grouse through lek disturbance, nest disturbance, and habitat degradation. Indirect impacts could occur due to temporary reduction in sage habitat due to O&M activities, prior to rehabilitation. These factors will be discussed in light of specific knowledge of the lines, service roads, and O&M activities.

Lek and nest disturbance

Very little information is presented in the literature on how and at what distance human presence disturbs nesting or lekking grouse. Leks are considered focal points for managing sage grouse (Connelly et al. 2000). Sage grouse nests are, on average, 1.1 to 3.8 mi from a lek (Connelly et al. 2000). Daily disturbance on sage grouse leks could cause reduction in mating, and thereby some reduction in total population. If flushed, sage grouse usually do not return to the lek in the same day (Call and Maser 1985). Spring O&M activities may include line patrols, inspection, and maintenance (Section 2.2.2.2). Most of these activities require personnel to be at a structure or span of structures for less than one day. In the case of major activities (such as pole replacements), personnel may be present for a few days. Connelly et al. (2000) recommended that disturbance be eliminated or at least restricted within 1,640 ft (500 m) of active leks. In addition, the Idaho sage grouse management plan recommends that human disturbances be avoided within 0.62 mi (1 km) of a lek during the breeding season (March 1 through May 31) from 1 hour before sunrise to 3 hours after sunrise and that new transmission lines should not be developed within 1,200 ft of a lek (Idaho Department of Fish and Game 1997).

The five historical sage grouse leks within 0.62 mi (1 km) of the Borah-to-Boise lines appear to be no longer in use. In addition none were closer than 0.34 mi (550 m) so there is likely little to no risk of disturbance to leks by O&M activities.

Proposed Action

If sage grouse leks are found near project ROW, no major O&M activities shall occur between March 1 and June 1 within 0.62 mi (1 km) of active sage grouse leks (Protective Measure 3-4). Idaho Power would coordinate with the IDFG on an annual basis to obtain the most recent lek data. Major O&M would include climbing inspections, line maintenance, pole replacement, and vegetation clearing. Fall reseeded is preferred near leks. If spring reseeded is necessary, activity should not occur before 11:00 am from March 1 to May 1. In addition spring helicopter flights would be done after 11:00 am (Protective Measure 3-4). Grouse are unlikely to be bothered by infrequent use of the service roads typical to O&M activities, such as patrolling, as Call and Maser (1985) state that grouse are tolerant of vehicles and may be watched at close range if observers do not leave the vehicle. However, scheduling spring aerial and ground patrols to start after 11 am would reduce the risk of lek disturbance.

If nests were found before or during O&M activities, Idaho Power would establish a 100-foot buffer zone around the nest and then contact the BLM immediately. Until the BLM authorized Idaho Power to proceed all activities would cease within the zone (Protective Measure 3-1).

No-Action Alternative

Under the No-Action alternative O&M activities would not be restricted spatially or temporally and there would be no effort to prevent direct disturbances to sage grouse.

Habitat degradation

A few site-specific locations along the Borah-to-Boise transmission lines may require individual trees to be trimmed to ensure system reliability and safety. Sagebrush is not affected. Other than vegetation maintenance in the ROW, O&M activities that could cause localized ground disturbance, including removal of habitat, would be restricted to service road shoulders and work areas at structures. Although ground disturbance can cause habitat degradation, impacts from individual O&M activities are probably insignificant compared to landscape level processes (e.g., wildfire, livestock grazing, and habitat conversion) that typically damage grouse habitats (Sather-Blair et al. 2000). Nonetheless, O&M policies should avoid further habitat damage, especially where active leks are present.

Proposed Action

Under the proposed action the area around all poles would be cleared to a distance of 10 ft. This may require the removal of a very small amount of sage grouse habitat. We recommend that O&M activities that directly degrade sagebrush communities in sage grouse habitats be reseeded with species compatible with grouse habitat needs (especially native forbs). For major O&M activities requiring ground disturbance, Idaho Power would prepare a revegetation plan in consultation with the BLM. The plan would specify appropriate revegetation techniques to be applied. Techniques could include reseeded native or other acceptable vegetation species (Protective Measure 2-6).

No-Action Alternative

Under the No-Action alternative poles would not be cleared to a distance of 10 ft. In addition, the FERC licenses directed Idaho Power to rehabilitate disturbed land. Therefore indirect disturbance to sage grouse through habitat degradation is expected to be minimal under the no-action alternative.

4.4.2.3. Raptors

The ferruginous hawk, prairie falcon, and the burrowing owl are the only raptor species of special concern known to nest near the Boise-to-Borah transmission lines. The USFWS has a clearly stated policy on disturbing nesting raptors: the Migratory Bird Treaty Act protects birds of prey. The Bald Eagle Protection Act protects golden eagles as well as bald eagles.

Nesting, roosting, and perching raptors can cause power outages if their feces or nesting materials interfere with conductors, insulators, or air gaps. Idaho Power manages nesting on transmission line structures to reduce conflicts. Such management may include relocating nests, modifying structures, and providing nesting platforms. Idaho Power consults with the USFWS and Idaho Department of Fish and Game when a problem nest is located.

In past years, Idaho Power has periodically inventoried raptor nests occurring on the Boise-to-Borah transmission-line structures. Beginning in 2003, raptor nests on project area lines will be recorded annually. In addition, Idaho Power will incorporate additional sources of nest location data in the vicinity of the transmission line rights-of-way as it becomes available.

Ferruginous hawk

Ferruginous hawks are known to nest on project area lines. England et al. (1997) recommended a 100 m (328 ft) buffer for major activities near occupied ferruginous hawk nests. White and Thurow (1985) recommended no activities within 250 m (820 ft) of an occupied nest and Richardson and Miller (1997) recommended no major actions within 800 m (0.5 mi) of an occupied nest. BLM guidelines (USDI 1987) restrict major activities within 0.75 mi of a nest from 15 March to 30 June. Currently line maintenance and pole replacement occurs between April and October for the Boise Bench to Midpoint #1 and Midpoint to Borah #1 lines, anytime of year for the Boise Bench to Midpoint #2 and #3 lines, and May to August for the Midpoint to Borah #2 line.

Proposed Action

Spatial and temporal management zones or buffers for nests and roosting sites can protect raptors from being disturbed by O&M activities. Any restrictions on an O&M activity should consider the location, type, and duration of the activity. Table 4-1 includes suggested periods during which O&M activities should be reviewed and may be restricted, depending on their potential to disturb nesting and roosting raptors. In general, Idaho Power's Environmental Affairs Department would review all O&M activities that would be within 400 meters of a raptor nest before the work can begin. For ferruginous hawk nests, buffer zones should be set and all O&M actions, except patrols, should be avoided between March 15 and June 30.

Table 4-1. Temporal periods of nesting raptor species during which non-patrol operation and maintenance activities would be reviewed, and may be restricted, within 400 meters of the Borah-to-Boise transmission lines.

Raptor Species	Life Stage	Restrictive Time Period
Bald eagle	Nesting	March 1– July 31
Bald eagle	Winter roost	November 1– March 15
Golden eagle ¹	Nesting	March 1– June 30
Osprey ¹	Nesting	April 1– July 31
Prairie falcon	Nesting	March 15 – June 30
Ferruginous hawk	Nesting	March 15 – June 30
Swainson's hawk ¹	Nesting	April 15 – July 30
Red-tailed hawk ¹	Nesting	March 1– June 30
Burrowing owl	Nesting	March 15 – June 30

¹ These are not species of special concern for this project but they are likely to be present in the project area and are protected by the Migratory Bird Treaty Act and the Bald Eagle Protection Act.

No-Action Alternative

Under the No-Action alternative O&M activities would still be restricted spatially and temporally due to federal protections. Idaho Power would consult with the BLM whose guidelines (USDI 1987) restrict major activities within 0.75 mi of a ferruginous hawk nest from 15 March to 30 June.

Prairie falcon

The prairie falcon is a cliff nester and should not be significantly disturbed by maintenance activities on towers above the cliffs. Holthuijzen et al. (1990) found that nesting prairie falcons showed no adverse effects during the re-construction of Swan Falls Hydroelectric project, which involved blasting. Holthuijzen (1995c) documented 3 prairie falcons nests in the mid-Snake River region (which included 3 of the 4 Boise Bench to Midpoint #1 line crossings). All of the nests were more than 0.5 mi from the line crossings. The prairie falcon nesting period in southern Idaho typically runs from March 15 to June 30. The Boise Bench to Midpoint #1 line maintenance typically occurs between May and October.

Proposed Action

In the event that an occupied prairie falcon eyrie occurred near the BLM line crossing, Idaho Power would consult with the BLM as to temporal and spatial restrictions needed.

No-Action Alternative

Under the No-Action alternative O&M activities would still be restricted spatially and temporally due to federal protections. Idaho Power would consult with the BLM as to temporal and spatial restrictions needed on a site specific basis.

Burrowing owl

Burrowing owls are known to nest near project area lines. They are mostly crepuscular and nocturnal and would not likely be significantly disturbed by minor or temporary major O&M activities as long as their burrows were not directly impacted. BLM guidelines (USDI 1987) restrict major activities within 0.25 mi (400 m) of a nest from 15 March to 30 June. Currently line maintenance and pole replacement occurs between April and October for the Boise Bench to Midpoint #1 and Midpoint to Borah #1 lines, anytime of year for the Boise Bench to Midpoint #2 and #3 lines, and May to August for the Midpoint to Borah #2 line.

Proposed Action

If a nest becomes known near the ROW, initially Idaho Power would restrict major activities within 0.25 mi (400 m) of it from 15 March to 30 June (Protective Measure 3-2). BLM would be consulted as to the exact avoidance restrictions.

No-Action Alternative

Under the No-Action alternative O&M activities would still be restricted spatially and temporally due to federal protections. If a nest becomes known near the ROW, initially Idaho

Power would restrict major activities within 0.25 mi (400 m) of it from 15 March to 30 June (Protective Measure 3-2). BLM would be consulted as to the exact avoidance restrictions.

4.4.2.4. Colonial waterbirds

Four colonial waterbird species may be at medium to high risk of transmission-line collision (SAIC 2000): American white pelican, white-faced ibis, black tern, and trumpeter swan (Table 3-3). Risk was based on mortalities reported in the literature and on risky flight characteristics such as awkward, distracted, frequent, nocturnal, or fast flight and large tight flocks formed on a daily basis or in migration. Avian mortality from collisions with power lines is well documented (Scott et al. 1972, McKenna 1976, Anderson 1978, Avery 1978, Malcolm 1982, Faanes 1987, and Bevanger 1994). Collisions occur most often where transmission lines intercept areas where birds concentrate, such as migratory flyways, feeding areas, and nesting/roosting sites (Savereno et al. 1996). Although some avian collisions with power lines occur during migration, most collisions take place during flights within a daily use area (APLIC 1994). Overhead groundwires that are situated above the conductor wires are the major cause of bird collisions with power lines (APLIC 1994). These groundwires are of a smaller diameter than the conductor wires and are less visible to birds.

On BLM land, one Snake River crossing of the Boise Bench to Midpoint #1 line (tower 995 to 996) may pose a collision risk. However, this span appears to have a low potential to cause collisions. At this river crossing, the line is high over the river (about 115 ft) across a steep cliff area. The flight paths of the species of concern in this area would likely be below the lines. American white pelicans, white-faced ibis, black terns, and trumpeter swans do not nest in the immediate area but use the area for foraging and movement. No collisions have been reported to Idaho Power despite a variety of wildlife studies in the area from 1990 to 1992 (Idaho Power 1995). The majority of waterbirds use portions of the Snake River upstream of the Boise Bench to Midpoint #1 line crossings. Based on this information, the line crossing would not be considered a major fly-way and the risk of collision causing significant, population level declines is extremely unlikely.

Proposed Action

The current risk level does not warrant a monitoring program. However, in the event of reported collisions there would be follow-up evaluations (Protective Measure 3-5). Measures to minimize avian collision would follow best management practices recommended in *Mitigating Bird Collisions with Power Lines: The State of the Art in 1994* (APLIC 1994) or subsequent updates to that publication.

No-Action Alternative

Under the No-Action alternative no effort is required to prevent avian collisions. Due to the extremely low risk of collision occurring on BLM lands, the impact of the no-action alternative is likely the same as the proposed action.

4.4.2.5. Pygmy rabbit

The pygmy rabbit is a rare inhabitant of big sagebrush shrublands. There are no recent records of the species in the project area but it may be present near the Midpoint to Borah #1 and #2 lines if appropriate habitat exists. Roads and cleared areas seem to be barriers to dispersal (Heady et al. 2001, Csuti et al. 1997) but the minor infringement of the Idaho Power ROW, including service roads, on the natural habitat should not affect this species. Rehabilitation of sagebrush areas disturbed by Idaho Power activities would minimize any impacts to the species. If burrow locations are found near the lines there may be a need for timing or spatial restrictions during the spring to summer breeding season.

Proposed Action

Under the proposed action the area around all poles would be cleared to a distance of 10 ft. This may require the removal of a very small amount of pygmy rabbit habitat. We recommend that O&M activities that directly degrade sagebrush communities in known pygmy rabbit areas be reseeded with species compatible with pygmy rabbit habitat needs. For major O&M activities requiring ground disturbance, Idaho Power would prepare a revegetation plan in consultation with the BLM. The plan would specify appropriate revegetation techniques to be applied. Techniques could include reseeded native or other acceptable vegetation species (Protective Measure 2-6).

If pygmy rabbit burrows are found before or during O&M activities, Idaho Power would establish a 100-foot buffer zone around the burrows and then contact the BLM immediately. Until the BLM authorized Idaho Power to proceed all activities would cease within the zone (Protective Measure 3-1).

No-Action Alternative

Under the No-Action alternative poles would not be cleared to a distance of 10 ft. In addition, the original ROW grant did direct Idaho Power to rehabilitate disturbed land. Therefore indirect disturbance to pygmy rabbits through habitat degradation is expected to be minimal under the no-action alternative. However, under this alternative O&M activities would not be restricted spatially or temporally and there would be no effort to prevent direct disturbances to pygmy rabbits.

5. LIST OF PREPARERS

Bureau of Land Management

Authorized Officer/Deciding Official: Joe Kraayenbrink, Acting District Manager, Upper Snake River District, Idaho Falls

Project Manager: Scott Powers, Project Manager, Washington Office (based in the Montana State Office, Billings)

Real Estate: Dorothy Bonner, Reality Specialist, Burley Field Office

Cultural Resources: John Lytle, Archaeologist, Burley Field Office

Biological Resources: Gary Wright, Wildlife Biologist, Shoshone Field Office

Bureau of Reclamation

Authorized Officer/Deciding Official: Jerrold D. Greg, Area Manager, Snake River Area Office, Boise

Idaho Power Company

Project Manager/Biological Resources: Brett Dumas, Landscape Ecologist

Project Sponsors: Darel Tracy, Project Leader, and Allan Ansell, Environmental Supervisor

Cultural Resources: Mark Druss, Archaeologist, and Robyn Johnson, Cultural Technician

Wildlife Resources: Leslie Carpenter, Environmental Technician

Botanical Resources: Marie Kerr, Botanical Technician

Rights-of-Way: Mike Jacobs, ROW Agent, and Diana Pon, ROW Permit Coordinator

6. LIST OF AGENCIES AND PERSONS CONSULTED

Bureau of Reclamation

Jerrold Gregg, Area Manager, Snake River Area Office

Yvonne Daniel, Realty Specialist

John Caywood, Realty Specialist

Corps of Engineers

Jana Brinlee, Realty Specialist, Walla Walla District

Peter Poolman, Chief Environmental Compliance Section, Walla Walla District

US Fish and Wildlife Service

Sandi Arena, Fish and Wildlife Biologist, Eastern Idaho Field Office

Barbara Heslin, Botanist, Snake River Basin Field Office

Shoshone-Bannock Tribe

Yvette Tuell, Environmental Programs

Adrian Seaman, Tribal Council Member

Shoshone-Paiute Tribe

Terry Gibson, Tribal Chairman

APPENDICES

Appendix 1. Critical Elements of the Human Environment

Air Quality	The Clean Air Act of 1955, as amended
Areas of Critical Environmental Concern	Federal Land Policy and Management Act of 1976
Cultural Resources	National Historic Preservation Act of 1966, as amended
Environmental Justice	Executive Order 12898
Farm Lands (Prime or Unique)	Surface Mining Control and Reclamation Act of 1977
Floodplain	Executive Order 11988, as amended
Migratory Birds	Executive Order 13186
Native American Religious Concerns	American Indian Religious Freedom Act of 1978
Threatened or Endangered Species	Endangered Species Act of 1973, as amended
Wastes, Hazardous or Solid	Resource Conservation and Recovery Act of 1976, and Comprehensive Environmental Response, Compensation and Liability Act of 1980
Water Quality, Drinking or Ground	Safe Drinking Water Act of 1974, as amended and Clean Water Act of 1977
Wetlands/Riparian Zones	Executive Order 11990
Wild and Scenic Rivers	Wild and Scenic Rivers Act of 1968, as amended
Wilderness	Federal Land Policy and Management Act of 1976 and Wilderness Act of 1964

Appendix 2. Determination of Significance and Impact

BURLEY FIELD OFFICE OF THE BUREAU OF LAND MANAGEMENT

Project Title: Idaho Power Right of Way **Proj. No.** IDI-34249

Results of Records Review and Field Examination:

- No sites are present in the project area.
- Sites are present in the project area (see below).

Determination of Eligibility:

<u>Site No.</u>	<u>Not Eligible</u>	<u>Potentially Eligible</u>	<u>Eligible</u>	<u>Listed</u>
-----------------	---------------------	-----------------------------	-----------------	---------------

(Please see Attached)

Determination of Effect:

<u>Site No.</u>	<u>No Effect</u>	<u>No Adverse Effect</u>	<u>Adverse Effect</u>	<u>Rationale</u>
-----------------	------------------	--------------------------	-----------------------	------------------

(Please see Attached)

Conditions, Stipulations and Coordinating Requirements

The stipulations and conditions as stated in the review document will be included in the Right-of-Way issued to Idaho Power for these power lines.

1. All sites which were "unevaluated" need to be evaluated as either "eligible or ineligible" prior to any further disturbance.
2. All sites which were evaluated as "potentially eligible" need to be re-evaluated as either eligible or ineligible.
3. All sites which were evaluated as Eligible for the National Register of Historic Places need to have that designation resolved by additional work to prepare the following:
 - A. A nomination to the National Register of Historic Places
 - B. An appropriate mitigation plan and determination of affect to assess a no affect, no adverse affect or adverse affect as a result of the ROW, maintenance activity or other future work.
4. All site forms submitted need to be updated as appropriate and sent to the appropriate BLM office and the State Historic Preservation Officer, particularly those mentioned in the above text.

BLM Certification

John C. Lytle, Archaeologist Date

District Manager Date

SHPO Comment: I have reviewed the documentation and recommendations provided by the BLM.

- I agree with the above determination of eligibility and effect and with the conditions of compliance.
- I agree with the above determination of eligibility and effect given stipulations explained below or in the attached letter.
- I disagree with the above determination of eligibility and effect as explained below or in the attached letter.

State Historic Preservation Officer Date

Appendix 3. Comments from the Idaho State Historic Preservation Office



BUREAU OF LAND MANAGEMENT
UPPER SNAKE RIVER DISTRICT
BURLEY FIELD OFFICE
RECEIVED

July 16, 2003

2003 JUL 18 AM 10 12

TO: John Lytle

FROM: Glenda King

RE: Idaho Power Right of Way, IDI-34249

Our mission: to educate through the identification, preservation, and interpretation of Idaho's cultural heritage.

Yesterday Idaho Power provided us with the final documents we needed in order to complete this review. Our comments are as follows:

Dirk Kempthorne
Governor of Idaho

Lines 906, 912, and 951

Steve Guerber
Executive Director

Our office provided comments on these lines on January 10, 2003. Enclosed you will find a copy of these comments.

Administration
1109 Main Street, Suite 250
Boise, Idaho 83702-5642
Office: (208) 334-2682
Fax: (208) 334-2774

Archaeological Survey
210 Main Street
Boise, Idaho 83702-7264
Office: (208) 334-3847
Fax: (208) 334-2775

Capital Education Center
Sunshine P.O. Box 83720
Boise, Idaho 83720-8001
Office: (208) 334-5174

Historical Museum and Education Programs
610 North Julia Davis Drive
Boise, Idaho 83702-7693
Office: (208) 334-3120
Fax: (208) 334-3059

Historic Preservation Office
210 Main Street
Boise, Idaho 83702-7264
Office: (208) 334-3861
Fax: (208) 334-2775

Historic Sites Office
2445 Old Penitentiary Road
Boise, Idaho 83712-8254
Office: (208) 334-2844
Fax: (208) 334-3225

Library/Historical and Genealogical Collection
450 North Fourth Street
Boise, Idaho 83702-6027
Office: (208) 334-3356
Fax: (208) 334-3198

Oral History
450 North Fourth Street
Boise, Idaho 83702-6027
Office: (208) 334-3865
Fax: (208) 334-3198

Memberships and Outreach and Development
1109 Main Street, Suite 250
Boise, Idaho 83702-5642
Office: (208) 334-3886
Fax: (208) 334-2774

Publications
450 North Fourth Street
Boise, Idaho 83702-6027
Office: (208) 334-3426
Fax: (208) 334-3198

State Archives/Manuscripts
2205 Old Penitentiary Road
Boise, Idaho 83712-8250
Office: (208) 334-2620
Fax: (208) 334-2626

Line 902

We agree with your findings and evaluations with the following exceptions. Site IPC 902-2 (10EL1489) should be included under the potentially eligible heading instead of with the not eligible sites. The status of a previously recorded site that is included only in the tables and not addressed in the report, 10TF136, should be discussed. Our records indicate it may be eligible and it is located within the pathway of this line. Two sites, both lithic scatters located under this transmission line, have been identified recently. They are 10EL1575 and 10EL1636. These sites should be included in the "potentially eligible" list.

Line 950

We agree with your findings and evaluations.

Finally, we believe the preparation of a nomination to the National Register of Historic Places is not necessary as part of the Section 106 review process. We do support your stipulation that prior to any ground-disturbing activity, the Section 106 Review process needs to be completed beginning with determinations of eligibility for any unevaluated or potentially eligible sites within the APE. Section 106 Review would also be necessary prior to increasing the historic patterns of frequency or weight/impact of equipment on the service roads.



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Our mission: to educate through the identification, preservation, and interpretation of Idaho's cultural heritage.

Dirk Kempthorne
Governor of Idaho

Steve Guerber
Executive Director

Administration
1109 Main Street, Suite 250
Boise, Idaho 83702-5642
Office: (208) 334-2682
Fax: (208) 334-2774

Archaeological Survey
210 Main Street
Boise, Idaho 83702-7264
Office: (208) 334-3847
Fax: (208) 334-2775

Capitol Education Center
Statehouse/P.O. Box 83720
Boise, Idaho 83720-0001
Office: (208) 334-5174

Historical Museum and Education Programs
610 North Julia Davis Drive
Boise, Idaho 83702-7695
Office: (208) 334-2120
Fax: (208) 334-4059

Historic Preservation Office
210 Main Street
Boise, Idaho 83702-7264
Office: (208) 334-3861
Fax: (208) 334-2775

Historic Sites Office
2445 Old Penitentiary Road
Boise, Idaho 83712-8254
Office: (208) 334-2844
Fax: (208) 334-3225

Library/Historical and Genealogical Collection
450 North Fourth Street
Boise, Idaho 83702-6027
Office: (208) 334-3356
Fax: (208) 334-3198

Oral History
450 North Fourth Street
Boise, Idaho 83702-6027
Office: (208) 334-3863
Fax: (208) 334-3198

Memberships and Outreach and Development
1109 Main Street, Suite 250
Boise, Idaho 83702-5642
Office: (208) 334-3986
Fax: (208) 334-2774

Publications
450 North Fourth Street
Boise, Idaho 83702-6027
Office: (208) 334-3428
Fax: (208) 334-3198

State Archives/Manuscripts
2205 Old Penitentiary Road
Boise, Idaho 83712-8250
Office: (208) 334-2620
Fax: (208) 334-2626

Craig A. Jones
Hells Canyon Relicensing Project Manager
Hydro Relicensing Department
Idaho Power Company
P.O. Box 70
Boise, Idaho 83707

RECEIVED
JAN 13 2003

January 10, 2003

Dear Mr. Jones:

Thank you for the opportunity to comment on the draft technical appendices for FERC Project No. 1971, the new license application for the Hells Canyon hydroelectric project. As you know, this has been an enormous undertaking.

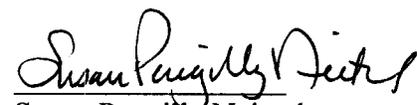
The comments found in this letter are from the two deputy State Historic Preservation Officers at Idaho SHPO. Included as attachments to the letter are comments on the historic architecture by Donald W. Watts, preservation planner at Idaho SHPO, and comments on the descriptive site records for the Hells Canyon NRA segment by Robert Yohe II, former Idaho state archaeologist. Because of Dr. Reid's former role as principal investigator for the Rainshadow Research effort during the 1998-1999 field seasons, his comments were not solicited for site records generated during that period.

We would like to start by complimenting Idaho Power Company on its obvious commitment to completing a comprehensive and state-of-the-art survey of the relicensing study area. By the same token this is an extraordinary amount of information to review in so short a period. We have worked to be clear and convincing in our comments and criticisms but we will be happy to discuss any of them with your team as the final report is produced.

Sincerely,


Kenneth C. Reid, Ph.D.
State Archaeologist and Deputy SHPO

Sincerely,


Susan Pengilly Neitzel
Compliance Coordinator and
Deputy SHPO



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Craig A. Jones
Idaho Power Company
SHPO Comments

Transmission Lines

General Comments: We appreciate receiving the list of legal descriptions for the transmission lines that were surveyed. We also need USGS quad maps showing the APEs, areas surveyed, and previously recorded and newly recorded archaeological sites within the APEs for these reports.

We did not receive Laurie Mauser's 1997 report documenting archaeological survey of Line 903. You have informed us, however, that this survey took place entirely in Oregon. If this is the case, we will not need a copy of that report or the site records.

We noted some discrepancies between the widths of the ROWs listed in Table E.4-10 of the License Application and the widths of the APEs and areas surveyed in the reports. Idaho Power should make sure that all of these figures correspond and recalculate the acres surveyed. We also recommend that a column be added to this table showing acres surveyed in Idaho.

A comprehensive table should be prepared that shows, by transmission line, all of the sites recorded within each transmission line's APE and the National Register evaluation of each site. The table should be similar that provided in Appendix 3.1-g of the Cultural Resources Management Plan, but should include sites evaluated as *not eligible* as well. Site evaluations change over time, so sites that have been evaluated as not eligible now may need to be reconsidered over the 30-year life of this license.

Several of the reports cite poor ground visibility as hindering the surveys. As part of ongoing management, Idaho Power needs to resurvey those portions where ground visibility was especially poor.

After considering the comments received for this review, site evaluations should be revised in the Exhibit E.4. Report on Historical and Archaeological Resources and in the Cultural Resource Management Plan before the final Application is submitted.

We found errors and omissions in Table 3.1-g of the Cultural Resources Management Plan. The information in this table will be very important for future archaeological monitors and other users of the CRMP, and needs to be checked against the reports again to ensure accuracy.

Finally, how does Idaho Power intend to address current effects from line maintenance and access on archaeological sites?

Craig A. Jones
Idaho Power Company
SHPO Comments

Lines 906 and 912: *Cultural Resources Survey of Idaho Power Company Transmission Lines 906 and 912, Boise Bench to Midpoint Station, Ada, Elmore, Gooding, and Lincoln Counties, Idaho* by James C. Chatters and Daryl E. Ferguson, Applied Paleoscience. December 1997.

- < The report needs U.S.G.S. topographic maps showing the survey corridors, and previously recorded sites and newly recorded sites in relation to the transmission line.
- < The report needs to clearly define the area of potential effects (APE) and survey corridor. This definition should be used consistently throughout the report. If a broader area was considered during the record search, which the report suggests, that too should be clearly stated. As written, project corridors of several widths are discussed. For example, on page 1, the report states that the project corridor is a 30-m (100-ft)-wide right of way. The next sentence explains that we reviewed not only sites directly within this corridor, but also known sites within 500m of that corridor. On page 11, it states that Idaho State Historical Society records document only eight properties within 500m of the project centerline. Also on page 11, it says that none of the known sites is intersected by, or within 50m of the outer edge of, the right-of-way. Finally, Table E.4-10 in the Licence Application itself states that the ROW is 80 feet wide.
- < The report leaves many of the sites unevaluated. According to 36CFR800 and to the Advisory Council on Historic Preservation, these sites need to be evaluated to design appropriate management or treatment measures. Until the sites are evaluated, we recommend that they be managed as eligible for the National Register of Historic Places.
- < We recommend that the following sites be managed as *eligible* for the National Register of Historic Places until Idaho Power completes evaluation:

Line 906	Eligible	Line 912
AP97-107	AP97-108	AP97-115
AP97-201	AP97109(10EL199)	AP97-116
AP97-204	AP97110	AP97-117
AP97-205	AP97111	AP97-202
AP97-206	AP97112	AP97-203
AP97-207	AP97-113	AP97-208
	AP97-114	AP97-209
		AP97-211

Craig A. Jones
Idaho Power Company
SHPO Comments

Please note that we evaluated as *eligible* seven of the sites evaluated as *not eligible* in the report. These sites include AP97-206, AP97-112, AP97-113, AP97-114, AP97-116, AP97-117, and AP97-203. With the exception of AP97-112 AND AP97-113, these are sites are located near many other similar prehistoric sites and should be evaluated as eligible for listing in a potential archaeological district. The rock walls identified as AP97-112 and AP97-113 should be evaluated in the context of the Barry Ranch or other rock walls or features in the area.

- ▶ The following site is *not eligible*:

Not Eligible

Line 912
AP97-210

- ▶ On page 14 of the report, AP97-201 is listed twice. The second listing should be AP97-204.
- ▶ Site AP97-201 should be included under *Sites Requiring Additional Attention* on page 17.

Line 951 and part of Line 923: *Cultural Resources Survey of IPC Transmission Line 951: Midpoint to Borah; Jerome, Lincoln, Minidoka, Blaine, and Power Counties* by Laurie Mauser, Northwest Archaeological Associates, Inc.

- ▶ We appreciate the quality of the maps provided in the report.

- ▶ Once again, your letter of December 3, 2002, notified us that the ROW for this line, and the area surveyed by Mauser, was 150 feet rather than 40 meters as described in Section B.2. of the archaeological report or 80 feet as described in Table E.4-10 of the License Application. These figures should be corrected in the final license.

Craig A. Jones
Idaho Power Company
SHPO Comments

- ▶ Figure A-8 indicates that previously recorded site 10MA45 is within the APE for this project, but it is not discussed in Section H of the report. According to our records, we evaluated the site as *not eligible* in 1990. After reviewing the site record again, we feel that the site should still be considered *not eligible*. This information should be included in Section H.
- ▶ Figure A-12 inaccurately shows sites 10PR11, 10PR12, and 10PR13 within the APE. According to the site records, these sites are located about 3/4 mile south of this line.
- ▶ We agree that the isolates (IPC-951-9 through IPC-951-27) are *not eligible* for the National Register of Historic Places.
- ▶ We agree that the following sites should be considered *eligible* for the National Register of Historic Places until Idaho Power completes formal evaluations:

Eligible Line 951	
IPC-951-1	IPC-951-6
IPC-951-2	IPC-951-7
IPC-951-3	IPC-951-8
IPC-951-4	Milner Gooding Canal
IPC-951-5	10MA56

- ▶ In Section I. of the report on page 8, it says that eleven sites may be determined eligible for the National Register. This figure should be changed to ten (10).
- ▶ The report needs to be signed.

Appendix 4. Prehistoric and historic sites associated with Boise to Borah transmission-line rights-of-way.

Line No.	Line Name	Prehistoric and Historic Sites			
		Temporary #	Smithsonian #	Eligibility	Prehistoric/Historic
902	Boise Bench to Midpoint #1 – 230 kV	902-1		Potentially Eligible	Prehistoric
		902-2	10EL1489	Potentially Eligible	Historic
		902-3		Not Eligible	Isolate
		902-4		Not Eligible	Isolate
		902-5		Potentially Eligible	Prehistoric
		902-6		Not Eligible	Isolate
		902-7		Not Eligible	Isolate
		902-8		Not Eligible	Isolate
		902-9		Not Eligible	Isolate
		902-10		Not Eligible	Isolate
		902-11		Not Eligible	Isolate
		902-12		Not Eligible	Isolate
		902-13		Not Eligible	Isolate
		902-14		Potentially Eligible	Prehistoric
		902-15		Potentially Eligible	Prehistoric
		902-16	10EL231	Potentially Eligible	Prehistoric
			10EL1575	Potentially Eligible	
			10EL1636	Potentially Eligible	
			10TF136	Potentially Eligible	
906	Boise Bench to Midpoint #2 – 230 kV	AP97-107	10GG677	Eligible	Prehistoric
		AP97-201	10GG678	Eligible	Prehistoric
		AP97-204	10EL1877	Eligible	Prehistoric
		AP97-205	10EL1878	Eligible	Prehistoric
		AP97-206	10EL1879	Eligible	Prehistoric
		AP97-207	10EL1880	Eligible	Prehistoric
		IPCAPIF203	10GG680	Not Eligible	Isolate
		IPCAPIF214	10EL1893	Not Eligible	Isolate
		IPCAPIF215	10EL1894	Not Eligible	Isolate
		IPCAPIF216	10EL1895	Not Eligible	Isolate
912	Boise Bench to Midpoint #3 – 230 kV	AP97-108	10GG109/114	Eligible	Prehistoric
		AP97-109	10EL199	Eligible	Prehistoric/Historic
		AP97-110	10EL1869	Eligible	Prehistoric
		AP97-111	10EL1870	Eligible	Prehistoric
		AP97-112	10EL1871	Eligible	Historic
		AP97-113	10EL555	Eligible	Prehistoric
		AP97-114	10EL1872	Eligible	Prehistoric

Line No.	Line Name	Prehistoric and Historic Sites			
		Temporary #	Smithsonian #	Eligibility	Prehistoric/Historic
		AP97-115	10EL1873	Eligible	Historic
		AP97-116	10EL1874	Eligible	Prehistoric
		AP97-117	10EL1875	Eligible	Prehistoric
		AP97-202	10GG679	Eligible	Prehistoric
		AP97-203	10EL1876	Eligible	Prehistoric
		AP97-208	10EL1881	Eligible	Prehistoric
		AP97-209	10EL1882	Potentially Eligible	Historic
		AP97-210	10EL1883	Not Eligible	Historic
		AP97-211	10AA584	Eligible	Prehistoric
		IPCAPIF101	10JE506	Not Eligible	Isolate
		IPCAPIF104	10LN843	Not Eligible	Isolate
		IPCAPIF115	10EL1884	Not Eligible	Isolate
		IPCAPIF117	10EL1885	Not Eligible	Isolate
		IPCAPIF118	10EL1886	Not Eligible	Isolate
		IPCAPIF119	10EL1887	Not Eligible	Isolate
		IPCAPIF121	10EL1888	Not Eligible	Isolate
		IPCAPIF122	10EL1889	Not Eligible	Isolate
		IPCAPIF123	10EL1890	Not Eligible	Isolate
		IPCAPIF124	10EL1891	Not Eligible	Isolate
		IPCAPIF125	10EL1892	Not Eligible	Isolate
		IPCAPIF206	10GG681	Not Eligible	Isolate
		IPCAPIF207	10GG507	Not Eligible	Isolate
		IPCAPIF209	10GG682	Not Eligible	Isolate
		IPCAPIF210	10GG683	Not Eligible	Isolate
		IPCAPIF211	10GG684	Not Eligible	Isolate
		IPCAPIF212	10GG685	Not Eligible	Isolate
		IPCAPIF218	10EL1896	Not Eligible	Isolate
			10EL832	Potentially Eligible	
			10EL896	Potentially Eligible	
			10EL898	Eligible	
			10GG76	Potentially Eligible	Prehistoric
			10LN939	Eligible	
950	Midpoint to Brady #1- 345 kV	IPC-950-01		Eligible	Prehistoric
		IPC-950-02		Eligible	Prehistoric
		IPC-950-03		Not Eligible	Isolate
		IPC-950-04		Not Eligible	Isolate
		IPC-950-05		Not Eligible	Isolate
		IPC-950-06		Not Eligible	Isolate
		IPC-950-07		Not Eligible	Isolate

Line No.	Line Name	Prehistoric and Historic Sites			
		Temporary #	Smithsonian #	Eligibility	Prehistoric/Historic
		IPC-950-08		Not Eligible	Isolate
		IPC-950-09		Not Eligible	Isolate
		IPC-950-10		Not Eligible	Isolate
		IPC-950-11		Not Eligible	Isolate
		IPC-950-12		Not Eligible	Isolate
		IPC-950-13		Eligible	Prehistoric
		IPC-950-14		Not Eligible	Isolate
		IPC-950-15		Not Eligible	Isolate
		IPC-950-16		Not Eligible	Isolate
		IPC-950-17		Not Eligible	Isolate
		IPC-950-18		Not Eligible	Isolate
		IPC-950-19	10LN12	Eligible	Prehistoric/Historic
		IPC-950-20	10LN62	Eligible	Prehistoric
		IPC-950-21		Not Eligible	Isolate
		IPC-950-23		Not Eligible	Historic
		IPC-950-24		Eligible	Prehistoric/Historic
		IPC-950-25		Not Eligible	Historic
		IPC-950-26		Not Eligible	Isolate
		IPC-950-27		Not Eligible	Isolate
		IPC-950-28		Eligible	Prehistoric/Historic
		IPC-950-29		Not Eligible	Historic
		IPC-950-30		Not Eligible	Isolate
		IPC-950-31		Not Eligible	Isolate
		IPC-950-32		Not Eligible	Isolate
		IPC-950-33		Not Eligible	Isolate
		IPC-950-34		Not Eligible	Isolate
		IPC-950-35		Not Eligible	Isolate
		IPC-950-36		Not Eligible	Isolate
		IPC-950-37		Not Eligible	Isolate
		IPC-950-38		Not Eligible	Isolate
		IPC-950-39		Not Eligible	Isolate
			10JE199	Eligible	Prehistoric
			10LN759	Not Eligible	Isolate
			Milner-Gooding Canal	Eligible	Historic
951	Midpoint to Borah #2 – 345 kV	IPC-951-01	10JE500	Eligible	Historic
		IPC-951-02	10BN1134	Eligible	Prehistoric
		IPC-951-03	10BN1135	Eligible	Prehistoric
		IPC-951-04	10PR789	Eligible	Prehistoric

Line No.	Line Name	Prehistoric and Historic Sites			
		Temporary #	Smithsonian #	Eligibility	Prehistoric/Historic
		IPC-951-05	10PR790	Eligible	Prehistoric
		IPC-951-06	10PR791	Eligible	Prehistoric
		IPC-951-07	10PR792	Eligible	Prehistoric
		IPC-951-08	10PR793	Eligible	Prehistoric
		IPC-951-09	10JE501	Not Eligible	Isolate
		IPC-951-10	10JE502	Not Eligible	Isolate
		IPC-951-11	10JE503	Not Eligible	Isolate
		IPC-951-12	10JE504	Not Eligible	Isolate
		IPC-951-13	10JE505	Not Eligible	Isolate
		IPC-951-14	10BN1136	Not Eligible	Isolate
		IPC-951-15	10BN1137	Not Eligible	Isolate
		IPC-951-16	10BN1138	Not Eligible	Isolate
		IPC-951-17	10PR794	Not Eligible	Isolate
		IPC-951-18	10PR795	Not Eligible	Isolate
		IPC-951-19	10PR796	Not Eligible	Isolate
		IPC-951-20	10PR797	Not Eligible	Isolate
		IPC-951-21	10PR798	Not Eligible	Isolate
		IPC-951-22	10PR799	Not Eligible	Isolate
		IPC-951-23	10PR800	Not Eligible	Isolate
		IPC-951-24	10MA180	Not Eligible	Isolate
		IPC-951-25	10MA181	Not Eligible	Isolate
		IPC-951-26	10MA182	Not Eligible	Isolate
		IPC-951-27	10MA183	Not Eligible	Isolate
			10MA45	Not Eligible	Prehistoric
			10MA56	Eligible	Historic
			Milner-Gooding Canal	Eligible	Historic

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