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Environmental Assessment
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IDI-12961 King to Wood River 138 Kilovolt Transmission Line Rebuild
December 2015

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Abbreviations and Acronyms

ACEC	Area of Critical Environmental Concern
ACOE	Army Corps of Engineers
AIRFA	American Indian Religious Freedom Act of 1979
APE	area of potential effect
APLIC	Avian Power Line Interaction Committee
ARMPA	Approved Resource Management Plan Amendment
ATV	all terrain vehicle
BLM	U.S. Bureau of Land Management
BSU	biologically significant unit
CAC	Community Advisory Committee
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
COT	Conservation Objectives Team
CWA	Clean Water Act
DEQ	Department of Environmental Quality
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Element Occurrence
EPA	Environmental Protection Agency
EPM	environmental protection measure
ERMA	Extensive Recreation Management Area
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FLPMA	Federal Land Policy and Management Act
GHG	greenhouse gas
GHMA	general habitat management area
GPS	global positioning system
IDFG	Idaho Department of Fish and Game
IDWR	Idaho Department of Water Resources
IHMA	important habitat management area
IM	Instruction Memorandum
INHP	Idaho Natural Heritage Program
IPC	Idaho Power Company
IPCC	Intergovernmental Panel on Climate Change
ITD	Idaho Transportation Department
km	kilometer
kV	kilovolt
LUP	land use plan
LWG	local working group
MA	Master Agreement
MD	Management Decision
MBTA	Migratory Bird Treaty Act
MFP	Management Framework Plan
MW	megawatt
NPDES	National Pollutant Discharge Elimination System

NEPA	National Environmental Policy Act
NERC	North American Electric Reliability Corporation
NESC	National Electrical Safety Code
NHPA	National Historic Preservation Act
NMVPA	North Magic Valley Planning Area
NRHP	National Register of Historic Places
OHV	off-highway vehicle
O&M	operation and maintenance
OPGW	optical ground wire
PGH	preliminary general habitat
PHMA	priority habitat management area
POD	Plan of Development
PUC	Public Utility Commission
PUP	Pesticide Use Permit
PPH	preliminary priority habitat
RDF	Required Design Feature
RMP	Resource Management Plan
RNA	Research Natural Area
ROD	Record of Decision
ROW	right-of-way
SFA	Sagebrush Focal Area
SFO	Shoshone Field Office
SHPO	State Historic Preservation Office
SNRA	Sawtooth National Recreation Area
SRMA	Special Recreation Management Area
SSP	special status plant
SSS	special status species
SSW	special status wildlife
SWPPP	Storm Water Pollution Prevention Plan
TMDL	Total Maximum Daily Load
USDA	U.S. Department of Agriculture
USDOI	U.S. Department of the Interior
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service or Service
VRM	Visual Resource Management
WRV	Wood River Valley
WSA	Wilderness Study Area

CHAPTER 1.0—PURPOSE & NEED

1.1. Introduction & Background

Idaho Power Company (Idaho Power or IPC) has submitted an application to the Bureau of Land Management (BLM), Idaho State Office, to renew and amend an existing right-of-way (ROW) (IDI-012961) (Figure 1-1). The existing, approximately 59 mile long, transmission line was built in 1962 and extends from Idaho Power's King Substation, located southwest of Gooding, Idaho, to the Wood River Substation, located near Ketchum, Idaho, in southwestern Idaho in Blaine, Camas, and Gooding Counties. The current ROW crosses approximately 30.2 linear miles of public lands managed by the Shoshone Field Office (SFO) in the Twin Falls District.

The existing electrical delivery systems and infrastructure do not adequately meet the Wood River Valley's (WRV) current or future needs for dependable and adequate power. The system lacks sufficient dependability due to:

- The electrical system serving the North WRV (Wood River to Ketchum transmission line) has only one line and provides no redundancy (two separate lines that can handle extreme peak loads alone without rotational power outages).

- The Midpoint to Wood River line (which was built in 1989) can handle the electrical load without the King to Wood River line, but the King to Wood River line cannot handle the load without the Midpoint to Wood River line. The King to Wood River line is rated at 105 megawatts (MW) and the Midpoint to Wood River line is rated at 120 MW.

- The Midpoint to Wood River line has experienced 13 sustained outages (five minutes or longer) and 26 momentary outages (less than five minutes) in a 10 year period (1996–2006). The King to Wood River line has experienced 24 sustained outages and 46 momentary outages in the same time period; the majority of outages have been associated with required maintenance activities.

As a regulated utility, Idaho Power needs to meet current and future power needs in a fiscally responsible manner. The Proposed Action is to address current deficiencies in the Wood River Valley by addressing reliability issues while minimizing environmental impacts and costs to Idaho Power's rate payers.

Idaho Power must also comply with North American Electric Reliability Corporation (NERC) Standard FAC-003-3 which became effective July 1, 2014. FAC-003-3 requires transmission owners to prepare and implement a formal vegetation management plan and requires, among other things, that transmission owners must identify, document, establish, and maintain clearances that must meet Minimum Voltage Clearance Distance. Utilities need to base ROW widths on being able to maintain enough clearance to eliminate phase to tree contact while the line is operating within its rating; this width needs to have been determined on an engineering or construction basis and includes blowout conditions (occur when the conductor breaks and blows perpendicular to the line). Idaho Power is requesting an amendment to widen the ROW to 100-feet to provide the ability to manage vegetation, if necessary, in accordance with FAC-003-3.

Idaho Power has determined that a 138 kilovolt (kV) transmission line would address reliability and power needs and is proposing to rebuild the existing 138 kV line with new structures and conductor. While the line is currently operating at 138 kV and would be operated at that voltage in the future, the rebuild is necessary because the existing structures cannot support the new conductor. While the new conductor would be the same voltage, it would allow for higher capacity than the older conductor and would improve Idaho Power's ability to operate their system in case the Midpoint to Wood River line experiences an outage.

1.2 Purpose of and Need for the Proposed Action

BLM is processing Idaho Power's application under the Federal Land Policy and Management Act (FLPMA), Title V. BLM is responsible for ensuring that use of public lands occurs in a manner consistent with FLPMA, the Energy Policy Act of 2005 (Public Law 109-58), and the applicable Land Use Plans (LUP). The FLPMA authorizes the use of public land for the public interest, and the Energy Policy Act encourages energy efficiency and conservation, promotes alternative and renewable energy sources, reduces dependence on foreign sources of energy, and increases domestic production. The BLM's purpose is to consider Idaho Power's application and to determine if, and under what terms and conditions it should renew and amend the existing ROW grant. The BLM's need is established by the BLM's responsibility under FLPMA to respond to a request for a ROW grant.

As the lead federal agency, BLM determined that an EA would be required to identify potential resource impacts of the project pursuant to the National Environmental Policy Act (NEPA) of 1969 and the Council of Environmental Quality (CEQ) regulations implementing NEPA.

1.2.1 Decision to be Made

The BLM may choose to authorize the Proposed Action with or without modification, develop and authorize a reasonable alternative or a combination of alternatives, or deny the application. The BLM may also determine that the Proposed Action is a "major federal action" significantly affecting the quality of the human environment, thereby requiring the development of an Environmental Impact Statement (EIS). Issuing the ROW authorizations would allow Idaho Power to implement the chosen alternative.

1.3 Conformance to BLM Land Use Plans

The Proposed Action is within the area identified in the following BLM LUPs:

- *Bennett / Timmerman Hills Management Framework Plan (MFP) (1980);*
- *Monument Resource Management Plan (RMP) (1984);*
- *Sun Valley MFP (1981); and*
- *Idaho and Southwestern Montana Greater Sage-Grouse Approved Resource Management Plan Amendment (ARMPA) (2015).*

The Bureau of Land Management's planning regulations state that the term "conformity" or "conformance" means that "…a resource management action shall be specifically provided for in

the plan, or if not specifically mentioned, shall be clearly consistent with the terms, conditions, and decisions of the approved plan or amendment" (43 CFR 1601.0-5(b)). The Proposed Action is not specifically provided for in the RMP and MFPs; however, it is consistent with the uses identified for public lands in the areas covered by the LUPs and is in conformance with each decision approving each LUP. The Proposed Action is also in conformance with ARMPA[1]. The LUPs and their objectives related to the Proposed Action are listed below:

- Bennett / Timmerman Hills MFP: Objective No. L-4. Utility Systems / Utility Corridors: Eliminate haphazard and scattered development and installation of major utility systems throughout the planning units.

    - Rationale: No local, county, state, or utility company needs have been identified. Existing projects are rather localized or amount to an uprating of existing systems. Keeping the development within areas of existing systems will confine environmental impacts to areas which have already undergone analysis for the various impacts. It will control haphazard and scattered development and will reduce application processing time substantially.

    - Recommendation L-4.1 Utility Systems / Utility Corridors: Allow future development of major utility systems along existing systems or along utility corridors identified in URA Step 4.

    - Rationale: The public has become much more aware and concerned about numerous 'systems' traversing national Resource lands. The use of corridors for development and installation of major systems will localize the impacts associated with the projects. This will allow for more timely and efficient processing of the applications since the areas will have already undergone previous analysis of the associated impacts.

    - Decision: Retain the previous MFP 3 decision to allow major utilities along existing systems and within existing corridors. However, in addition to corridors previously identified, one is hereby designated along the route described in Alternative 3, railroad Avoidance Alternative, in Environmental Assessment ID-050-1-068. When existing utility systems are removed, their routes will no longer be considered to be utility corridors.

- Monument RMP: Public Utilities (page 29): Public lands may be considered for the installation of public utilities except where expressly closed by law or regulation. In the Monument Planning Area, rights-of-way in common will be used whenever possible. Proposed utility developments identified by the public utility industries follow existing right-of-way routes very well. Because of the lack of resource conflicts, utility corridors were not identified as an issue for the Monument RMP and no corridors have been

[1] The BLM conducted a Plan Conformance Review and determined that the Proposed Action is in compliance with the ARMPA; documentation is included in the Administrative Record.

established. Utility developments would be prohibited in wilderness study areas (WSAs) recommended suitable for designation.

- Sun Valley MFP—Big Wood Analysis Unit: Decision Number 2 (page BW-2): Allow rights-of-way for utility and transportation purposes (both public and private), provided the uses comply with all requirements of this plan.

    - Rationale: The fast-growing population increases the need for utility and transportation rights-of-way.

    - Wildlife; Decision Number 2 (page BW-10): Manage major deer migration routes to minimize impedance to big game. Facilities such as fences, right-of-way facilities, and buildings will be constructed in such a way as to have minimal effect.

    - Wildlife; Decision Number 4 (page BW-11): All seedings in wildlife areas will have a seed mixture that provides forbs and shrubs (if needed and adaptable) and a mixture of appropriate grasses.

    - Visual resource management; Decision Number 1 (page BW-13): Manage all areas along travel influence zones in a visual resource class III. Care will be taken to minimize visual impacts to the extent practical.

    - Visual resource management; Decision Number 2 (page BW-13): The remainder of the unit will be managed as a visual resource class IV. Care will be taken to reduce the adverse impacts to the extent practical.

- *Idaho and Southwestern Montana Greater Sage-Grouse ARMPA*—The ARMPA and Record of Decision (ROD) were signed on September 21, 2015. The ARMPA provides a layered management approach that offers the highest level of protection for greater sage-grouse in the most valuable habitat. Land use allocations in the ARMPA would limit or eliminate new surface disturbance in Priority Habitat Management Areas (PHMA) and Important Habitat Management Areas (IHMA), while minimizing disturbance in General Habitat Management Areas (GHMA). In addition to establishing protective land use allocations, the ARMPA also would implement a suite of management tools, such as anthropogenic disturbance limits, required design features (RDF), seasonal habitat buffers, habitat objectives and monitoring, mitigation approaches, adaptive management triggers and responses, and other protective measures throughout the species range. Key components of the ARMPA include but are not limited to the following:

    - Management Decision (MD) Special Status species (SSS) 29 and 30: In order to avoid surface-disturbing activities in PHMA and IHMA priority will be given to alternatives that allow for development to occur outside these management areas. When authorizing development within a PHMA or IHMA priority will be given to non-habitat areas first and then least suitable habitat for greater sage-grouse. Criteria for project screening and assessment process along with the PHMA and IHMA Anthropogenic Disturbance Development Criteria must be met. This includes

ensuring the project will not exceed the 3% disturbance cap described in MD SSS 27: (The criteria are located on pages 2-13 and 2-14 of the ARMPA)

- MD SSS 31: Co-locating new infrastructure within existing ROWs and maintaining or upgrading ROWs is preferred over creation of new ROWs or the construction of new facilities in all management areas.

- MD SSS 32: Incorporate RDFs, as described within Appendix C of the ARMPA, in the development of project or proposal implementation, reauthorizations or new authorizations as a condition of approval.

- MD SSS 33: Conduct implementation and project activities, including construction and short-term anthropogenic disturbances consistent with seasonal habitat restrictions.

- MD SSS 35: In undertaking BLM management actions, and authorizing third party actions BLM will apply lek buffer distances in accordance with Appendix B of the ARMPA.

- MD Lands and Realty (LR) 5: Constant with MD LR 3, MD LR 4, and MD Renewable Energy (RE) 1, ROW for development of new or amended ROWs and land use authorizations in PHMA will only be considered when consistent with MD SSS 29. Rights-of-way for development of new or amended ROWs and land use authorizations in IHMA can be considered consistent with MD SSS 30. New ROW and land use authorizations can be considered within GHMA.

1.4 Relationship to Statutes, Regulations or other Plans

The BLM is directed to manage public land resources and the issuance of the proposed right-of-way renewal and amendment in accordance with all applicable statutes, regulations, instruction memorandums, and plans, including all of the following identified below.

1.4.1 Federal Policies, Plans, and Programs

This EA was prepared in accordance with NEPA as amended (42 U.S.C. §§ 4321–4370e (2012)) and in compliance with all applicable regulations and laws passed subsequently, including CEQ regulations 40 CFR §§ 1500–1508. This document was also prepared in conformance with the policy guidance provided in BLM's NEPA Handbook H-1790-1 (BLM 2008); Department of the Interior National Environmental Policy Act Procedures (Department Manual 516, Environmental Quality 516 DM 1–7) (USDOI 2005); BLM Guidelines for Assessing and Documenting Cumulative Impacts [BLM 1994a], and Considering Cumulative Effects under NEPA [CEQ 1997].

The proposed project is also subject to the requirements of the Endangered Species Act (ESA), the National Historic Preservation Act (NHPA), and the Clean Water Act (CWA). As the lead agency, BLM is responsible for analyses and documents that conform to NEPA, CEQ, and other pertinent federal laws and regulations. Table 1-1 provides a summary of potentially applicable statutes, regulations, and other requirements.

Table 1-1—Potentially Applicable Statutes, Regulations, and Other Requirements

Permit/Approval	Accepting Authority/ Approving Agency	Description	Statutory Reference
ROW grant	Bureau of Land Management	A ROW grant would be necessary before construction can proceed on lands administered by the BLM.	Federal Land Policy and Management Act 1976 (Pub. Law No. 94-579), 43 U.S.C.1761–1771 (2012), and 43 CFR § 2800
Endangered Species Act compliance	BLM as lead NEPA agency and U.S. Fish and Wildlife Service (USFWS)	The purpose of this act is to provide for the conservation of federally listed fish, wildlife, plants, and their habitats.	Endangered Species Act Sec. 7 consultation, 16 U.S.C. § 1536 (2012)
National Historic Preservation Act compliance with Sec. 106	BLM, as lead NEPA agency, and State Historic Preservation Office	Section 106 of NHPA requires federal agencies to consider the effects of their activities and programs on historic properties. Historic properties are significant cultural resources that are included in or eligible for inclusion in the National Register of Historic Places.	National Historic Preservation Act 1966, 16 U.S.C. 470 *et seq*. (2012), 36 CFR § 800
Environmental Justice	BLM, as lead NEPA agency	Executive Order 12989 directs federal agencies of identify and address, as appropriate, any disproportionately high and adverse human health or environmental effects on minority populations and low-income populations.	Exec. Order 12898 on Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
Tribal Consultation	BLM, as lead NEPA agency	This order established a requirement for regular and meaningful consultation and collaboration between federal agencies and tribal officials. The BLM would consult with the Shoshone-Bannock and Shoshone-Paiute tribes.	Exec. Order 13175 on Consultation and Coordination with Indian Tribal Governments
Native American Graves Protection and Repatriation Act	BLM, as lead NEPA agency	Provides a process for museums and Federal agencies to return certain native American cultural items to lineal descendants and culturally affiliated Indian tribes. Includes provisions for unclaimed and culturally unidentifiable native American cultural items, intentional and inadvertent discovery of native American cultural items found on Federal and tribal lands, and penalties for noncompliance.	Native American Graves Protection and Repatriation Act, 25 U.S.C. 3001 et seq. (Nov. 16, 1990).
The Bald and Golden Eagle Protection Act	BLM, as lead NEPA agency and with USFWS	This act prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald or golden eagles, including their parts, nests, or eggs; possession; and commerce of such birds.	The Bald and Golden Eagle Protection Act, as amended, 16 U.S.C 668-668c (2012)

Permit/Approval	Accepting Authority/ Approving Agency	Description	Statutory Reference
Migratory Bird Treaty Act, Executive Order 13186	BLM, as lead NEPA agency and with USFWS	This act and subsequent executive order and memorandum of understanding between the U.S. Department of the Interior (USDOI), USFWS, and U.S. Department of Agriculture (USDA) Forest Service provide for the protection of migratory birds.	Migratory Bird Treaty Act of 1918, as amended, 16 U.S.C. 703–711 (2012) and Exec. Order No. 13,186
National Environmental Policy Act	BLM	NEPA establishes the format and content requirements of environmental analysis and documentation.	NEPA, 42 U.S.C. 4321 *et seq.* (2012), Council on Environmental Quality 40 CFR §§ 1500 *et seq.*
Clean Water Act section 404 and Rivers and Harbor Act Section 10	Army Corps of Engineers (ACOE)	Regulates the discharge of dredged or fill material into waters of the U.S. through a nationwide or individual permit.	Clean Water Act section 404, 33 U.S.C. 1344 (2012)
CWA section 401 Water Quality Certification	Idaho Department of Environmental Quality (DEQ) and Environmental Protection Agency (EPA)	In-stream construction of any kind requires a National Pollutant Discharge Elimination System (NPDES) permit. Section 401 of the Clean Water Act gives states the authority to certify that NPDES permits meet state water quality standards. EPA is responsible for issuing NPDES permits in Idaho, while DEQ is the state agency responsible for implementing the 401 certification process. Clean Water Act Section 401 certification is required for any permit or license issued by a federal agency for any activity that may result in a discharge into waters of the state to ensure that the proposed project would not violate state water quality standards. Any §401 certification in Idaho also ensures that the project would comply with water quality improvement plans (Total Maximum Daily Loads [TMDL]) developed for affected water bodies and that the project would not adversely impact §303(d) listed streams (streams that already do not meet water quality standards).	Clean Water Act sections 401 and 303(d), 33 U.S.C. 1313 and 1341 (2012)
Stream Channel Alteration	Idaho Department of Water Resources (IDWR)	Required when construction activities impact a stream below the mean high water mark.	Idaho Administrative Code Title 03, Chapter 37; 37.03.07—Stream Channel Alteration Rules

Permit/Approval	Accepting Authority/ Approving Agency	Description	Statutory Reference
Clean Water Act—Construction Storm Water	EPA	EPA's general construction storm water permit requires the implementation of a comprehensive program to avoid the discharge of construction-related pollutants. Limited to sites with 1 acre or more of ground disturbance.	National Pollutant Discharge Elimination System General Permit for Discharges from Large and Small Construction Activities, 33 U.S.C. 1251 (2012)

1.4.1.1 Greater Sage-grouse

On March 23, 2010, the Service determined that greater sage-grouse warranted listing throughout its range, including Idaho, but was precluded by higher priority listing actions. 75 Fed. Reg. 13,910 (Mar. 23, 2010). Specifically, the Service found the adequacy of regulatory mechanisms in Federal resource management plans deficient with respect to addressing the primary threats to the species — namely, habitat fragmentation due to wildfires, invasive species, and energy and associated infrastructure development. See 75 Fed. Reg. at 13,973-80.

Following the Service's decision, the United States District Court for the District of Idaho ruled that pursuant to a D.C. District Court settlement, the agency must reevaluate the status of the species under the ESA by September 30, 2015. In response to this deadline, the Secretary of the Interior in December 2011 invited the eleven western states impacted by a potential listing of the species to develop state-specific regulatory mechanisms to address these cited deficiencies in an effort to preclude a listing under the ESA. In response to the Service's decision, the BLM (and U.S. Forest Service) implemented a national planning strategy to amend land use plans across most of the species/range and the State of Idaho implemented a Sage-grouse Conservation Team tasked with developing an alternative.

Parallel with this process the Service also implemented a Conservation Objectives Team (COT) to work in advance of its 2015 listing decision to develop conservation objectives for the Greater Sage Grouse that could help direct conservation actions for the species. The COT Team produced the COT Report (USFWS 2013) which identifies key areas for greater sage-grouse, key threats in those areas, and the extent to which they need to be reduced in order for the species to be conserved and for the Service to determine that listing is not warranted.

In September 2015, the BLM and Service issued their Record of Decision (ROD) for the Rocky Mountain and Great Basin Plan Approved Resource Management Plan Amendments. The Service subsequently found the listing of the greater sage-grouse was "not warranted at this time." The ARMPA of Idaho and Southwestern Montana assimilates a majority of the guidelines and recommendations provided in the COT report, including those that address threats to sage-grouse within the Snake-Salmon-Beaverhead population, within which the King to Wood River project/proposal occurs. The threats identified in the COT Report and the ARMPA are provided below.

- Isolated / small size—Threat is not known the be present
- Sagebrush elimination—Threat present but localized

- Agriculture conversion—Threat present but localized
- Fire—Threat is present and widespread
- Conifers—Threat present but localized
- Weeds / Annual grasses—Threat is present and widespread
- Energy[2]—Threat is present and widespread
- Mining—Threat is not known to be present
- Infrastructure—Threat present but localized
- Grazing—Threat is present and widespread
- Free-roaming equids—Threat is not known to be present
- Recreation—Threat present but localized
- Urbanization—Threat is not known to be present

The ARMPA provides a layered management approach that offers the highest level of protection for greater sage-grouse in the most valuable habitat. Land use allocations in the ARMPA would limit or eliminate new surface disturbance in PHMA and IHMA, while minimizing disturbance in GHMA. The ARMPA provides the following key management responses relevant to infrastructure:

- Implement the adaptive management plan, which allows for more restrictive land use allocation and management actions to be implemented if habitat or population hard triggers are met.
- Require and ensure mitigation that provides a net conservation gain to greater sage-grouse.
- Monitor implementation and effectiveness of conservation measures in greater sage-grouse habitats according to the habitat assessment framework.
- PHMA—Implement an anthropogenic disturbance cap of 3% within the biologically significant unit (BSU) and proposed project analysis areas (Idaho and Montana). Apply anthropogenic disturbance exception criteria and anthropogenic disturbance development criteria (Idaho only).

[2] Energy refers to renewable and non-renewable energy development.

- IHMA—Implement the 3% disturbance cap. Apply anthropogenic disturbance development criteria.

- Apply buffers necessary based on project type and location to address impacts on leks when authorizing actions in greater sage-grouse habitat.

- Apply RDFs when authorizing actions that affect greater sage-grouse habitat.

- Minimize the effects of infrastructure projects, including siting, using the best available science, updated as monitoring information on current infrastructure projects becomes available.

- PHMA—Avoidance area (may be available for major ROWs with special stipulations)

- IHMA—Avoidance area (may be available for major ROWs with special stipulations)

- GHMA—Avoidance area (may be available for major ROWs with special stipulations).

The ARMPA further identifies a number of management decisions, RDFs, and buffers relevant to infrastructure. Examples include co-locating infrastructure within or adjacent to existing ROWs, placing lines underground (if technically feasible), 3% anthropogenic disturbance cap, seasonal restrictions, spatial buffers, invasive plant control, restrictions on road use, removing unnecessary lines and roads, structure design that eliminates or reduces nesting and perching opportunities, and mitigation to achieve a net conservation gain for greater sage-grouse.

North Magic Valley Sage-grouse Local Working Group. In July 2006, through a collaborative process, Idaho completed a major revision of the statewide conservation plan; this resulted in the *Conservation Plan for the Greater Sage-grouse in Idaho*. This document identified Local Working Groups (LWG) and provided specific direction and recommendations for the LWGs to use in developing regionally appropriate conservation plans. The North Magic Valley LWG was formally initiated in March 2007 and published a conservation plan in January 2011.[3] This local plan encompasses sage-grouse habitat within the project area (Figure 1-2) and also identifies infrastructure as a threat.

1.4.1.2 Cultural Resource Laws and Executive Orders

BLM is required to consult with Native American tribes to "help assure (1) that federally recognized tribal governments and Native American individuals, whose traditional uses of public land might be affected by a proposed action, will have sufficient opportunity to contribute to the decision, and (2) that the decision maker will give tribal concerns proper consideration" (U.S. Department of the Interior, BLM Manual Handbook H-8120-1). Tribal coordination and consultation responsibilities are implemented under laws and executive orders that are specific to

[3] The LWG plan is available at http://fishandgame.idaho.gov/public/wildlife/sageGrouse/LWGnorthMagValley.pdf___; accessed on August 28, 2013.

cultural resources and are referred to as "cultural resource authorities," and under regulations that are not specific, which are termed "general authorities." Cultural resource authorities include: the National Historic Preservation Act; the Archaeological Resources Protection Act of 1979; and the Native American Graves Protection and Repatriation Act of 1990, as amended. General authorities include: the American Indian Religious Freedom Act of 1979 (AIRFA); NEPA; FLPMA; and Executive Order 13007-Indian Sacred Sites. The proposed action is in compliance with the aforementioned authorities.

Southwest Idaho is the homeland of two culturally and linguistically related tribes: the Northern Shoshone and the Northern Paiute. In the latter half of the 19th century, a reservation was established at Duck Valley on the Nevada/Idaho border west of the Bruneau River. The Shoshone-Paiute Tribes residing on the Duck Valley Reservation today actively practice their culture and retain aboriginal rights and/or interests in this area. The Shoshone-Paiute Tribes assert aboriginal rights to their traditional homelands as their treaties with the U.S., the Boise Valley Treaty of 1864, and the Bruneau Valley Treaty of 1866, which would have extinguished aboriginal title to the lands now federally administered, were never ratified.

Other tribes that have ties to southwest Idaho include the Bannock Tribe and the Nez Perce Tribe. Southeast Idaho is the homeland of the Northern Shoshone Tribe and the Bannock Tribe. In 1867, a reservation was established at Fort Hall in southeastern Idaho. The Fort Bridger Treaty of 1868 applies to BLM's relationship with the Shoshone-Bannock Tribes. The northern part of the BLM's Boise District also was inhabited by the Nez Perce Tribe. The Nez Perce signed treaties in 1855, 1863, and 1868. BLM considers off-reservation treaty-reserved fishing, hunting, gathering, and similar rights of access and resource use on the public lands it administers for all tribes that may be affected by a proposed action.

1.4.1.3 Archaeological and Historical Resources

The BLM is responsible for identifying, protecting, managing, and enhancing archaeological, historic, architectural, and traditional lifeway values located on public lands managed by the BLM, 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 NHPA, as amended; the Archaeological Resources Protection Act of 1979; the AIRFA; and the Native American Graves Protection and Repatriation Act of 1990. The Federal Land Policy and Management Act states that public lands are to be managed in a manner "that would protect the quality of... historical... and archaeological values." 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. AIRFA and NHPA envision the potential for access, use, and protection of traditional cultural properties, religious sites, and sacred objects.

The BLM has a national programmatic agreement with the Advisory Council on Historic Preservation and the National Conference of State Historic Preservation Officers. In addition, the Idaho BLM has a state protocol agreement with the Idaho State Historic Preservation Office (SHPO) that provides further guidance on BLM's responsibilities for implementation of NHPA and Section 106. Under Section 106, federal agencies are required to consider 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 Advisory Council on Historic Preservation. These regulations, "Protection of Historic Properties" (36 CFR 800), became effective June 17, 1999.

1.4.2 State Requirements

Idaho Power is a regulated public utility under the laws of the State of Idaho and operates under the oversight and regulatory control of the Idaho Public Utility Commission (PUC). Under Title 61 of the Idaho PUC regulations, Idaho Power "shall furnish, provide and maintain such service, instrumentalities, equipment and facilities as shall promote the safe, health, comfort and convenience of its patrons, employees and the public, and shall be in all respects adequate, efficient, just and reasonable."

1.4.3 County Requirements

A conditional use permit would not be required from Camas or Gooding Counties. Blaine County issued a conditional use permit in November 2015to rebuild the existing transmission line. For all three counties, transmission lines are permitted in all zoning districts.

1.5 Scoping and Identification of Issues

Issues to address in the analysis were identified during public scoping. A scoping letter was mailed on March 12, 2014, to tribal governments, state and county governments, interested public, and all adjacent right-of-way holders in the SFO area. The BLM also issued a press release on March 11, 2014, and made the public scoping package available at http://blm.gov/htld. Three comment letters were received by the BLM.[4] Additionally, the BLM conducted government to government consultation with the Shoshone-Bannock tribe on February 13, 2014 and the Shoshone-Paiute tribe on February 27, 2014.

The following issues and route suggestions were raised during public scoping:

- One commenter suggested that the power line be placed underground adjacent to Highway 75 from East Fork through Ketchum. The commenter was concerned about impacts to the scenic quality as visitors proceed north from Ketchum into the Sawtooth National Recreation Area (SNRA).

- One commenter stated that approving the Proposed Action would amount to a "takings" by a special interest / private company of public lands which are supported by the federal taxpayer and they did not support/approve of the Proposed Action.

- One commenter stated that they believe that reconstructing the line within the existing route may have less environmental impacts to greater sage-grouse than constructing a new line in a new ROW, but that the BLM may still need to examine other alternatives to

[4] Comment letters are available in the administrative record kept at the Shoshone Field Office.

verify this. Comments also included support for siting all new facilities and structures in previously developed areas as much as possible, and that the BLM should conduct a thorough analysis of avoiding, minimizing, and mitigating impacts to greater sage-grouse. Other issues raised include increased motorized travel, noxious weeds, and human-caused wildfire starts.

The comment to underground the line from the East Fork area through Ketchum addresses an area that is not part of the Proposed Action and is not addressed further in this Environmental Assessment (EA). The comment that approving the Proposed Action is a "taking" is incorrect. A regulatory "taking" occurs when the federal government physically occupies or otherwise limits actions on private lands such that the action is equivalent to eminent domain. In this case, if the BLM approved the Proposed Action or alternative route, the project would be located on public lands managed by the BLM, Idaho Power would pay rent for the ROW, and other uses that are compatible with a transmission line (e.g., grazing, hiking) would still be allowed within the ROW. This comment is not addressed further in the EA.

The comments regarding alternatives have been addressed through the development and analysis of Alternatives A and E, alternative overhead line routes that were not analyzed in detail. Development of an underground route was considered but not analyzed in detail (see Section 2.6.4 for additional discussion). Potential impacts to greater sage-grouse and other resources are addressed in Section 4.5.5.

Issues have also been raised through internal BLM review and interdisciplinary processes including meetings, personal communication, and an analysis record checklist. The analysis record checklist is located in the project file for this EA. The following sections summarize issues that were identified for analysis (Section 1.6.1) and issues that were not analyzed (Section 1.6.2).

1.5.1 Issues Identified for Analysis

1.5.1.1 Archaeological and Historical Resources

Federal agencies are required to consider the effects of the proposed undertaking on historic properties, which include archaeological and historical sites. Historic and prehistoric cultural resources occur in the project area. Removal of existing lines and structures, construction in the existing and wider ROW, and continued operation and maintenance (O&M) of the line—particularly those activities involving ground disturbance—could potentially impact the integrity of cultural resources. In addition, traditional cultural properties, if identified by Native American tribes, could be at risk.

The EA will analyze the following:

- Would the alternatives adversely affect a cultural resource that is listed, or is eligible for listing, on the National Register of Historic Places?

1.5.1.2 Soils

The initial installation of the new structures and the maintenance and construction of roads would result in soil disturbance. Erosion and sedimentation are natural processes; however,

construction activities have the potential to substantially accelerate erosion and sedimentation rates.

The EA will analyze the following:

- Will construction and O&M activities affect erosion and sedimentation rates?
- If there are changes in erosion and sedimentation rates, will the changes adversely affect existing plant communities or site rehabilitation?

1.5.1.3 Vegetation and Special Status Plant Species[5]

It is BLM policy (6840_08 Special Status Species Management Manual) to manage for the conservation of Special Status Plants (SSP) and their associated habitats and to ensure that actions authorized, funded, or carried out do not contribute to the need to list any Sensitive species as Threatened or Endangered. Vegetation community assessments were conducted and assessed for the northern, central and southern portions of the proposed project area (IPC 2014; URS 2011). The southern section exhibited the most impacted plant communities that ranged from fair (native plant community partially intact with moderate to high non-native plant cover and/or moderate to high anthropogenic disturbance), to poor (native plant community almost gone with high non-native plant species cover and/or high anthropogenic disturbance).

Seven special status plant species have the potential to occur within the vicinity (defined as within five miles of the existing transmission line) of the Proposed Action. One sensitive plant species, Mourning milkvetch, a BLM Type 3 SSP, was found in several occurrences within the northern and central sections of the ROW (Figures 6-10, 12-17; Appendix D, URS 2011). No other SSP Species were located within the project area.

The alternatives cross several waterways. It is possible that the alternatives may have an impact to wetlands and riparian zones depending upon the proximity of the proposed work to these areas.

Noxious weeds are plant species that make significant modifications to the landscape. Idaho's noxious weeds are designated under Idaho Code Title 22, Chapter 24. Noxious weed species that may occur in, or adjacent to, the alternatives include Russian knapweed, musk thistle, diffuse knapweed, rush skeletonweed, Canada thistle, Scotch thistle, field bindweed, whitetop, spotted knapweed, and poison hemlock. Cheatgrass, an annual invasive plant species, is also known to occur throughout the project area.

The EA will analyze the following:

- What are the potential effects of the Proposed Action and alternatives on existing vegetation communities and known sensitive plant species?

[5] Common names for plant and wildlife species are used in this EA. Appendices A and B provide the common and scientific names.

- Would the Proposed Action and alternatives result in the loss of wetland and riparian vegetation?

- Would the alternatives cause or contribute to an increase in existing invasive, non-native plant species and noxious weeds or introduce new noxious weeds to the project area?

1.5.1.4 Wildlife and Special Status Species

Habitat within and adjacent to the project area may provide habitat for the following Idaho BLM special status wildlife (SSW) species: bald eagle; burrowing owl; golden eagle; grasshopper sparrow; green-tailed towhee; ferruginous hawk; loggerhead shrike; Brewer's sparrow; sagebrush sparrow; Lewis's woodpecker; long-billed curlew; willow flycatcher; greater sage-grouse; gray wolf; kit fox; pygmy rabbit; spotted bat; Townsend's big-eared bat; fringed myotis; Piute ground squirrel; wolverine; boreal toad; Woodhouse toad; western groundsnake; northern leopard frog; redband trout; Wood River sculpin.

The Proposed Action and alternatives may contain habitat occupied by resident populations of pronghorn antelope, mule deer, and elk. Migratory populations of mule deer and elk utilize habitat in portions of the project area during the winter. The proposed project also crosses a mule deer migration corridor.

The listed, proposed, or candidate terrestrial animal species that may occur in, or adjacent to, the Proposed Action and alternatives are: Canada lynx (Threatened) and yellow-billed cuckoo (threatened). The Proposed Action and alternatives may also contain suitable aquatic habitat for the Bliss Rapids snail (Threatened). The BLM is obligated to protect listed species and determine if its actions are likely to affect these species. The Proposed Action and alternatives have the potential to impact these species by vehicle traffic, personnel, or by ground disturbing activities.

Areas within and adjacent to the alternatives likely provide habitat for the following seven species of conservation concern that are not listed as BLM Sensitive species: Swainson's hawk; lesser goldfinch; peregrine falcon; Calliope hummingbird; common garter snake; and Wilson's phalarope.

The EA will analyze the following:

- What are the potential effects of the Proposed Action and alternatives on wildlife species?

- What are the potential effects of the Proposed Action and alternatives on SSW species?

- What are the potential effects of the Proposed Action and alternatives on big game habitat and mule deer migration corridors?

- Would the alternatives result in a "may effect" determination or the direct loss of a threatened or endangered terrestrial animal or aquatic species?

Prior to conducting an analysis of potential impacts (Chapter 4), species habitat preferences, life history/behavior, documented occurrences, and survey results were reviewed to determine if

there was a potential for an impact. Species found with very little, if any associations with habitat found in the project area and the lack of expected impact from the alternatives were not analyzed in the document. Species that were not analyzed in detail include Piute ground squirrel, wolverine, fisher, bighorn sheep, kit fox, green-tailed towhee, Lewis's woodpecker, prairie falcon, northern goshawk, flammulated owl, Cassin's finch, olive-sided flycatcher, mountain quail, white-headed woodpecker, black tern, trumpeter swan, willow flycatcher, Calliope hummingbird, Wilson's phalarope, lesser goldfinch, dusky grouse, ruffed grouse, black-throated sparrow, grasshopper sparrow, Swainson's hawk, spotted bat, Townsend's big-eared bat, silver-haired bat, pallid bat, hoary bat, long-legged myotis, long-eared myotis, little brown myotis, Yuma myotis, western small-footed myotis, canyon bat, northern leopard frog, Woodhouse's toad, western groundsnake, terrestrial gartersnake, Canada lynx, Bliss Rapids snail, bald eagle, Columbian sharp-tailed grouse, and yellow-billed cuckoo. The species accounts for these species and the rationale for their exclusion from the analysis is provided in Appendix C.

1.5.1.5 Fish Habitat

The Proposed Action and alternatives cross streams that provide fish habitat. The anticipated activities associated with construction of roads for the transport of materials both on and off the project area, removal and installation of transmission towers, preparation of transmission line tensioning sites, and maintenance and use of project related access roads through the functional life of the project could result in direct or indirect impacts to fish habitat.

The EA will analyze the following:

- What are the potential effects of the alternatives on fish habitat?

1.5.1.6 Water Quality

The Proposed Action and alternatives cross several waterways and may impact water quality depending upon the proximity of the proposed work to these waterways. The potentially impacted waterways include, but are not limited to: Four Mile Creek, Canyon Creek, East Black Canyon Creek, Turkey Creek, Schooler Creek, Thorn Creek, Lava Creek, Camas Creek, Little Poison Creek, Rock Creek, Croy Creek, and Big Wood River

The EA will analyze the following:

- Would the alternatives result in changes to water quality such that water quality standards would be exceeded?

1.5.1.7 Visual Resources

The Proposed Action and alternatives includes Visual Resource Management (VRM) Inventory and Management Classes II, III and IV. The objectives for each class are:

- Class II Objective. The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

- Class III Objective. The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

- Class IV Objectives. The objective of this class is to provide for management activities which require major modifications of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

The EA will analyze the following:

- Would implementation of the alternatives be consistent with the visual resource classes?

1.5.1.8 Economic and Social Values

The existing transmission line provides electricity to the Wood River Valley. The proposed upgrades to the line are designed to ensure future reliability and without these upgrades it is possible that the electrical transmission to the Wood River Valley may degrade over the coming decades.

The EA will analyze the following:

- Would the alternatives have an appreciable effect on temporary housing and community services; employment, sales, and income tax; and property values in the Wood River area?

1.5.1.9 Recreation and Visitor Services

The project falls within an Extensive Recreation Management Area (ERMA). ERMAs are identified areas where recreation is planned for and actively managed on an interdisciplinary-basis in concert with other resources/resource programs. By default, public land that is not designated as a Special Recreation Management Area[6] (SRMA) is automatically identified as an ERMA. ERMAs offer recreation opportunities that facilitate visitors' freedom to pursue a variety of outdoor recreation activities and attain a variety of outcomes.

The EA will analyze the following:

- Would the alternatives have an appreciable effect on recreation and visitor services?

[6] A Special Recreation Management Area (SRMA) designation intensifies management of areas where outdoor recreation is a high priority. It helps direct recreation program priorities toward areas with high resource values, elevated public concern, or significant amounts of recreational activity.

1.5.2 Issues Not Analyzed

The following issues were identified by BLM staff as potential issues of concern during scoping; however, they are not analyzed in the EA for the reasons provided below

1.5.2.1 Floodplains (Executive Order 11988)

Floodplains are low, flat, periodically flooded lands adjacent to rivers, lakes and oceans and are subject to geomorphic (land-shaping) and hydrologic (water flow) processes. For land use planning purposes, the regulatory floodplain is usually viewed as all lands within reach of a 100 year flood. A "100-year flood" is defined as a flood event that has a one percent chance of occurring in any given year. The Federal Emergency Management Agency (FEMA) produces floodplain maps, defining what's in and out of the 100-year (or "regulatory") floodplain in order to implement the National Flood Insurance Program.

FEMA has mapped two areas with a 100-year floodplain within the project area.[7] One area occurs south of Highway 20 and is an approximately 90-foot wide floodplain associated with the Big Wood River. Structures 346 and 347 are located on either side of this floodplain and no roads or river crossing are proposed or currently used by Idaho Power. The second area is mapped in Democrat Gulch and is approximately 75-feet wide; structures 446 and 447 are located on either side of the floodplain. No roads or river crossing are proposed or currently used by Idaho Power within this floodplain. No facilities currently occur, or would occur, within mapped floodplains; therefore, they are not analyzed further in this EA.

1.5.2.2 Wilderness Study Areas and/or Lands with Wilderness Characteristics

The project area does not contain any Wilderness Study Areas (WSA). The existing ROW is adjacent to a segment of the eastern boundary of the Little City of Rocks WSA. In this specific location, the requested 100-foot wide ROW would be off-center.

Lands with Wilderness Characteristics

Section 201 of FLPMA requires the BLM to maintain an inventory, on a continuing basis, of all public lands and their resources and other values, which includes wilderness characteristics. It also provides that the preparation and maintenance of the inventory shall not, of itself, change or prevent change of the management or use of public lands. Regardless of past inventory, the BLM must maintain and update as necessary, its inventory of wilderness resources on public lands. The primary function of an inventory is to determine the presence or absence of wilderness characteristics [Manual 6310, p. 2]. According to BLM Manual 6310, *Conducting Wilderness Characteristics Inventory on BLM Lands*, "Managing the wilderness resource is part of the BLM's multiple use mission. Lands with wilderness characteristics provide a range of uses and benefits in addition to their value as settings for solitude or primitive and unconfined recreation."

The King to Wood River lands with wilderness characteristics inventory was completed in 2014. Although eight polygons, totaling 75,378 acres, met the size criteria, field verification found that the polygons did not meet the naturalness criteria. Therefore no Lands with Wilderness

[7] Floodplain boundaries obtained from the FEMA Flood Map Service Center. October 1, 2014.

Characteristics were found within the project area. Refer to Appendix D, *Lands with Wilderness Characteristics Inventory Summary Report* for more details.

1.5.2.3 Climate Change

Climate is the composite of generally prevailing weather conditions of a particular region throughout the year, averaged over a series of years. Climate change includes both historic and predicted climate shifts that are beyond normal weather variations. Climate change is defined by the Intergovernmental Panel on Climate Change (IPCC) as "a change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties, and persist for an extended period, typically decades or longer. It refers to any change in climate over time, whether due to natural variability or as a result of human activity" (IPCC 2007).

The CEQ published draft guidance in December 2014 to provide Federal agencies direction on when and how to consider the effects of greenhouse gas (GHG) emissions and climate change when evaluating all proposed Federal actions. Greenhouse gases are chemical compounds found in the earth's atmosphere that absorb and trap infrared radiation, or heat, re-radiated from the surface of the earth. The trapping and build-up of heat in the atmosphere increases the earth's temperature, warming the planet and creating a greenhouse-like effect (U.S. Energy Information Administration, 2009b). Anthropogenic activities (activities caused or produced by humans) are increasing atmospheric concentrations to levels that could increase the earth's temperature up to 7.2 degrees Fahrenheit by the end of the twenty-first century (EPA 2010b).

Global atmospheric greenhouse gas concentrations are a product of emissions and removal over time. Soils store carbon in the form of decomposing plant materials and constitute the largest carbon reservoir on land. Through the process of photosynthesis, atmospheric carbon is also captured and stored as biomass in vegetation, especially forests. Vegetation removal can impact the carbon cycle. The carbon cycle consists of two phases: gaseous carbon (carbon dioxide) and solid carbon (sugars). Photosynthesis is the process plants use to sequester carbon dioxide from the air and subsequently manufacture solid, organic mass. Consequently, as plants grow and increase in mass, carbon is removed from the atmosphere. Inversely, as plants decay or are burned, carbon is emitted into the atmosphere.

Implementation of any of the alternatives would contribute to greenhouse gas concentrations in several different ways. Carbon dioxide, methane, and nitrous oxide emission levels would incrementally increase as vegetation and soils are removed or disturbed during construction of the transmission line and through the operation of construction-related vehicles during the construction period. Emissions from construction, operations, and maintenance-related vehicles on and off the transmission line ROW also would impact atmospheric greenhouse gas concentrations incrementally because construction equipment and vehicles would be fueled by gasoline and diesel combustion motors.

Greenhouse gas emissions were estimated for construction and O&M activities for the proposed Gateway West project (BLM 2013). The Final EIS estimated that construction would result in 0.38 tons of nitrogen oxides (NOx) and 42.75 tons of carbon dioxide (CO2) per mile per year. The Final EIS states "Operations emissions are essentially *de minimus*." Assuming 30 miles would be rebuilt each year for two years, annual NOx emissions would be 11.4 tons and annual

CO2 emissions would be 1,282.5 tons per year if the construction schedule and equipment were the same for the Proposed Action and Gateway West. However, Gateway West would use more and larger equipment (e.g., concrete trucks for structure foundations; larger crane for structures; more vehicles to support larger work force) than the Proposed Action. The Gateway West Final EIS concluded "Construction GHG emissions are expected to be both temporary and insignificant when compared to the preliminary statewide GHG inventories. Operations GHG emissions would be *de minimus* and insignificant. " Given the differences in the type and number of equipment for Gateway West and the Proposed Action and alternatives and the conclusion that greenhouse gas emissions from Gateway West are insignificant, the emissions from the Proposed Action and alternatives are also considered insignificant. This is also true for O&M activities; the type of activities (e.g., ground inspections) are similar between the two projects.

The BLM's 2008 NEPA Handbook, H-1790-1, explains that a topic must have a cause-and-effect relationship with the proposed action or alternatives to be considered an issue (H-1790-1, p. 40). The science on predicting future climate conditions is continuously evolving. Land management actions might contribute to changes in atmospheric greenhouse gas levels, which can affect global climate. Addressing effects on greenhouse gas levels within the scope of NEPA is difficult due to the lack of explicit regulatory guidance on how to meaningfully apply existing NEPA regulations to this evolving issue, and due to the continuously evolving science available at varying levels. It is currently beyond the scope of existing science to identify a specific source of greenhouse gas emissions or sequestration and designate it as the cause of specific climate or resource impacts at a specific location.

Existing models have difficulty reliably simulating and attributing observed temperature changes at small scales. On smaller scales, natural climate variability is relatively larger, making it harder to distinguish changes expected due to external forces (such as contributions from local activities to GHGs). Uncertainties in local forces and feedbacks also make it difficult to estimate the contribution of GHG increases to observed small-scale temperature changes (Climate Change SIR 2010).

The proposed action and alternatives, when implemented, would not have a clear, measurable cause-and-effect relationship to climate change because the available science cannot identify a specific source of greenhouse gas emissions such as those from construction of this powerline upgrade and tie it to a specific amount or type of changes in climate. Therefore, the effects to the global climate will not be analyzed in detail in this EA.

CHAPTER 2.0—DESCRIPTION OF ALTERNATIVES, INCLUDING THE PROPOSED ACTION

2.1 Introduction

Alternatives were developed based upon issues identified through internal and public scoping. The alternatives were designed to address one or more of the identified issues as well as provide the opportunity for specific comparisons on which to base a decision.

2.2 Proposed Action

The Proposed Action is to renew and amend Idaho Power's existing grant (IDI-012961). The proposed amendment would include the following:

- Rebuilding the existing 138-kV transmission line in its current location (new structures would be placed within 10 feet of existing structures with three exceptions);
- Widening the existing ROW from 60-feet to 100-feet;
- Authorizing existing and proposed roads used to access the transmission line facilities;
- Constructing and/or improving approximately 4.12 miles (seven acres) of additional roads; and
- Long-term operation and maintenance of the transmission line and roads.

Long-term encumbrances are provided in Table 2-1.

The Proposed Action also includes a request for authorization for a short-term ROW grant to allow for pulling and tensioning of the new conductor. In some locations this activity would occur outside of the requested long-term ROW due to the need to pull the conductor along a straight path.

The Proposed Action is described in detail in Idaho Power's August 2015 *Plan of Development* (POD) (Appendix E) and in the following sections.

Table 2-1—Long-term Encumbrances on BLM-managed Public Lands Associated with the Proposed Action

County	Width (feet)	Length (feet/miles)	Acres
Transmission Line			
Gooding	100	99,490/18.8	228.4
Camas	100	42,174/8	96.8
Blaine	100	17,763/3.4	40.8
Total	**100**	**159,429/30.2**	**366.0**
Service Roads			
Gooding	14	112,082/21.2	36.0

Camas	14	41,800/7.9	13.4
Blaine	14	18,267/3.5	5.9
Total	**14**	**172,150/32.6**	**55.3**

Authorization of the Proposed Action would result in an estimated 12.4 acres of short-term encumbrances associated with construction activities (e.g., an estimated nine pulling and tensioning sites located outside of the long-term ROW).

2.2.1 Proposed Facilities

The design, construction, operation, and maintenance of the Project would meet or exceed the requirements of the National Electrical Safety Code (NESC), U.S. Department of Labor, Occupational Safety and Health Standards, and Idaho Power's requirements for safety and protection of landowners and their property.

2.2.1.1 Structure Types

Idaho Power has proposed three structure types: weathering steel H-frame, weathering steel 3-pole structures, and weathering steel 5-pole structures. The majority of structures used would be steel H-frames, with a rounded steel crossarm. The 3-pole structures would be typically used at angles (i.e. where the line changes direction), crossings (i.e. rivers, highways), or other areas where the necessary line separation cannot be maintained by an H-frame structure and the 5-pole structures would be used on extremely long crossings. In addition, there are three crossings where IPC would utilize an additional pole off to the side of the structure for marker balls. Typical structures are shown in Figure 2-1. Existing and proposed structure type, above ground height, and guy wire use are provided in Table 3 of the POD (Appendix E).

2.2.1.2 Shield Wire and Fiber Optic Cable

Each structure would have two lightning protection shield wires installed on the structure peaks; one of which would be an Optical Ground Wire (OPGW) shield wire. The glass fibers inside the OPGW shield wire would provide optical data transfer capability along the fiber path. Reliable and secure communications for system control and monitoring is very important to maintain the operational integrity of the project and of the overall interconnected system. Primary communications for relaying and control would be provided via the OPGW that would be installed on the transmission line; this path is solely for Idaho Power use and would not be used for commercial purposes.

2.2.1.3 Minor Additional Hardware

In addition to the conductors, insulators, and overhead shield wires, other associated hardware would be installed on the structures as part of the insulator assembly to support the conductors and shield wires. This includes clamps, shackles, links, plates, and various other pieces. A grounding system that would consist of copper or galvanized ground rods may be embedded into the ground at the base of each structure and connected to the structure by a buried copper lead. Other hardware that is not associated with the transmission of electricity may be installed as part of the Project. This hardware may include aerial marker spheres at crossings and / or aerial markers on the structures denoting the structure number.

2.2.2 Construction of the Facilities

Temporary construction yards would be located on private lands; specific location(s) have not yet been determined. The yards would serve as field offices, reporting locations for workers, parking space for vehicles and equipment, and sites for temporary marshalling of construction materials. Idaho Power is expecting that two separate construction yards would be used for the project; one per construction year.

The construction of the transmission line would typically follow the sequence of: 1) centerline surveyed and staked; 2) access and service roads constructed/maintained where necessary; 3) work area prepared; 4) holes excavated; 5) structures erected and installed; 6) fiber optic, conductors, and ground rods installed, 7) old line and structures removed; and 8) site cleaned and reclaimed. The number of workers and types of equipment required to construct the project are shown in Table 4 of the POD (Appendix E) A detailed description of the construction activities is provided in Section 5 of the POD (Appendix E) and is summarized below.

Various phases of construction may occur at different locations throughout the construction process. This would likely require several crews operating at the same time at different locations. Construction would occur in phases over two years, starting in 2016 and concluding in 2017. Construction would occur from late spring through fall each year. If there are delays in receiving approvals from the BLM and/or obtaining materials, work would start as soon as possible following receipt of all necessary approvals and materials and would be completed in two years.

The existing transmission line would be de-energized during the rebuild. However, as a condition of the contract, the contractor must be able to re-energize the line within 24 hours of an identified need. This may result in a different sequence of activities in some areas, use of additional crews, and / or completing shorter segments than typically done. Furthermore, IPC cannot place the new structures in the exact location of the existing structures because the existing line must be able to be energized within 24 hours. New structures would be placed on the existing disturbed structure pads within 10 feet of the existing structures with three exceptions (structures 15, 16, and 17 would be moved as they are currently located in and adjacent to a pond).

2.2.2.1 Roads

Existing and proposed access and service roads, as shown on Figure 2-2, would provide access for rebuild and O&M activities.

Because Idaho Power would need to access each structure location by vehicle during construction and O&M activities, roads would need to be repaired, maintained, or created. Idaho Power crews inventoried the existing roads and identified areas where roads would be used as-is, need repair or maintenance, need to be created, or where overland travel is possible. Idaho Power's road standard calls for a 14-foot wide road. However, where existing roads currently provide safe passage, the road would not be widened and the surface would not be improved. When roads are repaired or created (Category D or E), the road would be 14-feet wide. Roads created by Idaho Power would have the minimum improvements necessary for the safe operation of equipment; roads would not be graveled. Specific road activities, by span, are identified in Table 6 of the POD (Appendix E). General road activities include the following:

- **No work proposed (Category A)**—Use existing road or travelway and no repair or maintenance necessary. Road would not be widened.

- **Remove rocks (Category B)**—A backhoe would be used to move large rocks to the side. Road would not be widened.

- **Cut vegetation (Category C)**—Vegetation that can interfere with safe equipment operation would be cut. Road would not be widened.

- **Regrade/repair; includes ground disturbing activities (Category D)**—Grading to repair and / or restore still visible road prism; this can include repair of sloughs, widening narrow areas, and reduce slopes where necessary. Road may be widened to 14-feet.

- **Grade new road (Category E)**—Create road where no road prism is evident. Road would be 14-feet wide.

- **Crossing (Category F)**—Create or improve a water body crossing (e.g., install culvert or rock crossing). Crossing may be widened to 14-feet.

- **Overland travel (Category G)**—Multiple vehicle trips would create a two-track that is visible in vegetated areas. Vegetation would be crushed, but would not be cut or removed. In agricultural areas, overland travel would be coordinated with the land owner and would occur primarily when crops are not in place.

2.2.2.2 Removal of Old Line

The existing line would be removed in segments following construction of the new line. All existing conductor and associated hardware would be removed and existing wood poles would be cut off near ground level. Old poles are not typically pulled from the ground because this would cause more ground disturbance than cutting them. All materials would be salvaged or removed to a State approved landfill.

2.2.2.3 Work Area Preparation

Work areas around the structure locations would be cleared of vegetation and graded only to the extent necessary to allow for safe installation of the structure. Because of ongoing vegetation maintenance (removal of vegetation within a 10-foot radius of each pole) to protect wood poles from wild fires, most existing structures do not have large amounts of vegetation immediately adjacent to the structure or within the immediate work area. Therefore, vegetation removal associated with construction activities is expected to be minimal. Work associated with structure replacement will be primarily confined to the previously disturbed work pad. Structures that would require the creation of a work pad are identified in Table 6 of the POD (Appendix E). Equipment to create the work pad could include a small bulldozer, backhoe, and / or excavator, depending on the specific location. Work pads would be created in areas where a flat landing is necessary for set-up and operation of construction equipment.

2.2.2.4 Setting Structures

Work associated with structure replacement would be primarily confined to the previously disturbed work pad. Structures that would require the creation of a work pad (and the work pad

size) are identified in Table 6 of the POD (Appendix E). Structures would be directly embedded in the ground. Excavations for all structures would be done with a vehicle-mounted power auger or by controlled blasting. The most important factors that determine whether blasting is necessary is the geology of the area and the hardness of the rock. It is likely that the majority of holes would require blasting due to the rocky nature of the area. Blasting would be conducted in strict compliance with all applicable safety orders and/or rules. All employees engaged in the handling and use of explosives would have the appropriate certification required by the state or county in which such operation is located. No explosives would be stored in the ROW; they would be stored at Idaho Power's material storage yard. The magazines (used to store explosives) and site would meet all Federal requirements. Safeguards such as blasting mats would be employed when needed to protect adjacent property. Blasting is done in a very controlled manner to reduce stressing and fracturing of the rock beyond the desired excavation area.

Structures would be set using a crane and material trucks. Directly embedded foundations consist of a cylindrical hole in the ground 8 to 12 feet deep, depending on soil and structure height and loading. Structure holes that would be left open or unguarded overnight or for more than a day would be covered and/or fenced to protect the public, livestock, and wildlife. Soil removed from holes would be stockpiled in the work area and used to backfill holes. All remaining soil not needed for backfilling would be spread in the work area. If native soil is not suitable for backfill, clean, noxious weed free soil would be imported to backfill holes.

2.2.2.5 Pulling and Tensioning Locations

Pulling and tensioning sites (Figure 2-2) for the conductor are required approximately every five miles along the ROW and at locations where the line changes direction; it is not possible to correctly pull and tension conductors around corners. Idaho Power has identified more sites than would be used to provide flexibility to the contractor; contractors may pull one or two spools at a time and this affects the site location. Preliminary pulling and tensioning sites are provided in Table 7 of the POD (Appendix E).

Where possible, sites have been located within the requested permanent ROW. At locations where the conductor changes direction and some dead-end pulling sites, pulling and tensioning sites are located outside of the requested 100-foot wide ROW (see Figure 2-2 for locations). IPC has delineated a pulling and tensioning area of 100-feet wide by 600-feet long (centered at a structure) to allow for flexibility in placing equipment at each site. This also minimizes the number of pulling and tensioning sites as one site can be used to string line in two different directions.

Equipment used for pulling and tensioning would create ground disturbance as they are driven to the site and located in the correct position. Some grading may be necessary to create a flat work pad for the equipment. Pulling and tensioning sites would be restored to pre-construction conditions or better (e.g., if the area was dominated by cheat grass, Idaho Power would reseed using the seed mix specified in Section 2.2.3).

2.2.2.6 Shield Wire and Fiber Optic Installation

Similar to installation of the conductor, fiber optic and shield wire would be strung using powered pulling equipment at one end and powered braking or tensioning equipment at the other

end. Once structures are in place, a pilot line would be pulled (strung) from pole to pole and threaded through stringing sheaves on each pole. A larger diameter, stronger line would then be attached to the pilot line and strung. This is called the pulling line. This process is repeated until the fiber optic cable and shield wire is pulled through all sheaves.

Not all shield wire and fiber optic pulling and tensioning sites would be used. Two alternatives are presented because they reflect the methods that are typically used when pulling and tensioning shield wire and fiber optic cable; contractors may pull one or two spools of shield wire or fiber optic at a time. Preliminary pulling and tensioning sites are provided in Table 7 of the POD (Appendix E) and shown on Figure 2-2. Because spool lengths are different between conductors and shield wires and fiber optic, it is not always possible to use the same locations used for pulling and tensioning conductors.

Splice boxes for the fiber optic cable would be required approximately every four miles, where the cable spool ends. The boxes would measure approximately 36” x 48” x 36” and would be mounted on the side of the pole approximately 20 feet above the ground.

2.2.2.7 Traffic Control and Road Restrictions

Due to the remoteness of the Project, most areas of the line would not require traffic control or road restrictions. Guard structures would be installed as needed to ensure the safety of construction personnel and the public during construction at major road crossings. Guard structures consist of H-frame poles placed on either side of an obstacle. These structures prevent ground wire, conductor, or equipment from falling on an object. Equipment for erecting guard structures includes augers, line trucks, pole trailers, and cranes. Guard structures may not be required for small roads. On such occasions, other safety measures such as barriers, flagmen, or other traffic control would be used. At major intersections it may also be necessary at times to restrict traffic. Traffic control can include restriction of traffic to one lane as well as limited road closures. The closures would only be for the amount of time needed to perform the construction tasks requiring the road restrictions. Prior notice would be given for any extended delay or road blockage. The road restrictions would be managed according to the Manual of Uniform Traffic Control Devices.

2.2.2.8 Construction Waste Disposal and Cleanup

Work areas would be kept in an orderly condition throughout the construction period. Refuse and trash would be removed from the sites and disposed in an approved manner. Oils and fuels would not be dumped along the line onto the ground or into streams. Oils or chemicals would be containerized and disposed in an approved and licensed facility for disposal. Construction practices shall comply with all applicable federal, state, and local laws and regulations concerning the use, storage, transportation and disposal of hazardous materials. No open burning of construction trash would occur.

2.2.3 Stabilization and Rehabilitation

To minimize possible impacts to natural resources, reduce erosion and sedimentation, and minimize noxious weeds, Idaho Power would conduct stabilization and rehabilitation activities in areas affected by ground-disturbing O&M and/or construction activities. When a structure site is graded or otherwise disturbed, the area would be seeded as appropriate and as soon as possible

during the optimal seeding period following ground disturbance (see Table 2-2 for seed mix and application rates) each year. Service roads would also be reseeded as a best management practice to reduce the potential for erosion and establishment of noxious weeds. The best time to seed is in the fall (September − November). If seeding cannot be done then, spring seeding should take place as conditions dictate. IPC would work with the BLM to develop mutually agreeable specifications for site rehabilitation. General methods are presented below; these are subject to revision based on site conditions and on consultation with the BLM.

Table 2-2—Seed Mix and Application Rate for Rehabilitation Activities

Wyoming Sagebrush Seed Mix	
Species and Seed Variety	**Seed Rate Pounds/Acre PLS**
Wyoming Big Sagebrush	1.00
Bluebunch Wheatgrass	2.00
Bottlebrush squirreltail	4.00
Sandberg's bluegrass	6.00
rabbitbrush	0.50
dark blue Penstemon	0.30
scarlet globemallow	0.50
basalt milk-vetch	0.10
Wyoming big sagebrush	Seed & Containerized Stock
Antelope bitterbrush	Seed & Containerized Stock

Mountain Big sagebrush Seed Mix	
Species and Seed Variety	**Seed Rate Pounds/Acre PLS**
Mountain Big Sagebrush	1.00
Bluebunch wheatgrass	1.00
Idaho fescue (north slopes, particularly)	4.00
Bottlebrush squirreltail	3.00
Sandberg's bluegrass	2.00
dark blue Penstemon	0.20
Buckwheat (sulfur or Wyeth's)	2.00
Biscuitroot	1.00
Mountain big sagebrush	Seed & Containerized Stock
Antelope bitterbrush	Seed & Containerized Stock

Basin Big Sagebrush Seed Mix	
Species and Seed Variety	**Seed Rate Pounds/Acre PLS**
Basin Big Sagebrush	1.00

Bluebunch wheatgrass	2.00
Great basin wildrye	3.00
Indian ricegrass	2.00
Needle-and-threadgrass	1.00
rabbitbrush	0.50
dark blue Penstemon	0.30
scarlet globemallow	0.50
yarrow	0.20
Basin big sagebrush	Seed & Containerized Stock
Antelope bitterbrush	Seed & Containerized Stock

Low Sagebrush Seed Mix	
Species and Seed Variety	**Seed Rate Pounds/Acre PLS**
Low Sagebrush	1.00
Bluebunch wheatgrass	0.50
Idaho fescue at cool/moist sites	3.00
Bottlebrush squirreltail	2.00
Sandberg's bluegrass	1.00
buckwheat	1.00
dark blue Penstemon	0.20
hooker's balsamroot	1.00
Oregon sunshine	0.50
Biscuitroot	0.50
low sagebrush	Seed & Containerized Stock

The surface of the ground must be prepared prior to seeding; a process called seedbed preparation. Before seedbed preparation, an inspection of the site would determine the most appropriate method to use. IPC would follow these guidelines for preparing the seedbed:

1. The surface would be cleared of foreign materials, such as garbage, paper, and other materials, but all rocks and minor woody debris would be left in place. IPC would prepare the seedbed immediately prior to seeding.

2. Under appropriate soil-moisture conditions, a standard disk or spring bar harrow would be used to roughen the topsoil layer to create the desired surface texture before the seed is applied. Dirt clods and chiseled voids resulting from the roughening process increase the surface area for water collection and provide micro-sites for seed establishment. The soil should be disked or harrowed to no more than 2 inches deep at a time when soil moisture allows the surface to remain rough, with clods approximately 2 to 4 inches in diameter.

3. Disking or harrowing should be performed parallel to surface contours. In this way, downslope alignment of furrows can be avoided. In areas that already have the desired soil characteristics; the seedbed does not need to be prepared.

After the seedbed has been prepared, seed would be broadcast on the disturbed area, after which the seed would be lightly harrowed into the ground. Seeding efforts would not be performed when wind velocities would prohibit the seed mix from being applied evenly.

2.2.4 Operation and Maintenance Activities

Idaho Power performs O&M activities to keep the transmission line operational and in good repair. These activities are either planned (such as those for routine patrols, inspections, and scheduled maintenance) or unplanned (such as those for emergency maintenance in cases where public safety and property are threatened). Routine activities include:

- Routine air patrols to inspect for structural and conductor defects, conductor clearance problems, and hazardous trees
- Routine ground patrols to inspect structural and conductor components
- Climbing structures to inspect hardware or make repairs
- Structure or conductor maintenance from a maintenance vehicle
- Routine inspection and maintenance of authorized service and access roads following line rebuild
- Installation of bird protection devices, bird perch discouragers, and relocation or removal of bird nests.
- In-kind structure replacement
- Routine vegetation clearing to trim or remove tall shrubs and trees to ensure adequate ground-to-conductor clearances.
- Removal of individual trees or snags (hazard trees), inside the ROW boundary, that pose a risk of falling into the power line, conductors or structures and causing outages or fires.
- Vegetation removal on authorized access and service roads to allow the necessary clearance for access and provide for worker safety

Emergency situations are those conditions that may result in imminent or direct threats to public safety or threaten or impair Idaho Power's ability to provide power to its customers. The following examples include actual and potential emergency situations:

- Failure of conductor splices;

- Lightning strike or wildfire resulting in burned wood pole structures (existing line) or the smoke causing flashover between the conductors;

- 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 imminent failure of cross-arms or insulators, which could or does cause conductor failures; and

- Vandalism to structures or conductors from shooting or other destructive activities.

Activities to address emergency situations are the same as those implemented for O&M activities; however, adherence to all environmental protection measures (EPM) may not be feasible.

Maintenance on any particular structure may vary depending upon a number of factors and these activities may be carried out by Idaho Power as necessary; however, all maintenance on the King to Wood River transmission line remains subject to the definitions, descriptions, and EPM identified in Master Agreement (MA) BLM-MA-ID-001 signed April 2012 and subsequent revisions and the specific terms, conditions and stipulations of the ROW grant and reporting requirements. A copy of the MA is provided in Appendix 4 of the POD (Appendix E).

2.2.5 Applicant Committed Environmental Protection Measures

The following environmental protection measures (EPMs) are part of the Proposed Action and would be implemented by IPC, and its contractors, throughout the term of the ROW in order to minimize potential adverse impacts to the environment and resources:

2.2.5.1 General Measures

- GM-1. Existing improvements (fences, gates, etc.) would be repaired or replaced to their condition prior to disturbance if they are damaged by IPC, as agreed to by the parties involved.

- GM-2. The BLM may restrict general public access to closed federal roads that IPC may use and maintain (IPC would maintain service roads constructed for IPC use only). In cases of restricted access, IPC would physically close the road with a gate; as directed by the BLM. Gates would be locked with locks supplied by IPC and the BLM.

- GM-3. Appropriate traffic control measures, where necessary, would be used to ensure public safety during construction and O&M activities. Prior notice would be given for any extended delays or road blockage.

- GM-4. For ground disturbing activities that are one acre or more, IPC would prepare and implement a construction storm water pollution prevention plan in compliance with NPDES requirements.

2.2.5.2 Biological Resources

- B-1. Sensitive plant populations that occur within or near the ROW and work areas would be flagged, to ensure that they are avoided. Sensitive plant locations were mapped using global positioning system (GPS) equipment during surveys; GPS would be used to relocate populations to facilitate flagging. If previously undocumented species are discovered during the work, IPC would establish a spatial buffer zone, would contact the BLM within 24 hours, and would continue with the activity outside of the established buffer unless otherwise directed. The buffer would encompass the population and adjacent suitable habitat within the work area. Unless IPC is informed otherwise, work outside of the buffer area would continue. If IPC needs to work within the buffer area, the BLM and IPC would work together to develop a solution that is acceptable to both parties and would allow for IPC to complete the work in a timely manner or within the scheduled outage window, if applicable. After activities are completed, or would no longer poses a threat to the plant population, the marking (stakes), if used, would be promptly removed to protect the site's significance and location from unwanted attention. As needed, marking would be reinstated during the land rehabilitation period.

- B-2. If sensitive wildlife species are discovered during IPC activities, and the animals are not directly within ground disturbance areas, they would be protected by marking the edges of the ROW or work areas in the general vicinity to ensure that workers do not leave those areas. If the animals are within work areas that have, or would have, ground disturbance, and the animals are not expected to temporarily move out of the area, IPC would stop work in the immediate vicinity of the occurrence. Immediate vicinity refers to the work area and one span length in either direction. IPC would contact the Idaho Department of Fish and Game (IDFG) and BLM to determine the appropriate buffer. The IDFG, BLM, and IPC would work together to develop a solution that is acceptable to both parties and would allow for IPC to complete the work in a timely manner or within the scheduled outage window, if applicable. After activities are completed, or would no longer pose a threat to the species, any marking (stakes; flagging) would promptly be removed to protect the site's significance and location from unwanted attention. As needed, marking would be reinstated during the land rehabilitation period.

- B-3. In the event any sensitive plants cannot be avoided, the topsoil surrounding the plants would be salvaged, stored separately from subsoil, and re-spread during the restoration process.

- B-4. The Project has been designed and would be constructed in compliance with Avian Power Line Interaction Committee (APLIC)[8] standards in order to reduce impacts to avian species.

[8] Avian Power Line Interaction Committee (APLIC). 2006. Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006. Edison Electric Institute, APLIC, and the California Energy Commission. Washington, D.C. and Sacramento, CA.

- B-5. Nesting, roosting, and perching birds—especially osprey—can cause power outages if their feces or nesting materials interfere with conductors, insulators, or air gaps. IPC, in consultation with the USFWS, manages nesting on transmission line structures to reduce conflicts. Such management may include relocating nests, modifying structures, and providing nesting platforms. IPC would continue to consult with the USFWS and/or Idaho Department of Fish and Game when a problem nest is located.

- If a problem nest is suspected to be an eagle nest, IPC would coordinate with the USFWS prior to taking any action.

- If raptors are building a nest or a nest is unoccupied, the nest is considered inactive. IPC may dismantle the nest and install a nesting platform or other devices to prevent unwanted interactions between the birds and the electrical structure.

- If a nest is occupied and contains eggs or chicks, it is considered active, and **disturbance is only permitted** when the threat of fire hazard and power outages is present and imminent at the current nest location.

- B-6. Maintenance and rebuild activities should be conducted in a manner so as not to result in a take of migratory birds as defined by the Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. § 703 et seq. (2012) as amended.

- Crews conducting the rebuild would be trained to identify and protect nests during construction activities. Training would include what to look for: 1) whitewash (concentrations of white-colored droppings, 2) types of nests that may be encountered, 3) habitats where nests are most likely to occur, and 4) typical nesting periods for bird species that may be encountered. Training would also outline procedures to follow if a nest is found. Crews would survey areas scheduled for immediate and near-term construction activities.

- Maintenance activities occurring during nesting season, February 1 through July 31, should be limited to areas of existing surface disturbance (i.e., existing roads and structure pads). If maintenance activities must occur outside of areas of existing surface disturbance and have the potential to result in a take of migratory birds (e.g., surface disturbing activities that would directly affect vegetation in which birds may nest might be removed or driven over) then IPC's crews would inventory those areas for migratory birds prior to conducting the maintenance. If no nests are found, IPC may implement the planned maintenance. If nests are found, IPC may delay maintenance until after the nesting season or if that is not possible, IPC would consult with the USFWS and BLM.

- During vegetation maintenance activities, line-clearing crews will inspect shrubs, trees, and hazard trees to be trimmed or removed for active bird nests prior to cutting. If a cavity is found, a flash photo will be taken with a view inside the cavity to determine if the cavity is occupied. If an active nest is found, the location will be noted and provided to the IPC arborist in charge. If the vegetation is an imminent threat to public health and safety, the arborist will contact IPC's avian protection coordinator, who will contact the USFWS for appropriate permits allowing the nest to be moved or destroyed. If there is

not an imminent threat, and the vegetation must be trimmed prior to the next vegetation management cycle, the arborist will schedule it to be treated after the nesting season. If ROW clearing is to be expanded into previously untreated vegetation, a nesting survey would be coordinated by IPC's Environmental Affairs prior to clearing. Based on the results of the survey, a treatment plan would be developed that would protect active nests.

- B-7. If occupied raptor nests are observed, the extent of likely construction disturbance would be assessed. If necessary, the following spatial and temporal buffers would be implemented:

Species	Nesting Period Range	Average Nesting Period	Spatial Buffer (miles)
Golden eagle	8 Feb–10 Jul	2 Mar–16 Jun	0.5-1.0
Bald eagle	1 Feb–15 Aug	2 Mar–15 Jul	0.5-1.0
Ferruginous hawk	22 Mar–16 Jul	13 Apr–28 Jun	1.0
Great-horned owl	15 Jan–7 Jun	20 Feb–11 May	0.25
Burrowing Owl	10 Apr–5 Aug	30 Apr–12 Jul	0.25
Swainson's hawk	20 Apr–14 Aug	8 May–21 Jul	0.25
Prairie falcon	1 Apr–16 Jul	14 Apr–24 Jul	0.50
Peregrine falcon	15 Mar–14 Jul	15 Apr–28 Jul	1.0
Northern goshawk	15 Apr–17 Jul	1 May–7 Jul	0.50
Osprey	1 Apr–15 Aug	15 Apr–30 Jul	0.25
Red-tailed hawk	18 Mar–20 Jul	11 Apr–25 Jun	0.33

- B-8. Required Design Features to address sage-grouse include:
  - No repeated or sustained behavioral disturbance (e.g., visual, noise over 10 dbA at lek, etc.) to lekking birds from 6:00 pm to 9:00 am within 2 miles (3.2 km) of leks during the lekking season (approximately March 15-May 1 in lower elevations and March 25-May 15 in higher elevations).
  - Areas with ground disturbance would be reseeded or planted with containerized sage brush stock.
  - Place infrastructure in already disturbed locations where the habitat has not been fully restored.
  - Utilize existing roads, or realignments of existing routes to the extent possible.
  - Design roads to an appropriate standard no higher than necessary to accommodate their intended purpose.

- Use free standing structures where possible, to limit the use of guy wires. Where guy wires are necessary and appropriate bird collision diverters would be used, if doing so would not cause a human safety risk.

2.2.5.3 Cultural Resources

- C-1. Any unanticipated discovery of cultural and/or paleontological resource (fossil[s] or historic or prehistoric site or object) on BLM lands shall be immediately reported to the BLM. If new, probable historic, cultural, or paleontological resources are discovered during construction, potentially destructive work within 300 feet of the find would be halted. Pursuant to 43 CFR 10.4(g), the holder of the authorization must notify the BLM, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), activities in the vicinity of the discovery must be stopped until notified by the BLM to proceed. IPC would immediately implement the following measures:

    - Flagging would be erected to prohibit potentially destructive activities.

    - IPC's archaeologist would work with the BLM and through a coordinated effort to make a determination if the discovery represents a potential new site or an undocumented feature of a documented site.

    - O&M activities would not resume in the identified area until cleared by the BLM.

- C-2. Before any activity involving ground disturbance begins adjacent to a known cultural site, IPC would generically mark the sites as an avoidance area. After the project is complete or no longer poses a threat to the cultural resource, the marking would be removed to protect the site's significance and location from unwanted attention.

- C-3. If human remains are discovered during O&M activities, IPC would stop all work in the immediate area to protect the integrity of the find and notify law enforcement and the 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 actions are necessary prior to resuming work.

2.2.5.4 Noxious Weeds

- N-1. Before beginning rebuild activities or O&M activities on BLM-managed lands, IPC or their subcontractors would clean all equipment that would operate off-road or disturb the ground. Tracks, skid plates, and other parts that can trap soil and debris would be removed for cleaning when feasible, and the entire vehicle and equipment would be cleaned at an off-site location. The purpose of this is to limit the introduction and / or spread of noxious weeds. If vehicles or equipment leave the site and travel off-road to another location before returning, they would be rewashed.

- N-2. All herbicide applications would comply with label restrictions, federal, state and/or county regulation, IPC's specifications and landowner agreements. No spraying would occur on BLM-managed lands prior to notification to the BLM and receipt of a Pesticide

Use Permit (PUP). The PUP would include the dates and locations of application, target species, herbicide, adjuvant, and application rates and methods (e.g., spot spray vs. boom spray). No herbicide would be applied to any private property without written approval of the landowner.

- N-3. IPC may treat large populations of noxious weeds on BLM-managed lands that occur in areas of proposed ground disturbing activities prior to the start of rebuild activities provided IPC receives approval and a PUP in a timely manner (i.e., rebuild activities would not be delayed to wait for approval and a PUP) and it is the right time of year to treat the species.

- N-4. Herbicides may be applied using a broadcast applicator mounted on a truck or all-terrain vehicle (ATV), backpack sprayers, or with hand sprayers as conditions dictate. Herbicide applications would be conducted only by licensed operators or under the supervision of a licensed operator. Vehicle-mounted sprayers (e.g., handgun, boom, and injector) may be used in open areas readily accessible by vehicle. Where allowed, a broadcast applicator would likely be used. In areas where noxious weeds are more isolated and interspersed with desirable vegetation, noxious weeds would be targeted by hand application methods (e.g., backpack spraying), thereby avoiding other plants. Preconstruction herbicide applications would not occur within 500 feet of known special status species. Calibration checks of equipment would be conducted at the beginning and periodically during spraying to ensure proper application rates.

- N-5. Project-related staging areas would be kept weed-free through regular site inspections and herbicide applications, subject to the consent of the landowner.

- N-6. If straw or hay are specified in the Construction Storm Water Pollution Prevention Plan (SWPPP), they shall be certified weed free. If soil needs to be brought in for backfill or other purposes, it shall be from a certified weed free source.

2.2.5.5 Fire Prevention

- F-1. When performing activities during the "closed" fire season, IPC personnel and their contractors would be required to have the following equipment in their possession and be trained to use them, to aid in extinguishing a fire ignition before it gets out of control (taking action that a prudent person would take while still accounting for their own personal safety): a variety of fire suppression hand tools such as shovels, rakes, Pulaski's etc., a 16-20 lb fire extinguisher, and 20-50 gallons of water with a way to effectively spray the water (i.e. backpack pumps, water sprayer, etc.).

- F-2. Upon arriving at a work area, IPC would conduct inspections of the undercarriage of vehicles after driving over roads with high vegetation to make sure grass and brush have not accumulated near the vehicle's exhaust system.

- F-3. Each internal combustion engine shall be equipped with a spark arrester that meets the federal land managing agency's standards.

- F-4. During BLM's Stage II Fire Restrictions, IPC would obtain an appropriate waiver and take appropriate precautions when conducting activities that involve an internal combustion engine, generate a flame, involve driving over or parking on dry grass, involve the possibility of dropping a line to the ground, or involve explosives by using a Fire Prevention Watch Person that would remain in the area for one hour following the cessation of that activity. Also, IPC personnel would not smoke unless within an enclosed vehicle, building or designated recreation site, or while stopped in an area at least three feet in diameter that is barren or cleared of all flammable materials. BLM would inform IPC staff listed on the IPC Notification list, when BLM's Stage II Fire Restrictions are implemented.

- F-5. IPC would notify the jurisdictional fire dispatch center immediately upon confirmation of a wildland fire, would move to a safe location and wait for fire suppression resources to arrive, and would check-in with the BLM incident commander if one is on the scene.

- F-6. If the BLM determines that it must use fire-suppression techniques that could affect operation of the lines, it would notify IPC as soon as possible.

2.2.5.6 Aquatic Resources

- A-1. Woody vegetation management within 50 feet of streams (definable streambeds or stream banks, regardless of whether there is flowing water) would be conducted by hand crews. Herbaceous plants and low-growing shrubs would be left in place if they do not interfere with the safe O&M of transmission lines and equipment. IPC would use existing stream crossings and would not create new crossings without prior BLM approval and other necessary regulatory approvals (e.g., Section 404 of the Clean Water Act). Off road vehicle use in live water is limited to existing crossings, to minimize the potential for impacts from crushing or introduction of sediments into waterways.

- A-2. Tank mixing of herbicides or fueling of motorized equipment would not occur in riparian areas.

- A-3. Surfactant R-900 would not be used in or adjacent to (within 50-feet) riparian habitats.

2.2.5.7 Site Rehabilitation

- S-1. Final cleanup would be conducted at the end of each construction phase and would ensure that all construction areas are free of any construction debris including, but not limited to: assembly scrap metals, construction wood debris, and worker-generated litter. Permanent erosion control devices would be left in place.

- S-2. Temporarily disturbed areas would be re-contoured to blend with the surrounding landscape. Re-contouring would emphasize restoration of the existing drainage patterns and landform to preconstruction conditions, to the extent practicable. (Structure work pads would not be recontoured.)

2.3 Alternative 1—Renew Existing Grant

Under Alternative 1, the BLM would not authorize the rebuild of the existing transmission line or amend the grant to widen the ROW or authorize existing service roads; BLM would renew the existing grant as is. Renewal of the existing grant would include the following:

- Authorization of a 60-foot wide ROW; and
- Long-term operation and maintenance of the transmission line.

Renewing the existing grant would not authorize existing or proposed roads. Long-term encumbrances associated with this alternative are provided in Table 2-3. Authorization of Alternative 1 would allow Idaho Power to continue operating the line and to conduct maintenance activities on the existing line as long as maintenance activities were confined to the existing ROW. It would not authorize maintenance activities that would require road work or other ground disturbing activities outside of the existing ROW. This alternative would not meet Idaho Power's need to address reliability in the Wood River Valley and it would not meet the need to comply with NERC Standard FAC-003-3. This alternative is considered the baseline that would be used for comparison with the other alternatives.

Table 2-3—Long-term Encumbrances on BLM-managed Public Lands Associated with Alternative 1

County	Width (feet)	Length (feet/miles)	Acres
Transmission Line			
Gooding	60	99,490/18.8	137.0
Camas	60	42,174/8	58.1
Blaine	60	17,763/3.4	24.5
Total	**60**	**159,429/30.2**	**219.6**

2.3.1 Proposed Facilities

The existing transmission line would be operated and maintained to meet or exceed the requirements of the NESC, U.S. Department of Labor, Occupational Safety and Health Standards, and Idaho Power's requirements for safety and protection of landowners and their property.

2.3.1.1 Structure Types

Existing structures are typically wood H-frames. Existing structure type, above ground height, and guy wire use are provided in Table 3 of the POD (Appendix E).

2.3.1.2 Minor Additional Hardware

Minor additional hardware would be the same as the Proposed Action.

2.3.2 Construction of the Facilities

Since the rebuild would not be authorized, no construction would occur if this alternative was authorized.

2.3.3 Stabilization and Rehabilitation

To minimize possible impacts to natural resources, reduce erosion and sedimentation, and minimize noxious weeds, Idaho Power would conduct stabilization and rehabilitation activities in areas affected by ground-disturbing O&M activities. Stabilization and rehabilitation measures are the same as the Proposed Action.

2.3.4 Operation and Maintenance Activities

Idaho Power performs O&M activities to keep the transmission line operational and in good repair. These activities are either planned (such as those for routine patrols, inspections, and scheduled maintenance) or unplanned (such as those for emergency maintenance in cases where public safety and property are threatened). Routine and emergency activities are the same as the Proposed Action. The existing line has had 41 outages (average duration of approximately 7 hours) since 1996 (two-thirds of these are related to maintenance activities).

IPC would continue to conduct periodic inspections of the transmission line. Depending on the results of the inspections, O&M activities may be scheduled for immediate follow-up (e.g., in the case of imminent failure or safety issues) or follow-up in subsequent year(s) (e.g., issues that need to be repaired but do not cause an imminent problem). Routine and emergency O&M activities would be conducted in accordance with BLM-MA-ID-001 (Appendix 4 of the POD; Appendix E) which established procedures applicable to existing and future IPC ROW grants and clarifies routine O&M and emergency activities for grants that do not specifically address maintenance activities. Routine O&M and emergency activities are described in the MA and are incorporated herein by reference. Because of the age of the existing line (originally constructed in 1962) IPC expects to conduct routine maintenance on a reoccurring basis. The nature and extent of future maintenance activities, and any associated road work, is unknown. However, IPC anticipates that structure replacements and/or crossarm replacements would be part of the routine maintenance and that some road work (e.g., repair erosion; remove boulders) would be necessary on a reoccurring basis because of the age of the line and limited maintenance that has been conducted over the last few years. Crossarm replacement typically does not involve ground disturbance. Structure replacement involves drilling or blasting a hole next to the existing structure for the new structure and the old structure is either cut off at ground level or pulled out of the ground. Ground disturbance associated with structure replacement occurs in the area that was previously disturbed when the original structure was installed. Similar to previous maintenance activities, IPC would need to obtain separate authorization from the BLM for any road work and ground disturbing activities outside of the existing ROW before conducting the activity.

Because the existing line would not be rebuilt, wood poles would still be in place. Idaho Power would implement periodic reduction of fuel loads around wood poles in fire-prone areas. Idaho Power has implemented a program to protect wood poles from wild fires by 1) removing vegetation within a 20-foot radius and/or treatment with herbicide from the approved BLM list by a certified applicator, and in accordance with the Pesticide Use Permit, or 2) application of

fire retardant coating to the base of wood poles. If herbicide is used, Idaho Power would report to BLM the amount used for BLM's herbicide application yearly report. Crews typically access the ROW with trucks or ATVs and vegetation around the poles is removed with a weed whip and / or chainsaw. Where approved, SpraKil-26 is applied to the cleared area to minimize vegetation regrowth. Reduction of fuel loads is conducted on a rotating cycle and the frequency is dependent upon the vegetation and amount of regrowth that occurs. A typical frequency may be every 6 to 10 years. Prior to conducting fuel reduction, IPC reviews the documented locations of threatened and endangered plant and wildlife species to avoid impacts. IPC would also continue to inspect and treat wood poles for insect damage and rot and inject preservatives into the poles on a 10-year basis.

Emergency activities cannot be predicted, but it is expected that emergencies would occur over the life of the line. Emergencies that have occurred in the past and /or are expected in the future include damage due to wildfires, vandalism, and / or extreme weather events (e.g., high winds, ice loads). Emergency activities would be conducted in accordance with BLM-MA-ID-001 and are usually the same as those conducted during routine O&M activities; however, it may not be feasible to follow all environmental protection measures.

2.3.5 Applicant Committed Environmental Protection Measures

EPMs would be the same as the Proposed Action.

2.4 Alternative 2—No Action

In accordance with the BLM NEPA Handbook (H-1790-1; Section 6.6.2), the No Action Alternative for externally generated proposals or applications is generally to reject the proposal or deny the application. Under Alternative 2, the BLM would deny Idaho Power's pending application for renewal and amendment. If the BLM selects Alternative 2, Idaho Power would be required to remove the existing line. If Alternative 2 were authorized by the BLM, IPC would be required to remove all structures, conductors, insulators, crossarms, and hardware from the ROW. All areas of permanent disturbance would be restored in accordance with a Reclamation Plan to be developed by Idaho Power and approved by the BLM Authorized Officer. There are no long-term encumbrances associated with this alternative.

2.4.1 Proposed Facilities

There are no long-term proposed facilities associated with this alternative. Idaho Power would use existing access and service roads to remove the project lines and structures where possible; however, similar to the Proposed Action, temporary roads would need to be built to provide access to remove structures. Road maintenance and construction would be the same as the Proposed Action; however, service roads would be rehabilitated following removal of the facility.

2.4.2 Removal of the Facilities

Removal of the line would be similar to the work described in the Proposed Action, but would occur in reverse. The conductor and associated hardware would be removed and then the existing structures would be cut off and removed. Pulling and tensioning sites could still be needed if the existing conductor is removed by placing it on spools rather than cutting it into pieces and letting

it fall to the ground. Removal of the facilities differs from construction, as described in the Proposed Action, by:

- Auguring or blasting structure holes would not be required.
- Work pads, as identified in Table 6 of the POD (Appendix E), may not be necessary at all locations.
- Locations to splice fiber optic wires would not be needed.
- Work would likely be completed in one year.

2.4.3 Stabilization and Rehabilitation

Once the line and structure removal is completed, existing access roads would be left in place and service roads would be rehabilitated in accordance with BLM direction. This would include reseeding disturbed areas as described in Section 2.2.3.

2.4.4 Operation and Maintenance Activities

There would be no O&M activities associated with this alternative.

2.4.5 Applicant Committed Environmental Protection Measures

EPMs would be the same as the Proposed Action with the following exceptions: GM-2; B-4; B-5; A-1; A-2; and A-3. Because there would be no long-term O&M these EPMs are not relevant to this alternative.

2.5 Alternative 3—Limit the Existing Right-of-Way

Under this alternative, the BLM would authorize the rebuild of the existing transmission line and requested roads, but would not authorize the requested wider ROW; the BLM would issue a 100-foot wide temporary construction ROW for rebuilding the line. The ROW would remain at 60-feet wide. This would allow Idaho Power to continue operating the line and would authorize roads. Long-term encumbrances associated with this alternative are provided in Table 2-4.

Table 2-4—Long-term Encumbrances on BLM-managed Public Lands Associated with Alternative 3

County	Width (feet)	Length (feet/miles)	Acres
Transmission Line			
Gooding	60	99,490/18.8	137.0
Camas	60	42,174/8	58.1
Blaine	60	17,763/3.4	24.5
Total	60	159,429/30.2	219.6
Service Roads			
Gooding	14	112,082/21.2	36.0

Camas	14	41,800/7.9	13.4
Blaine	14	18,267/3.5	5.9
Total	14	172,150/32.6	55.3

This alternative would meet Idaho Power's need to address reliability in the Wood River Valley, but it would not meet the need to comply with NERC Standard FAC-003-3. It would not meet future maintenance needs as Idaho Power vehicles would not be able to confine all maintenance work within the 60-foot wide ROW.

2.5.1 Proposed Facilities

The proposed facilities are the same as the Proposed Action.

2.5.2 Construction of the Proposed Facilities

Construction of the proposed facilities are the same at the Proposed Action.

2.5.3 Stabilization and Rehabilitation

Stabilization and rehabilitation activities are the same as the Proposed Action.

2.5.4 Operation and Maintenance Activities

While the type of routine and emergency O&M activities are the same as the Proposed Action, how IPC implements corrective actions would be different because of the limited ROW. For example, if a bucket truck needed to set-up perpendicular to the transmission line and structure, it would not be able to stay within the 60-foot wide ROW. IPC would need to obtain authorization from the BLM prior to conducting any maintenance activities that would occur outside the 60-foot wide ROW. O&M activities would be the same as Alternative 1.

2.5.5 Applicant Committed Environmental Protection Measures

EPMs are the same as the Proposed Action.

2.6 Summary of Alternatives Evaluated in the EA

Table 2-5 provides a summary of the alternatives that are evaluated in this EA.

Table 2-5—Summary of Alternatives Evaluated in the EA

	Proposed Action	**Alternative 1—Renew existing grant**	**Alternative 2—No Action (Remove facility)**	**Alternative 3—Limit ROW to 60-feet**
Key Attributes	Widen ROW from 60-feet to 100-feet Authorize existing roads, road, maint., and construction of new roads Rebuild existing line Temporary	Maintain existing 60-foot wide ROW Do not authorize roads No rebuild	Remove facility Temporary authorization for roads	Maintain existing 60-foot wide ROW Authorize existing roads, road, maint., and construction of new roads Rebuild existing line Temporary

	authorization for pulling and tensioning sites			authorization for pulling and tensioning sites
Structures	Weathering steel with tubular cross arms; primarily H-frames	Wood with wood cross arms; primarily H-frames	None	Weathering steel with tubular cross arms; primarily H-frames
Timeframe	2 years construction from spring—fall Maintenance activities over life of grant	Maintenance activities over life of grant	1 year to remove facility	Same as Proposed Action
Operation and Maintenance	Ground and/or aerial inspection twice per year Minimal maint. anticipated as new structures, conductors, and hardware Since roads would be author., do not need separate authorization to conduct road maint. Minimal IPC presence Minimal emergency response as steel resistant to damage from wildfires and new facility	Ground and/or aerial inspection twice per year High level of maintenance over several years due to age of facility Separate authorization required to conduct road maintenance May need to amend existing grant depending on maint. activity (e.g., change in structure height) Vegetation mgmt. around structures Pole treatment every 10 years High to moderate IPC presence May have extensive damage and necessary repairs in event of wildfire Moderate to high emergency responses due to age of facility	None	Same as Proposed Action, but would need separate authorization for work outside the ROW
Meet Project Purpose and Need	Yes	Does not address reliability or compliance with NERC FAC-003-3	Does not address reliability or compliance with NERC FAC-003-3	Would not comply with NERC FAC-003-3 Maint outside the ROW would be allowed only if receive separate authorization

2.7 Alternatives Considered but Eliminated from Detailed Analysis

The following alternatives were considered but eliminated from detailed analysis. A brief description of each alternative and why it was not analyzed is provided below.

2.7.1 Alternative A—Community Advisory Committee Line Routes

In 2007, Idaho Power initiated and completed a cooperative planning effort with a Community Advisory Committee (CAC) to identify current and future electrical needs in the WRV and how to meet those needs (Wood River Electrical Plan; December 2007).[9] The CAC consisted of 19 members representing Blaine County, the cities of Sun Valley, Ketchum, Hailey, Bellevue, Picabo and Carey, Blaine County planning administrators, private business/developers, area residents, the BLM, USFS, and the Nature Conservancy. Lincoln County was also included due to the location of potential infrastructure improvements in Lincoln County that transmit power into the WRV. The Wood River Electrical Plan specifies locations for major transmission lines serving the WRV for many years to come and provides direction for the location of a new distribution/transmission substation to serve the southern part of the WRV.

The CAC initially recommended, and Idaho Power was going to pursue, construction of a new transmission line and substation. Through consensus agreement of the CAC, the Wood River Electrical Plan recommended the following infrastructure improvements and additions:

South Valley—South of Timmerman

- (A) Develop a new substation along Highway 75 near Burmah Road to serve the south Valley load and to act as a switching station for new transmission.

- (B) Construct a new 138 kV transmission line from Midpoint Station (near Shoshone) to the new Burmah substation. This line would be installed in parallel with Highway 75. The new line was developed to provide a third source of power into the WRV and was not intended to replace either one of the two existing lines.

- (C) Construct a new 138 kV transmission line from the new Burmah substation to Moonstone Substation (located east of Fairfield).

- (D) Construct a new 138 kV transmission line from Burmah substation to Silver Substation (located near Picabo).

- (E) Upgrade the existing King (near Hagerman) to Moonstone 138 kV transmission line to 230 kV.

Mid Valley—Timmerman to Hailey

- (F) Improve the capability of the existing transmission lines from Silver Substation and Moonstone Substation into the Wood River Transmission Station in Hailey using higher capacity wire while maintaining the current 138 kV operating voltage.

[9] Available at: http://www.idahopower.com/AboutUs/PlanningForFuture/RegionalElectricalPlans/WoodRiver/infoArchive.cfm

North Valley—Hailey to Ketchum

- (G) Construct an additional 138 kV transmission line between Wood River Transmission Station and Ketchum Substation to improve the reliability to the north end of the Valley. The CAC recommended that the new line run parallel with and adjacent to Highway 75. This route was considered the most sensible option because it follows the Valley's main transportation corridor.

Idaho Power's system planners determined that building a new line, as proposed in the Wood River Electrical Plan, would address electrical system issues and concerns in the WRV. Planning studies showed that the two existing lines would need to be rebuilt in the future along with the construction of a new line to meet projected electrical growth and maintain adequate voltage to Wood River Valley customers during outages on one of the lines.

Idaho Power and the CAC identified two potential new line routes, with alternatives, that would implement the CAC recommendations (Figure 2-3) Since the development of potential new routes, the BLM identified preliminary priority habitat (PPH) and preliminary general habitat (PGH) for greater sage-grouse and issued two Instruction Memorandum related to the conservation of greater sage-grouse. Governor Otter convened a task force to develop an Idaho alternative to the BLM's sage-grouse management planning process; the Governor's plan identifies core, important and general habitat. Members of the State of Idaho's Governor's sage-grouse task force, the BLM, IDFG, and others worked with Idaho Power to determine that new construction in a new ROW through PPH and PGH was not desired, would not be allowed under the State of Idaho's alternative, and would likely not be authorized by the BLM. To address electrical system needs in the Wood River area and to facilitate conservation of sage-grouse, Idaho Power decided to not pursue the option of a new transmission line and instead focused its efforts on rebuilding the existing line to the Wood River area.

On May 16, 2012, the Wood River Electrical Plan CAC was informed of project changes due to changes in how the BLM and State of Idaho are addressing greater sage-grouse habitat. The CAC was informed that Idaho Power would not pursue the construction of a new transmission line, but would pursue authorization to rebuild the existing line.

The CAC Route 1 parallels US Highway 93 and State Highway 75 as it leaves the Midpoint Substation and heads north. The route starts to angle east, away from Highway 75, as it enters BLM-managed lands and goes towards the proposed new Burmah Substation. From the Burmah Substation, the route splits and heads east to the Silver Substation and west to the Moonstone substation. As the route parallels Highway 75, the line would also parallel the borders of the Tee-Maze Area of Critical Environmental Concern (ACEC)/Research Natural Area (RNA), Black Butte WSA, and a portion of the Lava WSA. The western extension of the route would cross the Magic Reservoir SRMA. Alternative routes developed for the western extension would also cross the Magic Reservoir SRMA.

The CAC Route 2 also originates at the Midpoint Substation and is located to the east of Route 1 and east of US Highway 93. At Shoshone, this route heads north east around the eastern boundary of the Lava WSA. Once it reaches the northern boundary of the Lava WSA, it splits and one section heads to the west to the Moonstone Substation and one section heads to the east

to the Silver Substation. Similar to Route 1, the western section crosses the Magic Reservoir SRMA.

The Tee-Maze ACEC/RNA was designated to protect cave scenery and examples of volcanism and lava tube formation. The caves also provide hibernation habitat for Townsend big-eared bat (a BLM sensitive species), and unusual invertebrate and plant communities. When the Shoshone Land Use Plans were amended to designate this ACEC/RNA, it also included the following management action: "Do not allow new land authorizations (e.g., rights of way, R&PP leases, land use permits)." (Page 20 of *Amendments to Shoshone Field Office Land Use Plans*; August 2003).

It is also important to note that the CAC routes were not developed to replace the existing line, but would be in addition to the existing line; this would increase reliability in the Wood River area. Idaho Power would still need to operate and maintain the existing line.

These alternatives were not analyzed in detail for the following reasons:

- Approval of new rights-of-way in greater sage-grouse PHMA and IHMA would be inconsistent with MDSSS 29, 30, and 31 and MDLR 5 (see Section 1.3 of the ARMPA);
- Proximity to an ACEC/RNA and WSAs; and
- Crossing the Magic Reservoir SRMA.

Authorization of a CAC Route would not eliminate the need to operate and maintain the existing line.

2.7.2 Alternative B—Rebuild Existing Line at 230 kV

Once it was determined that new ROWs would not be feasible in PPH and PGH, Idaho Power then evaluated the possibility of rebuilding the existing King to Wood River transmission line at 230-kV and energizing it a 138-kV in the near term. The proposed increase in voltage was to accommodate forecasted growth and minimize the need for additional rebuilds in the future. This alternative was designed to use existing structure locations and roads to minimize impacts in sage-grouse habitat. Idaho Power also proposed to use steel poles and crossarms instead of wood poles and crossarms to reduce the need for vegetation management, reduce the potential for damage from wildfire, and to potentially reduce nesting opportunities for raptors and ravens (IPC 2013). The steel crossarms are rounded and provide a less stable nesting platform than the flat wooden crossarms. Following development of this alternative, Idaho Power planners determined that rebuilding the existing line at the existing 138-kV would address reliability issues and accommodate forecasted growth. The Proposed Action would meet electrical system needs, but would not meet the need to select a least-cost alternative consistent with Idaho Public Utility Commission requirements. This alternative would use the same ROW, roads, and structure locations (with a few exceptions) as the Proposed Alternative; and so from an environmental effects analysis perspective, this alternative is not substantially different from the Proposed Alternative.

2.7.3 Alternative C—Rebuild Midpoint to Wood River Transmission Line

Idaho Power also evaluated the option of rebuilding the existing Midpoint to Wood River transmission line. The Midpoint to Wood River line can handle the electrical load without the King to Wood River line, but the King to Wood River line cannot handle the load without the Midpoint to Wood River line. Because Idaho Power is required to be able to carry the load of other transmission lines serving the same electrical pathway in the event one of the lines goes out, rebuilding the Midpoint to Wood River transmission line would not increase reliability. This alternative was not analyzed in detail because it would not meet Idaho Power's reliability needs.

2.7.4 Alternative D—Underground Construction

Rebuilding the line as an underground line was identified as a possible alternative. The design and construction of an underground transmission line differs from an overhead line because of the following significant challenges that need to be addressed: (1) providing sufficient heat dissipation to prevent overheating and subsequent reduction in cable rating (i.e., capacity for carrying electrical current); (2) physical protection so the cable is not damaged (i.e., tree roots, digging); and (3) access for inspection, repair, and replacement.

Conductors that transmit energy need to be electrically insulated because they produce and retain heat during operation. Overhead lines are insulated by the air and heat is dissipated to the surrounding environment. Underground lines tend to retain heat because of the insulating properties of soil. To compensate for heat retention, underground cables (analogous to overhead conductors) tend to be larger to reduce electrical resistance and heat production; the larger size is one factor that contributes to the increased cost of underground lines. For direct buried cables (placed in a trench excavated in the ground), each cable needs to be well spaced from the others to allow for heat dissipation. Cables may be directly buried or placed inside conduit and then buried. Three cables would be used for the 138-kV circuit for this project. Separation between cables depends on heat production, insulating materials, and soil characteristics. The separation needed dictates the minimum width of the trench. Trenches are typically 6 to 8 feet deep but may be deeper to keep cables below the frost line. Trenches are typically excavated with a backhoe and blasting.

Installation of cables also requires ancillary facilities and would include vaults and transition structures. Vaults are large boxes, typically concrete, buried at regular intervals. The primary function of a vault is for splicing cables together during construction and for permanent access, maintenance, and repair of the cables. Vault spacing is dictated by the maximum length of cable that can be transported on a reel, the cable's allowable pulling tension, elevation changes along the route; and changes in direction along the route. Typical vault spacing is every 1'000 to 1,600 feet depending on topography and voltage and typical vault size is 10 by 30 feet and 10 feet deep. Vaults may be prefabricated or constructed onsite.

Transition structures provide the connection between overhead and underground lines. They are typically 60 to 100 feet tall and are designed to ensure that the three conductors are effectively separated and meet electrical code. Lightning arrestors are also placed close to where the underground cable connects to the overhead line to protect the underground cable.

The advantages and disadvantages of an underground power line are summarized in Table 2-6.

Table 2-6—Advantages and disadvantages of an underground transmission line relative to an overhead transmission line of the same voltage

Resource/Issue	Advantage/ Disadvantage	Underground Line	Overhead Line
Visual	Advantage	Majority of components are not visible.	Components are visible. Structure treatments and non-specular conductor can reduce visual contrast in some landscapes.
	Disadvantage	ROW is visible and does not blend with the surrounding landscape since trees and large-shrubs are not allowed due to potential problems with roots.	ROW is visible; contrast with surrounding landscape may be less as areas between structures can have shrubs and trees that do not interfere with the line.
Number of outages/duration	Advantage	Less susceptible to weather related outages and typically fewer outages than an overhead line.	Typically more outages than an underground line; however, a new line is expected to have fewer outages than an older line. Outages typically shorter than an underground line.
	Disadvantage	Outages last longer than overhead lines because it is more difficult to isolate the problem .	Outages are typically repaired faster and are shorter duration than underground lines.
Repairs	Advantage	None	A fault in an overhead line can usually be easily detected by a visual inspection. This facilitates repairs and reduced outage times. Repairs are typically less expensive than underground lines because of the materials and lack of excavation.
	Disadvantage	Underground line cable failures cannot be visually diagnosed. The cable system must be tested with specialized equipment to locate the damaged sections of the cable. Upon locating the faulty component or cable, specially trained workmen must be mobilized to repair or replace the failed components or cable resulting in potential outages of days to weeks; depending on the type of failure to be repaired, the failure location, and the availability of replacement materials.	None.
Reliability	Advantage	None	The life of an overhead line is typically 60 -80 years.
	Disadvantage	Underground systems tend to be less reliable than overhead installations due to a variety of factors (like conductor heat buildup, underground water and bacteria). Depending on the	While an overhead line may experience more outages, the number of outages is expected to be minimal due to new construction.

Resource/Issue	Advantage/ Disadvantage	Underground Line	Overhead Line
		cable, the life is about 40 years..	
Capacity	Advantage	None	Smaller conductor is needed to carry the same capacity as an underground line; this results in a lower cost for materials.
	Disadvantage	Underground cables carry far less capacity than overhead lines in similar sized cables; therefore, much larger cables are required to achieve the same capacity.	None
Maintenance	Advantage	Typically less maintenance than an overhead line because not as susceptible to weather events, fires, vandalism, etc.	Use of steel structures and new conductor would reduce the expected number of maintenance activities. Inspection would occur on a regular basis. Easier to access line and maintenance and inspection activities can more readily occur.
	Disadvantage	When maintenance is required, will need to re-excavate areas. May have to excavate multiple areas to isolate the problem. Will need to periodically manage vegetation to prevent the establishment of trees and large shrubs. Difficult to detect impending insulation failures. Inspections would occur on a regular basis.	None
Ancillary facilities	Advantage	None	No additional facilities are required.
	Disadvantage	Require transition structures. Underground splice vaults are required approximately every 1,000 to 1,600 feet, depending on the voltage.	None.
Ground disturbance	Advantage	None	Ground disturbance is concentrated at each structure location and roads and is not continuous along the ROW.

Resource/Issue	Advantage/ Disadvantage	Underground Line	Overhead Line
	Disadvantage	Underground transmission lines require large excavations through all habitat types. Approximately 50- to 80-foot-wide areas are needed to be cleared for construction and maintenance for the length of the route for underground lines. The right of way needs to remain free of trees and large shrubs to prevent interference to the underground lines from tree roots. Access roads also need to be maintained for underground lines for maintenance and repair. Excavation would occur during maintenance activities.	Access roads would need to be maintained for maintenance activities.
Environmental resources	Advantage	Does not provide perching or nesting opportunities.	Minimal vegetation management necessary due to low-growing nature of existing vegetation.
	Disadvantage	Trees and large shrubs are not allowed within the ROW due to potential problems with roots. Ground disturbance during construction, repairs, and maintenance can result in large, permanent displacement of excavated soil and subsequent issues with re-establishing native vegetation and preventing the overgrowth of invasive species.	Provides limited perching and nesting opportunities. Ground disturbance could occur at structures during maintenance activities.

The estimated costs for constructing underground transmission lines range from 4 to 14 times more expensive than overhead lines of the same voltage and distance (Public Service Commission of Wisconsin[10]). A 2012 survey found that new construction of underground transmission lines in rural areas ranged from $1,400,000 to $27,000,000 while comparable overhead construction ranged from $174,000 to $6,500,000 (EEI 2012) Factors that affect cost include the distances between splices and termination points (which affect the number of splice vaults); trenching construction costs; crossing natural or manmade barriers (e.g., rock ledge or boring under a highway); and the materials themselves. Underground components are often not as readily available as overhead components, are frequently not interchangeable, and typically require specialized training and/or proprietary equipment for installation and maintenance. Idaho Power's typical construction costs for overhead distribution lines range from $80,000 per mile to $150,000 per mile and typical costs for underground distribution lines of comparable service ranges from $500,000 to $1,500,000 per mile for an all conduit system, which is Idaho Power's standard. The conduit system provides protection for the conductor and allows for faster repairs

[10] http://psc.wi.gov/thelibrary/publications/electric/electric11.pdf; accessed May 29, 2014.

in certain situations. The difference in costs for underground versus overhead transmission lines is even greater than distribution lines. These additional costs must be approved by the Idaho PUC and are passed on to ratepayers.

Because of the need to keep the existing line energized, or have the ability to energize it within 24 hours, and the need to excavate a trench for underground construction, the existing ROW could not be used for an underground route. Trenching equipment would not be able to operate within the existing 60-foot wide ROW or requested 100-foot wide ROW safely while the existing line is energized or in place. Moreover, it is unlikely that vaults could be constructed within the existing or requested ROW while the line is in place. A new ROW, that could parallel the existing ROW, could be used for an underground line. However, there would be places where an underground route would need to vary from the existing ROW alignment because of topography (e.g., where the existing ROW crosses canyons). Construction of an underground line in existing road ROW (e.g., Highway 75) is technically feasible, but is not practicable given the amount of disruption to traffic that would occur during construction and maintenance activities. A new ROW that travels cross country is also technically feasible, but is not practicable given the amount of new ground disturbance. Ground disturbance would include the trench and roads for the construction, operation, and maintenance of the line.

This alternative was not analyzed in detail because it would increase the amount of environmental disturbance due to trenching, a new ROW, roads associated with the new ROW, and the need to construct new roads and maintain existing roads to remove the existing line.

2.7.5 Alternative E—Reroute the Existing Line

The following two alternative routes were proposed during scoping:

- Reroute the line to run along Highway 75 to reduce habitat fragmentation.
- Reroute the line to come from Mountain Home to reduce habitat fragmentation.

Construction of a new line in a new ROW adjacent to Highway 75 was not analyzed for reasons described in Section 2.6.1 (Alternative A). Additionally, construction adjacent to Highway 75 posed the following issues:

- Development of a route through the town of Shoshone and the ability to obtain the necessary easements;
- Highway 75 is a scenic byway and a transmission line may not be compatible with that designation;
- Construction of a new line in a new ROW could exacerbate fragmentation of sage-grouse breeding, nesting, brood-rearing, and winter habitat; and
- A new substation (Burmah) would need to be built south of Timmerman Hill and then two new lines would be constructed from the substation.

An alternative to the new Burmah substation and two new lines went straight up the highway over Timmerman Hill and into the Wood River Substation north of Hailey. This route was rejected by the CAC because of visual impacts and the difficulty of routing a new transmission line through Hailey when there are already two transmission lines.

No specific route was provided from Mountain Home to the Wood River Substation, but based on conversations with the Shoshone-Bannock tribe, the BLM understands that the route would follow Highway 20. If the route started at an Idaho Power substation near Mountain Home and followed Highway 20 to the Moonstone Substation it would require approximately 70 to 100 miles of new construction in a new ROW; approximately 30 miles or more would occur in PHMA, IHMA, and GHMA. The route would then continue from the Moonstone Substation to the Wood River substation within the existing ROW. Because of the winding nature of the road, it is likely the final line design would not be adjacent to the road in all cases and cross country construction, including service roads, and a new ROW would be required. The route along Highway 20 may be shorter or longer depending on engineering feasibility (e.g., topography, appropriate separation from existing facilities such as homes or US Bureau of Reclamation power lines) and the ability to acquire the necessary easements and authorizations. This route would not avoid or reduce impacts to sage-grouse habitat and would not be consistent with the ARMPA. Because this alternative was inconsistent with the ARMPA and the State of Idaho's alternative it was not developed further and was not analyzed in detail. While it may reduce habitat fragmentation in one area, it would cause or contribute to habitat fragmentation in other sage-grouse habitat. It would also result in the creation of new ground disturbance and a new ROW.

The Mountain Home alternative would also not address Idaho Power's reliability need. The reliability issue has to do with the exposure of WRV customers to unacceptably low voltage following an outage of one of the Wood River lines. A line from Mountain Home would perform more poorly during the loss of a second line than a line of the same construction in the existing corridor due to the longer route distance. To achieve equal performance, a line from Mountain Home would need to be built larger than an equivalently performing line in the existing ROW. A larger line would cost more to build on a per mile basis and would also cost more than the Proposed Action because of the increased length.

Both alternatives would also involve construction adjacent to a highway. The Idaho Transportation Department (ITD) determines the distance the line would need to be from the road based on the speed limit and the type of road; the line could not be placed immediately adjacent to the pavement. Because Highway 75 is a scenic byway, Idaho Power would need to get approval from ITD in addition to the usual permits for construction in their right-of-way. If Idaho Power were to build within road ROW, they would be required to move the line, at their cost, to accommodate any future road projects (e.g., widening). This would require development of a new route and alternatives, permitting, decommissioning of the existing line, and construction of another line.

CHAPTER 3.0—AFFECTED ENVIRONMENT

This chapter describes the current conditions (affected environment) for the Proposed Action and alternatives. The resources analyzed within this EA are:

- Archaeological and historical resources
- Soils
- Vegetation and special status plant species
- Wildlife and special status wildlife species
- Fish habitat
- Water quality
- Visual resources
- Economic and social values

Potential effects of the Proposed Action and alternatives are discussed in Chapter 4.

The affected environment is described in terms of the "project area". For the purpose of this document, project area includes the requested 100-foot wide ROW, roads, and temporary construction areas.

3.1 Archaeological and Historical Resources

Cultural resources are defined by the BLM (BLM Manual 8100) as: "a definite location of human activity, occupation, or use identifiable through field inventory (survey), historical documentation, or oral evidence. The term includes archaeological, historic, or architectural sites, structures, or places with important public and scientific uses, and may include definite locations (sites or places) of traditional cultural or religious importance to specified social and/or cultural groups. Cultural resources are concrete, material places and things that are located, classified, ranked, and managed. They may be, but are not necessarily, eligible for the National Register. Historic property is a term used to describe a cultural resource that meets specific eligibility criteria (36 CFR 60.4) for listing in the National register of Historic Places (NRHP). Cultural resources are a fragile, non-renewable resource, subject to impacts and degradation from many sources, both natural and human caused. The National Historic Preservation Act outlines the methods by which Federal agencies are to determine cultural resource significance and preservation requirements.

Native Americans have been living in the region for at least 12,000 years and likely longer. Native American occupation has been divided into various periods by archaeologists to reflect changes in technology, and, possibly, cultures. Regional archaeologists have developed a cultural chronology consisting of: Paleoindian Period (12,000–¬8000 B.P.); Archaic Period (8,000–250 B.P.); and, a Protohistoric period (250 B.P.–Historic Period) (Butler 1978, 1986; Plew 2008;

Swanson 1972). Archaeological sites representing all three periods are present in south central Idaho. This includes one of Idaho's best known sites related to the Paleoindian Period, the Simon Clovis Cache (Yohe and Woods 2002). Native American tribes maintain a tie to their ancestral lands that continues to this day. The Shoshone-Bannock Tribes of the Fort Hall Indian Reservation actively maintain their cultural traditions and assert aboriginal rights and/or interests in the project area. This includes participation in an annual Camas Lily Days celebration in Fairfield, which includes harvesting camas bulbs in Camas Prairie.

Euroamerican's entered the general area as early as the beginning of the 19th century. A fur trading expedition led by Wilson Hunt attempted to travel by canoe down the Snake River in 1811. Although unsuccessful, this early foray was soon followed by other trapping expeditions (Idaho State Historical Society 1973). Starting in the 1840s, thousands of immigrants traveled the Oregon Trail and its alternates through southern Idaho and points farther west. Although there was some limited settlement along the trails with people catering to immigrant needs, it wasn't until after the discovery of gold and silver in the early 1860s that larger, permanent settlements were established in Idaho. In addition to mining camps, farms and ranches were established to provide miners with foodstuffs.

The influx of permanent settlers resulted in a number of conflicts with Native Americans and the eventual removal of Native Americans to reservations at Fort Hall and Duck Valley. The last of these conflicts was the Bannock War, which resulted from loss of camas gathering areas in Camas Prairie (Murphy and Murhpy 1986). Several key events in this war took place within the SFO boundaries.

With the establishment of permanent settlements came improvements to local, regional, and national transportation networks, including roads and railroads. Railroads, such as the Oregon Short Line, were built and towns were founded across the area. After the mining boom faded in the early 1900s, large scale irrigation projects were built, such as Magic and Milner Dams. Each of the irrigation projects resulted in the construction of many miles of canals and ditches and an increase in Euroamerican settlement. This in turn lead to an increase in the number of roads and other infrastructure, such as transmission lines (both telephone and electric). Traces of all these activities still remain on the landscape.

An intensive (Class III) survey was completed in 2011 for the existing right-of-way on BLM administered lands (Gray and Statham 2012). An inventory of private lands (where access was granted), access roads, and pulling and tensioning sites located outside of the original right-of-way was conducted in 2014 (Gray and Statham 2015). A search of Idaho State Historic Preservation Office files indicates that 73 archaeological and historic sites had previously been recorded within ½-miles of the project area. The sites were dominated by historic period sites, including the Goodale Trail, ditches and canals, railroad grades, etc., as well as prehistoric lithic scatters. Condition of the sites is variable, ranging from excellent to heavily damaged from a variety of impacts.

A total of 25 sites were recorded or rerecorded during the 2011 and 2014 surveys. This includes five prehistoric lithic scatters, three multi-component lithic/trash scatters, two trash scatters/dumps, four ditches/canals, two railroad grades, a bridge, the Goodale Trail, a historic

road (Democrat Gulch Road), a concrete batch plant, a rock wall, two prospects, a homestead/mining camp, and a transmission line (Line 433 itself).

Of these 25 sites, ten are considered eligible to the National Register of Historic Places: the Y-Canal (47-017630); the Z-canal (47-017628); the Goodale Trail (10BN885); the Oregon Short Line Railroad (10GG493); the Union Pacific Railroad, Hill City Branch (10CM263); Democrat Gulch Road (13-16421); the two prospect sites (433-68-01 and 433-71-02); one of the dumps (433-69-01); and, the homestead/mining camp site (433-71-01). There are no structures located within any of these sites, and they are all spanned by the transmission line. This indicates only minimal impacts from the line to the site's setting, which have been in place for 50 years. Existing access roads, however, pass through sites 10BN885, 433-69-01, 433-68-01, 433-71-01. These roads are the only project related impacts to the sites and are an existing condition.

3.2 Soils

Dominant soil orders found in the project area include Aridisols and Mollisols. Aridisols are semi-desert and desert soils. Aridisols contain subsurface horizons in which clay, calcium carbonate, silica, salts, and/or gypsum have accumulated. They are usually not suitable for agriculture unless irrigation water is provided. Revegetation in these areas may be more difficult due to lack of water, or revegetation may need to be initiated in a wetter portion of the year. They tend to be coarse textured and are susceptible to wind erosion. Sandy and loamy soils are susceptible to accelerated wind erosion when vegetation cover is removed. Sandy loam soils have a moderate to high wind erosion potential, but would usually not erode readily unless the surface is disturbed and the vegetation is sparse. Water erosion can occur on steeper slopes. Ardisols occur in the southern portion of the project and extend a little north of highway 26.

Mollisols are generally found in grasslands, shrub-steppe, mountain shrublands, and along riparian zones. Mollisols includes a variety of soils formed mainly under grasslands. These soils have a strong organic component formed by the decomposition of grass and other vegetation, which results in very productive soils. These soils, if properly preserved or reclaimed, should be favorable for revegetation. They are finer grained than Aridisols and are subject to water erosion and soil compaction when wet. The finer textured soils on steeper slopes have a moderate to high water erosion potential when disturbed. They are also subject to wind erosion when their surfaces are exposed. Mollisols occur in the central and northern portion of the project.

A rock outcrop occurs between the ardisols and molisols. A vertisol soil occurs in the central portion of the project, between the rock outcrop and ardisols. Vertisols are clay-rich soils that shrink and swell with changes in moisture content. During dry periods, the soil volume shrinks, and deep wide cracks form. The soil volume then expands with moisture.

The distribution of soil orders generally correlates well with vegetation types. Agricultural land uses are more common in the southern portion of the project while more arid vegetation communities (e.g., sagebrush) occur in the central and northern portion of the project.

3.3 Vegetation and Special Status Plant Species

Vegetation community descriptions are based on 2011 and 2014 field surveys. Prior to conducting the field surveys, URS and Idaho Power consulted with the BLM on survey methods,

potentially occurring sensitive species, and noxious weeds that may occur in the project area. Methods and results are described in detail in *King to Ketchum Transmission Line (Right-of-Way Grant IDI-012919) Wildlife, Plant, and Noxious Weed Terrestrial Visual Encounter Survey Report* (URS 2011) and *King to Wood River (ROW IDI-012919) Wildlife, Plant, and Noxious Weed Report Addendum* (IPC 2014). Copies of these documents are available at the Shoshone Field Office. This section describes the vegetation communities, BLM special status species occurrences, wetland and riparian areas, and noxious weeds/invasive plants.

3.3.1 Vegetation Communities

To facilitate the description of existing vegetation communities and to capture differences along a linear project, the project area was divided into north, central, and south sections. Vegetation communities within the project area, and by land ownership, are summarized in Table 3-1 and shown on Figure 3-1.

Table 3-1—Vegetation Communities Found within the Project Area—ROW (requested 100-foot wide), Service Road, and Pulling and Tensioning Sites

Vegetation Community[a]	Acres							
	Transmission Line ROW				Service Road ROW[b]			
Ownership	**BLM**	**State**	**Private**	**Total**	**BLM**	**State**	**Private**	**Total**
Agricultural	0.82	0.21	49.65	**50.67**	0.12	0.01	7.33	**7.47**
Developed	6.56	0.94	14.88	**22.38**	4.04	2.17	8.65	**14.86**
Forested	0	0	5.49	**5.49**	0	0	0	**0**
Grassland	40.79	21.32	88.75	**150.86**	8.34	3.42	15.9	**27.67**
Mixed shrubland	4.74	0.48	11.82	**17.04**	0.64	0.04	1.31	**1.99**
Riparian	1.54	0	8.23	**9.8**	0.07	0	0.47	**0.54**
Sagebrush shrubland	313.85	43.48	99.61	**456.95**	50.12	7.4	18.35	**75.95**
Water	.027	0.84	1.67	**2.78**	0	0	0.06	**0.06**
Total	**368.57**	**67.26**	**280.12**	**715.95**	**63.42**	**13.04**	**52.09**	**128.54**

Vegetation Community[a]	Acres							
	Pulling and Tensioning Sites—Option 1				Pulling and Tensioning Sites—Option 2			
Ownership	**BLM**	**State**	**Private**	**Total**	**BLM**	**State**	**Private**	**Total**
Agricultural	0	0	1.48	**1.48**	0	0	1.48	**1.48**
Developed	0.02	0	1.16	**1.19**	0.04	0	0.46	**0.5**
Forested	0	0	0	**0**	0	0	0.12	**0.12**
Grassland	1.36	1.56	2.03	**4.95**	2.35	0	1.67	**4.01**
Mixed shrubland	0.46	0.5	0.19	**1.15**	0.69	0	0	**0.69**
Riparian	0	0	0	**0**	0	0	0.02	**0.02**
Sagebrush shrubland	12.87	0.69	3.89	**17.43**	6.53	0	6.18	**12.71**

Water	0	0	0	**0**	0	0	0	**0**
Total	**14.77**	**2.75**	**8.75**	**26.21**	**9.61**	**0**	**9.93**	**19.53**

[a] Forested includes aspen stands, coniferous, and deciduous forest. Grassland includes annual, perennial, mesic, and mixed grasslands. Mixed shrubland includes rubber rabbitbrush, spiny hopsage, buckbrush-chokecherry-sagebrush, antelope bitterbrush—gray rabbitbrush, and mixed shrubs. Sagebrush shrubland includes, mountain big sagebrush, low sagebrush, Wyoming big sagebrush, Basin big sagebrush, and mixed sagebrush.

[b] Service road acreage is based on a 14-foot wide road and includes all roads regardless of if Idaho Power has proposed maintenance and the type of maintenance.

3.3.1.1 North Section

The northern section of the project area, which extends southward approximately 20 miles from the northernmost point of the ROW north of Hailey, is characterized as rolling to steep foothill slopes with occasional cliffs and bedrock outcrops. This section occurs at an elevation of 4,898 to 5,980 feet. Vegetation communities are mostly comprised of mountain big sagebrush shrublands with perennial bunchgrass understories. Bluebunch wheatgrass, western wheatgrass, Thurber's needlegrass, Sandberg bluegrass, and bottlebrush squirreltail are the dominant perennial bunchgrasses in the mountain big sagebrush shrublands in this section. Soils within mountain big sagebrush shrublands are typically deeper loam than in other communities and are often overlain with gravel. Antelope bitterbrush often comprised the dominant overstory shrub species . A mosaic of lesser amounts of other vegetation communities includes low sagebrush and/or alkali sagebrush with Sandberg bluegrass and bottlebrush squirreltail understories, particularly in shallower, gravelly soils. Basin big sagebrush shrubland with an understory of basin wildrye and Louisiana sagewort is present in lower areas with greater moisture availability. Invasive annuals such as cheatgrass, bulbous bluegrass, and field brome are present in the sagebrush shrublands, becoming more prevalent in areas disturbed by livestock grazing or having experienced low-intensity fire. A sparsely vegetated antelope bitterbrush and rubber rabbitbrush community with a perennial grass understory is present on a ridge with shallow rocky soils. Patches of alkali sagebrush shrubland are present in boulder-rich areas.

Two small riparian areas occur within the northern section, the first occurring in a dry wash characterized by scattered black cottonwood, Douglas-fir, Pacific willow, and Woods' rose with a mesic graminoid understory. The second riparian area occurs along a narrow tributary to Rock Creek, with scattered quaking aspen and Pacific willow. The riparian area contains a mixed understory of Woods' rose, coyote willow, and mesic graminoids and forbs, including Canada thistle and diffuse knapweed. A basalt outcrop area near a cliff is dominated by Saskatoon serviceberry with an understory of various perennial forbs and grasses.

The majority of the northern section has existing access roads that occur in or adjacent to the existing ROW and connect to service roads. All roads have gravel and cobble sized substrate, but rarely is any larger substrate present. Previously graded areas in the northern portion are typically dominated by graminoids such as bulbous bluegrass, cheatgrass, Sandberg's bluegrass, and some western wheatgrass.

The southern half of the northern section is accessed by the well maintained gravel roads Rock Creek, Poverty Flat, and Poison Creek. Service roads off of the maintained gravel roads in this section have limited vegetation in them. The most abundant species in service roads in this

portion are field brome, cheat grass, and bulbous bluegrass. Shrub encroachment is very limited in the roads, although they are fairly common outside of two-tracks.

3.3.1.2 Central Section

The central section of the project area begins just south of Highway 20 near Camas Creek and extends southward approximately 20 miles. The central section is characterized as flat or gently rolling intermountain valleys with occasional basalt cliffs. The elevation range of this section is between 4,189 and 5,839 feet. Vegetation communities are predominantly a mosaic of different species of sagebrush shrublands with a bunchgrass understory. Soil is often loam that varies from sandy clay loam, sandy loam, clay loam, to silty clay loam, often overlain with basalt gravel and boulders. Alkali sagebrush is well represented and typically has an understory of Idaho fescue and Sandberg bluegrass. Low sagebrush with a Sandberg bluegrass understory is also very common. Mountain big sagebrush with a bluebunch wheatgrass and/or Sandberg bluegrass understory and basin big sagebrush, often with antelope bitterbrush and a bluebunch wheatgrass understory, are also common. Smaller patches of fuzzy sagebrush shrublands are present.

In the southernmost part of the central section, relatively large expanses of Wyoming big sagebrush shrublands with a Sandberg bluegrass and weedy non-native grasses understory, such as bulbous bluegrass, cheatgrass, and field brome, are represented. Patches of perennial grassland with crested wheatgrass, bluebunch wheatgrass, Sandberg bluegrass, and bottlebrush squirreltail are interspersed, particularly in the northern part of the central section. The perennial grasslands lack a native shrub cover due to past wildfire. Patches of annual grasslands dominated by medusahead, cheatgrass, and field brome are interspersed with the Wyoming big sagebrush shrublands in the southernmost part of the central section. Rocky basalt outcrops and cliffs are present in the southern section, and the project area crosses the basalt cliffs of Camas Creek at the western edge of the Magic Reservoir. Ephemerally moist swales and drainages are interspersed and the project area crosses multiple mesic graminoid dominated wet meadows occurring in low swales.

A small section of the project area, approximately six-tenths of a mile, burned during the 2013 Fir Grove Fire. It appears that the Fir Grove Fire had very little impact on the vegetation community of this area. The ROW crosses a small finger of the fire perimeter that protrudes from the main body; however, the majority of this area still has sagebrush shrublands intact and only a few localized areas that show more severe fire intensity and charred shrub skeletons. Access roads cut through the main body of the fire where shrub skeletons are much more apparent, however gray/rubber rabbitbrush may have survived the fire or resprouted post-fire. Graminoid composition in this area is sparse and diverse, with the exception of a few small pockets of cheatgrass and bulbous bluegrass dominance. The most common graminoid species present include Sandberg’s bluegrass, bluebunch wheatgrass, bottlebrush squirreltail, and Great Basin wildrye. This area has a diverse forb composition, and a limited amount of weedy species.

The northern and southern extremes of this section have well defined service roads within the ROW. The service roads in both of these portions of the line are well traveled and have limited vegetation with the exception of some graminoid species. These portions also contain occasional, low density populations of noxious weeds. Diffuse knapweed is the most abundant noxious weed in this section of line; however, the majority of the noxious weeds are located to the northeast of highway ID-46. While little vegetation is present within the roads themselves, a variety of

sagebrush communities are present adjacent to the roads. Sandberg's bluegrass and cheatgrass are the most abundant graminoids in the roads of the central section. In the large middle portion of the central section, the service roads are often overgrown with vegetation. The service roads here are very faint, if their existence was detected at all. The overgrown service roads go through communities dominated by mountain sagebrush, low sagebrush, and Wyoming big sagebrush. The most common forbs in the area are several buckwheat species, lupine, and several phlox species. Substrate in service roads varies from very little rock substrate to roads that go over bedrock and boulders.

3.3.1.3 Southern Section of ROW

The southern section of the project area is flat to gently rolling desert with occasional basalt outcrops, and occurs from between 3,320 and 4,150 feet in elevation. This section is in much closer proximity to agricultural lands as compared to the northern and central sections, and is more influenced by disturbances such as livestock grazing, canals, and roads within and adjacent to the project area. Basin big sagebrush and Wyoming big sagebrush shrublands with understories of invasive annual grasses (cheatgrass, medusahead, and field brome) are common in this section. Some areas had been burned and converted to medusahead- or cheatgrass-dominated annual grasslands. Patches of abundant tumble mustard are also present. Occasional sparsely vegetated basalt outcrops dominated by dwarf goldenbush and occasional antelope bitterbrush and forbs such as hotrock penstemon and skullcap are interspersed within the big sagebrush/annual grass communities.

Three weedy riparian areas occur within the southern section of the project area. A riparian area characterized by scattered Russian olive and willow trees with a scattered shrub layer of coyote willow and an understory with noxious and non-native forbs such as Canada thistle and Fuller's teasel was identified. The project area crosses a large irrigation canal with a riparian plant community dominated by Canada thistle, with some coyote willow and Woods' rose in the shrub layer and sparse Russian olive and black cottonwood trees in the overstory. A very narrow riparian area dominated by Woods' rose and Russian olive with a (mostly weedy) forb and graminoid understory occurs along a large irrigation canal.

The majority of the southern section of line has service roads in good condition that occur within the ROW. These roads are present in all areas except for a few small areas in the northernmost portion of this section. Vegetation is limited to sparse invasive annuals, such as cheatgrass. Service roads in the northern portion go through Wyoming big sagebrush communities; however, most of the service roads that have become faint travel through grassland. Rocks in or adjacent to the roadway range in size from pebble-gravel to boulder-bedrock. Cheatgrass, bulbous bluegrass, and Sandberg's bluegrass were the most common species within the roads. Shrub presence in roads was mostly due to encroachment on the edges, not rooted in the roadway. The most common forbs encountered in the southern section of the survey area were wavyleaf thistle, fiddleneck , and common sunflower.

3.3.2 Special Status Plants

Special status plants include plants that are listed as Threatened or Endangered under the ESA; species that are proposed or candidate for listing under the ESA, and BLM sensitive species. Type 1 BLM special status species are federally listed Threatened or Endangered species and

designated Critical habitat. Type 2 species have a high likelihood of being listed in the foreseeable future due to their global rarity and significant endangerment factors. Species also include; USFWS Proposed and Candidate species, ESA species delisted during the past five years, ESA Experimental Non-essential species, and ESA Proposed Critical Habitat. Type 3 species are Range-wide or State-wide Imperiled–Moderate Endangerment. These are species that are globally rare or very rare in Idaho, with moderate endangerment factors. Their global or state rarity and the inherent risks associated with rarity make them imperiled species. Type 4 are species generally rare in Idaho with small populations or localized distribution and currently have low threat levels. However, due to the small populations and habitat area, certain future land uses in close proximity could significantly jeopardize these species.

There are currently no ESA-listed plants in the SFO. Special status plants with the potential to occur within the project area are identified in Table 3-2.

Table 3-2—Special Status Plant Species with the Potential to Occur within the Project Area.

Common Name	Habitat Type	Flowering Period	BLM Status
Mourning milkvetch	Sagebrush/grass communities in thin soil of stony basalt flats where moist in spring, below 1,500 meters elevation.	Late May through July	Type 4
Snake River milkvetch	Barren sites with big sagebrush, Indian ricegrass, needle-and-thread grass and four-wing saltbush. Growing in loosely aggregated, frequently moving sand and gravelly sand deposits on bluffs, talus, dunes and volcanic ash beds, from 700 to 1,075 meters elevation.	Late April through June (spring and early summer)	Type 4
Greeley's wavewing	Sandy soil and brown and white volcanic ash in Wyoming big sagebrush, desert shrub and Indian ricegrass zones.	Flowering in March-April, fruiting to early June	Type 3
Giant helleborine	Calcareous hot or cold springs, often with monkey flower, sedges, and spike rushes, from 800 to 2,000 meters elevation.	April to early August	Type 3
Matted cowpie buckwheat	Gravelly branches on lake sediments in shadscale, mixed desert shrub and sagebrush communities, 760 to 1,300 meters elevation.	May through July	Type 4

Common Name	Habitat Type	Flowering Period	BLM Status
Bug-leg goldenweed	Gravelly to heavy clay soil in sagebrush-grass meadows, rolling sagebrush hills, and dry flats. Areas that are moist early and then dry out (ephemerally moist); open weak/shallow drainage or head of drainage. Also along fence lines, roads, and in old fields. Heavy clay soil. 1,500 to 1,700 meters elevation. Especially in Camas Prairie, Wood River Valley, and Muldoon Creek areas. Doesn't do well in thick grass. Endemic to the Camas Prairie, Bennett Hills, and the foothills of the Soldier, Smoky, Boulder, and Pioneer Mountains (Blackburn, 1994). Shallow disturbances such as scraping may be tolerated but deep disturbance (excavation for pipelines, cable burial, mining, right-of-way maintenance, trail or road construction, etc.) will kill plants.	July to August	Type 3
Malheur prince's plume	Annual to biennial mustard that occurs on clay soils derived from basalt that form slightly-raised, convex-shaped mounds at approximately 5000 feet elevation. Typically occurs on flat to steep north-facing exposures in clay soil in shrub-steppe ecosystems. The only known population in the SFO is in the Bennett Hills on the bench above Little City of Rocks.	April through June	Type 2

Mourning Milkvetch Locations within the Project Area

Mourning milkvetch was found at multiple locations within the project area (URS 2011 and IPC 2014) (Figure 3-2, Table 3-3). Mourning milkvetch was found in slightly disturbed areas as well as areas with little to no disturbances. This species was most often found within alkali and low sagebrush/perennial bunchgrass (typically dominated by Sandberg bluegrass) communities but was also occasionally found in areas where mountain big sagebrush was the dominant overstory shrub. Groups of observed mourning milkvetch plants are considered distinct occurrences if separated by at least one mile.

Table 3-3—Mourning Milkvetch Locations and Approximate Number of Plants Associated with Roads and Tensioning Sites

Location by Structure	Approximate Number of Plants	Project Facility	Road Category
Associated with Roads and Tensioning Sites			
173–198	159	Service road	A
204–217	346	Service road and tensioning site	B
217–225	31	Service road	A
236–243	38	Service road and tensioning site	C
260–261	1	Service road	C

279–281	27	Service road	A
293–314	62	Service road and tensioning site	A
314–325	1	Service road and tensioning site	A
325–340	29	Service road and tensioning site	A
381–387	242	Service road	A

A single occurrence of about 260 individuals occurs in the northern section of the ROW. This occurrence was found in both low sagebrush and alkali sagebrush shrublands with a healthy perennial bunchgrass understory dominated by Sandberg bluegrass. Five occurrences were found in the central section of the ROW. The northernmost occurrence, which spanned approximately 1.3 miles, consisted of an estimated 40 plants. An area of potential habitat with no plants observed was found just south of this occurrence. The second occurrence in the central section, which spanned a length of about 2.7 miles of the ROW, consisted of an estimated 4,070 plants. The third occurrence in this section consisted of eight plants, and the fourth occurrence consisted of three plants. The last occurrence in the ROW, which ran along Highway 46, consisted of an estimated 1,400 plants over a span of approximately five miles. Within the central section this species was most often found within alkali and low sagebrush/perennial bunchgrass (typically dominated by Sandberg bluegrass) communities but was also occasionally found in areas where mountain big sagebrush was the dominant overstory shrub. No occurrences were found in the southern section of the ROW. These six occurrences occupy an area approximately 9 miles in length and contain an estimated 5,781 individual plants. All mourning milkvetch individuals observed were within or immediately adjacent to the existing ROW.

No other SSP species were observed within the project area. Giant helleborine, matted cowpie buckwheat, Malheur princesplume, and bug-leg goldenweed all have Idaho Natural Heritage Program (INHP) documented occurrences within a mile of line 433, although none were observed during the terrestrial visual encounter surveys (URS 2011 and IPC 2014). No potential habitat was found for Snake River milkvetch, Greeley's wavewing, giant helleborine, matted cowpie buckwheat, or Malheur prince's plume. Potential habitat for bug-legged goldenweed was available, particularly within the wet meadows; however, no individuals of this species were observed.

3.3.3 Invasive Plants and Noxious Weeds

Noxious weeds are defined by the Idaho State Department of Agriculture. Noxious weeds known to be present or known to have occurred in the past and have the potential to occur in the project area are listed in Table 3-4.

Table 3-4—Noxious Weeds Potentially Occurring in the Shoshone FO

Common Name	Statewide List Type[11]
Russian knapweed	Control
Canada thistle	Containment
Diffuse knapweed	Containment
Rush skeletonweed	Containment
Salt cedar	Containment
Scotch thistle	Containment
Spotted knapweed	Containment
Dalmation toadflax	Containment
Leafy spurge	Containment
Puncturevine	Containment
Whitetop	Containment

Noxious weeds and invasive plants are found in varying degrees throughout the SFO and project area. Cheatgrass and medusahead wildrye, both invasive annual grasses, are prevalent in the lower elevations. Typically, medusahead wildrye is limited to finer textured soils. Other invasive plants found in the project area include field brome, tumble mustard, bur buttercup, and Russian thistle.

Nine noxious weeds listed by the Idaho State Department of Agriculture occur within the project area (Figures 2, 5-14, 17-24; Table 4; Appendices B and C in URS 2011). There are no noxious weeds in the north portion of the northern section of the project area. Noxious weeds occur in access and service roads in this south portion of the northern section of the ROW. Diffuse knapweed is the most abundant weed in this section; however, whitetop and Russian knapweed are also present at several locations along the roadway.

The central section has the highest population and diversity of noxious weeds. Diffuse knapweed is very common and abundant throughout this entire section. Field bindweed and whitetop occur along a fence line just outside a service road. Other noxious weeds observed in low abundance in this section included spotted knapweed, rush skeletonweed, and Canada thistle.

Noxious weeds are present in roads throughout the southern portion of the ROW, with rush skeletonweed and diffuse knapweed being the most abundant. Field bindweed, Scotch thistle, Russian knapweed, and Canada thistle are all present in low abundance in this area.

[11] "Control" means any or all of the following: prevention, rehabilitation, eradication, or modified treatments. "Containment" means halting the spread of a weed infestation beyond specified boundaries. Taken from Idaho Code Title 22 Agriculture and Horticulture, Chapter 24 Noxious Weeds, Idaho State Department of Agriculture.

Diffuse knapweed is the most common noxious weed in the northern and central sections, and Canada thistle, rush skeletonweed, and field bindweed are the most common species in the southern section. Russian knapweed, whitetop, spotted knapweed, poison hemlock, and Scotch thistle also occur within the project area. Past and current land uses in the vicinity of the project area include livestock grazing, agriculture, canals, roads, residential areas, power lines, off-highway vehicle use, and Highway 26. These land uses have likely contributed to the establishment and spread of noxious weeds in the area.

3.4 Wildlife and Special Status Wildlife Species

Wildlife species occurrences and species descriptions are based on 2011 and 2014 field surveys; information provided by BLM staff, IDFG Idaho Natural Heritage Program (INHP) database; and existing literature. Prior to conducting the field surveys, URS and Idaho Power consulted with the BLM on survey methods and potentially occurring sensitive species within the project area. The potential for occurrence was based on the presence of suitable habitat and/or documented occurrences. Methods and results are described in detail in *King to Ketchum Transmission Line (Right-of-Way Grant IDI-012919) Wildlife, Plant, and Noxious Weed Terrestrial Visual Encounter Survey Report* (URS 2011) and *King to Wood River (ROW IDI-012919) Wildlife, Plant, and Noxious Weed Report Addendum* (IPC 2014). Copies of these documents are available at the Shoshone Field Office.

All mention of wildlife "occurrences" are in reference to the INHP Animal Conservation Database element occurrence (EO) GIS data. These will be referenced as EO(s), recorded occurrence(s), or simply occurrence(s). Information collected during project-specific surveys are expressed as "observations" with a reference to the year the survey was conducted.

This section addresses big game, game birds, migratory birds, and/or special status wildlife species. The SFO provides habitat for numerous wildlife species that are not considered sensitive and/or were not identified as an issue. These species are not addressed in this document. Species discussed will be identified according to their BLM and/or Federal status, if applicable. Where no type or species status is given, species should be considered species of concern, receiving protections under the MBTA, managed as a game species, or other non-game wildlife in Idaho. The two BLM types are as follows: Type 1 includes species listed under the ESA as Endangered or Threatened, Experimental Essential populations, and designated Critical Habitat. Type 2-Idaho BLM Sensitive Species: Includes State Director designated species as well as FWS Candidate Species, FWS Proposed species, FWS Experimental Nonessential Populations, and species delisted from ESA Threatened or Endangered status within the past 5-years.

3.4.1 Big Game

3.4.1.1 Elk

Elk graze on various grasses, forbs, and shrubs heavily during spring, summer, and fall. Occasionally they will feed upon agricultural crops and browse on willow, aspen, and oak. Elk populations are primarily located in the northern half of the SFO in higher elevation habitat. The southern portion of the SFO provides winter range for this species; however, habitat within the northern portions is also utilized year round. Forested and shrubland areas adjacent to more open areas with available forage and water provide suitable calving habitat. Calving occurs from mid-May to late-June. Hiding and thermal cover is provided by timber and aspen stands, willow-

dominated riparian zones, and rugged terrain. South facing slopes in the northern portions of the SFO are considered crucial winter range for elk and deer (Figure 3-3). Elk were observed during the 2011 survey effort in the northern section of the project area. During fall and winter months, heavy snowfall and cold conditions will push elk down into lower elevations for mobility, thermal relief, and food availability. According to data provided by the IDFG, the line intersects two large areas designated as elk wintering habitat. The wintering habitat crossed in the northern section of the proposed ROW covers an area of 128,730 acres and the southern expanse of elk wintering habitat crossed by the proposed ROW occupies 88,782 acres.

3.4.1.2 Mule Deer

Mule deer occupy a variety of habitat that varies from the conifer forests present in the northern end of the SFO, to the shrublands and grasslands located throughout the FO. Similar to elk, deer will utilize timbered and brushy hiding cover and graze on grasses, forbs, and shrubs. Agricultural areas are sometimes utilized by mule deer as well. Also, hiding and thermal cover is provided by timber and aspen stands, willow-dominated riparian zones, and rugged terrain. As with elk, mule deer will migrate from higher elevations to valleys and foothills for avoidance of snowfall. The south-facing slopes, particularly in the northern portions of the SFO, provide crucial mule deer winter range (Figure 3-3). Additionally, there are portions of the project area that are utilized during migration. Migration of deer typically occurs from the higher elevations near the northern end of the project area to the lower elevations to the south. There are areas within the SFO that are vital to mule deer fawning. Fawning typically occurs in forested areas adjacent to openings with available, if not abundant forage. Shrub habitats with adequate cover, forage, and water are also utilized during fawning activities. Deer fawning primarily occurs from late-May to mid-June.

3.4.1.3 Pronghorn Antelope

The pronghorn antelope utilizes open areas, most often sagebrush shrublands and grasslands. In the SFO this habitat is characterized by flat to gently rolling hills. These habitat types provide forage and cover for this species, as well as breeding and fawning areas. Breeding typically occurs in mid-September to early October and births occur May through mid-June. Antelope are present and widespread throughout the majority of the SFO; multiple individuals were observed during both the 2011 and 2014 survey efforts.

3.4.2 Game Birds

3.4.2.1 California Quail

This game bird species occurs within sagebrush, cultivated lands, and forest edges; however, proximity to water in these various habitats is preferred. This species is predominately found in the southern portion of the SFO, with several observations noted during the 2011 and 2014 surveys. There are multiple occurrences proximate to the project area.

3.4.2.2 Ring-necked Pheasant and Gray Partridge

Ring-necked pheasants exist in low numbers on BLM-administered lands and primarily occupy the BLM-agriculture interface, and grasslands. They are a protected game bird species. These species have been observed utilizing open areas, woodlands, and open mountain forests; however, in southern Idaho they are most likely to utilize the agriculture interface and grasslands. Documented EOs are grouped near the southern end of the ROW, especially near the

Snake River. Agriculture and grasslands are the vegetation types that are the most likely to support ring-necked pheasants within the ROW, particularly the interface between them. While the interface of these two habitat types is preferred, the potential to utilize either one, outside of the interface zone, still exists. Therefore, agricultural areas and grasslands are included in the analysis of these two species.

The gray partridge, formerly known as the Hungarian partridge or "Hun", is an introduced species from Eurasia. This is a game bird species in Idaho. The gray partridge is typically associated with cultivated areas with nearby bushes, grasslands, and hedgerows for cover. Agricultural areas are utilized for forage and as nesting sites by this species. This species was observed during the 2011 survey effort, but not during the 2014 survey. There are three documented EOs within a mile of the project area, and all of these are located near the southern section of line and the Snake River.

3.4.2.3 Mourning Dove

Mourning doves occupy a wide array of habitat that includes open woodland, forested land, cultivated lands, and more arid habitats in proximity to water. Documented EOs are scattered throughout the project area in a variety of areas including, but not limited to, roadsides, agricultural areas, and shrublands. Mourning doves were observed during the 2011 and 2014 survey efforts. Mourning doves are a migratory game bird that are hunted during a prescribed season in Idaho.

3.4.2.4 Chukar

The chukar occupies a variety of habitat from rocky hillsides, mountain slopes with grassy vegetation, and open desert with sparse graminoid cover. Sagebrush grassland communities near water is preferred by this species and nesting usually occurs in this habitat on the ground or near cover provided by rock substrate and vegetation. There are several documented EOs near the central section of line in the Little City of Rocks. There is also an EO south of the line near the Snake River. Consistent with the documented EOs, a chukar was observed during the 2014 survey effort near the Little City of Rocks. Chukars are a game bird species in Idaho.

3.4.3 BLM Special Status Wildlife Species and Bird Species of Conservation Concern

Special Status Wildlife (SSW) are defined by the Idaho State BLM office as Type 1 and Type 2 species. Type 1 species are Federally listed Threatened or Endangered Species, and Experimental Essential populations; Type 2 species are Idaho BLM Sensitive Species, including USFWS Proposed and Candidate species, ESA species delisted during the past 5 years, and ESA Experimental Non-essential populations (BLM 2015). Executive Order 13186, signed January 10, 2001, lists several responsibilities of Federal agencies with respect to conservation of migratory birds and their habitats. Known element occurrence records of special status wildlife species and migratory birds are shown on Figure 3-4.

3.4.3.1 Raptors

Peregrine Falcon. The peregrine falcon is protected under the MBTA. The peregrine falcon was not observed during the 2011 or 2014 surveys; however, there is an occurrence approximately 0.5mile from the existing transmission line that was recorded in 2012 near Croy Creek Pond. Since 2007, approximately 20 peregrine falcons have been released at Centennial Marsh, located

18 miles from the survey area (Gary Wright, BLM, pers. comm.). The release of these individuals may increase the potential for this species to occur in or near the ROW. This species primarily pres on waterfowl and other larger marsh dwelling birds. The rocky bluffs and cliff faces near the Snake River and Malad River provide potential nesting and roosting sites for the peregrine falcon.

Ferruginous Hawk. The ferruginous hawk is a BLM Type 2 species. It inhabits flat and rolling terrain in grassland or shrub-steppe regions. In Idaho, the species is locally abundant at the interface between juniper and shrub-steppe habitats. During the 2011 survey, no ferruginous hawks were observed, and the closest EO was recorded in 2011 and is approximately 0.5 mile away from the project area. Potential habitat in the form of sagebrush communities and annual and perennial grasslands are present throughout the project area. Various sections of the project area border or intersect major roadways, which provide a continual source of disturbance. The proximity to the Snake River and the intersection of the Malad River provide rocky outcrops and cliff faces that could provide quality nesting and roosting habitat for the ferruginous hawk. Other preferred nesting areas are in tall trees, hillsides, and power poles.

Golden Eagle. The golden eagle is often associated with open or semi-open areas in deserts and mountains. Small mammals are the primary prey for this species, with rabbits being consumed the most. This BLM Type 2 species typically nests on rock ledges or on cliffs, and less frequently nest in large trees or on the ground. The golden eagle is a BLM Type 2 special status species and also receives protections under the MBTA and the Bald and Golden Eagle Protection Act. There were no golden eagles seen during the survey conducted along the ROW in 2011; however, one observation was recorded in 2014 just north of the Malad Gorge State Park. There are numerous EOs within a mile of the project area, with the majority of them recorded near the Snake River on the southern end of the project area. Nearly all of the ROW would provide suitable foraging habitat for this species, although nesting habitat is much less frequent. While distances vary, golden eagles tend to forage within 6 km (approximately 4 miles) of the center of their territories; however, they have been observed foraging 9 km (approximately 5.5 miles) or farther in xeric habitats (Pagel et al. 2010). Territory size is also variable and studies in southwest Idaho have shown eagles defending territories of 20-30 km2 (7.7 to 11.5 miles2) (Kochert et al. 2002). The proximity of known EOs and suitable nesting habitat, coupled with typical foraging distance and territory size increases the potential for this species to occur within the project area. There are scattered rock outcrops and a few cliff ledges present in and adjacent to the ROW that provide suitable nesting habitat. The most apparent of these potential nesting features within the ROW are located where the line crosses Camas Creek and the Malad River. The proximity of the line to the Snake River provides abundant nesting opportunities outside of the project area as well.

3.4.3.2 Avian Species Associated with Sagebrush and Grassland Habitat

Sagebrush Sparrow. Sagebrush sparrows use mature big sagebrush and to a lesser extent other mature native shrub species for nesting, song perches, and roosting. This BLM Type 2 species is strongly associated with sagebrush habitat with limited grass cover. Knick and Rotenberry (1995) found that sagebrush sparrow preferred sites with high sagebrush cover, large patch size, and low fragmentation. No sagebrush sparrows were observed during the 2011 or 2014 survey efforts. The INHP shows the closest occurrence was observed in 2012 approximately a half-mile to the east of the project area near the lower end of Vorberg Gulch and Croy Creek. This EO, as

well as another to the east in the same area, are the only two documented EOs within ten miles of the project area. While the data indicates there are no current populations in or proximate to the transmission line corridor, there is sagebrush habitat available throughout most of the project area.

Sage Thrasher. This BLM Type 2 species is strongly associated with sagebrush, specifically in areas with high sagebrush cover and limited vegetation in interstitial spaces. Avoidance of areas with spiny hopsage, budsage, and grass cover has been noted (Rotenberry and Wiens 1980). There was a sage thrasher observed southwest of Macon Flat Road in 2014. There are four INHP EO's within a mile of the project area, the closest is approximately a half mile to the west near Thorn Creek Reservoir.

Brewer's Sparrow. Brewer's sparrows have been found to avoid areas with abundant grasses, specifically cheatgrass (Natureserve 2014). Brewer's sparrow, a sagebrush obligate, was observed at multiple locations during the 2011 and 2014 surveys. There were three individuals observed in the northern section of the ROW along with twelve in the central section and five more individuals in the southern section of the ROW. There are documented EOs within a mile of the project area in all sections of the project area. As evidenced by the number of documented EOs and the observations during the survey efforts, this species utilizes the abundant habitat present within and proximate to the ROW. Brewer's sparrow is a BLM Type 2 species.

Loggerhead shrike. Loggerhead shrikes prefer open habitats characterized by grasses and forbs of low stature interspersed with bare ground and shrubs or low trees. This BLM Type 2 species typically inhabits big sagebrush, antelope bitterbrush, and greasewood communities but would utilize a variety of habitats including prairies, agricultural lands, and riparian areas. There were no loggerhead shrikes observed during the 2011 survey; however, one was observed in 2014 on an access road just north of highway US-26. There are nine EOs within three miles from the project area, although none of these EOs is to the north of US-20.. The open grassland or shrubland habitat preferred by the loggerhead shrike is found in throughout the project area. The closest INHP occurrence is less than a mile away and was observed in 2002. The two other occurrences are both approximately one and a half miles away, both recorded in 2004.

Western Burrowing Owl. Western burrowing owls utilize open and well-drained grasslands, agricultural areas, and prairies where they nest in pre-existing burrows. The diet for this BLM Type 2 species is largely comprised of small mammals. The grasslands and agricultural areas that are preferred by this species are much more common in the central and southern sections of the project area. There were two burrowing owls observed at one location during the 2014 survey effort. Several documented EOs are also present where the project area approaches Highway ID-46 from the south.

Long-Billed Curlew. Long-billed curlews nest on the ground in open grasslands or prairies and avoid treed, dense shrub, and tall grass habitats. A long-billed curlew was observed during the 2014 survey. The nearest documented occurrence of this species to the project area is approximately three-tenths of a mile to the east of the project area. This occurrence is located just to the north of Highway US-26 east of Bliss. Burrowing owls and long-billed curlews utilize very similar habitat within and outside of the project area. The long-billed curlew is a BLM Type 2 species.

Greater Sage-grouse. The sage-grouse is North America's largest grouse and is a sagebrush obligate species as the name implies. This species will utilize sagebrush habitat in foothills, plains, and mountain slopes. The sagebrush composition is not limited to big sagebrush, as sage-grouse will utilize low (dwarf) and black sagebrush habitat as well as a mix of low and big sagebrush. For a complete discussion of sage-grouse ecology, see Connelly et al. (2011).

Courtship displays and mating occur in the spring (~March-April) at communal display sites called leks, which are relatively open sites within sagebrush shrubland that are adjacent to nesting and brood-rearing habitat. Lek sites are formed by males in areas with potential nesting habitat and high female traffic (Natureserve Wakkinen et al 1992-Connelly et al. 2000). Female reproductive success, especially in pre-laying females, has been linked to areas with relatively diverse and abundant forb communities (Barnett and Crawford, 1994). A description of seasonal sage-grouse habitat by use periods within the project area is provided in Table 3-5.

Productive nesting habitats include a sagebrush canopy cover of 15–25%, sagebrush heights of 30–80 cm (12–31.5 inches), and average perennial grass/forb heights of 18 cm (7 inches) or more, and perennial grass/forb cover exceeding 15 or 25 % depending precipitation (Connelly et al., 2000, p. 977). In Idaho, about 80% of hens nest within 10km (6.2 miles) of the lek of capture (Connelly et al. 2013). Summer brood-rearing habitat includes portions of farmland, dry lakebeds, sagebrush areas, riparian areas and wet meadows where preferred forbs are available. Dietary behaviors are related to age, seasonality/availability, and other local variables. Insects are the predominant dietary component of chicks the first few weeks after hatching. Diet then shifts to primarily forbs during the summer/late-brood rearing period. In fall and winter, sage-grouse diet shifts almost exclusively to sagebrush leaves (Wallestad 1975).

Table 3-5—Seasonal Habitat Use by Sage-grouse within the North Magic Valley Local Working Group Planning Area

Season	Time Period	Description
Breeding/Nesting	Mar–15–Jun 15	Encompasses the displaying period when active breeding is occurring (as opposed to males simply staging at leks and early display efforts) and the nesting season. Female attendance at leks is generally greatest during the first and second week in April, and most chicks hatch in the first or second week in June (Skinner, pers. obs.).
Brood-rearing	Jun 16–Oct 15	Encompasses both early brood-rearing (young chicks) and late brood-rearing (older chicks) when the diet of sage-grouse includes insects and forbs in addition to sagebrush. Hens with broods utilize mesic habitat such as alfalfa fields, riparian meadows, grasslands, etc. in addition to sagebrush habitat (Connelly et al. 2000). Males may use high elevations during the summer and early fall, including non-traditional habitat such as non-forested alpine areas (Skinner, pers. obs.).
Late Fall	Oct 16–Dec 20	Sage-grouse that use non-sagebrush habitat during the brood-rearing season resume a diet consisting primarily of sagebrush. Observations of sage-grouse in non-sagebrush areas occur much less during this late fall period. In migratory populations (as are found in the western half of the NMV area), sage-grouse may stage at traditional sagebrush areas in preparation for moves to wintering grounds.
Winter	Dec 21–Mar 14	The migratory populations of sage-grouse fly to wintering grounds and larger groups (up to >100 birds) of sage-grouse may be observed. The diet

		of sage-grouse is almost exclusively sagebrush leaves during the winter (Patterson 1952, Wallestad et al. 1975), and they gain access to water by eating snow. Birds appear to become more widely distributed across the habitat when snow is present (Skinner, pers. obs.). By late February or early March, male sage-grouse begin returning to traditional lek areas. For non-migratory populations, lek areas and winter habitat may be in the same location (Connelly et al. 2000). While males can be observed staging and even strutting at leks during the winter period, females generally do not arrive at the leks until later. Autenrieth (1982) reported peak hen attendance at leks in the Snake River Plain of Idaho is generally the first week in April and about a week later at higher elevations. Males have been observed standing on several feet of snow at lek sites during this time or attempting to strut on snow free highways (Skinner, pers. obs.).

Source: North Magic Valley Sage-grouse Local Working Group, 2011

The BLM ARMPA identified conservation areas; biologically significant units; three habitat management area categories (PHMA, IHMA, and GHMA); and seasonal habitat objectives for lek, nesting/ early brood rearing, late brood rearing/ summer and riparian, and winter habitat. Applicable categories are used in this document to characterize existing conditions and impacts (Figure 3-5). The project area occurs in the Idaho Desert Conservation Area (located between King Hill Substation and US-20) and the Idaho Mountains Valleys Conservation Area (located between US-20 and Wood River Substation). The project area occurs in three Biologically Significant Units (BSU) as defined in the ARMPA including the 1) Idaho Desert Conservation Area—Priority BSU, 2) Idaho Mountains Valleys Conservation Areas—Priority BSU, and 3) Idaho Mountain Valleys Conservation Area Important BSU. The proposed ROW crosses approximately 26.8 miles of PHMA, 10.4 miles of IHMA, and 6.4 miles of GHMA on BLM-managed, private, and State lands. The proposed ROW also crosses approximately 20.1 miles of Sagebrush Focal Area (SFA), all contained within the PHMA on BLM land.

With the goals of conservation of quality habitat for sage-grouse, PHMA and IHMA specifically, the ARMPA adopted the use of a 3% anthropogenic disturbance cap as recommended in the National Technical Team Report (2011). This 3 percent disturbance cap is calculated at two different scales; the BSU and the project scales. The BSU's identified above, and associated disturbance calculations include all land ownerships. The BLM State Office Implementation Core team provided a review of the project's contribution, if any, to the 3% disturbance cap and ARMPA consistency[12].

Habitat loss, fragmentation, and degradation are thought to be the biggest threats for this species throughout their range (USFWS 2010[13]). Conversion of habitat to agriculture and/or urban development, accelerated fire regime, and increasing abundance of exotic annual grasses are thought to be main influences on habitat issues. Poorly managed livestock grazing (i.e. overgrazing) and energy development have also contributed to some degree of habitat

[12] The review is available as part of the administrative record.

[13] 75 FR 13910, March 23, 2010

degradation and fragmentation. Adult sage-grouse survivability is slightly higher than most game birds (Knick and Connelly 2011); however, investigations on population sustainability have revealed that nest predation can be a limiting factor given certain habitat and predator composition (Coates and Delehanty 2010). A study on nest predation on sage-grouse in Nevada showed that common ravens (hereafter raven(s)), and American badgers (hereafter badgers) have both been found to predate sage-grouse nests (Coates and Delehanty 2010). This study also revealed that habitat composition impacted the type of primary predator on sage-grouse nests. Microhabitats with greater understory abundance/obstruction were strongly correlated to nest predation by badgers, where nests in areas with reduced shrub canopy cover had higher probability of raven predation (Coates and Delehanty 2010).

Sage-grouse breeding populations are typically monitored by counting males at leks each spring. Leks are traditional display areas and are usually open areas within or adjacent to sagebrush habitats. Recent literature has utilized lek data in predicting population trajectories and persistence of sage-grouse in Management Zones and populations. In the Snake-Salmon – Beaverhead population, which encompasses the King-Wood River project, Garton (2015) concluded a high probability of persistence over both the long-and-short-term. Additionally, Western Association of Fish and Wildlife Agencies (2014) stated that Idaho sage-grouse populations have fluctuated less than those in many other states, particularly in recent years. The North Magic Valley (NMV) LWG conducts annual sage-grouse lek counts in support of the IDFG's annual productivity and estimated harvest surveys to track population trends (Table 3-6) in the North Magic Valley Planning Area (NMVPA).

BLM and conservation partners in Idaho have used the "Sage-grouse Habitat Planning" map, updated annually since 2000, to identify the broad components of current or potential sage-grouse habitat in Idaho including sagebrush, that provides habitat for sage-grouse at some point during the year (key habitat), perennial grasslands, annual grasslands and conifer encroachment areas. In addition, BLM (and USFS) use the habitat management area land use designations (PHMA, IHMA, GHMA) identified in the ARMPA in identifying land use allocations, activities, and conservation measures/restrictions. The key habitat map areas are incorporated within and informs these management areas at a finer scale, relative to general vegetation type, and will be used in evaluating habitat adaptive triggers during implementation of the ARMPA.

Table 3-6—Lek survey results, productivity, estimated harvest, and acres of key habitat burned within the NMVPA 2009-2014

Year	Total No of Males[a]	Productivity		Estimated Harvest[c]	Wildfire in Key Habitat[d] (Acres)
		Total Wings[b]	Chicks per Hen		
2014	629	119	1.6	291	9,337
2013	653	120	1.34	350	40,230
2012	653	193	1.48	335	27,599
2011	752	97*	0.9*	356	20,044
2010	494	209	2.4	579	7,692
2009	482	83*	2.8*	343	37

Data from 2014 Annual Report (ISGAC TAT 2014)

[a] Total number of males is the peak male attendance on one day for all leks on the lek route

[b] IDFG estimates productivity based on wing collections.

[c] IDFG estimates harvest through hunter surveys.
[d] Key habitat as identified in the Idaho conservation plan.
* Sample size too low for reliable productivity estimate.

The following information regarding sage-grouse within the project area is from the 2014 Annual Report (ISGAC TAT 2014). The average number of males per lek has shown variability within the NMVPA since 2009. The number of leks surveyed have ranged from 92 to 114 and the average number of males per lek has ranged from 6 to 9. Through time, the number of leks has increased, presumably a result of more intensive survey effort, while the average number of males per lek has remained relatively unchanged. The total number of males (peak male attendance for one day for all lek routes) has ranged from 482 in 2009 to 629 in 2014 ; the highest number of 752 was recorded in 2011.

Productivity is reported as the number of chicks per hen, as estimated by IDFG wing collection data collected during the sage-grouse hunting seasons. "Chicks per hen" represents the average number of chicks per hen alive during the hunting season in September. Productivity has declined since 2009; however, a slight increase was reported between 2013 and 2014. Since 1961, the lowest production years were in 2007, 2012, and 2013. Declines may be due to drought conditions but further investigation is needed (ISGAC TAT 2014). Estimated harvest (due to hunting) has averaged approximately 350 birds each year from 2011–2013.

From 2007–2013, wildfires impacted over 20,000 acres of key habitat in four out of the seven years. In 2013, 40,230 acres of key habitat burned within the NMVPA. The NMV LWG identified loss of sagebrush habitat due to the McCan, Beaver Creek, and Fir Grove fires as a threat to sage-grouse in 2013. A small portion of the existing ROW occurs within the boundary of the Fir Grove fire.

Lek Occurrences Proximate to the Project Area

The ARMPA provides a required design feature for analyzing tall structure project impacts to occupied leks within 2 miles. The 14 occupied leks within this two mile buffer are shown in Table 3-7 (IDFG, July 2015) and Figure 3-6. For context, habitat within this buffer inclusive of all land ownerships contains 71,424 acres of PHMA, 23,803 acres of IHMA, and 21,941 acres of GHMA.

Table 3-7—Occupied Greater Sage-grouse Leks Occurring within Two Miles of the Project Area

LekID	LekName	2015 Status	MgmtStatus	LastCount	Distance from ROW
1C059	Horn Spring	Active	Occupied	2015	1.17 miles
1C023	Dove RSVR	Inactive	Occupied	2015	1.83 miles
1C010	Combined w/ 1C013	Active	Occupied	2015	0.48 miles
1C010a	Old 1C013	Active	Occupied	2015	1.37 miles
1C011		Inactive	Occupied	2015	1.49 miles
1C028		Active	Occupied	2015	1.98 miles
1C002		Active	Occupied	2015	0.53 miles
1C029		Active	Occupied	2015	1.98 miles

1C031		Active	Occupied	2015	1.55 miles
1C006	Macon Lake	Active	Occupied	2015	1.86 miles
5B163	Rock Cr. Ranch	Inactive	Occupied	2015	1.34 miles
5B163	Little Rock Creek	Inactive	Occupied	2015	1.95 miles
5B167	Low Pass	Inactive	Occupied	2015	1.96 miles
5B164	Gilman Spring	Active	Occupied	2015	1.06 miles

3.4.3.3 Mammals

Gray Wolf. The gray wolf was removed from the List of Endangered and Threatened Wildlife on May 5, 2011 (Federal Register Notice May 5, 2011) and is now a BLM Type 2 Sensitive Species. A few gray wolf packs have been documented throughout the SFO and are likely to occur during any season of the year. The Red Warrior wolf pack and the Little Wood River wolf pack are the two closest documented wolf packs to the project area. The Liberal Mountain wolf pack was also in close proximity to the project area; however, this pack has been terminated. The project area overlaps with approximately 5.4 acres of the Red Warrior wolf pack minimum convex polygon used for estimating range, which covers an area of 193,808 acres in its entirety. Instances of solitary wolves traveling through BLM-managed lands occur as well. The gray wolf is most likely to occupy BLM-managed lands during the late fall and winter when migrating populations of elk and mule deer are present.

Pygmy Rabbit. Pygmy rabbits are sagebrush-obligates and prefer habitat that consists of dense, tall sagebrush. Topography and soils are likely important to pygmy rabbits when choosing where to dig a burrow. One of the biggest threats to pygmy rabbits is habitat loss and degradation. This includes wildfire and the subsequent vegetative communities that inhabit an area. Fragmentation of suitable habitat is also a growing concern, as the pygmy rabbit has limited dispersal capabilities (IDFG 2005). Pygmy rabbit populations are widely scattered and occur across the southern half of Idaho. The pygmy rabbit is currently classified as a BLM Type 2 species.

No pygmy rabbits were observed during the 2011 or 2014 survey efforts; however, the central and northern sections of the ROW contain suitable habitat. There are numerous pygmy rabbit EO's within two miles of the project area. The southernmost EO's are from 2002 near Highway 46 and Turkey Head Butte. Farther north by Little City of Rocks, there are a few more documented occurrences from 2002. The largest group of pygmy rabbit EO's is near the southern extent of Macon Flat, near Lava Creek. These occurrences are nearly at the toe-slope of the north facing hillside. EO's as the line drops down the bluff near Lava Creek and approaches Macon Flat to the north. Nearly all of these observations are within two miles of the line and are from 2006.

3.4.3.4 Amphibians and Reptiles—Western Toad

A western toad was observed during the 2011 survey. This was a single, incidental observation, with very limited habitat present. The somewhat wet area where the toad was observed is located in the southern portion of the project area. The INHP database reveals another occurrence south of the ROW near the Snake River from 2004. The proximity to the Snake River and the crossings of the Malad River and Big Wood River provide potential habitat for this species in addition to

other smaller bodies of water. Pools, ponds, and streams provide the primary breeding habitat for this species. After breeding adult toads will disperse to terrestrial habitats, where they will forage and eventually hibernate. Dispersal distances by adults from breeding areas can vary from an observed maximum of 1.56 miles with most dispersal distances under 0.3 miles (Bartelt 1997). Hibernacula can vary, although they have been observed in burrows, under a slash pile, and within hollow logs. Foraging activity is most closely associated with riparian habitats, with ants and beetles composing the majority of the diet. The western toad is a BLM Type 2 species.

3.4.3.5 Aquatic Species—Wood River Sculpin

The Wood River sculpin is an Idaho endemic species that historically occurred within streams and rivers in the Big Wood River and Little Wood River watersheds. Current distribution is limited to the Big Wood River watershed upstream of Magic Valley Reservoir and Upper Little Wood River watershed. This species is classified by the BLM as a Type 2 species. Wood River sculpin are a benthic (bottom-dwelling) species that inhabits flowing waters ranging in size from small streams to medium-sized rivers. Wood River sculpin are often found occupying the same habitats as redband trout which is likely due to similar habitat requirements of clean, cool water and coarse streambed substrates (gravel and larger) which stream dwelling sculpin typically select for spawning and rearing (Meyer, et al., 2008b). Wood River sculpin are believed to spawn in early spring similar to other sculpin species, but timing likely varies by stream and year depending upon elevation, stream temperature, and recent climate. Wood River sculpin have undergone declines in distribution within the historic range of the species. Water quality issues, habitat loss and degradation, and floodplain encroachment due to man-made developments are likely factors contributing to the declines of Wood River sculpin (Meyer et al., 2008a).

3.5 Fish Habitat

The existing ROW crosses several perennial streams and rivers that may provide suitable fish habitat. On BLM land the only perennial lotic system that the transmission line crosses is Camas Creek as it becomes the western portion of Magic Reservoir. The habitat provided in this section of the ROW is very slow moving water and basalt rocks throughout. The water table fluctuates depending on the time of year and nearby agricultural demand. There are several species of fish present that provide angling opportunities in this area including rainbow trout , yellow perch , smallmouth bass, and brown trout. Other fish species present include bridgelip sucker, largescale sucker, redside shiner, and speckled dace. Wood River sculpin is not likely in this area; however, it has been documented in the upper reaches of Camas Creek. The transmission line spans this section of water and the structures on either side of the water are located above the rocky outcrops near the bank. The structures are well above and away from the high water mark on this portion of the river.

To the north of Camas Creek the ROW crosses the Big Wood River. The Big Wood River supports rainbow and brown trout, which are sought year round by anglers. Brook trout an introduced species from the eastern United States, and mountain whitefish a native salmonid, are also found in this section of the Big Wood River. Several species of non-game fish are present, most notably the Wood River sculpin. The Wood River sculpin is a small fish with a large head and mouth that inhabits riffles of cold, clear waters. This species is only found in areas with cold, clear water with a very low tolerance for pollutants; as such, this species' presence indicates high water quality. The Wood River is bordered by a healthy riparian and/or cottonwood gallery in the

area that it is spanned by the existing line. The substrate in this section of the river is predominately gravel, cobble, and boulders with sandy sediment throughout. There is little to no basalt based rocks in the portion of the river where the line crosses.

The existing transmission line spans the Malad River at the Malad River State Park. This river is located at the bottom of the very steep and narrow Malad River Gorge. The river is bordered by a fairly narrow strip of riparian habitat on both sides. Riparian habitat is limited by the steep, narrow canyon walls. The basalt that is apparent in the canyon walls also provides substrate of various sizes in the river bottom. Rainbow trout is the primary fish species in this portion of the river; however, during IPC surveys redband trout were also identified in several reaches as well (Brink and Wilkison 2006). There are known occurrences of the Bliss Rapids snail in this reach of the river. Other mollusks present in this portion of the river include the California floater and the Columbia pebblesnail; these are also BLM sensitive species.

The ROW also crosses a canal approximately two miles from the confluence of the Little Wood and Big Wood Rivers. The canal crossing is just below a diversion dam. There are roads on both sides of the canal, although the road on the southern side appears to be the more traveled of the two. There is very little riparian habitat present in this area due to the nature of the canal (channelized, swift water, and steep embankments). Any rock substrate is likely lacking in the canal, and instead composed of fine sediments. Suspended sediments greatly impact the clarity of the water. Fish species present in the canal are unknown; however, it is likely that rainbow trout and sucker species are present in this portion.

3.6 Water Quality

The federal CWA requires that states restore and maintain the chemical, physical, and biological integrity of the nation's waters. States must adopt water quality standards necessary to protect fish, shellfish, and wildlife, while providing for recreation in and on the waters whenever possible. The Idaho DEQ is responsible for regulating water quality in the State of Idaho. Water quality standards and beneficial uses have been designated by the Idaho DEQ and are employed to determine if specific water resources have been adversely impacted by pollutants.

Section 303(d) of the CWA establishes requirements for states to identify and prioritize water bodies that do not meet water quality standards. States must publish a priority list of impaired waters every two years and develop water quality improvement plans to determine TMDLs, which establish allowable pollutant loads set at levels to achieve water quality standards. Impaired water bodies and TMDLs within the project area are summarized in Table 3-8.

Table 3-8—Impaired Waters and TMDLs

Stream Segment 303(d) List	Watershed (HUC Number)	Beneficial Uses Affected	Pollutants and Issues of Concern	TMDLs Developed
Little Wood Subbasin	17040221	Cold water aquatic life, salmonid spawning, secondary contact recreation.	Temperature, sediment, nutrients, and bacteria.	Little Wood River
Camas Creek Subbasin	17040220	Cold water aquatic life, salmonid spawning,	Temperature, sediment, nutrients,	Camas Creek Subbasin

Stream Segment 303(d) List	Watershed (HUC Number)	Beneficial Uses Affected	Pollutants and Issues of Concern	TMDLs Developed
		secondary contact recreation.	and bacteria.	Assessment and TMDL
Big Wood River Subbasin	17040219	Cold water aquatic life, salmonid spawning, primary and secondary contact recreation, special resource water, and drinking water supply.	Sediment, nutrients, ammonia, dissolved oxygen, temperature, bacteria, and flow alteration.	
Croy Creek	17040219	Cold water aquatic life, salmonid spawning, primary and secondary contact recreation, special resource water, drinking water supply.	Sediment and nutrients	
East Fork Wood River	17040219	Cold water aquatic life, salmonid spawning, primary and secondary contact recreation, special resource water, and drinking water supply.	Sediment, nutrients, bacteria.	
East Fork Rock Creek	17040219	Cold water aquatic life, salmonid spawning, primary and secondary contact recreation, special resource water, and drinking water supply.	Sediment, nutrients	

3.7 Visual Resources

The objective of VRM is to manage public lands in a manner which will protect the quality of the scenic (visual) values of these lands. The BLM is responsible for preparing and maintaining an inventory of visual values on all public lands they manage. The inventory is used to develop visual management objectives (classes) through the RMP process. The 1982 Sun Valley MFP (north of Highway 20) and associated map, establishes VRM management Classes within the planning area, see Figure 3-7. The 1980 Bennett Hills Timmerman Hills MFP (south of Highway 20) establishes VRM Management Classes however there is no map portraying where the management classes are delineated.

Per BLM Manual 8410 Visual Resources Management and BLM Manual 8410 – Visual Resource Inventory, "interim visual management classes" are established where a project is proposed and there are no RMP approved VRM objectives. These classes are developed using the guidelines in Section I to V and must conform to the land-use allocations set forth in the RMP which covers the project area. The establishment of interim VRM classes will not require a RMP amendment, unless the project that is driving the evaluation requires one. Therefore, since

the VRM management classes were established in the Bennett Hills Timmerman Hills MFP it was necessary to portray where they are within the planning area. Conducting a VRM inventory requires 3 parts: 1. Scenic quality evaluation, 2. Sensitivity level analysis and 3. Distance zones. The 1980 Bennett Hills Timmerman Hills MFP does have a scenic quality ratings map, see Figure 3-7 (VRM and scenic quality map). Therefore parts 2 and 3 were conducted by BLM staff to finish the inventory within the project area. The results of the inventory and the fact that the line was constructed in 1962, prior to the MFP, determined which VRM classes apply to the project area.

The inventory classes represent the relative value of the visual resources. Classes I and II are the most valued, Class III represents a moderate value, and Class IV is the least value. Visual resource classes are categories assigned to public lands and serve two primary purposes: (1) provide inventory tools that portray the relative value of the visual resources, and (2) provide management tools that portray the visual management objectives. The BLM's VRM system provides a process and framework for inventorying scenic values and establishing appropriate management objectives for those values during the RMP planning process. Using this system and its associated visual resource objectives, the BLM is able to evaluate proposed activities to determine whether they conform to the management objectives outlined in the RMP for a given planning area. The BLM's VRM system uses a contrast rating system to systematically analyze the potential visual impact of proposed projects on BLM lands. Visual resources on BLM lands are managed in accordance with the existing MFPs and RMP. The degree to which an activity affects the visual quality of a landscape depends on the visual contrast created between the proposed project and an existing landscape.

Through the inventory process, landscape units are assigned one of four visual resource inventory classes. Class I is assigned to all special areas where the current management situations require maintaining a natural environment essentially unaltered by humans no Class I areas occur within the project area. Classes II, III, and IV are assigned based upon a combination of factors that include the scenic quality, sensitivity level, and distance zones. The classes and their associated BLM management objectives are as follows:

- Class II. The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

- Class III. The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

- Class IV. The objective of this class is to provide for management activities which require major modifications of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt

should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

VRM Inventory and Management Classes are shown on Figure 3-7. The project area is located within VRM Management Class III and IV north of Highway 20. South of Highway 20, the project passes through VRM Inventory Classes III and IV. The contrast rating system, per BLM Handbook H- 8431-1, was used to develop key observation points to analyze potential visual impacts of the proposed project and to determine if the project would meet the management objectives of the area. Sensitivity level ranking sheets and the criteria used for key observation points can be found in the administrative record.

3.8 Economic and Social Values

This section describes the social and economic characteristics of the project study area and surrounding communities, which includes portions of Blaine, Camas, and Gooding counties. This section examines socioeconomic indicators for the project study area, including population, employment, income, housing, community services, and infrastructure, which could be affected by the proposed project. Information on the economic and social values were obtained from the Economic Profile System generated county reports and U.S. Census Bureau data[14] were used to provide an overview of existing conditions within the project area (Economic Profile System-Human Dimensions Toolkit)[15].

3.8.1 Population, Employment, and Income

3.8.1.1 Blaine County

From 2000 to 2011, the total population increased by 2,084; total employment increased by 1,778, and personal income (by thousands of 2012 dollars) increased by 151,617. Since the 1970s, population and employment has generally gradually increased. Personal income has also generally increased since the 1970s however the rate of increase was generally lower in the 1970s and 1980s and decreased in the mid-2000s.

3.8.1.2 Camas County

From 2000 to 2011, the total population increased by 156; total employment increased by 336, and personal income (by thousands of 2012 dollars) increased by 14,103. Since the 1970s, population and employment has fluctuated historically and more recently increased. Personal income has also fluctuated and started to increase more steadily since the early 1990s. Long-

[14] Accessed March 27, 2014

[15] http://headwaterseconomics.org/tools/eps-hdt/geography. Accessed March 6, 2014. EPS is a web and Excel-based tool to produce detailed socioeconomic profiles and provides access to demographic, government, labor, and land use data across a wide spectrum of geographies. EPS was created by Headwaters Economics, in partnership with the BLM and U.S. Forest Service. EPS-HDT uses published statistics from federal data sources, including Bureau of Economic Analysis and Bureau of the Census, U.S. Department of Commerce; and Bureau of Labor Statistics, U.S. Department of Labor.

term, steady growth of population, employment, and real personal income is generally an indication of a healthy, prosperous economy.

3.8.1.3 Gooding County

From 2000 to 2011, the total population increased by 1279; total employment increased by 457, and personal income (by thousands of 2012 dollars) increased by 203,196. Since the 1970s, population and employment has generally gradually increased. Personal income has also generally increased since the 1970s however since the 2000s, personal income has fluctuated up and down. The population, employment, and income trends for the project area (by county) are summarized in Table 3-9.

Table 3-9—Population, Employment, and Income Trends for Blaine, Camas, and Gooding Counties, Idaho

	Population		Employment (Full and Part-time Jobs)		Income (Thousands of 2012$)	
County	2000	2011	2000	2011	2000	2011
Blaine	19,115	21,199	17,729	19,507	1,135,455	1,287,072
Camas	968	1,124	559	895	30,264	44,368
Gooding	14,196	15,475	8,027	8,484	447,435	650,631

Idaho Power would use a contractor and it is expected that construction workers would be employees of the contractor and few, if any, would be from the Wood River or Treasure Valley areas.

3.8.2 Temporary Housing

Temporary housing in the project area consists of available housing units, motels, hotels, and camping facilities. Table 3-10 provides housing information as identified by the 2012 U.S. Census. Numerous hotels, motels, and condominiums are available in the Hailey/Ketchum area; information on the number of units, vacancy rates, and availability was not available. Camping is available in developed and undeveloped areas on public lands and at private campgrounds.

Table 3-10—Housing Characteristics for Blaine, Camas, and Gooding Counties, Idaho. 2012 U.S. Census Bureau Data.

Housing Type	Blaine County	Camas County	Gooding County
Total Housing Units	15,014	801	6,078
Occupied	9,210	449	5,536
Vacant	5,804	352	542
Rental vacancy rate	10.5	11	602
Homeowner vacancy rate	2.9	5.9	3

3.8.3 Community Services

Community services and amenities include restaurants, grocery stores, entertainment and recreational facilities, and various community services provided by municipal government. Restaurants include a wide variety of venues, from fast-food chains, lunch and dinner sit-down chains, to local establishments. There also are retail establishments that sell groceries, clothing, recreational equipment, and fuel. Services are more readily available in the Wood River Valley area than in Shoshone. Services are also available in Twin Falls, Idaho, located south of the project area.

St. Luke's Wood River Medical Center, located two miles south of Ketchum and the St. Luke's Center for Community Health, located in the airport industrial area of Hailey, provide emergency and non-emergency medical services. Private practitioners are also available in the Wood River Valley. The Shoshone Family Medical Center provides health care in Shoshone, Idaho.

Emergency services in the Wood River Valley and Shoshone include the following[16]:

- Ketchum City and Rural Fire Department.
- Sun Valley Fire Department.
- Wood River Fire and Rescue Department.
- Hailey Fire Department.
- Bellevue Fire Department.
- Shoshone Fire Department.

County sheriff departments and municipal police departments provide law enforcement services in the project area and adjacent communities.

3.9 Recreation and Visitor Services

Recreation activities that occur within the project area include: hiking, hunting, horseback riding, recreational target shooting, Off-Highway Vehicle use, and driving for pleasure. Prior to visiting public lands people participating in these recreation activities have a destination or route they intend to follow. Recreational use occurs year-round and the majority of visitors reside within the Magic Valley, Wood River Valley, and Treasure Valley areas. Based on field observations and BLM staff professional knowledge, hunting, hiking, and driving for pleasure are the primary activities that occur or may occur within the project area. Historically there have been no known use/user conflicts, visitor health and safety issues, or recreation related impacts associated with the power line.

[16] Source: http://www.mtexpress.com/images/fire_district_map2.pdf

The power line passes through the following IDFG Hunting Units 45, 48, 49, 52, and 53. Within these hunt units there are a variety of hunting seasons. The most popular hunting season that occurs within the project area is antelope, deer and elk. However other seasons and species include bear, mountain lion, wolf, moose, mountain goat, upland game birds, and waterfowl. Depending on the species, and type of hunt, hunting can occur in the area from late summer through late winter. Additionally, varmint (e.g., ground squirrel, coyote) hunting may occur throughout the year.

CHAPTER 4.0—ENVIRONMENTAL CONSEQUENCES

NEPA requires the analysis and disclosure of direct, indirect, and cumulative effects to the affected environment. In this document, the terms "environmental consequences", "effects", and "impacts" are interchangeable. The analysis of anticipated effects is based on the information in Chapter 3 and provides a basis for comparing alternatives. Direct effects are those effects which are caused by the action and occur at the same time and place. Indirect effects are caused by the action and occur later in time or are removed in distance, but are still reasonably foreseeable. Cumulative effects are the incremental additive effects of past, present, and reasonably foreseeable future actions.

The potential impact, or effect, is influenced by the duration the effect would last. For the purposes of this EA, temporary impacts are defined as those that would last for three or fewer years (generally during the construction and rehabilitation period), and permanent impacts are those that would last for more than three years (generally resulting from the operation of the facility or loss of sagebrush). Both temporary and permanent impacts would occur from construction and O&M activities associated with the alternatives.

Temporary impacts during construction include direct impacts, such as ground disturbance to areas that would be restored to preconstruction conditions following completion of the project (e.g., pulling and tensioning sites, and construction areas around structure pads). Temporary impacts from construction would also include indirect impacts, such as general disturbance of wildlife resulting from noise, dust, and/or the presence of workers and construction equipment in and near wildlife habitats. Temporary impacts during O&M activities would result from the periodic disturbance associated with inspection and maintenance of the line. Direct impacts would result in a temporary or permanent loss of habitat quality or utility, which would last for the duration of the disturbance, as well as the length of the recovery period for ground disturbances. For example, the recovery period for agricultural areas that are directly disturbed could be as short as 1 to 3 years; grasslands and herbaceous wetlands would generally recover within 3 to 7 years; shrublands may require 30 to 100 years to recover (with the longer recovery periods associated with disturbances in mature sage-brush habitats located in arid regions or for specific sage-brush species; e.g., Wyoming big sagebrush); and forested and woodland areas could take anywhere from 50 to many hundreds of years to reach preconstruction conditions (depending on the condition of the area prior to the impact).

Permanent impacts are associated with areas that are disturbed during construction, but which would not be restored to preconstruction conditions. Permanent direct impacts would be primarily associated with ground disturbances that are not restored to preconstruction conditions (e.g., roads and structure locations). These impacts would either result in a loss of habitat utility (e.g., in areas occupied by a structure or road) or a conversion of one habitat type to another (e.g., conversion of forested habitats to shrub and grassland habitats under the transmission line).

The amount of ground disturbance was estimated based on the typical design characteristics of the transmission line (see POD; Appendix E). The estimated ground disturbance associated with using existing roads, or upgrading or constructing roads was also considered.

4.1 Archaeological and Historical Resources

The NHPA requires that federal agencies take into account the effect of their undertakings on historic properties. After identifying historic properties through archaeological survey or other identification efforts, a determination must be made of the potential effect that the undertaking has on any of the historic properties. The agency official, in consultation with the SHPO, applies the criteria of adverse effect to determine whether the undertaking will adversely affect any historic properties identified within the area of potential effect (APE). An adverse effect is found when an undertaking has the potential to alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for listing in the NRHP. Determinations of "adverse effect" are almost always made in the case of 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. When an archaeological site that is determined eligible for its information potential (Criterion D in the NRHP Criteria for Evaluation) has the potential to be affected by a proposed undertaking, there is usually also a finding of an "adverse effect." Data recovery is the most frequently recommended approach to mitigation of the adverse effect to sites of this nature. A determination of "no effect" is made when (1) the undertaking will not affect any historic properties even though such properties are located within the APE, (2) the undertaking can be redesigned to entirely avoid effects to eligible properties, or (3) when only elements of eligible properties that do not contribute to their importance would be affected.

The types of impacts that could adversely affect historic properties (cultural resources that have been determined eligible for listing on the NRHP) include direct impacts due to physical disturbance (e.g., inadvertent discovery while grading or vandalism) and indirect impacts due to changes in the visual setting.

4.1.1 Proposed Action

The proposed action is the rebuild of an existing transmission line. Since the line has been in place for 50 years, impacts to the setting and feeling of sites along the line's route have already been realized. Direct physical impacts would be minimized by keeping construction activities to previously disturbed areas as much as possible and implementation of EPMs C-1 through C-3.

Idaho Power has conducted a literature review and pedestrian surveys (on BLM-managed lands, State lands, and private property where access was granted) to identify cultural resources. The existing transmission line spans the ten sites that were identified as eligible for the NRHP and the proposed rebuild would also span these sites. Of the ten eligible sites, four also have existing access roads that pass through them. Of these four sites, three are eligible under Criterion D only, and one, the Goodale Trail in the vicinity of Structure 371, is also eligible under Criterion A. In consultation with the Idaho SHPO, a determination of no adverse effect was reached for the roads and their use by vehicular traffic on the roads as long as there are no ground disturbing activities (e.g., grading or rutting) on these sections of road. Avoidance flagging and monitoring of traffic and construction activity around these sites would occur to ensure no inadvertent impacts.

Because the Proposed Action would follow the same centerline as the existing transmission line; the requested 100-foot wide ROW will not intrude into known sites; and EPMs C-1 through C-3

(Section 2.2.5) will address inadvertent discoveries and protection of known resources; impacts to archaeological and historical resources are not expected to occur.

Operation and maintenance of the line would be conducted in accordance with BLM-MA-ID-001. This agreement has measures that require records search, field surveys, and consultation with the BLM depending on the nature of the activity. O&M activities would also comply with applicant committed EPMs as described in Section 2.2.5. Impacts from O&M activities are not expected to impact archaeological and historical resources.

4.1.2 Alternative 1—Renew Existing Grant

This alternative would reduce the potential for impacts to previously unknown cultural resources since construction activities would not occur. Operation and maintenance of the line would be conducted in accordance with BLM-MA-ID-001. Unlike the Proposed Action, which would have new structures, O&M activities are expected to occur more frequently because of the age of the existing structures. Since Idaho Power would be required to identify and protect cultural resources and protect inadvertent discoveries, impacts to archaeological and historical resources are not expected to occur.

4.1.3 Alternative 2—No Action

Impacts from removal of the line would be the same as those for construction of the Proposed Action. Impacts from O&M activities would not occur since there would be no line.

4.1.4 Alternative 3—Limit the Existing Right-of-Way

Impacts would be the same as those for construction of the Proposed Action. Operation and maintenance of the line would be conducted in accordance with BLM-MA-ID-001. This agreement has measures that require records search, field surveys, and consultation with the BLM depending on the nature of the activity. O&M activities would also comply with applicant committed EPMs as described in Section 2.2.5. Impacts from O&M activities are not expected to impact archaeological and historical resources.

4.2 Soils

Construction activities could result in both direct and indirect adverse impacts to soil resources. Impacts associated with construction activities could include:

- Accelerated soil erosion in sloped areas where construction-related activities have disturbed or altered the land surface by exposing soils (temporary).

- Accelerated soil erosion in areas where construction-related activities have altered the contours of the land surface (temporary).

- Construction of permanent access roads, which could be used by the general public to access currently inaccessible areas, potentially resulting in accelerated rates of erosion by water or wind (permanent).

- Degradation of the land surface and loss of soils resulting from accelerated soil erosion (temporary to permanent).

- Loss of soil productivity and negative impacts on water quality, if sediment is washed into nearby waterbodies (temporary), see Section 4.7.

4.2.1 Proposed Action

Implementation of the Proposed Action would result in ground disturbance that could result in increased erosion and associated sedimentation. Soils in the project area are susceptible to wind erosion when vegetation is removed. The soils occurring in the central and northern portion of the project area are more susceptible to water erosion and compaction when wet than the soils in the southern portion of the project area. Approximately 828 acres occur within the requested ROW; however, not all of this acreage would be disturbed during construction activities. Vegetation removal and ground disturbing activities associated with roads is approximately 34 acres (Table 4-1), with structures is approximately 78 acres (Table 4-2), and with pulling and tensioning sites is approximately 19 or 26 acres (Table 4-3). Total ground disturbance associated with the project is approximately 131–138 acres. Since construction would occur over two years and would be roughly evenly divided, the ground disturbance for one year would be approximately 65-70 acres. This is less than 10 percent of the project area.

Idaho Power would implement a SWPPP and install and maintain measures to address erosion and sedimentation in accordance with the CWA (EPM GM-4) during construction activities. The SWPPP identifies measures to address erosion and sedimentation, inspection schedules, and maintenance activities. Once construction activities are completed, Idaho Power's site rehabilitation (EPM S-2) would establish vegetation and restore the existing drainage to the extent possible. Species identified in the seed mix (Table 2-2) establish fairly quickly (1 to 3 years), are suited for the soils and climate in the project area, stabilize disturbed soils, provide wildlife forage, range from short to long-lived, take 2 to 3 years to establish stands, are not considered invasive, and can compete with cheat grass (USDA Plants Database. Available at: http://plants.usda.gov/java/). Idaho Power would implement measures in the SWPPP until vegetation cover is established in accordance with the stormwater regulations. When considering the use of best management practices, the amount of annual ground disturbance, rehabilitation activities, soil types, and flat areas, there is minimal potential for erosion and sediment to occur at rates above existing levels.

Because Idaho Power would conduct construction activities during the drier time of the year there is a potential for wind erosion for some of the finer textured soils present in the project area. Dust suppression methods (e.g., wetting soils) would be used as necessary.

Potential effects due to O&M activities would be similar to construction activities, but the area of overall ground disturbance would be less. Implementation of EPMs would minimize the potential for erosion and sediment to occur at rates above existing levels.

4.2.2 Alternative 1—Renew Existing Grant

The type of potential soil impacts are the same as the Proposed Action, but the nature and extent is more similar to O&M activities for the Proposed Action because no roads would be created

and the rebuild would not occur. Idaho Power anticipates a high level of maintenance over the next several years due to the age of the line; maintenance could include ground disturbing activities. The amount of ground disturbance depends on the type of maintenance activity (structure replacement versus on-structure work) and the number of structures. It is likely that the amount of ground disturbance would be between the Proposed Action and the No Action alternatives. Similar to the Proposed Action, Idaho Power would implement EPMs to minimize the potential for erosion and sediment to occur at rates above existing levels. Idaho Power would also rehabilitate disturbed areas using the same seed mix and methods as the Proposed Action.

4.2.3 Alternative 2—No Action

The type of potential soil impacts and their nature and extent associated with removal of the line is the same as those for construction activities associated with the Proposed Action. Implementation of EPMs would minimize the potential for erosion and sediment to occur at rates above existing levels. Since there would be no facilities to maintain, there would be no impacts from O&M activities. Idaho Power would reseed service roads and would not reseed access roads under the Proposed Action; under this alternative Idaho Power would reseed all access and service roads no longer needed for the facility. Since service roads and some access roads would be rehabilitated and closed with this alternative, the overall potential for erosion would be less than the Proposed Action and Alternative 1.

4.2.4 Alternative 3—Limit the Existing Right-of-Way

Impacts from construction would be the same as the Proposed Action. Impacts from O&M activities could be less than the Proposed Action if Idaho Power were not able to obtain separate authorization for maintenance work outside of the ROW. If Idaho Power were to receive separate authorization for maintenance activities, impacts could be similar to Alternative 1.

4.3 Vegetation and Special Status Plant Species

Construction related impacts would result in temporary (e.g., during construction from vegetation clearing) or permanent (e.g., displacement of vegetation with project features such as structures or permanent roads) impacts to vegetation communities. Permanent construction activities could also result in the alteration of soil conditions and changes in topography and drainage, such that the ability of a site to support native vegetation after construction could be impaired. Sagebrush ecosystems are especially sensitive to ground disturbance and can take decades to recover. Construction activities would create disturbed conditions that may be favorable for the invasion of non-native plant species that inhibit the establishment of native vegetation and may adversely affect wildlife. Erosion caused by construction could cause deposition of soil downslope, and non-native plant species established in the construction zone could spread into adjacent, undisturbed vegetation.

Direct impacts to vegetation and SSP include removal of plants during construction or O&M activities; removal for structure locations would be a permanent impact. Indirect impacts associated with vegetation removal may include impacts to the seed bank where SSP occur and colonization by invasive plant species. Invasive plant species could compete for resources with SSP and other native vegetation, possibly altering the local plant community and fire regime.

4.3.1 Vegetation Communities

Impacts to vegetation communities were calculated using the following assumptions:

- Work pads for H-frame structures are 0.11 acre (80-feet diameter area centered around the structure);
- Work pads for 3-pole and 5-pole structures are 0.4 acre (150-feet diameter area centered around the structure);
- Additional work pads for safe equipment operation occur at locations specified in Table 6 of the POD (Appendix E);
- Road categories A and B would not result in ground disturbance and/or impact vegetation and are not included in road impacts;
- Road categories C, D, E, and F would require ground disturbance and/or impact vegetation and are included in permanent road impacts;
- Road category G would result in a temporary disturbance to vegetation and is included in temporary road impacts; and
- Pulling and tensioning sites would result in a temporary disturbance to vegetation.

A geographic information system was used to calculate impacts to vegetation communities. Work pads were created for each structure location and overlaid on the vegetation layer to calculate impacts from structure replacement. Roads (including road category) and pulling and tensioning sites were also placed over the vegetation layer to calculate impacts. The vegetation layer was created using data from field surveys; plant communities were mapped using a global positioning system unit and the resulting data were imported into the geographic information system. Detailed vegetation maps and categories are provided in the 2011 (URS) and 2014 (IPC) survey reports.

4.3.1.1 Proposed Action

Ground disturbance during construction would result from road maintenance and creation; removal of existing structures and installation of new structures; pulling and tensioning sites; and staging yards. Of the approximately 76 miles of roads[17] identified for the Proposed Action, 56 miles would be used as they currently occur (road categories A and B); approximately 2.5 miles of the 56 miles would have rocks removed where they interfere with safe access. Approximately 6.4 miles of roads (road category C) would require vegetation to be cut for safe access. Approximately 8.35 miles of roads (road categories D and E) would require grading and or

[17] Where two road categories were identified for the same segment of road (e.g., cut vegetation (C) and regrade (D), the more impactive action was used in the total. For example, a category of C/D was included in D and not C.

ground disturbing repair. Approximately 4.6 miles of overland travel (road category G) would occur and approximately 0.6 mile of water crossings (road category F) would occur.

Of the approximately 120 acres of roads (including all road categories), 34.5 acres would be impacted by the proposed action. Road activities that result in vegetation and/or ground disturbance are provided in Table 4-1. Impacts to vegetation from road work, with the exception of Category G, are considered permanent even though some vegetation would be allowed to re-establish on the roads; this is because there would be periodic road use and maintenance. Impacts for road category G are considered temporary since this is overland travel and while vegetation would be crushed during the rebuild, a permanent road would not be created.

Table 4-1—Acres of Vegetation Community, by Road Work and Vegetation Impact, That Would be Affected by the Proposed Action

	Vegetation Community (Acres)																								
Road Work—Vegetation Impact	**Agriculture**			**Developed**			**Forested**			**Grassland**			**Mixed Shrubland**			**Riparian**			**Sagebrush Shrubland**			**Water**			**Total**
Ownership	**BLM**	**State**	**Private**	**BLM**	**State**	**Private**	**BLM**	**State**	**Private**	**BLM**	**State**	**Private**	**BLM**	**State**	**Private**	**BLM**	**State**	**Private**	**BLM**	**State**	**Private**	**BLM**	**State**	**Private**	
Maintenance—cut vegetation	0	0	0.23	0.26	0	0.34	0	0	0	1.16	0	0.32	0.09	0	0	0	0	0	5.75	1.57	1.48	0	0	0	11.2
Maintenance and new road—grading	0	0	0	0.63	0.34	1.84	0	0	0	0.11	0	4.39	0	0	0.29	0	0	0.03	2.91	0.92	5.06	0	0	0	16.51
Water crossing	0	0	0.16	0	0	0	0	0	0	0	0	0.12	0	0	0	0	0	0	0.08	0	0.09	0	0	0	0.46
Overland travel—trampling	0	0	3.14	0.32	0	0.83	0	0	0	0	0.08	1.29	0	0		0	0	0	0.09	0	0.57	0	0	0.04	6.36
Total	**0**	**0**	**3.53**	**1.21**	**0.34**	**3.01**	**0**	**0**	**0**	**1.27**	**0.08**	**6.12**	**0.09**	**0**	**0.29**	**0**	**0**	**0.03**	**8.83**	**2.49**	**7.2**	**0**	**0**	**0.04**	**34.53**

Note: For purposes of quantifying impacts, adjacent habitat categories were used to characterize roads since some portions of the roads consist of bare ground; this results in an over-estimate of impacts. , Road widths for all road categories was assumed to be 14-feet based on IPC's standard road width.

Removal and installation of structures would occur within a work pad. Work pads are defined as areas that were previously disturbed during construction of the original line, have been disturbed by ongoing maintenance and vegetation management activities, and would be disturbed during proposed construction activities. Additional work areas are identified in Table 6 of the POD. These are areas that need to be graded to allow for safe operation of equipment while installing a structure; size varies by location. Work within a work pad is considered temporary as the site would be rehabilitated following construction. A total of 38 additional work pads would be used during the rebuild; this would temporarily impact 2.22 acres. Permanent impacts would occur from the permanent occupancy of a given area by each structure. Impacts to vegetation communities from the structures are provided in Table 4-2.

Table 4-2—Permanent and Temporary Impacts to Vegetation Communities by Structure Type

Structure Type	Number of Structures	Temporary Impacts (Acres) (Numbers in parens represent impact on BLM lands)							Permanent Impact (ft^2)
		Agricultural	Developed	Forested	Grassland	Mixed Shrubland	Sagebrush Shrubland	Riparian	
H-frame	420	3.55 (<0.01)	0.89 (0.43)	0	9.51 (2.89)	1.46 (0.46)	32.4 (22.6)	0.52	1,680
3-pole	63	0.19	1.58	0	8.47 (<0.01)	1.02 (0.34)	15.52 (7.65)	0	567
5-pole	2	0	0.41	0.11	0	0	0.3	0	20
Marker ball pole	6	0	<0.01	0	<0.0	0	<0.0	0	12
Additional work areas	36–40 x 60 foot 2–30 x 40 foot	0	0	0	0.63	0	1.59	0	0

Note: Work within the work pad is considered a temporary disturbance. Permanent disturbance is defined as the structure footprint; this acreage has been subtracted from the temporary disturbance total.
Permanent disturbance is based on an area of occupancy of 2 square feet for each pole within a structure.

Idaho Power has proposed two options within the Proposed Action for the location of pulling and tensioning sites. Impacts would be temporary since sites would be restored following use. Impacts by habitat type and option are shown in Table 4-3.

Table 4-3—Temporary Impacts by Vegetation Community Associated with Pulling and Tensioning Sites and Splicing Sites.

Vegetation Community	Option 1 (Acre)	Option 2 (Acre)
Agriculture	1.48	1.48
Developed	0.61	0.50
Forested	0.00	0.12
Grassland	4.95	4.01
Mixed Shrubland	1.15	0.68
Riparian	0.00	0.02
Sagebrush Shrubland	18.15	12.71
Water	0.06	0.00
Total	**26.40**	**19.52**

Idaho Power would use two staging yards. Each staging yard would be approximately 40 acres and located on private lands. The location of staging yards would be determined following authorization of the project by the BLM and is dependent upon negotiations with landowners. Idaho Power would prefer (in order of preference) staging yards in previously developed (e.g., parking lot) land; disturbed open areas; annual grassland; or agricultural areas. Staging yards would not be located in sagebrush habitat.

Operation and Maintenance

Idaho Power would conduct O&M activities in a manner that minimizes permanent impacts on vegetation cover and complies with the Master Agreement, BLM land use plans, EPMs, and other applicable environmental laws and policies. The existence of new service roads and repair of existing roads could facilitate increased use by off-highway vehicles (OHVs), which could result in direct and indirect impacts to vegetation communities. OHV travel can transport noxious weeds and seed to new locations, and can disturb intact vegetation. OHV travel and use of the project area could also increase the risk for more frequent wildfires. However, with the existing road network and overland travel[18] currently in the project area it is unlikely that the Proposed Action would contribute significantly to an increase in OHV use in the area.

Idaho Power currently conducts vegetation management around the existing wood structures to protect them in the case of wildfire. Idaho Power currently clears a 20-foot radius around each pole and applies an approved herbicide to minimize vegetation regrowth. Because Idaho Power is proposing to use steel structures, vegetation management around each pole would no longer be implemented. This would result in a positive effect on vegetation.

There is also a potential that the transmission line could cause a wildfire. Idaho Power's O&M is designed to identify and correct potential problems before that happens. However, vandalism, weather conditions, and faulty equipment can occur and there is a low potential for wildfires. Depending on the location, nature, and extent of the fire, potential affects to vegetation could be minor to major. For example, if a fire were to occur in an area dominated by cheatgrass and confined to a few acres, the effect would be minor. If the fire were to occur in sagebrush, the effect would be considered more significant.

4.3.1.2 Alternative 1—Renew Existing Grant

Impacts to vegetation communities from O&M activities would occur as a result of work within the existing ROW. Moreover, the frequency of O&M activities are expected to be higher for this alternative than the Proposed Action because of the age and current condition of existing structures. Idaho Power would conduct the same O&M activities as the Proposed Action and would continue to conduct vegetation management around each wood structure to protect them from wild fires. Impacts to vegetation from pole treatment activities would result in permanent impacts to 14.14 acres of vegetation. Typical maintenance activities could range from structure replacement to on-structure work (e.g., replace cross arm or insulator). Idaho Power may drive

[18] The BLM management plans for the project area do not prohibit overland travel.

over vegetation to access a structure; this results in crushing or trampling, but does not typically result in removing the entire plant. If Idaho Power were to replace a structure, the work would be conducted within the original work pad but vehicles would need to park within and outside of the 60-foot wide ROW because of vehicle size and operation.. Impacts to vegetation communities from O&M activities cannot be quantified because locations are determined following inspections and on an as-needed basis. Generally, structure replacement occurs in areas that were disturbed when the original structure was installed; disturbances would be limited to the ROW width and typically extend 20–40 feet from the structure (parallel to the ROW); this is 600 to 1,200 sq. ft. of disturbance per structure replacement. Since Idaho Power currently implements vegetation management in a 20-foot diameter circle around each wood pole, only about half of the disturbed area is expected to be vegetated. Idaho Power would be required to comply with applicable grant stipulations, land management plan requirements, and other requirements when conducting O&M activities. Because O&M activities are expected to be high over the next several years, O&M impacts would be greater from this alternative than from O&M activities associated with the Proposed Action. This is primarily because the Proposed Action would be a new line with steel structures that would require little to no maintenance while this alternative is an older line with wooden structures that would need ongoing maintenance.

Structures may be damaged or destroyed by a wild fire. The wooden structures would be repaired or replaced as an emergency action as soon as possible. During emergency actions, Idaho Power would follow EPM's where possible, but typically it is not possible to follow all of them (e.g., timing restrictions). Emergency responses typically result in more ground disturbance than routine O&M and could include road repair or creation. Post emergency rehabilitation is coordinated with the BLM and may be implemented by IPC or as part of the BLM's emergency stabilization and restoration activities.

Because this alternative would not authorize roads, the rebuild project, or a wider ROW, impacts to vegetation communities would be lower overall than the Proposed Action.

4.3.1.3 Alternative 2—No Action

Under Alternative 2, the BLM would deny Idaho Power's pending application for renewal and amendment, and Idaho Power would be required to remove the existing line. Impacts to vegetation communities would be the same as the Proposed Action during line removal activities. Idaho Power would still need to create work pads; create pulling and tensioning sites; and repair, maintain, and create roads to access structures and to be able to remove them. If Idaho Power did not use pulling and tensioning equipment to remove and reclaim conductor, and instead cut it into pieces, then temporary impacts would be approximately 19–23 acres less than the Proposed Action. Idaho Power would rehabilitate the disturbed areas using the same methods and seed mix as the Proposed Action (Section 2.2.3).

There would be no long-term impacts to vegetation communities from O&M activities since the line would no longer be present. Since not all roads used by Idaho Power are used by them exclusively, not all access roads would be reclaimed. Idaho Power would reclaim approximately 20 miles of service roads that occur within the ROW.

4.3.1.4 Alternative 3—Limit the Existing Right-of-Way

Impacts to vegetation communities would be the same as the Proposed Action during construction activities. Idaho Power would still need to create work pads; create pulling and tensioning and splicing sites; and repair, maintain, and create roads. Construction activities would occur outside of the 60-foot wide ROW and would be authorized by a temporary grant from the BLM under this alternative. Impacts to vegetation communities are the same between this alternative and the Proposed Action because Idaho Power would disturb and rehabilitate the same areas and implement the same EPMs.

Impacts from O&M activities are expected to be the same as the Proposed Action as both alternatives are expected to have minimal O&M activities since it would be a new line with steel structures. Impacts from O&M activities would be less than those expected for Alternative 1. Since this alternative would authorize a 60-foot wide ROW rather than the 100-foot wide ROW of the Proposed Action, the overall potential to impact vegetation is less since the ROW is smaller.

4.3.2 Special Status Plant Species

Potential direct impacts to SSP species include direct mortality via crushing, burial, or grubbing. Potential indirect impacts to SSP species include the spread or establishment of invasive plant species, which could compete with and eventually exclude SSP from the area. Furthermore, control and treatment of invasive plant species (e.g., use of herbicides) could result in collateral damage to non-targeted species if conducted improperly. Invasive plant species can also increase the risk of fires, which can adversely affect SSP species or state-listed plant species. In addition, without proper construction and restoration techniques, soil disturbance could result in erosion, thereby reducing or eliminating habitat quality for SSP species.

4.3.2.1 Proposed Action

Mourning milkvetch occurs throughout the project area with 5,781 individual plants identified in the requested ROW and 936 individual plants in roads and pulling and tensioning sites. Plants located within the ROW would be flagged and can be avoided during construction and O&M activities. Individual plants could be directly impacted by construction activities associated with roads and pulling and tensioning sites (Table 4-4). The number of plants that could be affected represents approximately 14% of the plants occurring within the requested ROW. The majority of plants were identified in areas where road work would not occur; however, multiple trips with different pieces of equipment would result in direct impacts to plants (e.g., crushing). Indirect impacts could occur from soil disturbance and the potential for the introduction and/or spread of noxious weeds and non-native plant species. Idaho Power would implement EPMs that would reduce the potential for impacts to mourning milkvetch. In accordance with EPM B-1, IPC would flag sensitive plant locations for avoidance. This could be done on some of the existing roads depending on road width and the ability to still safely drive equipment around the plant population. This would reduce direct impacts but may still lead to indirect impacts. Avoidance of plants may be possible in tensioning sites as the sites are larger than necessary to allow flexibility in how the equipment is set. EPM GM-4 would minimize potential impacts from sediment and erosion and EPMs N-1 through N-6 would address the potential introduction and/or spread of noxious weeds. EPM S-2 addresses rehabilitation of temporarily disturbed areas; reseeding could help minimize the establishment of noxious weeds and invasive plant species in disturbed areas.

Table 4-4—Mourning Milkvetch Occurrence, Vigor, and Potential Impacts Due to Construction Activities

Location (Structure Nos.)	Distance (miles)	Road Category	Number of Plants/ Location	Vigor[a]
173–198	2.8	A	159—roads	Poor–fair
204–217	1.42	B	164—tensioning site 182—roads	Poor–fair
217–225	0.93	A	31 -roads	Poor–good
236–243	1.34	C	31 tensioning site 7—roads	Fair–good
279–281	0.28	A	27—roads	Good
293–314	2.7	A	58—tensioning site 4—roads	Fair
325–340	1.7	A	27—tensioning site 2—roads	Poor–fair
381–387	0.75	A	226—tensioning site 16—roads	Poor–fair

[a] Vigor classifications were based on an adaptation of surveying methods outlined in the Measuring and monitoring plant populations BLM Technical Reference (Elzinga et al. 1998). Classifications were based upon reproductive status, visible displays of stress (specifically environmental factors, i.e. water and heat), and impacts from OHV use and wildlife/livestock (trampling, trailing, etc.).

Poor Vigor—Majority if not all of plants lacked any signs of reproductive activity. Visible stress from insufficient water and heat related stress (most commonly evidenced by dry, brittle stems, leaves, and/or leaflets) was apparent. Plants in this category were observed lacking majority or all leaflets, no reproductive activity, and impacts from OHV and/or livestock/wildlife is apparent on nearly all individuals.

Fair Vigor—Evidence of minimal reproductive activity and visible stress on majority of plants is moderate OR no reproductive activity observed but minimal to moderate visible stress noted. OHV traffic and livestock/wildlife impacts minimal to severe within any portion of the population/subpopulation. Plants in this category either had minimal reproductive individuals with moderate stress due to environmental conditions (heat/water) and/or OHV and livestock/wildlife impacts.

Good Vigor—Evidence of reproductive activity is apparent on individuals not experiencing environmental stress to moderate environmental stress and OHV traffic and livestock/wildlife impacts are absent or minimal. Or populations/subpopulations had little reproductive activity and minimal environmental stress or impacts from OHV and wildlife/livestock. Population/subpopulations observed in good vigor typically had minimal to moderate reproductive activity with minimal impacts due to environmental stressors and OHV and livestock/wildlife impacts.

Impacts to mourning milkvetch from O&M activities would be similar to those from construction activities, but they would likely occur in smaller areas and sporadically as maintenance activities are expected to be minimal with the new structures. Idaho Power would still implement EPMs and would comply with the provisions of BLM-MA-ID-001. Because future maintenance activities and locations are not known, it is not possible to quantify potential impacts.

4.3.2.2 Alternative 1—Renew Existing Grant

Impacts to mourning milkvetch from construction activities would not occur since the line would not be rebuilt and roads would not be authorized. The type of impacts associated with O&M activities would be the same as the Proposed Action. Similar to the Proposed Action, plants occur within the ROW between structures and not within the structure workpad; therefore, it is unlikely that plants would be directly impacted by maintenance activities. Indirect impacts would

be similar to the Proposed Action and Idaho Power would implement the same EPMs to avoid and minimize impacts. Idaho Power would implement EPMs and comply with the provisions of BLM-MA-ID-001 to reduce potential impacts. Because future maintenance activities and locations are not known, it is not possible to quantify potential impacts. Impacts could occur to plants as a result of the pole protection program; however, the likelihood of plants occurring within a 20-foot radius is low since Idaho Power already conducts vegetation management in these areas.

4.3.2.3 Alternative 2—No Action

Impacts to mourning milkvetch would be the same as those for construction activities for the Proposed Action. Idaho Power would need to use, maintain, and create roads to access the facilities to remove them. There may be fewer impacts than the Proposed Action to individual plants (506 individual plants would not be impacted) if Idaho Power cuts the conductor off the structures rather than pull it off the structures; pulling and tensioning sites would not be necessary. The number of plants that could be affected represents approximately 5% of the plants occurring within the ROW requested in the Proposed Action.

Impacts due to O&M activities would not occur since the line would not be in place.

4.3.2.4 Alternative 3—Limit the Existing Right-of-Way

Impacts to mourning milkvetch would be the same as the Proposed Action for construction and activities. The type of impacts associated with O&M activities would be the same as the Proposed Action. Similar to the Proposed Action, plants occur within the ROW between structures and not within the structure workpad; therefore, it is unlikely that plants would be directly impacted by maintenance activities. Indirect impacts would be similar to the Proposed Action and Idaho Power would implement the same EPMs to avoid and minimize impacts. Since there would be a high level of maintenance over several years, indirect impacts could occur at a higher frequency and affect more plants than the Proposed Action. Idaho Power would implement EPMs and comply with the provisions of BLM-MA-ID-001 to reduce potential impacts. Because future maintenance activities and locations are not known, it is not possible to quantify potential impacts.

4.3.3 Invasive Plants and Noxious Weeds

Noxious weeds are typically effective competitors with native plants for resources and may permanently change the plant community, often becoming monocultures that may alter the local fire regime by increasing the fire fuel load. Non-native grasses in particular can provide a fuel source for intense fires, for which some native vegetation communities are not adapted. This may result in long-term habitat change due to the increased abundance of fire-adapted non-native plants that often occurs after such fires. Such changes usually preclude re-establishment of the native plant community in disturbed areas, and represent a permanent change in the local ecology. Several noxious or invasive weed species already occur within the project area.

4.3.3.1 Proposed Action

During construction and O&M activities, vehicles could transport seeds and parts of noxious weeds and invasive plant species (aka weeds) to and from the ROW. Areas disturbed during construction (132–139 acres) and O&M activities would also be susceptible to weed invasion.

Implementation of EPMs N-1 and N-2 would minimize the potential for the transport and establishment of weeds. Idaho Power would apply BLM-approved herbicides to treat noxious weeds that they cause or contribute to during construction and O&M activities. Herbicides and the best time to apply them are identified in the University of Idaho's *Idaho's Noxious Weeds 2011 Control Guidelines Noncrop and Rangeland Sites* publication. Knapweed, thistles, and skeletonweed would be treated with a mixture of Tordon 22k (picloram) and 2,4-D. Whitetop would be treated with TelarXP (chlorsulfuron). Herbicides would be applied by licensed applicators in accordance with label restrictions and BLM requirements. Washing vehicles and equipment prior to entering BLM-managed lands would minimize the chance of introducing noxious weeds to the project area during construction and O&M activities. Use of approved herbicides in accordance with the University of Idaho guidelines would effectively treat noxious weeds and the Proposed Action would not result in a long-term increase or spread of noxious weeds. There may be a short-term (one to three years) increase in noxious weeds due to time lags between when ground disturbance occurs and weeds start to establish and when plants seeded during rehabilitation become established. Treatment of noxious weeds would occur during or following ground disturbing activities and site rehabilitation would occur at the end of each construction season (2016 and 2017) and following ground disturbing O&M activities.

Since noxious weeds occur outside of the project area and other users of the area may not clean vehicles and equipment, it is likely that noxious weeds would continue to persist and could spread in the project vicinity. Wildlife and wind could also spread noxious weeds.

4.3.3.2 Alternative 1—Renew Existing Grant

Since roads and construction activities would not be authorized, approximately 132-139 acres of new ground disturbance would not occur and the potential for introduction and establishment of noxious weeds is less than the Proposed Action. However, O&M activities have the same potential to introduce and spread weeds as the Proposed Action. Because O&M would be high for this Alternative and low for the Proposed Action, the potential to introduce and spread noxious weeds due to O&M activities is greater for this alternative than Proposed Action. Overall, because this alternative would result in fewer disturbed acres at any one time, it would result in fewer potential areas available for establishment of noxious weeds. Similar to the Proposed Action, implementation of EPMs N-1 and N-2 would minimize the potential for the transport and establishment of weeds. Treatment of noxious weeds would occur during or following ground disturbing O&M activities. Rehabilitation of areas disturbed during O&M activities would minimize the potential for establishment of weeds. There would still be a potential that weeds could spread by wildlife or wind.

4.3.3.3 Alternative 2—No Action

Impacts from line removal would be the same as impacts during construction activities under the Proposed Action. Since the line would not be present, impacts from O&M activities would not occur. Because Idaho Power would rehabilitate approximately 20 miles of service roads, along with areas disturbed during line removal, this alternative would result in fewer areas susceptible to weed invasion following establishment of seeded vegetation (3 years). Because roads would be rehabilitated and removed, there is also a reduced chance that recreationists and grazing permittees would introduce weeds by vehicles. There would still be a potential that weeds could spread by wildlife or wind.

Since O&M activities would not occur, there would be no potential for Idaho Power to introduce and spread noxious weeds following removal of their facilities and site rehabilitation.

4.3.3.4 Alternative 3—Limit the Existing Right-of-Way

Impacts would be the same as the Proposed Action.

4.4 Wildlife and Special Status Wildlife Species

Impacts to wildlife habitat were quantified using vegetation data from the field surveys. Information on life history and habitat use were developed using scientific literature, BLM resource specialist information, and professional judgment. Impacts were calculated using the following method and assumptions:

- Impacts to vegetation communities, as provided in Section 4.3, were used to quantify impacts to wildlife habitat.
- The "analysis area" for each alternative is the proposed or existing ROW, as applicable.
- Impacts are presented for the entire project regardless of land ownership.
- Indirect impacts to wildlife outside of the ROW will be addressed, as appropriate.

Where possible, impacts to habitat were quantified on a species-specific basis. Species were grouped based on their similar habitat requirements and impacts for the Proposed Action and alternatives are summarized in Table 4-5. Additional information is provided in Appendix F.

Table 4-5—Summary Table of Species Specific Analysis of Impacts to Habitat from Proposed Action and Alternatives

Species	Vegetation Community/Habitat	Alternative	Specific Habitat within 100' ROWi	Specific Habitat Within 60' ROWii	Vegetation Management: Permanent Disturbance (D) or Restored (R)	Permanent Impacts Associated with Proposed Action	Temporary Impacts Associated with Proposed Action and Alternative 3: Option 1	Temporary Impacts Associated with Proposed Action and Alternative 3: Option 2
Western Burrowing Owl	Grassland	Proposed Action	150.86 acres	n/a	2.89 acres R	7.04 acres	6.32 acres	5.38 acres
		Alternative 1	n/a	90.57 acres	2.89 acres D	n/a	n/a	n/a
		Alternative 2	n/a	n/a	2.89 acres R	n/a	n/a	n/a
		Alternative 3	n/a	90.57 acres	2.89 acres R	7.04 acres	6.32 acres	5.38 acres
Sagebrush Sparrow, Sage Thrasher, Brewer's Sparrow	Sagebrush Shrubland	Proposed Action	456.95 acres	n/a	9.25 acres R	22.88 acres	18.81 acres	13.37 acres
		Alternative 1	n/a	274.55 acres	9.25 acres D	n/a	n/a	n/a
		Alternative 2	n/a	n/a	9.25 acres R	n/a	n/a	n/a
		Alternative 3	n/a	274.55 acres	9.25 acres R	22.88 acres	18.81 acres	13.37 acres
Ring-necked Pheasant, Gray Partridge, and Long-billed Curlew	Agricultural and Grassland	Proposed Action	201.54	n/a	3.76 acres R	7.43 acres	10.94 acres	10.00 acres
		Alternative 1	n/a	121 acres	3.76 acre D	n/a	n/a	n/a
		Alternative 2	n/a	n/a	3.76 acres R	n/a	n/a	n/a
		Alternative 3	n/a	121 acres	3.76 acres R	7.43 acres	10.04 acres	10.00 acres
California Quail	Agricultural and Sagebrush Shrubland	Proposed Action	507.63 acres	n/a	10.12 acres R	23.27 acres	23.43 acres	17.99 acres
		Alternative 1	n/a	304.98 acres	10.12 acres D	n/a	n/a	n/a
		Alternative 2	n/a	n/a	10.12 acres R	n/a	n/a	n/a
		Alternative 3	n/a	304.98 acres	10.12 acres R	23.27 acres	23.43 acres	17.99 acres
Pronghorn Antelope, Chukar, Peregrine Falcon, Ferruginous Hawk, Golden Eagle, and Loggerhead Shrike	Sagebrush Shrubland and Grassland	Proposed Action	607.81 acres	n/a	12.14 acres R	29.92 acres	25.13 acres	18.75 acres
		Alternative 1	n/a	365.12 acres	12.14 acres D	n/a	n/a	n/a
		Alternative 2	n/a	n/a	12.14 acres R	n/a	n/a	n/a
		Alternative 3	n/a	365.12 acres	12.14 acres R	29.92 acres	25.13 acres	18.75 acres
Mourning Dove	Agricultural, Grassland, and Sagebrush Shrubland	Proposed Action	658.49 acres	n/a	13.01 acres R	30.31 acres	29.75 acres	23.37 acres
		Alternative 1	n/a	395.55 acres	13.01 acres D	n/a	n/a	n/a
		Alternative 2	n/a	n/a	13.01 acres R	n/a	n/a	n/a
		Alternative 3	n/a	395.55 acres	13.01 acres R	30.31 acres	29.75	23.37 acres
Elk	Elk Wintering Habitat	Proposed Action	148.39 acres	n/a	2.97 acres R	9.88 acres	4.29 acres	4.29 acres
		Alternative 1	n/a	89.07 acres	2.97 acres D	n/a	n/a	n/a
		Alternative 2	n/a	n/a	2.97 acres R	n/a	4.29 acres	4.29 acres
		Alternative 3	n/a	89.07 acres	2.97 acres R	9.88 acres	4.29 acres	4.29 acres
Mule Deer	Mule Deer Migration Corridor	Proposed Action	129.19 acres	n/a	2.51 acres R	7.2 acres	4.48 acres	4.48 acres
		Alternative 1	n/a	77.50 acres	2.51 acres D	n/a	n/a	n/a
		Alternative 2	n/a	n/a	2.51 acres R	n/a	n/a	n/a

Species	Vegetation Community/Habitat	Alternative	Specific Habitat within 100' ROWi	Specific Habitat Within 60' ROWii	Vegetation Management: Permanent Disturbance (D) or Restored (R)	Permanent Impacts Associated with Proposed Action	Temporary Impacts Associated with Proposed Action and Alternative 3: Option 1	Temporary Impacts Associated with Proposed Action and Alternative 3: Option 2
		Alternative 3	n/a	77.50 acres	2.51 acres R	7.2 acres	4.48 acres	4.48 acres
Mule Deer	Mule Deer Wintering Habitat	Proposed Action	341.02 acres	n/a	3.55 acres R	3.16 acres	5.95 acres	4.3 acres
		Alternative 1	n/a	204.68 acres	3.55 acres D	n/a	n/a	n/a
		Alternative 2	n/a	n/a	3.55 acres R	n/a	n/a	n/a
		Alternative 3	n/a	204.68 acres	3.55 acres R	3.16 acres	5.95 acres	4.3 acres
Gray Wolves	Pack Territory	Proposed Action	5.4 acres	n/a	0.09 acres R	2.36 acres	0	1.05 acres
		Alternative 1	n/a	3.24 acres	0.09 acres D	n/a	n/a	n/a
		Alternative 2	n/a	n/a	0.09 acres R	n/a	n/a	n/a
		Alternative 3	n/a	3.24 acres	0.09 acres R	2.36 acres	0	1.05 acres
Pygmy Rabbit	Pygmy Rabbit Habitat (BLM)	Proposed Action	545.6 acres	n/a	10.73 acres R	29.99 acres	20.42 acres	15.59 acres
		Alternative 1	n/a	327.68 acres	10.73 acres D	n/a	n/a	n/a
		Alternative 2	n/a	n/a	10.73 acres R	n/a	n/a	n/a
		Alternative 3	n/a	327.68 acres	10.73 acres R	29.99 acres	20.42 acres	15.59 acres
Western Toad	Aquatic and Riparian	Proposed Action	12.58 acres	n/a	0.14 acres R	0.03 acres	0.10 acres	0.06 acres
		Alternative 1	n/a	7.54 acres	0.14 acres D	n/a	n/a	n/a
		Alternative 2	n/a	n/a	0.14 acres R	n/a	n/a	n/a
		Alternative 3	n/a	7.54 acres	0.14 acres R	0.03 acres	0.10 acres	0.06 acres
Redband Trout and Wood River Sculpin	Aquatic	Proposed Action	2.78 acres	n/a	n/a	0.00 acres	0.10 acre	0.04 acre
		Alternative 1	n/a	1.64 acres	n/a	n/a	n/a	n/a
		Alternative 2	n/a	n/a	n/a	n/a	n/a	n/a
		Alternative 3	n/a	1.64 acres	n/a	0.00 acre	0.10 acre	0.04 acre

4.4.1 Big Game

Direct impacts to big game are grouped together due to the similarity of the impact and likely response by all three species. While these species prefer slightly different habitats, sagebrush shrubland and grassland habitats may be utilized by all of the species at different times of the year. Death of an animal would be considered a direct impact. Indirect impacts could result from temporary displacement and changes in energy expenditure related to reduced and altered foraging and rest times.

4.4.1.1 Elk

Proposed Action

Based on habitat preference, sagebrush shrubland has the most potential to support elk within the ROW. Elk would typically occur in lower elevation shrublands in the winter when snow has accumulated in higher elevations. Because Idaho Power would end construction activities in the fall and not start until later spring, the likelihood of elk being present within the analysis area during construction activities is low.

Impacts to elk habitat were analyzed using the winter range spatial data provided by IDFG, as this provides the area of the most vital habitat utilized by elk in the SFO. Two separate winter ranges intersect the analysis area, these two locations occupy 128,730 acres in the northern portion of the ROW and 88,782 acres in the southern portion of the ROW, for a total of 217,512 acres. There are 148.39 acres of elk winter range within the proposed 100-foot wide ROW of the Proposed Action. Of the 148.39 acres of elk winter range within the ROW, 4.11 acres would be temporarily disturbed by splicing sites and pulling and tensioning sites. All disturbance associated with these sites and work pads would be revegetated with an appropriate seed mix determined by the BLM. The service roads occupy 30.43 acres of elk wintering range habitat; however, 20.37 acres of the total would not have any work conducted on them. The remaining 10.06 acres would be impacted by overland travel and construction of new roads. Because construction would not occur along the entire length of the ROW simultaneously, and because not all areas of the ROW would be disturbed, elk would still be able to access and utilize the winter range. Replacing the wood structures with steel structures would also eliminate the need for vegetation management, allowing vegetation to regrow around structures and provide 2.97 acres of habitat within the elk winter range.

Construction activities associated with the rebuild could result in indirect impacts due to noise and the presence of people and equipment. If elk are present during these activities, temporary displacement and altered energy behaviors is the most likely response. Upon completion of the rebuild, IPC would primarily be present twice a year while conducting ground or aerial inspections. The presence of suitable habitat outside of the ROW and topographical relief is likely to alleviate stress and limit dispersal distances for migrant and wintering elk. Additionally, O&M activities would be less than they currently are and IPC presence and associated disturbance would be less. The new structure material and equipment would reduce emergency response due to the fire resistant steel structures and new equipment on structures. The creation and improvement of roads may increase recreational use in and near the project area that may adversely impact this species. Since roads would be revegetated with a grasss seed mix, their visibility would be reduced over a few years as grass becomes established; this may reduce

recreational use as the roads would not be as readily apparent. The construction dates for the Proposed Action minimize overlap with sensitive wintering times for elk, further reducing the potential impact.

Idaho Power may need to conduct maintenance activities in the winter, this could result in a short-term disruption to elk if they are present in the area. Indirect impacts could occur in the form of temporary displacement and altered energy behavior such as avoidance and dispersal. When Idaho Power proposes winter maintenance activities in elk winter range, they would coordinate maintenance with the BLM per the Master Agreement. Coordination would provide the BLM an opportunity to review the maintenance activity, determine if elk are present in their winter range, consult with the IDFG, and determine if the proposed activity could occur or would need to be rescheduled. This would minimize potential adverse impacts to elk.

Alternative 1—Renew Existing Grant

No direct or indirect impacts to elk would occur during construction activities since the rebuild would not be authorized under this alternative. Indirect impacts could occur during O&M activities if elk habitat were reduced and/or degraded. The amount of habitat that would be impacted cannot be estimated since future maintenance actions and their locations are unknown. Temporary displacement and dispersal when crews are in an area is the most likely indirect impact. Per EPM S-2, disturbances during O&M activities would be re-seeded and re-contoured to pre-disturbance condition; maintenance would not result in any additional permanent impacts. The only permanent disturbance associated with O&M activities is from continued vegetation management at each structure; the impact to 2.97 acres has already been realized as this is an ongoing activity.

Impacts to elk would be assessed at the time of the grant renewal. Responses by elk to O&M are expected to be the same as described in the Proposed Action, with temporary displacement and altered energy behaviors as the most probable. In anticipation of the proposed rebuild, non-critical maintenance has been postponed until a formal decision has been reached. If Alternative 1 were authorized, the frequency and intensity of O&M activities would increase to ensure present and future reliability of the line. The potential for emergency maintenance to occur during sensitive timeframes with regards to elk increases in comparison to the Proposed Action. This increased risk from emergency maintenance is derived from the age and condition of the line, as well as the susceptibility of wood poles to damage from wildfire. Additionally, pole treatment would occur at each structure every 10 years, while vegetation management around poles would continue to occur every five years. This would create a more frequent disturbance regimen over time that has the potential to impact wildlife at a higher rate compared to the Proposed Action. No new roads would be permitted and the level of recreational use is expected to remain at existing levels.

Alternative 2—No Action

Direct and indirect impacts to elk during removal of the line would be similar to construction impacts under the Proposed Action with the following exceptions: Removal of the existing line would not require any drilling/blasting, splicing sites, or pulling and tensioning sites. The same roads and road work as the Proposed Action would be necessary to access all of the structures; however, roads identified by the BLM would be restored in accordance with a Reclamation Plan to be developed by Idaho Power and approved by the BLM. Since the line would be removed

within one year and not over two years, overall presence in the area would be less than the Proposed Action; this reduces the potential for direct and indirect impacts. Moreover, since work to remove the line would not occur in the winter, there is less chance that elk would be present. There are no permanent impacts associated with this alternative and it would likely provide the benefit of increased habitat over time.

The removal of the line would entail very similar impacts and expected responses by elk as the Proposed Action during the removal of the line. Work conducted at every structure has the potential to alter energy behavior and temporarily displace elk that are present. However, upon completion of the removal, roads, work pads, and structure footprints would be revegetated, thereby eliminating long term impacts.

Alternative 3—Limit the Existing Right-of-Way

Direct and indirect impacts are identical to the Proposed Action. While the difference in temporary and permanent ROW width changes the number of acres of wintering elk habitat within the ROW it does not change the acreage of disturbance. This is reflected in the 89.07 acres of wintering elk habitat in the 60-foot ROW, as opposed to the 148.39 acres of the 100-foot ROW. The replacement of steel structures would negate the need to continue vegetation management practices, allowing 2.97 acres of previously disturbed elk wintering habitat to be revegetated.

Impacts to elk during O&M activities are the same as the Proposed Action.

4.4.1.2 Mule Deer

Proposed Action

Similar to elk, mule deer in the area would utilize habitat at the higher elevations found in the northern reaches of the project area during the summer, and with the onset of colder weather and snow, would migrate to the lower elevation wintering habitat. Resident populations are likely to utilize suitable habitat in the area year-round. Mule deer migration corridors are relatively narrow areas used by deer as they travel between summer and winter habitats.

The proposed 100-foot ROW contains 129.19 acres of mule deer migration corridor out of two separate migration corridors that total 59,415 acres and 60,678 acres (Figure 3-3). Temporary impacts from pulling and tensioning sites are 2.06 acres. The temporary impact from either splicing site options is 2.42 acres within the mule deer migration corridor. The roads that would be permitted under this option would encompass 23.46 acres within the mule deer migration corridor; 7.2 acres would be permanently impacted. Upon completion of the rebuild the discontinued vegetation management practices would allow for 2.51 acres of migration corridor to be re-vegetated.

The Proposed 100-foot ROW contains 341.02 acres within mule deer winter range/habitat. The maximum impact to winter range from any combination of pulling and tensioning and splicing sites is 5.95 acres. This is considered temporary impact. Service roads would permanently impact 3.16 acres of the mule deer winter range habitat. The use of steel structures would stop vegetation management and allow 3.55 acres of suitable winter range habitat to be revegetated.

Indirect impacts would be the same as for elk.

Alternative 1—Renew Existing Grant

The renewal of the existing grant would encompass 77.50 acres of habitat within the mule deer migration corridor and 204.68 acres within mule deer wintering habitat. No direct or indirect impacts to mule deer or their habitat would occur during construction activities since the rebuild would not be authorized under this alternative. The ongoing, realized impact to 2.51 acres within migration habitat and 3.55 acres within winter range would continue for vegetation management. Indirect impacts could occur during O&M activities if mule deer habitat were reduced and/or degraded. The amount of habitat that would be impacted cannot be estimated since future maintenance actions and their locations are unknown. Temporary displacement and dispersal when crews are in an area is the most likely indirect impact.

Impacts to mule deer would be assessed during the grant renewal. Responses to O&M are expected to be the same as described in the Proposed Action, with temporary displacement and altered energy behaviors as the most probable. In anticipation of the proposed rebuild, non-critical maintenance has been postponed until a formal decision has been reached. If Alternative 1 were authorized, the frequency and intensity of O&M activities would increase to ensure present and future reliability of the line. The potential for emergency maintenance to occur during sensitive timeframes with regards to wildlife (mule deer in particular) increases in comparison to the Proposed Action. The potential for emergency actions to occur in sensitive time frames is likely due to the age and current condition of the line. Additionally, pole treatment would occur at each structure every 10 years, while vegetation management would continue to occur every five years. This would create a more frequent disturbance regimen over time that has the potential to impact wildlife at a higher rate compared to the Proposed Action. No new roads would be permitted and the level of recreational use is expected to remain at current levels.

Alternative 2—No Action

Impacts to mule deer would be similar to elk. Road work would temporarily impact 7.2 acres of migration corridor and 3.16 acres of winter range. Removal of the line would halt vegetation management, allowing 2.51 acres within the migration corridor and 3.55 acres within winter range to be restored. There are no permanent impacts associated with this alternative and it would provide increased habitat and decreased fragmentation following site rehabilitation.

The removal of the line would entail very similar impacts and expected responses by mule deer as the Proposed Action. Work conducted at every structure has the potential to alter energy behaviors and temporarily displace deer. However, upon completion of the removal, roads, workpads, and structure footprints would be revegetated, thereby eliminating impacts in the long-term.

Alternative 3—Limit the Existing ROW

Impacts to mule deer would be similar to elk. The temporary 100-foot ROW would include 129.19 acres of habitat and the 60 foot ROW would include 77.5 acres of habitat within the mule deer migration corridor. Acreage for the winter range also changes, from the 341.02 acres within the 100-foot ROW, to the 204.68 acres contained in the 60-foot ROW.

Impacts to mule deer under this alternative would be the same as the Proposed Action unless maintenance could not be completed within the 60-foot ROW. Suitable habitat within the mule

deer migration corridor is found to a much greater extent outside of the temporary 100-foot ROW and permanent 60-foot ROW. The undulating terrain in and adjacent to the ROW and adjacent habitats provide numerous areas for mule deer to use if they are displaced temporarily.

4.4.1.3 Pronghorn Antelope

Proposed Action

Sagebrush shrublands are the predominant habitat type utilized by pronghorn antelope, but they may also use grasslands; therefore, both of these vegetation communities were used when analyzing impacts to pronghorn antelope habitat (Table 4-5; Appendix F). Direct permanent impacts would occur to 29.92 acres and temporary impacts would occur to 25.13 acres out of 607.81 acres of habitat within the proposed 100-foot wide ROW. The replacement of the existing wooden structures with steel structures would result in the cessation of vegetation management; this would remove impacts on 12.14 acres of potential habitat within the ROW and allow for revegetation.

Impacts to pronghorn antelope as a result of the Proposed Action are similar to those identified for elk and mule deer. The most likely impact to this species is temporary displacement and altered energy behaviors. Upon completion of the rebuild, IPC would primarily be present twice a year while conducting ground or aerial inspections. The presence of suitable habitat outside of the ROW and topographical relief is likely to alleviate stress. O&M activities would be less than they currently are and IPC presence and associated disturbance would be less. The new structure material and equipment would reduce emergency response due to the fire resistant steel structures and new equipment on structures. The creation and improvement of roads may increase recreational use in and near the project area that may adversely impact this species. Since roads would be revegetated with a grasss seed mix, their visibility would be reduced over a few years as grass becomes established; this may reduce recreational use as the roads would not be as readily apparent. The construction dates for the Proposed Action minimize overlap with sensitive wintering times for pronghorn, further reducing the potential impact.

Alternative 1—Renew Existing Permit

There are no impacts associated with construction since the rebuild would not occur.

The 60-foot ROW contains 365.12 acres of suitable habitat. O&M activities may cause temporary impacts to some pronghorn habitat and displacement of animals as they move into adjacent suitable habitat.

Impacts to pronghorn antelope would be assessed during the grant renewal. Responses to O&M are expected to be the same as described in the Proposed Action, with temporary displacement and altered energy behaviors as the most probable. In anticipation of the proposed rebuild, non-critical maintenance has been postponed until a formal decision has been reaching. If Alternative 1 were authorized, the frequency and intensity of O&M activities would increase to ensure present and future reliability of the line. Additionally, pole treatment would occur at each structure every 10 years, while vegetation management would continue to occur every five years. This would create a more frequent disturbance regimen over time that has the potential to impact wildlife at a higher rate compared to the Proposed Action. No new roads would be permitted and the level of recreational use is expected to remain at current levels.

Alternative 2—No Action

Impacts to pronghorn antelope habitat from removing the line would be the same as rebuilding the line except that the 31.95 acres of road impacts would be temporary as roads would be rehabilitated; no pulling and tensioning or splicing sites would be needed to remove and salvage the line and there would be no drilling or blasting for new structures. Since there would be no need for continued vegetation management, 12.14 acres of habitat would be revegetated. There are no permanent impacts associated with this alternative and it would provide increased habitat and decreased fragmentation following site rehabilitation.

The removal of the line would entail very similar impacts and expected responses by antelope as the Proposed Action during the removal of the line. Work conducted at every structure has the potential to alter energy behaviors and temporarily displace antelope. However, upon completion of the removal, roads, workpads, and structure footprints would be revegetated, thereby eliminating long-term impacts.

Alternative 3—Limit the Existing ROW

Impacts due to construction activities would be the same as the Proposed Action except that 29.92 acres would be permanently impacted out of the 365.12 acres of habitat present within the ROW.

Impacts from O&M activities would be the same as the Proposed Action.

4.4.2 Game Birds

4.4.2.1 California Quail

Proposed Action

Based upon habitat preference and EO's proximate to the ROW, agricultural and sagebrush shrubland vegetation communities were identified as the most likely to provide suitable habitat for California quail. While this species is more likely to occur in the southern half of the project area, the habitat available in the remainder of the ROW could also support this species and is included in the analysis.

Direct and indirect impacts to California quail could include direct mortality such as collisions with conductors, guy wires or vehicles,, impacts to reproduction (e.g., driving over a nest), reduction in primary habitat, temporary displacement, and nest failure/abandonment. The permanent impact associated with construction of the Proposed Action is 10.12 acres out of the 507.63 acres of suitable habitat identified within the 100-foot wide ROW (Table 4-5). Replacing wood with steel structures would allow for an additional 10.12 acres of suitable habitat as a result of the cessation of vegetation management. Direct mortality could occur if birds were unable to avoid heavy equipment or if equipment drove over a nest with chicks or eggs. The presence of suitable habitat outside of the ROW along with rolling topography in and adjacent to the ROW provides adequate cover in the event of temporary displacement.

The Proposed Action would entail a period of increased activity along the line for a portion of two years during the rebuild. Upon completion of the rebuild, IPC would primarily be present twice a year while conducting ground or aerial inspections. Inspections on the ground would be conducted by vehicle on the roads or on foot as necessary, resulting in minimal disturbance to

quail. The new structures and equipment decrease the potential for maintenance, while also reducing the risk of damage from wildfires. Use of roads by the general public may increase and would likely result in temporary displacement. The prevalence of suitable habitat outside of the ROW and the undulating terrain provide suitable dispersal habitat. The increased structure height is not expected to increase predation on this species. This is due to a combination of factors including minimal height increase, predator prey distances are higher which reduces prey detectability, and increased distance from detection have shown to reduce capture success (Anderson 2008). Additionally, vegetation height throughout the project area can provide concealment opportunities. The use of tubular crossarms has been observed by Idaho Power biologists to decrease nesting occurrences by raptors and corvids (potential predators) based on aerial surveys (IPC 2013); however, perching appears to be unaffected by the change.

Roads created and upgraded within the Proposed Action would be utilized by IPC personnel twice per year after the rebuild is complete, limiting temporary displacement from IPC activities. Recreational use of the roads is possible during any time of the year.

Alternative 1-Renew Existing Grant

Impacts from construction activities would not occur. The ongoing, already realized impact to 10.12 acres of habitat would continue as a result of vegetation management (Table 4-5). Impacts from O&M activities would be similar to the Proposed Action.

Impacts to California quail will be assessed during the grant renewal. Responses to O&M are expected to be the same as those outlined in the Proposed Action, with temporary displacement being the most probable. In anticipation of the proposed rebuild, non-critical maintenance has been postponed until a formal decision has been reached. If Alternative 1 were authorized, the frequency and intensity of O&M activities would increase to ensure present and future reliability of the line. Additionally, pole treatment would occur at each structure every 10 years, while vegetation management would continue to occur every five years. This would create more frequent disturbance over time that has the potential to impact wildlife at a higher rate compared to the Proposed Action. Observations by Idaho Power indicate that the flat wooden crossarms provide a more stable nesting platform to be utilized by avian predators than the tubular steel of the Proposed Action. The continued vegetation management limits the amount of cover directly underneath structures; however, this habitat is unlikely to be utilized by California quail as it would increase their detection rates due to lack of cover.

Alternative 2-No Action

Removal of the line would have similar impacts to construction of the Proposed Action except that 23.27 acres of road impacts would be temporary as roads would be rehabilitated; no pulling and tensioning or splicing sites would be needed to remove and salvage the line and there would be no drilling or blasting for new structures. There are no permanent impacts associated with this alternative and it would provide increased habitat and decreased fragmentation following site rehabilitation.

Removal of the line would entail very similar impacts and expected responses by California quail as the Proposed Action during the removal of the line. Work conducted at every structure has the potential to alter energy behaviors and temporarily displace quail. However, upon completion of the removal; roads, work pads, and structure footprints would be revegetated, thereby

eliminating impacts in the long-term. The removal of elevated perching structures of potential predators would likely provide a decreased predation risk to California quail. Over time the small-scale landscape patchiness resulting from vegetation management would decrease.

Alternative 3—Limit the Existing Right-of-Way

This alternative has the same impacts associated with the rebuild activities of the Proposed Action; however, habitat within the permanent ROW differs because it is a smaller ROW. Overall, 7.43 acres of permanent impact would occur, along with 10.94 acres of temporary disturbance (Table 4-5; Appendix F). Temporary displacement is the most likely indirect impact. There is also the potential for nest abandonment and direct mortality as a result of construction and O&M activities; however, quail are expected to move to habitat outside of the ROW when disturbed.

This alternative would have the same expected impacts of the Proposed Action.

4.4.2.2 Ring-necked Pheasant and Gray Partridge

Proposed Action

Based on habitat preference, the interface between grassland and agricultural areas and agricultural lands are the most likely to support ring-necked pheasants and gray partridge. While the interface of these two habitat types is preferred, the potential to utilize either one, outside of the interface zone, still exists. Therefore, agricultural areas and grasslands are included in the analysis of these two species.

Approximately 201.54 acres of agricultural and grassland habitat occurs within the proposed 100-foot wide ROW; approximately 7.43 acres of this would be permanently impacted and 10.94 acres would be temporarily impacted (Table 4-5). Indirect impacts would most likely result in temporary avoidance of work areas. Collisions with the line poses a risk to individuals; however, if adequate cover is nearby ring-neck pheasants have a noted preference to run to cover rather than flying (Giudice, et. al. 2001). Since construction would not occur during the winter, impacts would not occur when ring-necked pheasants are the most vulnerable to altered energy behaviors. Individuals may be killed when colliding with facilities and nests may be crushed by equipment.

Impacts from O&M activities could include habitat loss or degradation; temporary avoidance of work areas; death due to collision with equipment and facilities; and crushing of nests. Work during the rebuild would most likely result in the temporary displacement of these two species. Upon completion of the rebuild, IPC would primarily be present twice a year while conducting ground or aerial inspections. The replacement of the flat wooden crossarm with tubular steel has been noted to decrease nesting potential by raptors and corvids (IPC 2013). This may decrease the presence of potential predators nesting on structures; however, they would still provide a useable perch for hunting/foraging. The increased structure height is not expected to increase predation on these species. This is due to a combination of factors including minimal height increase, predator prey distances are higher which reduces prey detectability, and increased distance from detection have shown to reduce capture success (Anderson 2008).

Alternative 1-Renew Existing Grant

Impacts from construction activities would not occur. The ongoing, already realized impact to 3.76 acres of habitat would continue as a result of vegetation management (Table 4-5). Impacts from O&M activities would be the same as the Proposed Action.

Responses to O&M are expected to be the same as described in the Proposed Action, with temporary displacement and altered energy behaviors as the most probable. In anticipation of the proposed rebuild, non-critical maintenance has been postponed until a formal decision has been reached. If Alternative 1 were authorized, the frequency and intensity of O&M activities would increase to ensure present and future reliability of the line. The potential for emergency actions to occur is more likely due to the age and current condition of the line. Additionally, pole treatment would occur at each structure every 10 years, while vegetation management would continue every 5 years. This would create a more frequent disturbance regimen over time that has the potential to impact wildlife at a higher rate compared to the Proposed Action. No new roads would be permitted under this alternative, and recreational use of existing roads would not increase as a result of this action.

The use of flat crossarms provides a more suitable nesting platform than the tubular steel crossarms of the proposed actions. These may increase potential predator activity within the project area, because of the more suitable nesting platform provided by the flat crossarm.

Alternative 2—No Action

Removal of the line would have similar impacts to construction of the Proposed Action except that the acres of permanent impacts from the service roads would be temporary as disturbed areas would be rehabilitated; no pulling and tensioning or splicing sites would be needed to remove and salvage the line and there would be no drilling or blasting for new structures. There are no permanent impacts associated with this alternative.

Removal of the line would have similar impacts as the rebuild of the Proposed Action; however, there are no expected impacts following the removal of the line. Roads and structure sites would be revegetated, thereby eliminating long term impacts. Predation rates and predator abundance may be impacted by the removal of the line; however, the net benefit or detriment experienced by ring-necked pheasant and gray partridge is unknown. It is likely that natural predators would utilize other existing elevated perches within the landscape.

Alternative 3—Limit the Existing Right-of-Way

This alternative has the same impacts associated with the Proposed Action; however, habitat within the permanent ROW differs because it is a smaller ROW. This alternative would permanently impact acres and temporarily impact acres of habitat within the ROW (Table 4-5). Indirect impacts from this alternative would most likely result in the temporary displacement of pheasants. There is also the potential for nest abandonment and direct mortality as a result of construction and O&M activities; however, pheasants are expected to move to habitat outside of the ROW when disturbed.

Impacts to ring-necked pheasants and gray partridge would be the same as the Proposed Action.

4.4.2.3 Mourning Dove

Proposed Action

The potential impacts associated with the Proposed Action range from nest failure and mortality to temporary displacement. This species may nest in trees, shrubs, ledges, and nests of other species. Temporary displacement is the most likely impact to this species, although similar habitat is available outside of the ROW. Direct mortality could occur due to collision with facilities, as well as the crushing of nests.

The most abundant vegetation communities that this species inhabits within the proposed ROW are agricultural areas, grasslands, and sagebrush shrublands. These vegetation communities occupy 658.49 acres of the proposed ROW. There would be 24.58acres of temporary disturbance as a result of the pulling, tensioning, and splicing sites. The total permanent impact associated with construction is 30.31 acres, with a maximum of 29.75 acres of temporary disturbance from either pulling and tensioning option (Table 4-5; Appendix F). The installation of the steel structures would discontinue vegetation management allowing an additional 13.01acres within suitable habitat to be revegetated.

Construction activities may cause temporary displacement and altered energy behaviors. Upon completion of the rebuild, IPC would primarily be present twice a year while conducting ground or aerial inspections. The switch from wood to steel structures is expected to require less maintenance and decreases the susceptibility of the line to wildfire damage. The presence of suitable habitat outside the ROW and topographical relief is likely to alleviate stress and limit dispersal distances for mourning doves. The replacement of the flat wooden crossarm with tubular steel has been noted to decrease nesting potential by raptors and corvids (IPC 2013). This may decrease the presence of potential predators nesting on structures; however, they would still provide a useable perch for hunting/foraging. The increased structure height is not expected to increase predation on these species. This is due to a combination of factors including minimal height increase, predator prey distances are higher which reduces prey detectability, and increased distance from detection have shown to reduce capture success (Anderson 2008). The creation and improvement of roads may increase recreational use in and near the project area that may adversely impact this species. Since roads would be revegetated with a grasss seed mix, their visibility would be reduced over a few years as grass becomes established; this may reduce recreational use as the roads would not be as readily apparent.

Alternative 1—Renew Existing Grant

Impacts from construction activities would not occur. The ongoing, already realized impact to 13.01acres of suitable habitat would continue as a result of vegetation management (Table 4-5). Impacts from O&M activities would be similar to the Proposed Action.

The impacts to mourning doves would be assessed during the grant renewal. Impacts from O&M activities are expected to be the same as the Proposed Action, with temporary displacement and altered energy behaviors as the most probable. In anticipation of the proposed rebuild, non-critical maintenance has been postponed until a formal decision has been reached. If Alternative 1 were authorized, the frequency and intensity of O&M activities would increase to ensure present and future reliability of the line. The line would be inspected by ground or aerial methods

twice per year, while pole treatment would occur at each structure every 10 years. The continued use of flat wooden crossarms would maintain existing predator perch and nest sites.

Alternative 2—No Action

Removal of the line would have similar impacts to construction of the Proposed Action except that the 30.31 acres of permanent impacts from the rebuild would be temporary as disturbed areas would be rehabilitated; no pulling and tensioning or splicing sites would be needed to remove and salvage the line and no drilling or blasting sites for new structures would be necessary. There are no permanent impacts associated with this alternative.

The removal of the line would result in similar impacts and expected responses by mourning doves as the Proposed Action during the removal of the line. Work conducted at every structure has the potential to alter energy behaviors and temporarily displace mourning doves. Similar habitat is present outside the ROW and provides suitable habitat in the event of displacement from the project area; additionally, the suitability of this habitat outside the ROW would likely alleviate stress from the displacement. The removal of structures would eliminate potential predator nest sites and perch locations from the landscape. Roads and structure sites would be rehabilitated upon the removal of facilities and equipment.

Alternative 3—Limit Existing ROW

This alternative has the same impacts associated with the rebuild activities of the Proposed Action; however, habitat within the permanent ROW differs because of the reduced width. This alternative would permanently impact 30.31acres and temporarily impact up to 29.75acres of habitat within the ROW (Table 4-5). Indirect impacts to mourning doves would most likely result in temporary displacement; however, the potential for direct mortality due to collision with vehicles and facilities, as well as destruction of nests is possible. Mourning doves are expected to move outside of the ROW when disturbed by construction or O&M.

This alternative would result in the same impacts as Proposed Action.

4.4.2.4 Chukar

Proposed Action

This species is known to occupy grasslands and sagebrush shrublands with a component of herbaceous cover, most frequently on hillsides and slopes. These particular habitat types are found throughout the project area; however, the hillsides and slopes features are less prevalent. For analysis, all acreage of these habitat types was included. The most likely impact to this species is temporary displacement; however, direct mortality and nest abandonment may also occur.

The permanent impact associated with construction activities is 29.92 acres of potential habitat, with a maximum of 25.13 acres of temporary impact. The use of steel structures for the rebuild would eliminate the need for continued vegetation management allowing an additional 12.14 acres within potential habitat to be revegetated (Table 4-5). Indirect impacts associated with the Proposed Action would be greater than Alternative 1 during the rebuild; however, disturbances are expected to be less than Alternative 1 during O&M because the new line would require less maintenance than the existing line.

The construction activities may cause temporary displacement and altered energy behaviors. Upon completion of the rebuild, IPC would primarily be present twice a year while conducting ground or aerial inspections . The new structures and equipment decrease the potential for O&M, while also reducing the risk of damage from wildfires. The creation and improvement of roads may increase recreational use in and near the project area that may adversely impact this species. Since roads would be revegetated with a grasss seed mix, their visibility would be reduced over a few years as grass becomes established; this may reduce recreational use as the roads would not be as readily apparent. The prevalence of suitable habitat outside of the ROW and the undulating terrain provide suitable dispersal habitat outside of the ROW, that would likely alleviate stress. The replacement of the flat wooden crossarm with tubular steel has been noted to decrease nesting potential by raptors and corvids (IPC 2013). This may decrease the presence of potential predators nesting on structures; however, they would still provide a useable perch for hunting/foraging. The increased structure height is not expected to increase predation on these species. This is due to a combination of factors including minimal height increase, predator prey distances are higher which reduces prey detectability, and increased distance from detection have shown to reduce capture success (Anderson 2008).

Alternative 1—Renew Existing Grant

Impacts from construction activities would not occur. The ongoing, already realized impact to 12.14 acres of potential habitat would continue as a result of vegetation management (Table 4-5). Impacts from O&M activities would be similar to the Proposed Action, although they are expected to be experienced at a higher frequency.

Impacts to chukar would be assessed during the grant renewal. Responses to O&M are expected to be the same as those described in the Proposed Action, with temporary displacement being the most probable. In anticipation of the proposed rebuild, non-critical maintenance has been postponed until a formal decision has been reached. If Alternative 1 were approved, the frequency and intensity of O&M activities would increase to ensure present and future reliability of the line. Additionally, pole treatment would occur at each structure every 10 years, while vegetation management would continue to occur every five years. This would create a more frequent disturbance regimen over time that has the potential to impact wildlife at a higher rate than the Proposed Action. Observations by Idaho Power indicate that the flat wooden crossarms provide a more stable nesting platform for predators. The continued vegetation management limits the amount of cover directly beneath structures; however, as a potential perch for predators, this habitat is unlikely to be utilized by chukars as it would increase their detection rates by potential predators. The wood structures are also more vulnerable to damage from wildfires, increasing the potential for disturbance due to emergency maintenance activities.

Alternative 2—No Action

Removal of the line would have similar impacts to construction of the Proposed Action except the 31.95 acres of road impacts would be temporary as roads would be rehabilitated; no pulling and tensioning or splicing sites would be needed and there would be no need to drill or blast for new structures. Additionally, vegetation management would not occur, which would allow the restoration of 12.14 acres of potential habitat. This alternative and it would likely provide the benefit of increased habitat over time following site rehabilitation.

Removal of the line would entail very similar impacts and expected responses as the Proposed Action during the removal of the line. Work conducted at every structure has the potential to alter energy behaviors and temporarily displace chukar. However, upon completion of the removal; roads, workpads, and structure footprints would be revegetated, thereby eliminating impacts in the long-term. The removal of elevated perching structures of potential predators would likely provide a decreased predation risk to chukar. Over time the reduction of small-scale landscape patchiness from vegetation management could provide suitable habitat and cover for chukar.

Alternative 3—Limit the Existing ROW

This alternative has the same impacts associated with the rebuild activities of the Proposed Action; however, habitat within the permanent ROW differs because it is a smaller ROW. Overall, 29.92 acres of permanent impact would occur, along with 25.13 acres of temporary disturbance (Table 4-5; Appendix F). Impacts resulting from this alternative would most likely result in the temporary displacement of chukars. The potential for nest abandonment and direct mortality as a result of this alternative exists; however, chukars are expected to move to suitable habitat outside of the ROW when disturbed.

This alternative would have similar impacts to the Proposed Action.

4.4.3 Raptors

4.4.3.1 Peregrine Falcon

Proposed Action

Peregrine falcons nest on rocky outcrops and cliff faces; these habitats are limited within the proposed ROW. No nests are known to occur within the proposed ROW. While no nests have been observed, shrubland and grassland vegetation communities may provide suitable foraging habitat. No marshy areas or abundant aquatic habitat is present within the ROW, limiting the presence of waterfowl, the primary prey of peregrine falcons. Construction and maintenance activities typically avoid rocky substrate, cliffs, and outcrops where plausible, because of the difficulty to work in and on these areas. This avoidance would greatly reduce impacts to nesting individuals and nesting habitat. The most likely impact to these species as a result of the Proposed Action is the reduction in quality or loss of foraging habitat. The Proposed Action would permanently impact 29.92 acres of foraging habitat along with 25.13 acres of temporary impact (Table 4-5; Appendix F). The construction with steel structures would discontinue the vegetation management and allow for an additional 12.14 acres of suitable habitat to be revegetated. The line would be built to raptor-safe standards reducing the risk of electrocution. Mortality due to collisions is possible; however, the size of the conductor and the excellent eyesight of the falcons greatly reduce this risk. Collisions are more likely when chasing prey and in low visibility conditions. The potential for nest abandonment exists, although the lack of proximity to the ROW and topographic barriers reduce the likelihood for this to occur.

The rebuilding of the line may cause temporary displacement and altered energy behaviors. Upon completion of the rebuild, IPC would primarily be present twice a year while conducting ground or aerial inspections. The presence of suitable habitat outside the ROW and topographical relief is likely to alleviate stress and reduce dispersal distance. The replacement of the flat wooden crossarms with the tubular steel is expected to reduce nesting opportunities; however,

they still provide perching opportunities. The creation and improvement of roads may increase recreational use in and near the project area that may adversely impact this species. Since roads would be revegetated with a grasss seed mix, their visibility would be reduced over a few years as grass becomes established; this may reduce recreational use as the roads would not be as readily apparent. The only structures that are moving from their existing locations are those that span the pond in Malad Gorge State Park. Moving these structures away from the pond may reduce collision risk while the falcon is pursuing waterfowl in this area.

Alternative 1—Renew Existing Grant

Impacts from construction activities would not occur. The ongoing, already realized permanent impact to 12.14 acres of suitable habitat would continue as a result of vegetation management (Table 4-5). Impacts from O&M activities would be the same as the Proposed Action.

Impacts from O&M activities are expected to be the same as described in the Proposed Action, with temporary displacement and altered energy behaviors as the most probable. In anticipation of the proposed rebuild, non-critical maintenance has been postponed until a formal decision has been reached. If Alternative 1 were authorized, the frequency and intensity of O&M activities would increase to ensure present and future reliability of the line. The continued use of flat wooden crossarms would provide the same perching and nesting opportunities as the existing line; however, no peregrine falcons were observed nesting on the line during the two surveys conducted along the ROW (URS 2011 & IPC 2014). In addition to the expected increase in maintenance activities, the continued vegetation management would occur at every structure in five year cycles; additionally, pole treatment would occur at the wooden structures every 10 years. The continued use of wooden poles increases the risk of damage due to wildfires. No roads would be authorized under this alternative, resulting in no expected increase in disturbance from recreational use of access roads.

Impacts to the peregrine falcon are similar to the Proposed Action. The ongoing O&M is expected to result in more frequent disturbance over time than the Proposed Action. This alternative would keep the structures that span the pond on Malad State Park, providing more of a collision risk than the Proposed Action.

Alternative 2—No Action Alternative

Removal of the line would have similar impacts to construction of the Proposed Action except the 31.95 acres from road work would be classified as temporary disturbance because it would be restored upon completion of the line removal. No pulling and tensioning or splicing sites would be needed to remove and salvage the line. Additionally there is no need for drilling or blasting for new structures. No permanent impacts are associated with this alternative.

Impacts from removing the line would be similar to the Proposed Action. Removal of the line eliminates a potential collision risk to peregrine falcons; however, they are also losing potential nesting and perching sites.

Alternative 3—Limit the Existing ROW

This alternative has the same impacts associated with the rebuild activities of the Proposed Action; however, habitat within the permanent ROW differs because it is a smaller ROW. This alternative would permanently impact 29.92 acres of suitable habitat and would temporarily

impact 25.13 acres of habitat within the ROW (Table 4-5; Appendix F). Indirect impacts are expected to reduce or degrade falcon foraging habitat with some potential for temporary displacement. The availability of the same vegetation communities and habitat opportunities outside of the ROW would provide ample foraging habitat in the event temporary displacement occurs.

This alternative would have similar impacts to the Proposed Action.

4.4.3.2 Ferruginous Hawk

Proposed Action

The rebuilding of the line would potentially impact the foraging and nesting habitat of the ferruginous hawk. This species feeds on mammalian prey although it will occasionally prey upon avian, reptilian, and amphibian prey. Ferruginous hawks nester on trees/large shrubs, cliffs and utility structures and the sagebrush shrubland and grassland vegetation communities in the project area provide foraging and nesting opportunities. The most likely impact to this species as a result of the Proposed Action is the reduction in quality or loss of foraging habitat. The line would be built to raptor-safe standards reducing the risk of electrocution. Mortality due to collisions is possible; however, the size of the conductor and the excellent eyesight of the ferruginous hawk greatly reduce this risk. Collisions are more likely when chasing prey and in low visibility conditions.

The Proposed Action would permanently impact 29.92 acres of foraging habitat along with 25.13 acres of temporary impact (Table 4-5; Appendix F). The construction with steel structures would discontinue the vegetation management and allow for an additional 12.14 acres of suitable habitat to be revegetated.

Construction activities may cause temporary displacement and altered energy behaviors. Upon completion of the rebuild, IPC would primarily be present twice a year while conducting ground or aerial inspections. Suitable habitat is also found outside of the ROW and the undulating terrain can provide some relief to stress and potentially reduce dispersal distance. The flat wooden crossarms would be replaced with tubular steel that has been observed to reduce nesting (IPC 2013). The change to the tubular steel does not appear to impact the ability to perch; therefore this change is not expected to impact any foraging activities associated with perch hunting. The creation and improvement of roads may increase recreational use in and near the project area that may adversely impact this species. Since roads would be revegetated with a grasss seed mix, their visibility would be reduced over a few years as grass becomes established; this may reduce recreational use as the roads would not be as readily apparent.

Alternative 1—Renew Existing Grant

Impacts from the construction activities would not occur. The ongoing, already realized permanent impact to 12.14 acres of suitable habitat would continue as a result of vegetation management (Table 4-5).

Impacts to the ferruginous hawk would be assessed during grant renewal. Impacts from O&M are expected to be the same as the Proposed Action. In anticipation of the proposed rebuild, non-critical maintenance has been postponed until a formal decision has been reached. If Alternative

1 were approved, the frequency and intensity of O&M activities would increase to ensure the present and future reliability of the line. The need for vegetation management every five years and the pole treatment at each structure would occur every 10 years. The continued use of flat wooden crossarms provide a more stable nesting platform; however, survey efforts revealed no ferruginous hawk activity within the project area. Roads would not be constructed or rebuilt in this alternative and the current level of use and disturbance from recreation activities would not increase due to this project.

Alternative 2—No Action Alternative

Removal of the line would have similar impacts to construction of the Proposed Action except that the 31.95 acres of impact from the service roads would be temporary; no pulling and tensioning or splicing sites would be needed to remove and salvage the line. Additionally there is no need for drilling or blasting for new structures. No permanent impacts are associated with this alternative.

The initial removal of the line is expected to elicit similar response from ferruginous hawks as the Proposed Action. Upon completion of the removal roads and structure pads would be revegetated. The removal of all structures may impact ferruginous hawk nesting and foraging activities; however, the nature and extent of the impact is unknown. Wakely (1978) showed that ferruginous hawks hunting from perches had the lowest success/capture rate while Plumpton and Andersen (1997) showed the opposite. The location and prey species from the Wakely study is more similar to the project area. The removal and reclamation of the roads could reduce recreational use in the project area.

Alternative 3—Limit the Existing ROW

This alternative has the same impacts associated with the rebuild activities of the Proposed Action; however, habitat within the permanent ROW differs because it is a smaller ROW. This alternative would permanently impact 29.92 acres of suitable habitat and would temporarily impact 25.13 acres of habitat within the ROW (Table 4-5; Appendix F). Indirect impacts are expected to reduce or degrade ferruginous hawk foraging habitat with some potential for temporary displacement. The availability of the same vegetation communities and habitat outside of the ROW would provide ample foraging habitat in the event temporary displacement occurs.

This alternative would result in the same impacts as the Proposed Action.

4.4.3.3 Golden Eagle

Proposed Action

The golden eagle is often associated with open or semi-open areas in deserts and mountains, including grasslands and sagebrush shrublands. These two vegetation communities are occupied by the small mammal species that make up the majority of the diet of the golden eagle; specifically rabbits and marmots within the project area. These two vegetation communities also contain potential nesting habitat in the form of rock ledges, cliffs, and outcrops.

The 100-foot ROW would include 607.81 acres of potential habitat in the form of sagebrush shrublands and grasslands. The activities associated with the Proposed Action would

permanently impact 29.92 acres, with a maximum of 25.13 acres of temporary impacts (Table 4-5).

The most likely indirect impact from the construction activities would be the degradation and/or loss of preferred foraging habitat. The risk of collision or electrocution within the line or associated equipment exists; however, the line would be rebuilt in accordance with the Avian Protection standards. Collision potential is less likely due to the excellent eyesight of golden eagles, although it is still a risk when pursuing prey or in low visibility conditions. Impacts associated with O&M activities could include habitat loss or degradation, temporary displacement, and collision with equipment and facilities. No rebuild or maintenance work would be conducted within a half-mile of an active nest during the gold eagle breeding season, as defined in the Master Agreement. Therefore, potential impacts to active golden eagle nests within a half-mile of all activities associated with the Proposed Action are minimal.

The construction activities may cause temporary displacement and altered energy behaviors to golden eagles utilizing the ROW. Upon completion of the rebuild, IPC would primarily be present twice a year while conducting ground or aerial inspections. The creation and improvement of roads may increase recreational use in and near the project area that may adversely impact this species. Since roads would be revegetated with a grasss seed mix, their visibility would be reduced over a few years as grass becomes established; this may reduce recreational use as the roads would not be as readily apparent. The replacement of the flat wooden crossarms with the tubular steel crossarms is expected to reduce nesting potential for eagles. The two surveys conducted in the ROW (URS 2011, IPC 2014) did not reveal any golden eagle nesting within or near the ROW.

Alternative 1—Renew Existing grant

There would be no impacts associated with construction activities. The ongoing, already realized impact to 12.14 acres of habitat would continue as a result of vegetation management (Table 4-5). Impacts from the continued O&M would be the same as the Proposed Action.

Impacts to golden eagles would be assessed during the grant renewal. Responses to O&M are expected to be the same as outlined in the Proposed Action, with temporary displacement and altered energy behaviors as the most probable. In anticipation of the proposed rebuild, non-critical maintenance has been postponed until a formal decision has been reached. If Alternative 1 were approved, the frequency and intensity of O&M activities would increase to ensure present and future reliability of the line. In addition to the expected O&M necessary, two aerial or ground inspections per year, vegetation management every five years, and pole treatment every 10 years would continue. The flat wooden crossarms may provide suitable nesting substrate for golden eagles. As with the Proposed Action, all O&M work associated with this alternative would be conducted in accordance within the seasonal and spatial buffers in the Master Agreement. No new roads would be permitted under this alternative, resulting in the same level of use that is currently experienced. The long-term O&M is expected to be higher than the Proposed Action due to the age and current condition of the line.

Alternative 2—No Action

Removal of the line would have similar impacts to the Proposed Action except the 31.95 acres from road work would be classified as temporary disturbance because it would be restored upon

completion of the removal. Removing all structures would result in reduced elevated perch and/or nesting sites for golden eagles.

Alternative 3—Limit the Existing ROW

This alternative has the same impacts associated with the rebuild activities of the Proposed Action; however, habitat within the permanent ROW differs because it is a smaller ROW. This alternative would permanently impact 229.92 acres, with a temporary impact to 25.13 acres. Indirect impacts from this alternative are the same as the Proposed Action.

This alternative would result in the same impacts as the Proposed Action.

4.4.4 Avian Species Associated with Sagebrush and Grassland Habitats

4.4.4.1 Sagebrush Sparrow, Sage Thrasher, and Brewer's Sparrow

Proposed Action

The sagebrush sparrow, sage thrasher, and Brewer's sparrow are considered sagebrush obligate species, requiring continuous sagebrush habitat to support this species. Direct impacts from the rebuild of this line could include temporary displacement, nest abandonment, and degradation and removal of habitat. Temporary displacement is the most likely indirect impact resulting from construction. The nest site location of these species are often hidden from overhead view within the canopy of sagebrush or ground level at the base of vegetation, which may result in the destruction of nests and/or nest abandonment due to equipment or human presence. Mature birds are expected to flush prior to mortality induced by construction activities.

The Proposed Action would have a permanent impact to 22.88 acres of potential habitat, with an additional temporary impact to 18.81 acres of potential habitat (Table 4-5).

Impacts associated with the O&M activities could include habitat loss or degradation, temporary displacement, and destruction of nests. Inspection on the ground would be conducted by vehicle on the roads or on foot as necessary, resulting in minimal disturbance to these species. The new structures and equipment decrease the potential for maintenance, while also reducing the risk of damage from wildfires. Use of roads by the general public may increase and could result in temporary displacement and/or reduced utilization near the roads. Ingelfinger (2004) showed that density of sagebrush obligates within 100 meters of roads was reduced when subjected to low traffic volume. Low traffic volumes were classified as 10-700 vehicles per day and the topography of the study area was described as flat. The lower range of this would be exceeded during construction and would not be exceeded during O&M activities. Recreational use may exceed the lower end at times. Ingelfinger postulated that reduced density of these species near roads may be the result of habitat selection away from edges, exploitative or interference competition, or a combination of all of these. The prevalence of suitable habitat outside of the ROW and the undulating terrain is expected to alleviate some stress. The increase in structure height may increase predation opportunities for avian predators; however, nest site selection appears to minimize aerial detection as well as accounting for surface temperatures, prevailing winds, and ground-dwelling predators. Additionally, the switch to steel structures would remove the need to conduct vegetation management at the base of every structure. The reseeding of native grasses and the natural recruitment of shrubs would allow for suitable foraging and nesting habitat over time.

Alternative 1—Renew Existing Grant

Impacts from construction activities would not occur. The ongoing, already realized impact to 9.25 acres of habitat would continue as a result of vegetation management (Table 4-5). Impacts from O&M activities would be the same as the Proposed Action.

Impacts from O&M activities are expected to be the same as those described in the Proposed Action, with temporary displacement being the most probable. In anticipation of the proposed rebuild, non-critical maintenance has been postponed until a formal decision has been reached. If Alternative 1 were authorized, the frequency and intensity of O&M activities would increase to ensure present and future reliability of the line. Additionally, pole treatment would occur at each structure every 10 years, while vegetation management would continue to occur every five years. Inspections would remain consistent with the Proposed Action at two per year. This would create a more frequent disturbance regimen over time that has the potential to impact wildlife at a higher rate compared to the Proposed Action. This alternative would not permit any access roads and recreational use by the general public is expected to remain at its current rate.

Alternative 2—No Action

Removal of the line would have similar impacts to construction of the Proposed Action except that the 23.54 acres of impacts from the service roads would be temporary as disturbed areas would be rehabilitated. No pulling and tensioning or splicing sites would be needed to remove and salvage the line. There would be no drilling or blasting necessary for this alternative. There are no permanent impacts associated with this alternative.

Work conducted at every structure has the potential to alter energy behaviors and temporarily displace these species. However, upon completion of the removal; roads, work pads, and structure footprints would be revegetated, thereby eliminating long-term impacts. The removal of elevated perching structures of potential predators could provide a decreased predation risk. Over time the restoration of small-scale landscape patchiness resulting from vegetation management would provide suitable foraging and nesting habitat for these species.

Alternative 3—Limit the Existing ROW

This alternative has the same impacts associated with the rebuild activities of the Proposed Action; however, habitat within the permanent ROW differs because it is a smaller ROW. This alternative would permanently impact 22.88 acres of suitable habitat and an additional 18.81 acres of temporary impact. Indirect impacts from this alternative would most likely result in the temporary displacement of sagebrush sparrows. There is also the potential for temporary displacement, nest abandonment, and direct mortality as a result of O&M activities; however, sagebrush sparrows are expected to move to habitat outside of the ROW when disturbed.

This alternative would have the same impacts as the Proposed Action

4.4.4.2 Loggerhead Shrike

Proposed Action

Impacts from the rebuild of this line to the loggerhead shrike include temporary displacement, nest abandonment, and degradation and removal of habitat. Temporary displacement is the most likely indirect impact resulting from rebuild activities. The nest-site locations of loggerhead

shrikes are often hidden from overhead view, which may result in the inadvertent destruction of nests.. The ability for this species to occupy both sagebrush shrubland and grasslands allow ample opportunities for habitat utilization inside and extending beyond the boundary of the ROW. As primarily a sit-and-wait predator, the loggerhead shrike may benefit from the continued presence of transmission structures as well as the potential to flush potential prey species during the rebuild and O&M activities associated with the Proposed Action. This species has shown a preference for roadways, utility lines and structures (Yosef 1996).

The Proposed Action would permanently impact 29.92 acres of suitable habitat and 25.13 acres of temporary habitat (Table 4-5). Impacts from O&M activities could include habitat loss or degradation, temporary avoidance of work areas, and potentially crushing of nests. EPM B-2 would further protect recently hatched chicks upon discovery in areas with expected disturbance.

Upon completion of the rebuild, IPC would primarily be present twice a year while conducting ground or aerial inspections. Inspections on the ground would be conducted by vehicle on roads or on foot as necessary. The proposed steel structures and equipment decrease the potential for O&M, while also reducing the risk of damage from wildfires. The creation and improvement of roads may increase recreational use in and near the project area that may adversely impact this species. Since roads would be revegetated with a grasss seed mix, their visibility would be reduced over a few years as grass becomes established; this may reduce recreational use as the roads would not be as readily apparent. The prevalence of suitable habitat outside of the ROW and the undulating terrain provide suitable dispersal habitat outside of the ROW, which is expected to relieve some stress. The flushing of potential prey species may also increase during IPC activities, potentially impacting detection and capture rates. Structures may provide perching opportunities for the loggerhead shrike; however, they may also be utilized by potential avian predators. The steel structures would eliminate the need for continued vegetation management practices and natural recruitment of vegetation would occur, increasing amount of suitable habitat available over time.

Alternative 1—Renew Existing Grant

Impacts from construction activities would not occur. The ongoing, already realized impact to 12.14 acres of habitat would continue as a result of vegetation management (Table 4-5). Impacts from O&M activities would be the same as the Proposed Action.

Impacts to loggerhead shrike would be assessed during the grant renewal. Impacts from O&M activities are expected to be the same as those described in the Proposed Action, with temporary displacement being the most probable. In anticipation of the proposed rebuild, non-critical maintenance has been postponed until a formal decision has been reached. If Alternative 1 were authorized, the frequency and intensity of O&M activities would increase to ensure present and future reliability of the line. Pole treatment would occur at each structure every 10 years, while vegetation management would continue to occur every five years. This would create a more frequent disturbance regimen over time that has the potential to impact wildlife at a higher rate compared to the Proposed Action. This alternative would not permit any access roads and recreational use by the general public and the intensity of the use is expected to remain at its current levels.

Alternative 2—No Action

Removal of the line would have similar impacts to construction of the Proposed Action except that the 31.95 acres of impact from the service road would be restored upon completion of the removal. No Pulling and tensioning or splicing sites would be needed to remove and salvage the line. There is no drilling or blasting associated with this alternative. There are no permanent impacts associated with this alternative.

Work conducted at every structure has the potential to alter energy behaviors and temporarily displace loggerhead shrike. However, upon completion of the removal; roads workpads, and structure footprints would be revegetated by seeding efforts and natural recruitment, thereby eliminating impacts in the long-term. The removal of elevated perching may reduce the avian predation risk; however, it also removes a potential perch for loggerhead shrikes. Over time the restoration of small-scale landscape patchiness resulting from vegetation management would provide suitable foraging and nesting habitat for these species.

Alternative 3—Limit the Existing ROW

This alternative has the same impacts associated with the rebuild activities of the Proposed Action; however, habitat within the permanent ROW differs because it is a smaller ROW. This alternative would permanently impact 29.92 acres and temporarily impact 25.13 acres. Indirect impacts from this alternative would most likely result in the temporary displacement of loggerhead shrikes. The potential for nest abandonment and direct mortality as a result of construction and O&M activities exists; however, loggerheads shrikes are expected to move to habitat outside of the ROW when disturbed

This alternative would result in the same impacts as the Proposed Action.

4.4.4.3 Western Burrowing Owl

Proposed Action

This species is most commonly found within grassland habitat. Because this species uses burrows, they may be able to avoid or reduce some of the indirect impacts (e.g., noise; human presence) by escaping to their burrows. This behavior may subject burrowing owls to subsurface tremors due to blasting activities; however, response or impact from this has not been investigated. The availability of suitable habitat outside of the ROW and the undulating terrain found in and near the project area would provide adequate refuge if burrowing owls are caught away from their burrows. Burrows could collapse as a result of equipment being driven or parked on them. The total permanent impact associated with the Proposed Action is 7.04 acres, with an additional 6.32 acres of temporary impact to this habitat (Table 4-5). Impacts from O&M activities could include habitat loss or degradation, and potential death due to collision with equipment and facilities. The steel structures allow for the discontinued use of vegetation management practices and additional 2.89 acres would be reseeded with an appropriate seed mix determined by the BLM.

Upon completion of the rebuild, IPC would primarily be present twice a year while conducting ground or aerial inspections Inspection on the ground would be conducted by vehicle on the roads or on foot as necessary, resulting in minimal disturbance to burrowing owls. The new structures and equipment decrease the potential for O&M, while also reducing the risk of

damage from wildfires. The creation and improvement of roads may increase recreational use in and near the project area that may adversely impact this species. Since roads would be revegetated with a grasss seed mix, their visibility would be reduced over a few years as grass becomes established; this may reduce recreational use as the roads would not be as readily apparent. Burrowing owls are expected to either withdraw into their burrows or move into suitable habitat outside of the ROW when disturbed. The increase in structure height may increase risk of predation by perching raptors and corvids, due to increased detection rates provided by a higher angle of vision. However, mammalian predators, badgers in particular, are often the largest source of mortality for burrowing owls, burrowing owl eggs and young (Poulin, 2011). The use of steel structures and crossarms would eliminate the need for vegetation management practices and reduce raptor and corvid nesting potential, respectively.

Alternative 1—Renew Existing Grant

Impacts from construction activities would not occur. The ongoing, already realized impact to 2.89 acres would continue as a result of vegetation management (Table 4-5). Impacts from O&M activities would be the same as the Proposed Action.

Impacts to burrowing owls would be assessed during the grant renewal. Responses to O&M are expected to be the same as those outlined in the Proposed Action, with temporary displacement being the most probable. In anticipation of the proposed rebuild, non-critical maintenance has been postponed until a formal decision has been reached. If Alternative 1 were approved, the frequency and intensity of O&M activities would increase to ensure present and future reliability of the line. Additionally, pole treatment would occur every ten years, while vegetation management would continue to occur every five years. This would create a more frequent disturbance regimen over time that has the potential to impact wildlife at a higher rate compared to the Proposed Action. Observations by Idaho Power indicate that the flat wooden crossarms provide a more stable nesting platform to be utilized by potential avian predators than the tubular steel of the Proposed Action. No new roads would be permitted under this alternative and recreational use of roads is not expected to increase above existing levels.

Alternative 2—No Action

The removal of the line would have similar impacts to construction of the Proposed Action except that the 8.41 acres of impact from the service roads would be temporary because they would be restored upon completion of the removal. No pulling and tensioning or splicing sites would be needed to remove and salvage the line, and there would be no drilling or blasting for new structures. There are no permanent impacts associated with this alternative.

Work conducted at every structure has the potential to alter energy behaviors and temporarily displace burrowing owls. The presence and use of burrows and habitat nearby are expected to alleviate stress caused by removal of the line. Upon completion of the removal of the line; roads, work pads, and structure footprints would be revegetated, thereby eliminating long-term impacts. The removal of elevated perching structures may provide a decreased predation risk to burrowing owls from avian predators.

Alternative 3—Limit the Existing ROW

This alternative has the same impacts associated with the rebuild activities of the Proposed Action; however, habitat within the permanent ROW differs because it is a smaller ROW. This alternative would permanently impact 7.04 acres and temporarily impact 6.32 acres (Table 4-5). Indirect impacts form this alternative would most likely result in the temporary displacement or altered energy behavior of burrowing owls. In the event of displacement, the availability of suitable habitat outside of the ROW would provide suitable refuge.

This alternative would have the same impacts of the Proposed Action.

4.4.4.4 Long-Billed Curlew

The breeding habitat utilized by this species is predominately grassland, but agricultural areas are also used. This species does not avoid cheatgrass habitat like other species that are often associated with grassland; this has been hypothesized to be a result of vegetation structure rather than vegetation quality (Dugger 2002). The total permanent impact associated with the Proposed Action is 7.43 acres and a temporary impact to 10.94 acres of suitable habitat (Table 4-5). Indirect impacts associated with the Proposed Action would be greater than Alternative 1 during the rebuild; however, disturbances are expected to be less than Alternative 1 during O&M because the new line would require less maintenance than the existing line. The installation of the steel structures would discontinue the vegetation management practices around structures, resulting in an additional 3.76 acres of habitat that would be revegetated with a BLM approved seed mix and natural recruitment.

The Proposed Action would entail a period of increased activity along the line for a portion of two years during the rebuild. Upon completion of the rebuild, IPC would primarily be present twice a year while conducting ground or aerial inspections. Inspections on the ground would be conducted by vehicle on the roads or on foot as necessary, resulting in minimal disturbance to long-billed curlews. The new structures and equipment decrease the potential for O&M, while also reducing the risk of damage from wildfires. The creation and improvement of roads may increase recreational use in and near the project area that may adversely impact this species. Since roads would be revegetated with a grasss seed mix, their visibility would be reduced over a few years as grass becomes established; this may reduce recreational use as the roads would not be as readily apparent. The prevalence of suitable habitat outside of the ROW and the undulating terrain provide suitable dispersal habitat outside of the ROW that is expected to relieve some stress; however, incubating females tend to flush extraordinarily late, if at all (Dugger 20020). Disturbance during brood rearing would most likely result in altered energy behavior by males, evidenced by circling “intruder” and alarm calls. The increase in structure height is unlikely to impact this species as no adult predators are confirmed and nest predation is most often attributed to mammalian predators (Dugger 2002).

Alternative 1—Renew Existing Grant

Impacts from construction activities would not occur. The ongoing, already realized impact to 3.76 acres of habitat would continue as a result of vegetation management (Table 4-5). Impacts from O&M activities would be the same as the Proposed Action.

Impacts to long-billed curlew would be assessed during the grant renewal. Responses to O&M are expected to be the same as those outlined in the Proposed Action, with temporary displacement and/or altered energy behaviors being the most probable. In anticipation of the proposed rebuild, non-critical maintenance has been postponed until a formal decision has been reached. If Alternative 1 were authorized, the frequency and intensity of O&M activities would increase to ensure present and future reliability of the line. Additionally, pole treatment would occur at each structure every 10 years, while vegetation management would continue to occur every five years. This would create a more frequent disturbance regimen over time that has the potential to impact wildlife at a higher rate compared to the Proposed Action. The continued vegetation management limits the amount of cover directly underneath structures; however, this habitat is unlikely to be utilized by long-billed curlews.

Alternative 2—No Action

Removal of the line would have similar impacts to construction of the Proposed Action except that the 11.94 acres of impact from the service roads would be restored once the removal is complete. No pulling and tensioning or splicing sites would be needed to remove and salvage the line, and there would be no need for drilling or blasting. There are no permanent impacts associated with this alternative.

Removal of the line would result in similar impacts as the Proposed Action during the removal of the line. Work conducted at every structure has the potential to alter energy behaviors and temporarily displace individual birds. However, upon completion of the removal; roads, work pads, and structure footprints would be revegetated by seeding efforts and natural recruitment, thereby eliminating long-term impacts. The removal of elevated structures is not expected to have an impact on long-billed curlews. Over time the restoration of small-scale landscape patchiness from vegetation management would provide suitable habitat and cover for long-billed curlews.

Alternative 3—Limit the Existing ROW

This alternative has the same impacts associated with the rebuild activities of the Proposed Action; however, habitat within the permanent ROW differs because it is a smaller ROW. This alternative would permanently impact 7.43 acres of suitable habitat and temporarily impact 10.94 acres of suitable habitat within the ROW (Table 4-5). Indirect impacts from this alternative would be the same as the Proposed Action, with temporary displacement the most likely effect.

This alternative would result in similar impacts to the Proposed Action.

4.4.4.5 Greater Sage-grouse

Proposed Action

Greater sage-grouse could be directly impacted by collisions with the transmission line or equipment during construction and O&M activities. Nesting hens could be disturbed or grouse eggs or young could potentially be killed by equipment operating in nesting habitat. Indirect impacts could include a reduction in the quality and/or quantity of habitat through vegetation removal and/or the spread of invasive plants and noxious weeds; habitat fragmentation; noise from construction and O&M activities; and an increase and/or a change in the distribution of predators. Equipment use could also ignite wildfires leading to habitat loss. These impacts or

risks would be largely offset or minimized by required design features, seasonal restrictions, and EPMs. With the implementation of the EPMs and conformance with all of the RDFs from the ARMPA, the sage-grouse implementation team found that the Proposed Action would not contribute to the 3% anthropogenic disturbance cap. All other alternatives were determined to have the same or less amount of disturbance; therefore, the Proposed Action and all of the alternatives also do not contribute to the 3% disturbance cap.[19]

Very little information is available on the collision rate of sage-grouse with powerlines. Three sage-grouse died as a result of collisions with a telegraph line in Utah (Borell 1939). Braun (1998) and Connelly et al (2000) report on sage-grouse collisions with powerlines, but do not provide any details. Beck et al. (2006) reported that two out of 43 (4.6%) radio-tracked sage-grouse were killed by colliding with a power line. Direct impacts due to collisions of individual sage-grouse with the transmission line, vehicles, and equipment is possible, though unlikely to measurably impact local populations. Collision risks, following construction, are not anticipated to increase above current level as a result of the Proposed Action, because this is an upgrade of an existing line which has been in place for over 50 years. .

Fourteen occupied leks occur within two miles of the Proposed Action (Table 3-7); however, disturbance to lekking grouse would be avoided because Idaho Power is proposing to conduct rebuild activities outside of the lekking season as identified in EPM B-9. O&M and emergency activities could occur at any time of the year. During routine O&M activities, Idaho Power would adhere to EPM B-9; during emergency actions Idaho Power would follow this EPM if possible. Following the EPM would minimize the potential to adversely impact sage-grouse. Direct disturbance to nesting hens or nests is unlikely in portions of the ROW since construction activities associated with the upgrade would occur in close proximity to agricultural lands, areas with minimal sagebrush cover, and along State Highway 46. The remaining 27.5 miles of line through sage-grouse nesting habitat would not experience any construction or maintenance during the restrictive time-frame for nesting.

Indirect effects are more difficult to quantify as scientific literature is sparse, there is disagreement on the extent of the effect, and few studies have been conducted to date. Most scientists agree that loss of habitat and habitat fragmentation can contribute significantly to declines of sage-grouse populations. Others state that proximity to transmission lines and avoidance of tall structures could significantly affect sage-grouse. Nonne et al. (2013) conducted a 10-year study of greater sage grouse in response to a 345-kV transmission line in central Nevada and the ten-year progress report stated that habitat conditions had a greater effect on sage grouse nests, brood success, and overall survival than proximity to the transmission line.. However Gibson et al. (2013) reported in the final document strong support for effects of the

[19] The Proposed Action would not contribute to the 3% anthropogenic disturbance cap. The project is a rebuild/ upgrade of an existing transmission line, and most of the activity would occur within the existing ROW, which is already part of the existing disturbance baseline. Although there would be some limited habitat loss from the creation of tensioning areas and roads, the actions would be temporary in nature or otherwise do not fit the specific types of anthropogenic disturbances included in disturbance cap calculations as described in the ARMPA.

Falcon-Gondor line on nest survival and female survival. Messmer et al. (2013), citing UWIN's stakeholder-based literature and knowledge-based review of tall-structure impacts on sage grouse, states that "Stakeholder's concluded that there were no results in the published, peer-reviewed literature of experimental studies designed to evaluate the potential landscape effects of tall structures on sage-grouse." Gillan et. al. (2013) suggest that sage-grouse avoid power transmission lines by 600 meters (0.37 mile) and do not exhibit detectable avoidance of major and minor roads. A 2014 conservation buffer review prepared by the USGS (Manier et. al. 2014) also found that it was difficult to isolate the effect tall structures have on sage-grouse and difficult to determine the mechanism; habitat alteration, providing increased opportunities for predators, or some other unknown mechanism(s) may contribute to impacts on greater sage-grouse. Walters et. al. (2014) reviewed literature from 1969–2013 and were unable to detect any consistent response to tall structures and concluded that it is difficult to isolate the effect of the structures from other influential factors.

Common raven and diurnal raptors are considered predators of (sub) adult sage-grouse, chicks, or eggs. Adult sage-grouse are readily taken by golden eagles (Schroeder et al. 1999, Kochert et al. 2002) and occasionally by other larger raptor species. Common raven and smaller raptor species (e.g., northern harriers) will take chicks, while common raven will also predate eggs. Thus, depending on the predator, adults, chicks, or eggs may be taken. Foraging ranges for sage-grouse predators vary considerably. Engel and Young (1992) determined that non-breeding ravens traveled daily an average 6.9 km (4.3 miles) in southern Idaho (up to 62.5 km [38.8 miles]) from roost sites to distant human-subsidized food sources (i.e., landfills and feedlots). Dinkins et. al. (2014) "…did not find any independent negative effects of raptor densities on Sage-Grouse survival, even in conjunction with anthropogenic factors." Moreover, Dinkins et. al (2014) found that hen survival was higher with greater density of roads.

Power line structures provide convenient places for common ravens and raptors for perching and nesting (e.g., Steenhof et al. 1993). While Steenhof et al. (1993) documented raptor and common raven colonization of a new transmission line structures and nesting success they did not report on hunting success related to power line structures. Common ravens quickly started nesting on newly built transmission line towers along a 596 km (370 mile) transmission line crossing southern Idaho and western Oregon, comprising 81 of 133 (61%) nests after 9 years of study. Golden eagles used transmission towers as alternative nesting sites by shifting nest sites from natural substrate to towers.

Common raven populations have increased substantially over the last 40 years in the western US (five-fold in Idaho) (Sauer et al. 2011). In desert environments, common ravens easily adapt to anthropogenic landscapes and human related food subsidies at feedlots and landfills (e.g., Engel and Young 1989, Kristian and Boarman 2007). Without the presence of human subsidized food either through land-fills, feedlots, or road kills, common raven densities are likely to remain low, even when nesting sites are available (Kristian and Boarman 2007, Bui et al. 2010). Sage-grouse are adapted to minimize predation by cryptic plumage and behavior (Schroeder et al. 1999). Predation of nests and chicks is not a serious threat when habitat is not limited and of good quality (Coates and Delehanty 2010, Conover et al. 2010, USFWS 2010). Hagen (2011) reviewing sage-grouse predation literature, concluded that on average predation is not limiting sage-grouse populations, except in fragmented landscapes. Manzer and Hannon (2005) in a study on effects of corvid density on sharp-tailed grouse in Alberta reported that grouse nests located

within 75 m (0.05 mile) of perch sites were more vulnerable to corvid predation unless adequate cover was available. They found that concealment cover was the most important variable for explaining nest success. Forty-four percent of nests within 75 m (0.05 mile) of a perch were successful and they found that nests were more likely to be successful if they had taller concealment cover. Thus, the entire landscape is important in determining predation rates of sage-grouse, influencing predator community composition, predator behavior, and susceptibility of sage-grouse to predation mitigated by the quality and extent of suitable sage-grouse nesting and brood-rearing habitat. The foraging range of predators and the potential influence on sage-grouse habitat is a function of the overall landscape, not just the presence of transmission line structures that provide perching and nesting opportunities.

Although still hunting (e.g., sitting on a transmission line structure) is an effective manner to conserve energy (central foraging theory; Pyke et al. 1977), a relatively small area can be covered around a structure. It only appears to be an effective technique where prey is abundant and few other perches exist. Hunting on the wing, practiced by many avian predators, provides a much wider field of vision and a much greater attack speed (e.g., Rijnsdorp et al. 1981). We have been unable to find studies that compare energetics and hunting success between still hunting and active hunting for avian predators of sage-grouse. It is also exceedingly difficult to make a distinction between perching (and hunting) and sitting (not hunting) in raptors (Rijnsdorp et al. 1981). Thus, there is little evidence to support the notion that raptors and common raven benefit from power line structures for increased range of vision and greater attack speed when hunting.

The existing transmission line already provides potential nesting substrate for ravens and raptors. During URS' July 2011 surveys, five raven nests were observed on top of the structures within the central and southern sections of the ROW. One of the raven nests within the central section was active with one juvenile present in the nest, and no adults were seen in the general area. The four other raven nests were all inactive. An unknown raptor nest was observed within the central section on top of a structure. Raven and raptor nesting is minimal on this existing line and the Proposed Action may further reduce nesting opportunities due to the use of the more rounded steel crossarms. A targeted survey conducted by Idaho Power, indicated that raptor and corvid use of rounded steel crossarms was substantially less than nesting activity on flat, wooden crossarms. In summary, the survey identified five nests on wooden H-Frames and one nest on a rounded steel crossarm. The survey encompassed 1,349 structures over approximately 190 miles (IPC 2013)

Because the Proposed Action is associated with an existing line and ROW, some direct and indirect effects, if they occur, would have already been realized

Impacts to habitat within the Proposed ROW in relation to the 2-mile buffer would be minimal (Table 4-6). Sources of the impacts are primarily the result of all proposed rebuild activities as well as the creation and maintenance of service roads.

Table 4-6—Acres of Habitat Management Areas within 2 miles of and Inside the ROW

Acres of Habitat Management within 2 Miles of the ROW.			
Habitat Category	**GHMA**	**IHMA**	**PHMA**
Acreage Within 2 miles of ROW	21,940.58 acres	23,803.38 acres	71,423.7 acres
Acreage Within 100' Proposed ROW	76.47 acres	116.44 acres	334.612 acres
Existing and Expected Construction Disturbance	6.7 acres	10.91 acres	26.91 acres
Disturbance within 2-mile Buffer (%)	**0.0305%**	**0.0458%**	**0.0376%**
Disturbance Within 100' ROW (%)	**8.7%**	**9.37%**	**8.04%**

Habitat fragmentation that has occurred as a result of the existing ROW would not change as the same ROW would be used in the Proposed Action. Road categories A through D are existing roads and impacts from fragmentation have already been realized (Table 4-7). Road category E (new roads) would create 0.16 mile of roads in PHMA, 3.95 miles of road in IHMA, and 0.44 mile of road in GHMA. The approximately 4.5 miles of new roads represent 7 percent of the 62.7 miles of roads and overland travel associated with the Proposed Action.

Table 4-7—Service and Access Roads by BLM Habitat Category and Road Category

Sage Grouse Habitat	IPC Road Type	Road Category	Miles
Priority Habitat Management Area	Access Road	A	0.07
		NA	1.6
	Service Road	A	19.05
		B	2.3
		B/C	0.72
		C/D	0.11
		D	1.18
		D/E	0.16
		F	0.11
Important Habitat Management Area	Access Road	A	0..63
		G	0.04
		NA	2.55
	Service Road	A	7.88
		C	0.39
		D	0.23
		E	3.95
		F	0.08
		G	0.67
General Habitat Management Area	Access Road	A	1.78

		NA	0.54
	Service Road	A	5.16
		C/G	0.6
		E	0.44
		G	1.00
		NA	0.08

Impacts due to structure installation, with the exception of the area occupied by the structures, would be temporary (Table 4-8). Construction of the Proposed Action would temporarily impact approximately 23.87 acres of PHMA, 9.68 acres of IHMA, and 5.94 acres of GHMA regardless of land ownership. A total of approximately 27.72 acres of sage-grouse habitat would be temporarily impacted on BLM-managed lands. Post-construction disturbances at structure locations are expected to be less than existing disturbance over the long-term as vegetation management would not occur with the proposed steel poles; permanent disturbances would consist of the approximately 2-foot diameter steel pole and this is similar to the existing permanent disturbance of the wood pole.

Future O&M activities could result in impacts to BLM habitat categories; the nature and extent of impacts are unknown as it is not known what future maintenance would be necessary or where it would occur.

Table 4-8—Existing and Estimated Structure Disturbance by BLM Habitat Category

Habitat Category	No. Structures	Existing Structure Disturbance (Acre)	Disturbance During Construction (Acre)	Post-Construction Disturbance (Acre)
Priority Habitat Management Area	217	3.04	23.87	.<0.01
Important Habitat Management Area	88	1.23	9.68	.<0.01
General Habitat Management Area	54	0.76	5.94	.<0.01
Total Structures on BLM	252	3.53	27.72	.02

Notes: Existing structure disturbance assumes all structures are H-frame and 10-foot radius (628 sq ft; 0.014 acre) cleared around each pole as part of vegetation management.

Disturbance during construction assumes a work pad dimension of 80 -ft diameter (5,024 sq ft; 0.11 acre).

Post-construction disturbance assumes all structures are H-frame and permanent disturbance is 4 square-feet (the approximate area occupied by the structure) per structure.

Alternative 1—Renew Existing Grant

Since the line would not be rebuilt and maintenance of existing roads or creation of new roads would not occur, there would be no construction impacts to sage-grouse habitat categories. Current O&M activities would continue and the ongoing vegetation management program would impact approximately 3.04 acres of PHMA, 1.23 acres of IHMA, and 3.53 acres of GHMA. Since vegetation management in an ongoing activity, the impact has already been realized.

Direct and indirect impacts from O&M activities would otherwise be similar to the Proposed Action. However, there is a potential that the existing crossarm configuration could be more conducive to nesting since they are flat and have a gap between the two arms that can support a nest. It is possible that if ravens and raptor populations expand in the area that they may nest on the existing structure. Idaho Power would implement the same EPMs as the Proposed Action.

Impacts to sage-grouse would be assessed during the grant renewal. Impacts from O&M activities are expected to be the same as those described in the Proposed Action, with temporary displacement of individual sage-grouse being the most probable. In anticipation of the proposed rebuild, non-critical maintenance has been postponed until a formal decision has been reached. If Alternative1 were approved, the frequency and intensity of O&M activities would increase. Additionally, pole treatment would occur at each structure every 10 years, while vegetation management would continue to occur every five years. This would create a more frequent disturbance regimen over time that has the potential to impact wildlife at a higher rate compared to the Proposed Action. Observations by Idaho Power indicate that the flat wooden crossarms provide a more stable nesting platform for avian predators than the tubular steel crossarm of the Proposed Action. The continued vegetation management limits the amount of cover directly underneath structures; however, this habitat is unlikely to be utilized by sage-grouse as it would increase their detection rates due to lack of cover.

Alternative 2—No Action

Direct and indirect impacts to sage-grouse would be similar to those for construction of the Proposed Action. However, impacts from road construction and maintenance would be temporary as roads would be rehabilitated following removal of the facilities. Removal of the facilities and rehabilitation of the ROW, combined with road rehabilitation, would reduce habitat fragmentation within the area. Raven and raptor nesting opportunities would be less than the Proposed Action since there would be no crossarms or structures. Impacts from O&M activities would not occur as the facility would no longer be present.

Removal of the line would have impacts similar to the Proposed Action during the removal of the line. Work conducted at every structure has the potential to alter energy behaviors and temporarily displace individual sage-grouse. However, upon completion of the removal; roads, workpads, and structure footprints would be revegetated by seeding efforts and natural recruitment, thereby eliminating long-term impacts. The removal of elevated perching structures of potential predators would likely provide a decreased predation risk to sage-grouse. Over time restoration of the small-scale landscape patchiness from vegetation management would provide suitable habitat and cover for sage-grouse.

Alternative 3—Limit the Existing Right-of-Way

This alternative would have impacts similar to the Proposed Action.

4.4.5 Mammals

4.4.5.1 Gray Wolf

Proposed Action

Indirect impacts to wolves would be temporary displacement. Some habitat utilized by the wolf may be disturbed; however, the wide-ranging nature of this species would reduce the severity of

the impact. The main prey source, elk, occupy BLM-managed lands in the late fall and winter, which is primarily outside of the work period. Gray wolves have been noted to utilize roads for travel, as well as for hunting/pursuit of prey. The creation, improvement, and cutting of vegetation for travel may create travel corridors and ideal hunting opportunities for wolves, especially during winter months.

According to fine scale pack territory range created by the Idaho Fish and Game and the Nez Perce Tribe, the project area overlaps a small portion on the edge of the minimum convex polygon pack territory created for the Red Warrior wolf pack. The proposed ROW would contain 5.4 acres out of 193,808 acres of the Red Warrior Pack territory. The total amount of temporary impact from either splicing option is 0.36 acres, while the maximum pulling and tensioning temporary impact is 0.69 acres within the Red Warrior Pack range. Service roads would impact 2.36 acres of the Red Warrior Pack territory. Once the rebuild is complete, the vegetation management would cease and would allow for re-vegetation of 0.09 acres of habitat within the range of the Red Warrior Pack. Since the majority of their territory occurs outside the project area, the potential for adverse impact to this species is minimal.

Construction activities associated with the rebuild and O&M activities could result in indirect impacts due to noise and the presence of people and equipment. If wolves are present during these activities, temporary displacement and altered energy behaviors is the most likely response. Upon completion of the rebuild, IPC would primarily be present twice a year while conducting ground or aerial inspections, limiting adverse impacts to wolves. The creation and improvement of roads may increase recreational use in and near the project area that may adversely impact this species. Since roads would be revegetated with a grasss seed mix, their visibility would be reduced over a few years as grass becomes established; this may reduce recreational use as the roads would not be as readily apparent. Wolves may also use these roads as travel corridors, especially during winter months.

Alternative 1—Renew the Existing Grant

No direct or indirect impacts to elk or wolves would occur during construction activities since the rebuild would not be authorized under this alternative. Direct impacts could occur during O&M activities if habitat within the Red Warrior Pack territory is reduced or degraded. The amount of habitat that could be impacted cannot be estimated since future maintenance actions and their locations are unknown. Temporary displacement may occur due to maintenance activity in an area. Routine O&M activities are expected to increase due to the age and condition of the line, but the actual maintenance necessary is unknown. Ground disturbances from O&M activities would be rehabilitated to pre-disturbance condition, per EPM S-2; therefore, maintenance would not result in any additional permanent impacts. The only quantifiable impact associated with this alternative is the continued vegetation management that would impact 0.09 acres of habitat within the Red Warrior Pack territory.

Impacts to wolves would be assessed during the grant renewal. Responses by wolves to O&M are expected to be the same as described in the Proposed Action, with temporary displacement and altered energy behaviors as the most probable. In anticipation of the proposed rebuild, non-critical maintenance has been postponed until a formal decision has been reached. If Alternative 1 were approved, the frequency and intensity of O&M activities would increase. The continued use of wooden structures would increase the potential risk due to wildfires. Additionally, pole

treatment would occur at every structure every 10 years, while vegetation management around poles would continue to occur every five years. This would create a more frequent disturbance regimen over time that has the potential to impact wildlife at a higher rate compared to the Proposed Action. No new roads would be permitted and the level of recreational use is expected to remain at existing levels.

Alternative 2—No Action

Direct and indirect impacts to wolves during removal of the line would be similar to construction under the Proposed Action with the following exceptions, removal of the existing line would not require any drilling/blasting, splicing sites, or pulling and tensioning sites. The same roads and road work as the Proposed Action would be necessary to access all of the structures; however, the 2.36 acres of impacts from roads would be restored in accordance with a Reclamation Plan to be developed by Idaho Power and approved by the BLM. Since the line would be removed within one year and not over two years, the overall presence in the area would be less than the Proposed Action. This shorter duration reduces the potential for impacts. Moreover, since work to remove the line would not occur in the winter, there is less chance that this activity would impact wolves in the area as wolves are more likely to be in the project area when elk are using their winter range. There are no permanent impacts associated with this alternative and it would likely provide the benefit of increased habitat over time, albeit a fraction of the total area currently occupied by the Red Warrior or any other active wolf pack territory.

The removal of the line would result in impacts similar to the Proposed Action during the removal of the line. Work conducted at every structure has the potential to alter energy behavior and temporarily displace wolves that are present. However, upon completion of the removal, roads, work pads, and structure footprints would be revegetated by the seeding efforts and natural recruitment, thereby eliminating long-term impacts.

Alternative 3—Limit the Existing ROW

Direct and indirect impacts are identical to the Proposed Action. While the difference in temporary and permanent ROW width changes the number of acres within an active wolf pack territory within the ROW, it does not change the acreage of disturbance. This is reflected in the 3.24 acres within the 60-foot ROW compared to the 5.4 acres contained within the 100-foot ROW. The of steel structures would negate the need to continue vegetation management practices, allowing 0.09 acres with the current Red Warrior Wolf Pack territory to be re-vegetated. Impacts to wolves during O&M activities are the same as the Proposed Action.

The ype of impacts are the same as the Proposed Action; however, Alternative 3 would impact 3.24 acres within the 60-foot ROW compared to the 5.4 acres contained within the 100-foot ROW. The steel structures would negate the need to continue vegetation management practices, allowing 0.09 acres with the current Red Warrior Wolf Pack territory to be re-vegetated. Impacts to wolves during O&M activities are the same as the Proposed Action.

4.4.5.2 Pygmy Rabbit

Proposed Action

The pygmy rabbit is referred to as a sagebrush obligate, as it needs continuous tracts of sagebrush, typically with moderate to high canopy cover. The high quality habitat preferred by

this species would reduce its potential to occur near areas of construction and O&M activities because of the current vegetation management at each structure. The most likely impact to pygmy rabbits associated with the Proposed Action is habitat degradation and temporary displacement. Construction activities associated with the rebuild could result in indirect impacts due to noise and the presence of people and equipment. Pygmy rabbits may use their burrows to escape increased noise and human presence or they may disperse to adjacent suitable habitat. Similar to the ROW, impacts associated with service roads are also expected to be minor as suitable habitat is limited.

Of the 715.95 total acres permitted under the 100-foot ROW of the Proposed Action, 545.60 acres are within moderate or high likelihood of pygmy rabbit core habitat. The temporary disturbance of pulling and tensioning and splicing sites is 15.16 acres within the high likelihood habitat. The installation of steel structures would provide an additional 10.73 acres of habitat within the moderate and high likelihood for core habitat areas that would be revegetated as a result of discontinued vegetation management. Permitted roads would contain 98.57 acres within either moderate or high likelihood habitat. Of this, 28.38 acres of permanent impact and an additional 0.7 acres would be temporarily impacted.

The Proposed Action would entail a period of increased activity along the line for portions of two years during the rebuild. The new structures and equipment decrease the potential for O&M, while also reducing the risk of damage from wildfire. The creation and improvement of roads may increase recreational use in and near the project area that may adversely impact this species. Since roads would be revegetated with a grasss seed mix, their visibility would be reduced over a few years as grass becomes established; this may reduce recreational use as the roads would not be as readily apparent. The use of burrows and the presence of suitable habitat directly adjacent to the ROW would likely alleviate stress caused by rebuild and future O&M activities. The steel structures eliminate the need for vegetation management and over time natural recruitment of shrubs could provide suitable habitat up to the structure itself.

Idaho Power may need to conduct maintenance activities in the winter, this could result in a short-term disruption to pygmy rabbits if they are present in the area. Indirect impacts could occur in the form of temporary displacement and altered energy behavior such as avoidance and dispersal.

Alternative 1—Renew Existing Grant

No direct or indirect impacts to pygmy rabbits would occur during construction activities since the rebuild would not be authorized under this alternative. Impacts could occur during O&M activities if pygmy rabbit habitat was reduced or degraded. The amount of habitat that would be impacted can't be estimated since future maintenance actions and their locations are unknown. Temporary displacement and refuge in burrows when crews are in an areas is the most likely impact. Disturbances during O&M activities would be rehabilitated to pre-disturbance condition, per EPM S-2. As a result, maintenance would not result in any additional permanent impacts. The only permanent disturbance associated with O&M activities is from continued vegetation management at each structure. This amounts to 10.73 acres of habitat within the moderate and high likelihood habitat (combined).

Impacts to pygmy rabbits would be assessed during the grant renewal. Impacts from O&M are expected to be the same as those outlined in the Proposed Action, with temporary displacement being the most probable. In anticipation of the proposed rebuild, non-critical maintenance has been postponed until a formal decision has been reached. If Alternative 1 were approved, the frequency and intensity of O&M activities would increase. Additionally, pole treatment would occur every ten years, while vegetation management would continue to occur every five years. This would create a more frequent disturbance regimen over time that has the potential to impact wildlife at a high rate compared to the Proposed Action. No new roads would be permitted under this alternative and there is no expectation that the recreational use of roads would increase above existing levels.

Alternative 2—No Action

Direct and indirect impacts to pygmy rabbits during removal of the line would be similar to construction under the Proposed Action with the following exceptions: removal of the existing line would not require any drilling/blasting, splicing sites, or pulling and tensioning sites. The same roads and road work as the Proposed Action would be necessary to access all of the structures; however, roads identified by the BLM would be restored in accordance with a Reclamation Plan to be developed by Idaho Power and approved by the BLM. Since the line would be removed within one year and not over two years, overall presence in the area would be less than the Proposed Action; this reduces the potential for indirect impacts. Moreover, since work to remove the line would not occur in the winter there is less chance that pygmy rabbits would be impacted during this time. There are no permanent impacts associated with this alternative and it would likely provide the benefit of increased habitat over time.

Removal of the line would result in impacts similar to the Proposed Action during the removal of the line. Work conducted at every structure has the potential to alter energy behaviors and temporarily displace pygmy rabbits. The use and presence of burrows nearby are expected to alleviate stress caused by the removal of the line. Upon completion of the removal of the line; roads, work pads, and structure footprints would be revegetated with BLM approved seed-mix and natural recruitment, thereby eliminating long-term impacts. The removal of elevated perching structures may provide a decrease in potential avian predators.

Alternative 3—Limit the Existing Right-of Way

Direct and indirect impacts are identical to the Proposed Action. While the difference in temporary and permanent ROW width changes the number of acres of high and moderate potential for pygmy rabbit core habitat within the ROW, it does not change the acreage of disturbance. This is reflected in the 327.68 acres of moderate and high potential pygmy rabbit habitat in the 60-foot ROW, as opposed to the 545.60 acres of moderate and high potential pygmy rabbit habitat within the 100-foot ROW. The replacement of steel structures would negate the need to continue vegetation management practices, allowing 10.73 acres of previously disturbed pygmy rabbit high and moderate habitat to be revegetated.

This alternative would have impacts similar to the Proposed Action.

4.4.6 Amphibians and Reptiles

4.4.6.1 Western Toad

Proposed Action

Aquatic and riparian areas provide breeding and foraging habitat, respectively, for the western toad. The 100-foot ROW of the Proposed Action contains 2.78 acres of aquatic habitat with an additional 9.8 acres of riparian habitat that may provide suitable breeding areas for the western toad. Of the total 12.58 acres of aquatic and riparian habitat that may support western toad, 0.03 acres would have a permanent impact due to rebuild activities. The rebuild using steel structures would allow 0.14 acres of riparian habitat to be revegetated as a result of the discontinued vegetation management.

Additionally, the areas with the permanent impact never encompass the entirety of a water body or riparian area and there is no work proposed directly in water. This retains the most sensitive habitat for this species. The tadpole life-stage of this species provides limited displacement and dispersal capabilities; however, the impact to only small portions of breeding areas would allow avoidance within the same water body. Furthermore, this may cause more concentrated groups of tadpoles which have been noted to decrease predation risk, stir bottom sediments, and suspend food (Bartelt 1997).

Individuals may be crushed by equipment or temporarily displaced by activity associated with construction or the continued O&M. Upon completion of the rebuild, IPC would primarily be present twice a year while conducting ground or aerial inspections. The creation and improvement of roads may increase recreational use in and near the project area that may adversely impact this species. Since roads would be revegetated with a grasss seed mix, their visibility would be reduced over a few years as grass becomes established; this may reduce recreational use as the roads would not be as readily apparent.

Alternative 1—Renew Existing Grant

Impacts from construction activities would not occur. The ongoing, already realized impact to 0.14 acres of habitat would continue as a result of vegetation management. Impacts could occur during O&M activities if western toad habitat were reduced and/or degraded. The amount of habitat that would be impacted can’t be estimated since future maintenance actions and their locations are unknown. Routine O&M activities are expected to increase due to the age and condition of the line, but the actual maintenance is unknown. Impacts from O&M activities would be the same as the Proposed Action.

Impacts from O&M activities are expected to be the same as described in the Proposed Action, with temporary displacement as the most probable. In anticipation of the proposed rebuild, non-critical maintenance has been postponed until a formal decision has been reached. If Alternative 1 were approved, the frequency and intensity of O&M activities would increase. Additionally, pole treatment would occur at each structure every 10 years, while vegetation management would continue to occur every five years. This would create a more frequent disturbance regimen over time that has the potential to impact wildlife at a higher rate compared to the Proposed Action. No new roads would be permitted and the level of recreational use is expected to remain at current levels.

Alternative 2—No Action

Removal of the line would have similar impacts to construction of the Proposed Action except that the 0.03 acres of permanent impact from the Proposed impact would be temporary as disturbed areas would be rehabilitated. No pulling and tensioning or splicing sites would be needed to remove and salvage the line. No drilling or blasting for new structures would be necessary either. There are no permanent impacts associated with this alternative.

The removal of the line would have impacts similar to the Proposed Action during the removal of the line. However, upon completion of the removal, roads, workpads, and structure footprints would be revegetated by seeding efforts and natural recruitment, thereby eliminating long-term impacts.

Alternative 3—Limit the Existing ROW

This alternative has the same impacts associated with the rebuild activities of the Proposed Action; however, habitat within the permanent ROW differs because it is a smaller ROW. This alternative would permanently impact 0.03 acres and a maximum temporary impact to 0.10 acres of potential habitat within the ROW. Indirect impacts could result in the temporary displacement of western toads and western toad tadpoles. There is also the potential for direct mortality due to travel near and in potential habitat.

Impacts from O&M activities would be the same as the Proposed Action.

4.4.7 Aquatic Species

4.4.7.1 Wood River Sculpin

Proposed Action

There are no fine scale habitat data available for the Wood River sculpin; therefore, impacts to all aquatic habitat associated with the Malad River, the Big Wood River, and Little Camas Creek as it flows into Magic Reservoir are used in this analysis.

There would be a total of 2.78 acres of aquatic habitat permitted under the Proposed Action. Of this, the permanent impact due to construction activities is 0.03 acres. This permanent impact is located on the edge of the pond in Malad Gorge State Park which is not known as habitat for this species. The temporary impact to aquatic habitat within the 100-foot ROW is 0.10acres. These impacts are spread throughout the entire ROW and not confined to a single or entire body of water. Impacts from construction and O&M activities may cause the release of sediment, sloughing, or other forms of erosion into suitable habitat; however, the distance from structures and suitable habitat would greatly reduce, if not eliminate this. Additionally the three main rivers and creeks are spanned by the line and are separated by substantial vertical and/or horizontal distances up to approximately 1,200 feet and 0.37 mile, respectively. Zaroban (2010) found that the potential historical range of this species also included Croy Creek and Rock Creek subwatersheds; however, all creeks and stream crossings are spanned by the line and no new vehicle crossings are proposed. The line does not span Rock Creek, but does span Croy Creek near the agricultural and residential developments. EPMs would be implemented to reduce impact to aquatic species by reducing sediment released into all waterway and re-contouring to retain pre-construction watershed characteristics.

Alternative 1

Impacts from construction activities would not occur. There is no vegetation management conducted in areas that could contain Wood River sculpin. The amount of habitat that could be impacted from O&M activities can't be estimated since future maintenance actions and their locations are unknown, but the type of impacts would be the same as the Proposed Action. Indirect impacts associated with the Proposed Action would be greater than Alternative 1 during rebuild; however, disturbances are expected to be less than Alternative 1 during O&M because the new line would require less maintenance than the existing line.

Alternative 2—No Action

Direct and indirect impacts to Wood River sculpin during the removal of the line would be similar to construction under the Proposed Action with the following exceptions: removal of the existing line would not require any drilling/blasting, splicing sites, or pulling and tensioning sites. The same roads and road work as the Proposed Action would be necessary to access all of the structures; however, roads identified by the BLM would be restored in accordance with a Reclamation Plan to be developed by Idaho Power and approved by the BLM. Since the line would be removed within one year and not over two years, overall presence in the area would be less than the Proposed Action. This reduces the potential for indirect impacts. There are no permanent impacts associated with this alternative.

Alternative 3—Limit the Existing ROW

Direct and indirect impacts are identical to the Proposed Action. While the difference in temporary and permanent ROW width changes the number of acres of suitable habitat within the ROW, it does not change the acreage of disturbance. This is reflected in the 2.78 acres of aquatic habitat in the 100-foot ROW, as opposed to the 1.64 acres within the 60-foot ROW. Vegetation management would no longer occur; however, this does not impact suitable Wood River sculpin habitat. Impacts to Wood River sculpin during O&M activities are the same as the Proposed Action.

4.5 Fish Habitat

The amount of soil disturbance adjacent to waterbodies, as well as the number of waterbody crossings, the types of waterbodies crossed (e.g., intermittent or seasonally dry ephemeral, versus perennial streams), and the methods used to cross these waterbodies (i.e., transmission line spanning waterbodies versus access roads directly crossing them), would affect the type and magnitude of impacts that could occur to fish species and their habitats. Potential impacts to fish species/habitats include alterations to water quality and temperature and increases in suspended sediment. Sediment entering the water column can be redeposited on downstream substrates, which could bury aquatic macroinvertebrates (an important food source for some fish species). Additionally, downstream sedimentation could impact spawning habitat, spawning activities, eggs, larvae, and juvenile fish survival, as well as benthic community diversity and health. Because the impacts of increased sedimentation and turbidity are often limited to the period of work / soil disturbance, the duration of these impacts is expected to be relatively short. However, specific site characteristics including flow, substrate composition, relative disturbance, and other factors could extend the duration of construction impacts. Construction and maintenance of roads across waterbodies and culvert installation, as well as any other in-water work, is typically a

major contributor to waterbody sedimentation. Changes to water temperature could occur if sufficient amounts of vegetation that shades the water is removed.

4.5.1 Proposed Action

The structures are located outside of the high water mark of the waterbodies they cross and the crossings are characterized by narrow bands of riparian habitat. The distance between the work areas and waterbodies and implementation of EPM G-4 would minimize erosion and prevent the introduction of sediment into fish habitat during construction and O&M activities. Idaho Power's SWPPP would be developed to comply with EPA's construction stormwater requirements and would take into account topography, climate, soils, and vegetation cover when developing BMPs and maintenance schedules to address erosion and sedimentation. Idaho Power would use BMPs identified by the EPA and/or Idaho Department of Environmental Quality that are effective for the site conditions. The potential for increased sedimentation would be addressed by the use of appropriate BMPs.

Approximately 9.8 acres of riparian vegetation occurs within the requested ROW; 1.54 acres occurs on BLM-managed lands. Since structures would be located outside of the riparian areas and conductor would be strung from an overhead position, riparian vegetation would not be impacted by rebuilding the line. Understory riparian vegetation would not interfere with the operation of the line and would not be managed during O&M activities. Willows and aspens that occur within the ROW typically do not get tall enough to interfere with operation of the line; however, these trees may be trimmed on an infrequent basis if they would interfere with line operation. The limited cottonwoods that occur in the riparian areas may also require trimming on an infrequent basis. Approximately 0.03 acre of riparian would be impacted due to road activities. Idaho Power has not proposed new access roads or road work across fish-bearing streams. Idaho Power would use the existing crossings and/or routes around crossings for fish-bearing creeks and rivers in the project area. Idaho Power has proposed three culverts to facilitate crossing ephemeral waterbodies located on private lands. The Proposed Action is not expected to adversely affect fish habitat given the limited number of culverts, the fact that the culverts would be installed on non-fish bearing waterbodies, and 0.03 acre of riparian habitat would be affected.

4.5.2 Alternative 1—Renew Existing Grant

Alternative 1 could have slightly fewer potential impacts to fish habitat than the Proposed Action since road work would not be authorized. Impacts would be the same as the Proposed Action for O&M activities with the exception of the three ditch crossings. Since the crossings currently do not have culverts, there is a potential for short-term localized sedimentation if that section of road were used to conduct maintenance and water was present in the ditch.

4.5.3 Alternative 2—No Action

Impacts associated with line removal would be the same as those associated with construction activities under the Proposed Action. However, installation of the three culverts at the ditch crossing would be temporary and the culverts would be removed upon completion of line removal. Short-term localized sedimentation may occur during culvert installation and removal.

There would be no impacts to fish habitat from O&M activities since the line would be removed.

4.5.4 Alternative 3—Limit the Existing Right-of-Way

Impacts from construction and O&M activities would be the same as the Proposed Action.

4.6 Water Quality

Waterbodies in the project area are listed as impaired for temperature, sediment, nutrients, and bacteria. Impacts to perennial and intermittent surface water features could include sedimentation from Project-related disturbance, fugitive dust deposition, temporary and permanent fill associated with roads, removal of riparian vegetation, bank alteration, and accidental contamination associated with spills of environmentally harmful material.

4.6.1 Proposed Action

No transmission line structures would be constructed in or immediately adjacent to surface waters. Existing structure 15, 16, and 17 would be moved since an artificial pond was created around structure 16 after it was installed. Removal of the structure could create a short-term increase in sedimentation within the pond. This is not an impaired water body and sedimentation would be short-term.

Idaho Power is proposing to install culverts for three ephemeral waterbody crossings on private lands (between structures 9-10, 11-12, and 12-13). Idaho Power would use an existing crossing to cross Black Canyon Creek (between structures 141 and 142) and is not proposing any road maintenance at this crossing. Installation of culverts could result in temporary, short-term increases in sedimentation if water is present during installation. Since construction is proposed during the drier part of the year, it is unlikely that water would be present when culverts are installed. Installation and use of culvert crossings could result in a long-term benefit to water quality as vehicles would not be driving through the waterbodies during construction and O&M activities. Because of the distance between structure work pads and road work and the existing topography, it is unlikely that any sediment from ground disturbance would travel to the impaired waterbodies. Moreover, Idaho Power would implement a SWPPP and install and maintain measures to address erosion and sedimentation in accordance with the CWA (EPM GM-4). Idaho Power's site rehabilitation (EPM S-2) would establish vegetation and restore the existing drainage to the extent possible; this would minimize the potential for erosion and sediment. Idaho Power's SWPPP would also include measures to address the potential for release of hazardous or toxic materials (e.g., identify refueling areas and spill containment and clean-up measures). Because of the distance between work areas and impaired waterbodies and implementation of measures to comply with the CWA, it is unlikely that accidental contamination would occur.

Vegetation management in riparian areas has the potential to adversely affect water temperature if overstory is removed. This would allow additional heating from sunlight. Given the small amount of existing riparian vegetation that would be affected (1.03 acre), lack of existing extensive shade, and the lack of proposed vegetation management for riparian areas, this is not likely to occur.

Construction and O&M activities do not have the potential to introduce bacteria or nutrients into water bodies; therefore, the Proposed Action would not affect the concentration or occurrence of these pollutants in impaired waterbodies.

4.6.2 Alternative 1—Renew Existing Grant

Alternative 1 would have slightly fewer potential impacts to surface waters than the Proposed Action since road work would not be authorized. Impacts would be the same as the Proposed Action for O&M activities with the exception of the three culvert crossings. Since the crossing would not have culverts, there is a potential for short-term localized sedimentation if that section of road were used to conduct maintenance. Because of the anticipated high level of maintenance and lack of culverts, the potential to increase sediment is greater than the Proposed Action. O&M activities are not anticipated to appreciably contribute to sedimentation in conflict with established TMDLs. Similar to the Proposed Action, there is a potential to accidently release hazardous or toxic materials into a water body during O&M activities. O&M activities are not expected to contribute to bacteria or nutrient levels.

4.6.3 Alternative 2—No Action

Impacts associated with line removal would be the same as those associated with construction activities under the Proposed Action. However, installation of the three culverts would be temporary and the culverts would be removed upon completion of line removal.

There would be no impacts to water quality from O&M activities since the line would be removed. Localized sedimentation may be reduced due to reclamation of roads. However, given the distance of potentially reclaimed roads from impaired waterbodies, and the low likelihood that sediment would travel from roads to the waterbodies, the benefit of road reclamation could be minimal.

4.6.4 Alternative 3—Limit the Existing Right-of-Way

Impacts from construction and O&M activities would be the same as the Proposed Action.

4.7 Visual Resources

The BLM's VRM system uses a contrast rating system to systematically analyze the potential visual impact of proposed projects on BLM lands. Visual resources on BLM lands are managed in accordance with the existing MFPs and RMP. The degree to which an activity affects the visual quality of a landscape depends on the visual contrast created between the proposed project and an existing landscape.

Visual resources, as defined by BLM, are the visible physical features of a landscape (e.g., land, water, vegetation, animals, structures, and other features). All land has inherent visual values that warrant different levels of management. Aesthetic judgment, especially related to landscape views, is often considered subjective. The BLM Visual Resource Class Objectives does not apply to visual resources located on private land. For purposes of this EA, assessment of potential impacts to visual resources was conducted using a qualitative analysis.

4.7.1 Proposed Action

The Proposed Action occurs within VRM management and interim classes III–IV. It is important to note that the VRM classes were established after the power line was originally constructed in 1962. None of these classes preclude structures, rather, they address the degree of change, or contrast, that is acceptable. Structure height and width are changing (see Table 3 in

the POD for specific changes), but this is not expected to be readily apparent to the casual observer. The change in structure material, from wood to weathering steel, may be noticed by some casual observers however the weathering steel structures produce less sheen therefore overall this change helps minimize the visual contrast. Because this is the rebuild of an existing line and the VRM classes were established with the existing line in place, the Proposed Action is not expected to result in a change in the class or to be inconsistent with the existing class.

Maintenance of existing roads and creation of new roads may create short-term impacts to visual resources as the newly graded area contrasts with existing landscape. Idaho Power would reseed roads following construction activities and this would reduce the visual impact once vegetation becomes established. Construction would occur over two years and it would take one to two years for grasses to become established in the roads resulting in minimal impacts to the visual characteristics and would not dominate the view.

Construction and O&M activities could also affect visual resources through the presence of equipment and personnel. This would be short-term and temporary as visitor and crews move throughout the area.

The degree of contrast that would result from the proposed action is allowable within the VRM designated and interim management classes. The mitigation measures and design features minimize the visual impacts and contrasts to help protect and maintain the integrity of scenic values of the public landscape for the use and enjoyment of present and future generations.

4.7.2 Alternative 1—Renew Existing Grant

Impacts to visual resources would be similar to those for O&M activities under the Proposed Action. Impacts may be slightly more noticeable as sections or individual structures are replaced through maintenance activities. New wood structures would contrast with the existing weathered structures and may be more noticeable until they weather.

O&M activities could also affect visual resources through the presence of equipment and personnel. This would be short-term and temporary as visitors and crews move throughout the area.

4.7.3 Alternative 2—No Action

Potential impacts during removal of the line would be the same as those for construction activities associated with the Proposed Action. Removing the power line would eliminate the structures from the landscape and would result in a long-term benefit on visual resources as the facility and some of the roads would no longer be present. Since there would be no facilities to maintain, there would be no impacts from O&M activities.

4.7.4 Alternative 3—Limit the Existing Right-of-Way

Impacts would be the same as the Proposed Action.

4.8 Economic and Social Values

Potential impacts to economic and social values within the project area are discussed below.

4.8.1 Proposed Action

Temporary Housing and Community Services. Workers needed to construct the transmission line are expected to be contract workers. Any required construction workers from outside the area are expected to use temporary housing facilities, including local campgrounds, recreational vehicle facilities, and hotel/motels in nearby cities. Sufficient temporary housing is expected to be available. Given the relatively small number of temporary construction workers, schools, and emergency services within the region should be more than sufficient to accommodate the increase.

Existing Idaho Power employees would be responsible for routine O&M activities. Existing housing and community services are sufficient for employees conducting O&M activities if they were required to stay overnight.

Employment, Sales, and Income Taxes. Temporary indirect benefits during construction include local expenditures from construction workers for food and services, and potentially construction materials and services. The purchase of construction materials could include concrete, rebar, steel, and equipment rental.

Idaho Power uses centralized material yards and local purchases during O&M activities are typically limited to food and gasoline.

Potential Impact on Property Values. The construction of transmission lines on private property may impact associated property values, although based on ongoing research, the potential impact remains a topic of debate. Numerous research studies have been conducted on the effects of transmission lines on property values and the majority of the studies have looked at commercial, industrial, and residential properties in metropolitan areas and high voltage transmission lines. A summary of published research (Headwater Economics, 2012) states:

> One observation of available research and previous summaries of that research is that the results have been as mixed as the study approaches and their diverse locations. That said, taking in the whole body of research, most summaries note that negative property value impacts (as measured in market transactions) tend to be smaller in size, extent, and duration than might be expected. For example, a recent summary observes: "The studies reviewed [published empirical research from 1964 to 2009] . . . generally pointed to small or no effects on sale price due to the presence of electric transmission lines. Some studies found an effect but this generally dissipated with time and distance. The effects that were found ranged from approximately 2% to 9%."
>
> The explanation offered by the researchers for the lack of an effect commensurate with the negative perceptions of landowners is basically that in most real estate transactions, numerous factors affect buyer decisions and can often outweigh the stigma of high voltage overhead transmission line.

The transmission line is a lower voltage, existing line and while the rebuild would entail the use of different structures (e.g., steel vs. wood), any impacts to property values were likely realized when the line was originally built.

O&M activities are not expected to impact property values as they occur on a sporadic basis.

4.8.2 Alternative 1—Renew Existing Grant

Impacts would be the same as the Proposed Action except that temporary housing, community services, and purchases of local materials would not occur since the line would not be rebuilt. Impacts from O&M activities and impacts to property values would be the same as the Proposed Action.

4.8.3 Alternative 2—No Action

Impacts would be the same as the Proposed Action except that purchases of local materials and the potential to hire local workers may be less as removing the line takes less work than rebuilding the line. Removal of the line would leave only one line to serve the demand in the Wood River Valley. The existing Midpoint to Wood River line can currently meet the demands in the Wood River Valley except at extreme peak demand periods and it is not expected that it could meet demand in the future (IPC 2007). If the King to Wood River line were removed and the Midpoint to Wood River line experienced an outage, there would be no electrical service to the Wood River Valley. Or if an extreme peak demand event occurred, then Idaho Power would need to meet demand using rotational outages. Economic and social impacts would vary depending on when an outage occurred and the duration of the outage. Outages could range from minutes to days and social and economic impacts could range from minimal to severe depending on the time of year and duration of the outage. The lack of a redundant line and/or adequate capacity to meet future growth could also hinder future development in the area.

There would be no impacts from O&M activities.

4.8.4 Alternative 3—Limit the Existing Right-of-Way

Impacts would be the same as the Proposed Action.

4.9 Recreation and Visitor Services

4.9.1 Proposed Action

The Proposed Action and alternatives allows those recreation opportunities to continue to be available. However short term direct impacts would occur during the time of construction and be in the form of visitor displacement. Most recreationists have a destination or route they intend to follow when visiting public lands and most of the recreation and hunting that occurs within the project area is day-use. This means they do not spend the night on public lands but return to their residence or accommodation each evening. Therefore if construction interferes with their ability to reach the planned destination the recreationist would most likely be displaced for a day or multiple days if they intended to visit the same area for several days in a row. Their attachment to the planned destination would determine their level of frustration. This would especially be true if the recreationist is a hunter and construction activities impacts their ability to hunt in a favorite area and/or construction activities also displace wildlife from that same area.

Long term impacts to recreationists would occur when the power line is undergoing maintenance operations however these impacts would not occur on the same scale as during construction.

4.9.2 Alternative 1—Renew Existing Grant

There would be no direct or indirect impacts associated with this alternative since there would be no construction.

4.9.3 Alternative 2—No Action

Impacts would be the same as the Proposed Action; however, impacts would only occur once during the removal of the power line and there would be no long term impacts since there would not be a need for maintenance.

4.9.4 Alternative 3—Limit the Existing Right-of-Way

Impacts would be the same as the Proposed Action.

4.10 Cumulative Impacts Analysis

A cumulative impact is the impact on the environment that results from the incremental impact of an action when added to the effects from other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or nonfederal) or person undertakes such actions (40 CFR 1508.7). Cumulative impacts can result from individually minor but collectively significant actions taking place over time. Reasonably foreseeable future actions, while not part of the proposed action, refer to future projections or estimates of what is likely to take place when a proposed action is implemented. This allows for future impacts, cumulative and otherwise, to be estimated as required by the NEPA.

- The SFO will continue to provide maintenance of all structural range improvements (fences, reservoirs, pipelines, guzzlers, corrals, cattle guards and spring developments and troughs), road maintenance and cattle guard or spring box replacement where warranted. New structural projects such as cattle guards, management fences, and water developments will continue to be proposed and analyzed to help promote or maintain progress toward Standards for Rangeland Health and support guidelines for livestock grazing management. Ongoing stabilization and rehabilitation projects and monitoring throughout the SFO in conjunction with wildfires occurs continuously.

- The Twin Falls District is currently analyzing the Twin Falls District Vegetation Treatment for Noxious and Invasive Weeds, a district-wide proposal for vegetation treatments.

- A new BLM SFO RMP that would replace the Shoshone & Monument RMPs and Sun Valley MFP is not scheduled to begin until the Federal fiscal year 2019, so any specific management actions to be considered from this future planning activity is not considered foreseeable

- The North Highway 20 and Bennett Hills Travel Management Plan (TMP) was initiated to provide direction regarding travel management within these portions of the BLM SFO. The completion of this plan would result in fewer acres of public land to be available to cross-country travel, thereby decreasing the effects to soils and vegetation in the proposed project area.

- In 2008, the BLM has received a court order to amend the Craters of the Moon National Monument and Preserve RMP. The amendment process is in progress and a Draft EIS for the amendment is due to be released for public review in calendar 2016. The order determined that portions of the original RMP would need to be amended and updated to analyze a range of alternatives for livestock grazing management and incorporate considerations for sage-grouse. Though the RMP Amendment will identify a preferred livestock management alternative in a Draft EIS, it is not known at this time how livestock allocations will be determined.

In response to a 2010 determination by the USFWS that the listing of the greater sage-grouse under the ESA was "warranted, but precluded" by other priorities, the BLM, in coordination with the US Department of Agriculture Forest Service, developed a landscape-level management strategy. A Record of Decision (ROD) and ARMPAs were issued in September 2015 for Idaho and Southwestern Montana. The ARMPAs include greater sage-grouse habitat management direction that avoids and minimizes additional disturbance in greater sage-grouse habitat management areas. Moreover, they target restoration of and improvements to the most important areas of habitat. Management under the ARMPAs is directed through land use allocations that apply to greater sage-grouse habitat. These allocations accomplish the following:

- Eliminate most new surface disturbance in the highest value sagebrush ecosystem areas identified as Sagebrush Focal Areas

- Avoid or limit new surface disturbance in Priority Habitat Management Areas, of which Sagebrush Focal Areas are a subset, and avoid or limit new surface disturbance in Important Habitat Management Areas

- Minimize surface disturbance in General Habitat Management Areas

In addition to protective land use allocations in habitat management areas, the ARMPAs include a suite of management actions, such as establishing disturbance limits, greater sage-grouse habitat objectives, mitigation requirements (see mitigation section), monitoring protocols, and adaptive management triggers and responses. They also include other conservation measures that apply throughout designated habitat management areas.

The cumulative effect of these measures is to conserve, enhance, and restore greater sage-grouse habitat across the species' remaining range in the Great Basin Region. The targeted resource management plan protections presented in the ROD and ARMPAs apply not only to the greater sage-grouse and its habitat but also to other wildlife species associated with the sagebrush-steppe ecosystem in North America. In addition to protecting habitat, it will enhance a variety of rangeland uses, including recreation and grazing.

Cumulative effects are bounded by geographic and temporal scopes that can vary by resource. Geographic scope is generally based on natural boundaries and not jurisdictional boundaries. The temporal scope is generally based on the duration of effects of the Proposed Action or alternatives. The temporal scope considered for cumulative effects is 60 years. This is based upon the 53 year age of the current powerline and estimating that the upgraded powerline would serve for the same amount of time then adding an estimated seven year period for

decommissioning, removal of infrastructure, and rehabilitation of the corridor at the end of the serviceable period. As a comparison, the 500 kV Gateway West Transmission line environmental impact statement considered a 60-year lifespan, 50 years of operational service and 10 years for decommissioning and rehabilitation.

4.10.1 Past and Present Actions

Residual effects from past and present actions include development such as expansion of agricultural areas or rural development; infrastructure such as highways, powerlines, and pipelines; wildfires; livestock grazing; and recreation. By definition, residual effects from past actions and effects from current activities contribute to the current conditions of resources found in the project area. The affected environment, Chapter 3, describes the current condition of resources which would also be affected by the proposed powerline upgrade.

4.10.1.1 Archaeological and Historical Resources

The boundary for cumulative impacts to archaeological and historical resources is the proposed ROW. These resources would not move from their present location, and the direct and indirect effects from the proposed project would not be felt by these resources beyond the project area. As described in section 3.1 of this EA, an intensive (Class III) survey was completed in 2011 for the existing right-of-way on BLM administered lands (Gray and Statham 2012). An inventory of private lands (where access was granted), access roads, and pulling and tensioning sites located outside of the original right-of-way was conducted in 2014 (Gray and Statham 2015). Other than continuing livestock grazing in the proposed project area, there are no additional projects proposed within the boundary of cumulative effects for archaeological and historical resources at this time that would have an additional effect these resources. Structural improvements related to livestock grazing could affect archaeological and historical resources; however, when these projects are proposed, cultural surveys would be required and protective measures taken to avoid effects to these resources. Any future proposals for structural improvements would require site-specific NEPA analysis and would consider the cumulative effects of the King to Wood River powerline. Post-fire Emergency Stabilization and Restoration (ESR) plans are also required to survey for and protect cultural resources. Resources may be adversely affected during firefighting activities and by vandalism. Review of ground disturbing activities by the BLM would continue and mitigation would be required to address possible impacts.

4.10.1.2 Soils

The boundary for soils is the sub basin since impacts (e.g., erosion and sediment, pollutants) would flow through the water way, but would have dissipated to immeasurable levels anywhere beyond this boundary. With increasing distances from the proposed ROW corridor, it becomes difficult to determine impacts due to the dilution effect that comes with increasing boundary distance. Livestock grazing activity affects soils through compaction in areas where animal numbers are concentrated and through erosion and sedimentation if improperly high levels of grazing occur. Recreational activities can have similar impacts to livestock in areas of concentrated use; recreationists can trample vegetation and through time compact soils in areas of high or repetitive use (e.g., ATV trail). For the Proposed Action and Alternative 3, four miles of new roads would be created for construction activities. Access by recreationists on these four miles would temporarily increase the effects to soils. Recreation and livestock have occurred, and are expected to continue to occur, in the watershed sub basin. Recreation and livestock use

are not anticipated to change and existing impacts would continue. The total adverse effect to soils would likely be reduced over 3-5 years in the proposed project area as temporary construction disturbance would be subject to rehabilitation efforts, and replacement of wooden structures with metal structures would result in vegetation being reestablished in the ROW corridor, thereby providing increased soil stability compared to the current conditions.

Site specific locations and the intensity of wildfires are not foreseeable events, but they will likely occur within the project area. Fire can affect soils by changing their ability to absorb water and by creating large, unvegetated areas that are susceptible to erosion. Depending on the intensity of a fire, soils may become hydrophobic (i.e., repel water) initially after a fire. This not only precludes water from permeating the soil and helping seeds to germinate, it creates runoff that can cause erosion and sedimentation. Winds may also cause erosion. Future activities will include the BLM's ESR program that is implemented following wildfires. The ESR is intended to stabilize soils from erosion and can include installation of temporary fences, reseeding and shrub planting, changes in livestock grazing, and temporary recreation restrictions. The BLM would continue ESR activities in the sub basin.

4.10.1.3 Vegetation and Special Status Plant Species

The boundary for vegetation effects is the proposed widened ROW, the conductor tensioning areas and the access roads used for installation and maintenance activities. The effects to vegetation are generally not measureable or observable beyond these surface disturbing activities. . Extending the effects analysis beyond this boundary would dilute the impacts of the proposed action within the project area.

Livestock can affect vegetation by grazing and trampling. Livestock and equipment used to manage livestock can spread and introduce noxious weeds and invasive plant species throughout the grazing allotment. Livestock grazing has occurred within the area managed by the BLM SFO since the late 1800s and is expected to occur in the future. The proposed project ROW corridor intersects eight BLM-managed grazing allotments from north of Highway 26 to just south of the Wood River Substation. The BLM assesses the rangeland health of these allotments, and, if lands do not meet applicable standards, the BLM is expected to work with the grazing permittee to correct the situation; this could include changes in grazing timing, number of animals, use of fencing, etc. The levels and intensity of effects from livestock grazing are not expected to increase in the foreseeable future.

Gateway West Transmission line is a 500 kilovolt powerline expected to be built across southern Idaho over the next few years but the direct and indirect effects from an upgrade of the existing King to Wood River powerline do not overlap with the effects analysis area of the Gateway West transmission line.

The Twin Falls District is currently analyzing a district-wide proposal for vegetation treatments. The name of the proposed project is the Twin Falls District Vegetation Treatment for Noxious and Invasive Weeds. The BLM has not issued a decision record that would implement this project, and site-specific analysis is not yet complete. Any overlap of the direct and indirect effects to vegetation including special status plant species with the effects from the King to

Wood River powerline upgrade are speculative at this point in time. Cumulative effects analysis in the District Vegetation Treatment for Noxious and Invasive Weeds would have to consider the powerline upgrade in that analysis if the proposed powerline is approved. Section 4.3 in this EA analyzes the direct and indirect effects to vegetation, noxious and invasive weeds.

Wildland fires are a common occurrence within the project area and multiple areas have burned numerous times. Nearly 90,000 acres of the total burned area has burned at least twice and up to seven times in this 56 year time-frame. Higher intensity burn areas remove most of the plant cover which can lead to erosion and establishment of invasive plants (e.g., cheat grass) and noxious weeds. Vegetation that is repeatedly burned may have a reduced ability to recover from subsequent fires and/or produce seeds.

4.10.1.4 Wildlife and Special Status Species

The cumulative effects spatial boundary for wildlife is their habitat within and adjacent to the proposed ROW where these species may move through their habitat on a seasonal basis since species can move or be transported throughout the area.

Livestock grazing, recreationists, and wildfire can affect wildlife by adversely impacting vegetation and habitat, temporarily displacing wildlife, trampling of nests, and noise. Range improvements to support livestock grazing and ESR activities following a fire can provide benefits to wildlife such as installation of water guzzlers, noxious weed control, and vegetation planting.

The combined effects of all land uses within and adjacent to the ROW have resulted in changes in habitat and land use by wildlife and use restrictions. Public land north of Highway 20 is designated mule deer winter range and crucial elk winter range and portions of BLM lands south of Highway 20 are designated as pronghorn antelope and mule deer winter range. Mule deer migration corridors have also been identified.

The combined effects of human and natural changes have impacted the availability and quality of greater sage-grouse habitat. Fragmentation has reduced the connectivity of suitable habitat and the loss of sagebrush has reduced the overall amount of available habitat. Development and infrastructure (e.g., powerlines; roads and highways, fencing) may have also affected sage-grouse by creating areas they avoid and collision hazards and increased opportunities for predation.

4.10.1.5 Fish Habitat

The boundary for effects to fish habitat is defined by the sub basin since impacts such as erosion and sediment, pollutants that would affect fish and their habitat would flow through the water way, but would have dissipated to immeasurable levels beyond the sub basin boundary.

Actions within the sub basin that have affected fish habitat include livestock grazing, recreational uses, road construction, noxious weeds and invasive plant species, wildfire, and development. Direct and indirect impacts to fish habitat include trampling of eggs and fish, increased sedimentation, reduced bank stability (leading to increased erosion and sedimentation), and loss of riparian vegetation. Impacts to water quality include increased sediment, changes in nutrient levels, and increased water temperatures due to decreased riparian vegetation. Fencing to protect

riparian areas, properly constructed and maintained stream crossings, and changes in grazing practices have reduced some impacts through time. These land uses and protective measures are expected to continue to occur.

4.10.1.6 Water Quality

Like soils, the boundary for effects to water quality is the sub basin since impacts (e.g., erosion and sediment, pollutants) would flow through the water way, but would have dissipated to immeasurable levels beyond the sub basin boundary. Cumulative impacts to water quality would be similar to those described for fish habitat, above.

4.10.1.7 Visual Resources

The existing powerline was in its current location when the VRM inventory and management classes were established in the 1980s. Although many of the new pole structures would be approximately 10 feet taller than the current wood structures, the effects to visual resources resulting from the upgrade are considered to be unnoticeable to observers visiting the area for a couple of reasons. First, naturally weathering steel structures are expected to be no more noticeable that the wood structures. Second, steel structures allow the proposed corridor width to remain uncleared of vegetation since steel structures are not threatened by wildfire. Over time, the revegetation of the corridor would lessen the visual effects of the powerline to the visual resource. Therefore the boundary for effects to visual resources would remain unchanged and is the VRM inventory or management class unit intersected by the proposed ROW.

Development has altered the form, lines, and color of the natural environment and has changed the visual characteristics of the area. Development on private lands is expected to occur in the future, but no projects were identified during scoping. Wildfires can also affect the viewshed. Wildfires are expected to continue to occur in the area. Development on BLM-managed lands would continue to be addressed through the permitting and planning processes.

4.10.1.8 Economic and Social Values

The boundary for economic and social values are the counties crossed by the proposed ROW, but the economic benefit of electrical service to the Big Wood River valley is already occurring. The years of benefit to the valley would increase because of the powerline rebuild. Communities within the project area are primarily agricultural or livestock based south of the Wood River Substation and are primarily tourism based north of the substation. This land use pattern and associated economic and social values are expected to continue and would not change as a result of the powerline upgrade in any measureable way.

4.10.2 Cumulative Impacts Summary

This particular project shows measureable but no substantial differences between the Proposed Action and Alternative 3 with the exception of the proposed increase in the ROW width, from 60 feet to 100 feet. This increased width adds approximately 145 acres to the entire ROW. Both alternatives would result in approximately 56 acres of new disturbance with both resulting in rehabilitation of these acres. “Wildland fire” is a general term that describes any nonstructural fire that occurs in the wildland and for the purposes of this EA, refers to unplanned ignitions (e.g., lightning strike, vandalism).

Of the approximately 76 miles of roads identified for the Proposed Action, 56 miles would be used as they currently occur (road categories A and B); approximately 2.5 miles of the 56 miles would have rocks removed where they interfere with safe access. Approximately 6.4 miles of roads (road category C) would require vegetation to be cut for safe access. Approximately 8.35 miles of roads (road categories D and E) would require grading and or ground disturbing repair. Approximately 4.6 miles of overland travel (road category G) would occur and approximately 0.6 mile of water crossings (road category F) would occur.

There are no site specifically defined developments proposed in the project area whose impacts overlap with the direct and indirect effects of this proposal. The proposed project would rebuild an existing facility, therefore the direct and indirect effects, when added to the residual effects of the existing line are not substantial.

Alternative 2 could result in the highest additive effects to the economic resource as well as the natural resources compared to the other alternatives. Decommissioning, removal of infrastructure, and the rehabilitation of the ROW corridor would result in the most as removal of the line would decrease reliability and adversely affect Idaho Power's ability to provide service to the Wood River Valley should power outages occur. Without this line, Idaho Power would not be able to meet the Wood River Valley's electrical needs during peak demand time. Alternatives 2 and 3 could result in cumulative economic impacts to a lesser extent than the No Action alternative; as the existing line continues to age and maintenance ability is limited by the lack of roads and sufficient ROW width, the number or outages and their duration could increase.

4.11 Compensatory Mitigation

The proposed action of rebuilding the existing transmission line within the right-of-way has avoided and minimized effects to the Greater Sage-Grouse through design features and avoidance measures however, the action would still result in habitat loss and therefore, mitigation would be required to provide a net conservation gain to the species as required by the Idaho and Southwestern Montana ARMPA. Due to temporary and long term ground disturbance in sage-grouse habitat, offsite mitigation is required. However, since the proposed action is a rebuild of an existing line, the habitat loss of 56 acres results in less actual impact to sage-grouse and consequently requires less offsite mitigation to achieve a net conservation benefit

The BLM and the Fish and Wildlife Service recently completed a white paper describing indirect effects to sage-grouse from transmission lines and made recommendations for assessing those effects. In it they recognize that sage-grouse avoid transmission lines and an area surrounding them. The 56 acres of proposed habitat loss for the project is all within 600 meters of the existing transmission line and the specialists determined that the habitat within this area has 75% less utility to sage-grouse. Therefore, applying the 75% reduction rate for the 56 acres of habitat loss, results in approximately 14 acres of necessary offsite mitigation, in addition to the requirement for the mitigation to result in a net conservation gain. (BLM and FWS 2015)

The proposed compensatory mitigation would provide $56,450 which would be applied to the collection and production of sage-grouse preferred native forb seed using BLM Seeds of Success protocol. $11,450 of this total would be used for monitoring of the production contract and subsequent planting to ensure success of this mitigation effort. Seed would be grown in an agricultural field-setting to increase seed volume and produce containerized plants over a 3-5

year time frame in order to provide sufficient seed and plant stock to use in habitat restoration or enhancement of up to 200 acres of sage-grouse habitat within the Shoshone Field Office/Twin Falls District. This would result in a conservation gain to sage grouse on substantially more acres than the 14 acres of required offsite mitigation and would therefore result in a net conservation benefit to sage-grouse habitat.

Mitigation has been designed and would be implemented consistent with the Principles, Standards & Mitigation Program Elements contained in the Greater Sage-Grouse Range-Wide Mitigation Framework, September 3, 2014 as follows:

Observe an appropriate mitigation sequence: The proposed action has incorporated design features to avoid or reduce the impacts to the sage-grouse. These include timing restrictions, reseeding, using existing roads and placing infrastructure in previously disturbed locations. Since this is a rebuild of an existing transmission line in sage-grouse habitat, it is consistent with ARMPA management decision MD SSS 31, which states, "Co-locating new infrastructure within existing ROWs and maintaining and upgrading ROWs is preferred over the creation of new ROWs or the construction of new facilities in all management areas."

Attain net conservation gain: The proposed action would result in approximately 56 acres of sage-grouse habitat loss on BLM land. The temporary use areas would be reseeded with locally-sourced sagebrush, forbs and a perennial grass seed mix. The roads would be reseeded with perennial grasses to stabilize soil but still allow occasional vehicle traffic. Because transmission lines reduce sage-grouse habitat quality (BLM and FWS 2015) and the proposed action is a rebuild of an existing line, the habitat loss of 56 acres results in less actual impact to sage-grouse and consequently requires less offsite mitigation to achieve a net conservation benefit. Considering the reduction in habitat utility, 14 acres of offsite mitigation is necessary, in addition to the requirement for the mitigation to result in a net conservation gain. The compensatory mitigation would fund the collection and grow out of sage-grouse preferred native forb seed and containerized plants. Native seed produced would be increased five-fold over initial collection amounts. In addition, the Generation 1 (G1) seed stock would be further leveraged for future larger-scale increases to fill BLM Regional Seed Warehouse sage-grouse habitat seed need requests.

Use a landscape-scale approach to inform mitigation: The compensatory mitigation would serve to implement the collection of native forb seed through the BLM Seeds of Success protocol and a grow-out contract. Use of forb seed and plant stock would provide enhancement of sage-grouse habitat that currently lacks this important plant life form and could provide islands of forb connectivity to more isolated, but otherwise functionally intact habitat necessary to sustain sage-grouse. Forb availability and cost is often cited as main impediments in developing diverse seed mixes.

Ensure transparency, consistency, and participation: Use of seed increase contract specifications and reporting would provide the appropriate standards, protocols and metrics for successful native seed increase.

Base mitigation decision in science: The mitigation has been developed to be consistent with the Principles, Standards & Mitigation Program Elements contained in the USFWS Greater

Sage-Grouse Range-Wide Mitigation Framework, September 3, 2014. Development, increase, and use of native species that are genetically appropriate to sustain long-term ecosystem function is supported by a large body of research via the USFS Rocky Mountain Research Station (Great Basin Native Plant Project) and USGS for-instance. Use of native species, especially forbs which support diverse insect communities, are more frequently being considered as critical components to enhance and build long-term habitat function (Dumroese et al. 2015).

Siting: The compensations provided would be used to collect and grow a high-quality, accurately identifiable native seed and plant stock which would be used for reclamation, enhancement and restoration projects within sage-grouse habitat. The forb seed would be used for the rehabilitation and/or enhancement of up to 200 acres of sage-grouse habitat within the Shoshone Field Office/Twin Falls District. By increasing forb seed volume and availability of these target life forms, greater use and benefit to sage-grouse habitat would be facilitated and provide long term benefits.

Duration: The mitigation action of the development of a forb seed increase and plant grow out contract would be initiated in spring of 2016. Target forb seed would be collected in spring and early summer. Construction of the proposed action would occur in phases beginning in 2016 and concluding in 2017. Although the timeframe of habitat loss would be prior to the completion of the forb seed increase, the identified reclamation of temporary disturbance areas would be stabilized immediately following the completion of construction with seed mixes specified by the BLM.

Additionality: Due to the disturbance within sage-grouse habitat, 14 acres of offsite mitigation is required in addition to the reclamation of the temporary disturbance areas. The mitigation would provide adequate funding for the development of native forb seed increase contract which has the potential to provide seed and/or containerized plants for approximately 40 – 200 acres, depending on the species grown, seeding rate and method. Therefore, the compensatory mitigation plan would provide additional seed above and beyond the 14 acres of disturbance that would otherwise not be available to the BLM. The seed and plant stock produced from the contract would be used for sage-grouse habitat restoration or enhancement in the Shoshone Field Office/Twin Falls District.

Effectiveness: Forb seed would be grown in an agricultural field-setting to increase seed volume and produce plant stock over a 3-5 year time frame. This would provide sufficient seed and plant stock for sage-grouse habitat restoration or enhancement projects on substantially more acres than the 14 acres of required offsite mitigation and would therefore result in a net conservation benefit to sage-grouse habitat. A projected single species forb seed volume increase from 1 pound of collected and cleaned Pure Live Seed (PLS) after year two of agricultural seed increase could range between 25-50 pounds depending on plant life form and species selected. Similar contracts have been developed for native perennial grass increases which average $50,000 to increase one pound of seed from seven ecotypes to 200 pounds after year three. Forb contracts for up to seven small lot increases are similar in cost.

Durability: Contract specifications and associated reporting requirements would provide the appropriate standards, protocols and metrics for successful native seed increase. The contract terms would include reporting requirements for: results of testing and cleaning of seed; specifics

of soil preparation, planting, herbicides, and germination; details regarding maturity of plants, problems, fertilizer, water, and other growth factors; final report of harvest, cleaning, and bagging of seed.

Metrics: The habitat loss of the proposed action was calculated with assumptions for sizes of poles, structure pads and roads and using geographic information system to calculate impacts to vegetation communities. Design features were incorporated to reduce both direct and indirect effects to the sage-grouse. Seeding requirements, seasonal timing restrictions and utilizing existing disturbed areas are actions developed in coordination with IDFG to avoid and minimize the impacts to the sage-grouse. Regarding the mitigation, the collection and grow-out contractor will provide and maintain clean, well-prepared seedbeds, equipment, manpower, herbicides, insecticides, fertilizer, water, and conditioning and testing of seed. Testing will be done by an accredited laboratory or laboratories agreed upon by the grower and BLM. All of these shall be documented and recorded for review with BLM.

CHAPTER 5.0—CONSULTATION AND COORDINATION

The key team members who conducted the environmental analyses and prepared the EA are listed in Table 5-1.

Table 5-1—List of Preparers

Name	Title	Responsibility
Bureau of Land Management		
Lisa Cresswell	Archaeologist	cultural resources
Anne Halford	Botanist	invasive, non-native species; vegetation and special status plant species
John Kurtz	Outdoor Recreation Planner	Visual resources; Wilderness Study Area and/or lands with wilderness characteristics; recreation
Paul Makela	Wildlife Biologist	migratory birds; threatened or endangered species; wildlife and special status wildlife species
Eric Mayes	NEPA Specialist	NEPA Compliance
Codie Martin	Field Manager	Authorized Officer
Julie Suhr Pierce	Regional Socio-economic Analyst	economic and social values
Kasey Prestwich	Realty Specialist	NEPA compliance
Meghan Sorensen-Pereira	Realty Specialist	NEPA Compliance
Brian Thrift	NEPA Specialist Planning & Environmental Coordinator	NEPA Compliance
Gary Wright	Wildlife Biologist	fish habitat; migratory birds; threatened or endangered species; wildlife and special status wildlife species

Agencies, organizations, and individuals that were consulted during the preparation of this EA include the following:

- Shoshone-Paiute
- Shoshone-Bannock

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CHAPTER 7.0—MAPS AND FIGURES

Figure 1-1—Project Overview

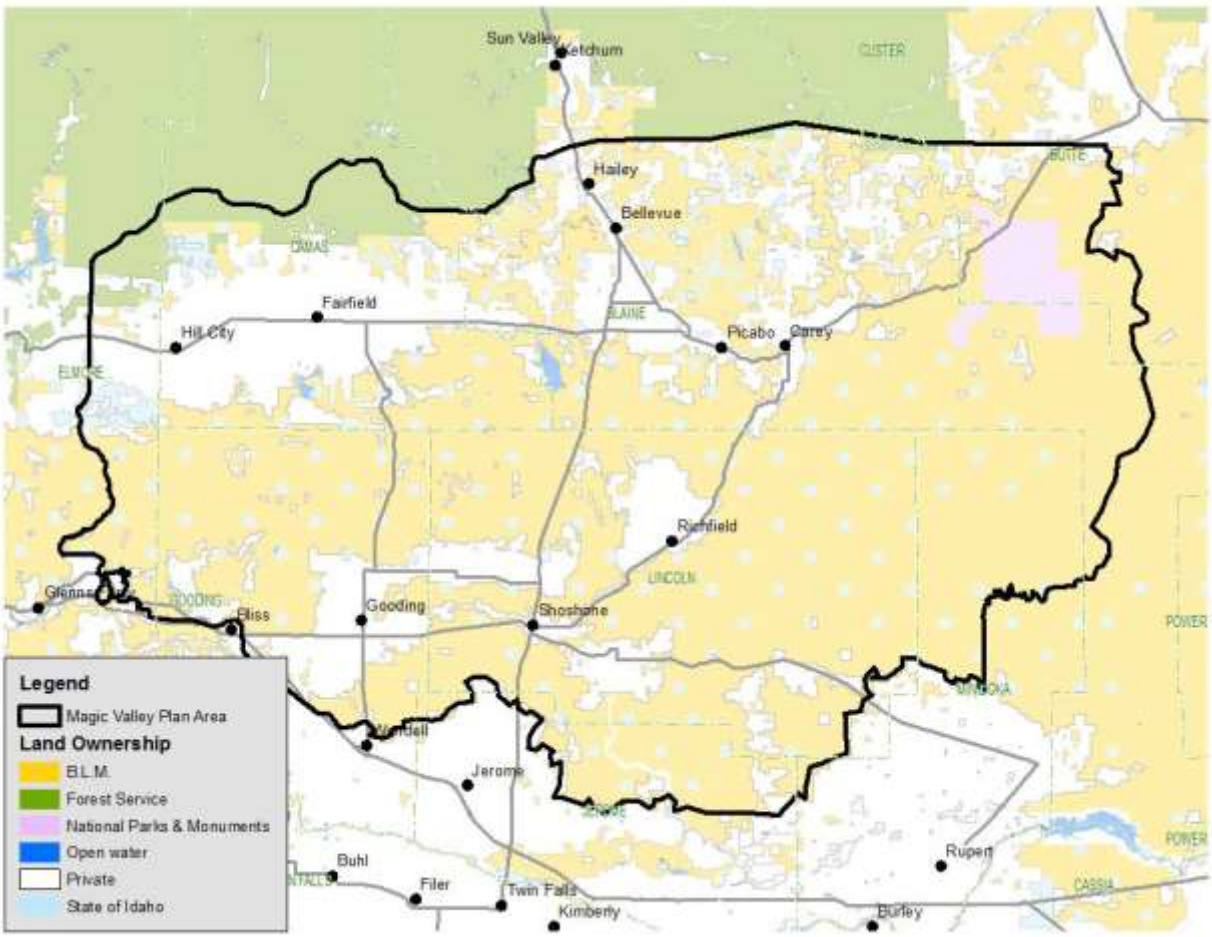

Figure 1-2—North Magic Valley Greater Sage-grouse Local Working Group Area

Figure 2-1—Typical Structures Proposed for the King to Wood River Transmission Line Rebuild

Figure 2-2—Roads and Pulling and Tensioning Sites

(12 pages)

Figure 2-3—Wood River Electrical Plan Alternative Routes

Figure 3-1—Vegetation Community

(3 pages)

Figure 3-2—Mourning Milkvetch Locations

Figure 3-3—Elk and Mule Deer Winter Range and Mule Deer Migration Corridors

Figure 3-4—Special Status Wildlife Species

Figure 3-5—BLM Greater Sage-grouse Management Categories

Figure 3-6—Greater Sage-grouse Leks

Figure 3-7—Visual Resource Management Classes

CHAPTER 8.0—APPENDICIES

Appendix A—Scientific and common names of botanical species

Scientific Name	Common Name
Achnatherum hymenoides	Indian ricegrass
Achnatherum thurberianum	Thurber's needlegrass
Acroptilon repens	Russian knapweed
Agropyron cristatum	crested wheatgrass
Amelanchier alnifolia	Saskatoon serviceberry
Amsinckia sp.	fiddleneck
Artemisia arbuscula ssp. *longiloba*	alkali/low/little sagebrush
Artemisia ludoviciana	Louisiana sagewort/white sagebrush
Artemisia nova	black sagebrush
Artemisia papposa	fuzzy sagebrush
Artemisia tridentata ssp. *tridentata*	basin big sagebrush
Artemisia tridentata ssp. *vaseyana*	mountain big sagebrush
Artemisia tridentata ssp. *wyomingensis*	Wyoming big sagebrush
Astragalus atratus var. *inseptus*	Fairfield/mourning milkvetch
Astragalus purshii var. *ophiogenes*	Snake River milkvetch
Atriplex canescens	fourwing saltbush
Atriplex confertifolia	shadscale
Balsamorhiza sagittata	arrowleaf balsamroot
Bromus arvensis	field brome (Japanese brome)
Bromus tectorum	cheat grass
Cardaria draba	whitetop
Carduus nutans	musk thistle
Carex sp.	sedge
Centaurea diffusa	diffuse knapweed
Centaurea stoebe	spotted knapweed
Ceratocephala testiculata	bur buttercup
Chondrilla juncea	rush skeletonweed
Cirsium arvense	Canada thistle
Cirsium undulatum	wavyleaf thistle
Conium maculatum	poison hemlock
Convolvulus arvensis	field bindweed
Cymopterus acaulis var. *greeleyorum*	Greeley's wavewing
Dipsacus fullonum	Fuller's teasel

Elaeagnus angustifolia	Russian olive
Eleocharis sp.	spikerush
Elymus elymoides	bottlebrush squirreltail
Epipactis gigantea	giant helleborine
Ericameria nana	dwarf goldenbush
Ericameria nauseosa	gray/rubber rabbitbrush
Eriogonum shockleyi var. shockleyi	matted cowpie buckwheat
Eriogonum sp.	buckwheat
Euphorbia esula	leafy spurge
Festuca idahoensis	Idaho fescue
Grayia spinosa	spiny hopsage
Helianthus annuus	common sunflower
Hesperostipa comata	needle and thread
Juniperus sp.	juniper
Leymus cinereus	basin wildrye
Linaria dalmatica dalmatica	dalmation toadflax
Lupinus sp.	lupine
Medicago sativa	alfalfa
Mimulus sp.	monkeyflower
Onopordum acanthium	scotch thistle
Pascopyrum smithii	western wheatgrass
Penstemon deustus	hotrock/scabland penstemon
Phlox sp.	phlox
Picrothamnus desertorum	budsage
Poa bulbosa	bulbous bluegrass
Poa secunda	Sandberg bluegrass
Populus balsamifera ssp. trichocarpa	black cottonwood
Populus tremuloides	quaking aspen
Pseudoroegneria spicata	bluebunch wheatgrass
Pseudotsuga menziesii	Douglas-fir
Purshia tridentata	antelope bitterbrush
Pyrrocoma insecticrurus	bug-leg goldenweed
Quercus sp.	oak
Rosa woodsii	Wood’s rose
Salix exigua	coyote willow

Salix lucida ssp. *lasiandra*	pacific willow
Sarcobatus vermiculatus	greasewood
Scutellaria	skullcap
Sisymbrium altissimum	tall tumblemustard
Stanleya confertiflora	Malheur princes-plume
Taeniatherum caput-medusae	medusahead wildrye
Tamarix spp.	saltcedar
Tribulus terrestris	puncturevine

Appendix B—Scientific and common names of wildlife species

Scientific Name	Common Name
Avian Species	
Accipiter gentilis	northern goshawk
Alectoris chukar	chukar
Ammodramus savannarum	grasshopper sparrow
Amphispiza belli	sage sparrow
Amphispiza bilineata	black-throated sparrow
Aquila chrysaetos	golden eagle
Athene cunicularia	burrowing owl
Bonasa umbellus	ruffed grouse
Bubo virginianus	great horned owl
Buteo jamaicensis	red-tailed hawk
Buteo regalis	ferruginous hawk
Buteo swainsoni	Swainson's hawk
Carpodacus cassinii	Cassin's finch
Centrocercus urophasianus	greater sage-grouse
Childonias niger	black tern
Coccyzus americanus	yellow-billed cuckoo
Contopus cooperi	olive-sided flycatcher
Corvus corax	common raven
Cygnus buccinator	trumpeter swan
Dendragapus obscurus	dusky grouse
Empidonax traillii	willow flycatcher
Falco mexicanus	prairie falcon
Falco peregrinus	peregrine falcon
Grus canadensis	sandhill crane
Haliaeetus leucocephalus	bald eagle
Lanius ludovicianus	loggerhead shrike
Melanerpes lewis	Lewis's woodpecker
Numenius americanus	long-billed curlew
Oreortyx pictus	mountain quail
Oreoscoptes montanus	sage thrasher
Pandion haliaetus	osprey
Perdix perdix	Gray partridge

Phalaropus tricolor	Wilson's phalarope
Phasianus colchicus	ring-necked pheasant
Picoides albolarvatus	white-headed woodpecker
Pipilo chlorurus	green-tailed towhee
Psiloscops flammeolus	flammulated owl
Selasphorus calliope	Calliope hummingbird
Spinus psaltria	lesser goldfinch
Spizella breweri	Brewer's sparrow
Tympanuchusphasianellus	Columbian sharp-tailed grouse
Zenaida macroura	mourning dove
Mammalian Species	
Antilocapra americana	pronghorn antelope
Antrozous pallidus	pallid bat
Brachylagus idahoensis	pygmy rabbit
Canis lupus	gray wolf
Cervus elaphus	elk
Corynorhinus townsendii	Townsend's big-eared bat
Eptesicus fuscus	big brown bat
Euderma maculatum	spotted bat
Gulo gulo luscus	wolverine
Lasionycteris noctivagans	silver-haired bat
Lasiurus cinereus	hoary bat
Lynx canadensis	Canadian lynx
Marmota flaviventris	yellow-bellied marmot
Myotis ciliolabrum	western small-footed myotis
Myotis evotis	long-eared myotis
Myotis lucifugus	little brown bat
Myotis thysanodes	fringed myotis
Myotis volans	long-legged myotis
Myotis yumanensis	Yuma myotis
Odocileus hemionus	mule deer
Ovis canadensis	bighorn sheep
Parastrellus hesperus	canyon bat
Pekania pennant	fisher
Plecotus townsendii	Townsend's big-eared bat

Urocitellus mollis	Piute ground squirrel
Vulpes macrotis	kit fox
Reptiles and Amphibians	
Anaxyrus boreas	Western/boreal toad
Anaxyrus woodhousii	Woodhouse's toad
Lithobates pipiens	northern leopard frog
Sonora semiannulata	western groundsnake
Thamnophis elegans	terrestrial gartersnake
Aquatic species	
Anodonta californiensis	California floater
Catastomus columbianus	bridgelip sucker
Catastomus macrocheilus	largescale sucker
Cottus leiopomus	Wood River sculpin
Fluminicola fuscus	Columbia pebblesnail
Micropterus dolomieu	smallmouth bass
Oncorhynchus mykiss	rainbow trout
Oncorhynchus mykiss gairdneri	redband trout
Perca flavescens	yellow perch
Prosopium williamsoni	mountain whitefish
Rhinichthys osculus	speckled dace
Richarsonius balteatus	redside shiner
Salmo trutta	brown trout
Salvelinus fontinalis	brook trout
Taylorconcha serpenticola	Bliss Rapids snail

Appendix C—Species accounts for species not carried through analysis

The following species were identified in Section 1.6.1.5 as species that would not be analyzed in the EA. The accounts include a brief life history, location of nearest historical occurrence, and the rationale for excluding them from analysis. All of the species listed below have been determined to experience no adverse impact as a result of the Proposed Action and alternatives.

Piute Ground Squirrel

This BLM Type 2 species is commonly associated with shrub-steppe habitat, especially in areas with sagebrush, shadscale, black greasewood, and winterfat. Similar to other ground squirrel species in Idaho, the Piute ground squirrel estivates for up to eight months per year. The remaining months when the squirrels are active, they face persecution from humans by way of recreational shooting and rodent poisoning to reduce crop depradation. This species, along with other small mammals, provides a significant prey source for raptors during their short active period.

There were no Piute ground squirrels observed in the project area during the 2011 or 2014 surveys. Also, there are no INHP element occurrences of this species within ten miles of the ROW corridor that were taken within the last fifty years. The habitat found in the ROW corridor appears to be suitable and able to support this species; however, the lack of presence during two surveys and the lack of any recent observations resulted in this species not being analyzed in the EA.

North American Wolverine

The wolverine is classified as a BLM Type 2 species, although it was formerly listed as a Candidate species under the ESA. Primary winter habitat is mid-elevation conifer forest; summer habitat is typically subalpine, high-elevation cirques. Although wolverines are known to avoid low-elevation grass-shrub habitats, individuals occupy a large home range and may make incidental use of BLM-administered lands in the SFO during any season of the year while searching for prey. There are three EOs within three miles of the project area near Croy Creek. All three of these occurrences were taken by observers of unknown background from 1987-1988 and were likely incidental observations. Habitat typically favored by this species does not occur within the Project Area.

Fisher

The fisher is a BLM Type 2 species that may be found in the northern portions of the Shoshone field office. This species inhabits various types of forest, but seem to prefer dense conifer forests over deciduous forests. The fisher has a noted aversion to human disturbance and conversely has a preference for contiguous sections of dense forest, and is most often associated with forest interior. The nearest EO is approximately 39 miles to the north-northwest of the northern section of line and was recorded in 2010. No observations of a fisher were noted in 2011 or 2014 during survey efforts. The absence of dense conifer forest and proximate EOs eliminate any impact to this species or its preferred habitat as a result of any action related to the Proposed Action and alternatives.

Kit Fox

The kit fox, a BLM Type 2 species, is often found in shadscale, black greasewood , and big sagebrush dominated areas of desert shrub and shrubsteppe habitats. Limited surface water in arid sites is also linked to habitat occupied by kit fox. Small mammals, birds, reptiles, and insects compose a diverse diet for this species. The primary threats to kit fox are persecution predominately by humans via shootings, poisonings, and vehicle collisions, but competition for prey resources with coyotes may also occur (White and Garrott 1997).

The project area contains three subspecies of big sagebrush and several other species from the same genus along portions of the ROW that would fit habitat preferences for the kit fox. While none were observed during the survey there are two EOs that are approximately 10.5 and 12 miles away from the project area, recorded in 2009 and 1992 respectively. As the line travels farther south there is an increase in exotic annual grasses and forbs in the understory, reducing the overall quality of the habitat present. The higher quality habitat on the northern portion of the line may be utilized by the kit fox; however, proximity to known wolf packs in the area may impact the likelihood of kit fox to occupy this habitat. The southern end of this project area comprises the northernmost boundary of this species known distribution. The Snake River provides a substantial barrier for northern dispersal/expansion of range. Additionally, intraguild competition and predation by coyotes and wolves would likely deter the kit fox from utilizing habitat found in the project area. As a result of distribution, proximity of EOs, and interactions with other carnivores, canids specifically, this species has been removed from the discussion and analysis provided in Chapters 3 and 4.

Bighorn Sheep

This Type 2 species prefers grassland and shrub-steppe habitats in foothills or mountains, particularly in areas with suitable “escape terrain”. This terrain is used for predator avoidance and is often characterized by cliffs, talus slopes, etc. The INHP database has no documented EOs for this species proximate to the project area or within the state of Idaho. The IDFG does not have any available hunts in units inside the SFO. According to the IDFG 2013 Bighorn Sheep Progress Report, there are two population management units (PMUs) for Rocky Mountain bighorn sheep in the northern fringe of the FO boundary. These PMUs, the East Fork Salmon River and Pioneers, are ten and twenty miles north of Ketchum and the project area, respectively. The lack of suitable habitat, documented EOs, and PMU locations limit the potential for this species to occur within the ROW. While incidental occurrences could potentially occur in the northern portion of the project area, the distance from PMUs and the lack of proximate EOs indicate that the Proposed Action and alternatives would have no impact on this species.

Lewis’s Woodpecker

This BLM Type 2 species is commonly associated with open forests and woodlands, especially ponderosa pine. Nests in cavities of snags and burnt trees, although is occasionally found in open riparian areas. Preferred conditions typically include an open canopy with the availability of nest cavities and perches with a shrubby component to understory and abundant insects. The project area does not contain any dense patches of forest or riparian areas that would provide suitable habitat for this species; however, this species has been observed in nearby drainages where suitable habitat is present (BLM 2010b). The Proposed Action and alternatives would have no impact on this species.

Prairie Falcon. The prairie falcon typically nests on cliffs or rock outcrops and forages in nearby grassland and shrub-steppe habitat. Prairie falcons receive protections under the MBTA. There were no prairie falcons observed during the 2011 survey; however, there are documented EOs within two miles of all sections of the project area. During the 2014 survey effort a prairie falcon was observed south of Macon Flat and west of Horse Mountain. Potential habitat in the form of sagebrush communities and annual and perennial grasslands are present in the project area. The proximity to the Snake River and the intersections at Malad River and Little Camas Creek provide rocky outcrops and cliff faces that could provide quality nesting and roosting habitat for the prairie falcon. The nearby Little City of Rocks also provides suitable nesting habitat. Various sections of the project area border or intersect major roadways which are a potential source of disturbance.

Northern Goshawk

The northern goshawk is typically associated with various types of forests; including, deciduous, coniferous, and mixed forests. This BLM Type 2 species will occasionally forage in open sagebrush habitat if it is near forested or riparian habitat. There were no northern goshawks observed during the 2011 survey. The nearest occurrence is approximately 4 miles away and was observed in 1985. While open sagebrush habitat is present within the project area, the presence of forests or riparian areas on the fringes of the shrubland is absent. This species was not analyzed because of the lack of nesting habitat coupled with the extremely limited foraging habitat, on forest and riparian fringes.

Flammulated Owl

Breeding habitat for this BLM Type 2 species is associated with mature pine forests with limited brush and saplings. Nesting most often takes place in abandoned tree cavities created by other species, or the natural cavity of a large diameter snag or tree. The closest documented EO to the project area is over eleven miles to the north of the project area. This species was not analyzed because of the lack of forest habitat and distance to a known observation.

Cassin's Finch

Cassin's finch is most commonly associated with patchy coniferous or mixed forests, although it may also utilize woodlands and brushy areas with scattered trees. This species nests primarily in conifers on the outer end of the limb. This BLM Type 2 species is often found in flocks except for the nesting season. A survey conducted for the BLM (2010b) showed Cassin's finch present near the Croy Creek area; however, there is no suitable habitat present within the project area .

Olive-sided Flycatcher

This BLM Type 2 species is often considered an indicator species for coniferous forests. While it is sometimes found in deciduous-conifer mixed forests it is rarely noted to use other habitat types. There are two occurrences near the project area, both approximately five miles away. However; these occurrences are from areas with a much different habitat composition provided by the Big Wood River and Snake River, respectively. There is no suitable nesting habitat within and directly adjacent to the ROW.

Mountain Quail

This BLM Type 2 species is typically associated with conifer forests and woodlands, while occasionally occupying more arid regions with sagebrush, pinyon pine, and juniper. Nesting locations vary in habitat, although proximity to water seems to be more of a constant preference. There were no mountain quail observed during the 2011 or 2014 survey efforts and the nearest documented EO is over 25 miles from the project area. This species was removed from further analysis because of the general preference of conifer forests and woodlands, neither of which are present within the project area. Additionally, the distance to the nearest EOs imply that there would be no impact on this species as a result of the Proposed Action and/or any of the alternatives.

White-headed Woodpecker

The white-headed woodpecker, a BLM Type 2 species, is strongly associated with mature, montane coniferous forests that yield large cones and seeds. Nesting occurs in nest cavity in dead trees and stumps. The project area is primarily composed of sagebrush shrubland and grasslands. While there are several forested areas present, they are not represented by continuous dense stands of coniferous or deciduous forest. Review of the INHP database revealed there are no documented EOs within 35 miles of the project area. This species was not analyzed because of the lack of habitat and no proximate occurrences of this species near the project area.

Black Tern

The black tern typically prefers offshore waters and bays; however, they will come to terrestrial habitat during migration or when breeding. Preferences for a variety of waterbodies by this BLM Type 2 species include rivers and lakes as well as seacoasts, bays, and lagoons. There was no black tern observed during either of the survey efforts. The closest EO to the project area is over five miles to the south of the project area along the Snake River. Nesting areas are closely associated with a mix of emergent vegetation and open water, typically with little to no flow. The limited amount of this suitable habitat that is located within the project area will not be impacted by any activities associated with the Proposed Action or any of the alternatives.

Trumpeter Swan

Trumpeter swans are classified as a BLM Type 2 species. Trumpeter swans typically prefer shallow, slow moving waterbodies with abundant vegetation. The closest occurrence of a trumpeter swan to the ROW is approximately 2.3 miles to the southwest of the southernmost section of line. This EO taken along the Snake River was observed in 1992. There are several EOs along Spring Creek near the central section of line with the most recent observation date from 2006. While there is one occurrence less than a mile from the line, the habitat that it is occupying is associated with the main body of Magic Reservoir and one of the creeks that feeds it. Where the line crosses Camas Creek as it empties in to the reservoir, there is a steep cliff face with the creek in the narrow corridor at the bottom. The rocky substrate and narrow position do not allow for abundant emergent or riparian vegetation, and does not provide the preferred habitat for trumpeter swans. The Proposed Action and all alternatives would not impact any habitat associated with waterways as the line spans these areas. The lack of habitat present in the project area, along with the siting of the line eliminate any impact associated with the Proposed Action and all alternatives

Willow Flycatcher

Willow flycatchers, a BLM Type 2 species, use woody riparian plant communities comprised mostly of native willows during the spring and early fall seasons for nesting, brood-rearing, and foraging habitat. Some form of water, or saturated soils, along with willows or other deciduous shrubs are considered essential habitat elements for this species. The two closest documented EOs for this species are located approximately a mile and a half from the project area. Both of these occurrences are associated with large bodies of water in the Snake River and the braided channels of the Big Wood River form Croy Creek near Hailey, ID. While close to some areas with suitable habitat for these species, the location of all existing and proposed structures of the Proposed Action and the alternatives eliminates impact to the unique riparian habitat required by this species.

Calliope Hummingbird

The calliope hummingbird is not a BLM special status species; however, it receives protections under the MBTA. Calliope hummingbirds migrate to Idaho in mid to late-May. This species is typically associated with riparian habitat, but will also occupy open conifer forest, aspen, mountain shrub, mountain meadows, and old burns. The calliope hummingbird frequently nests in coniferous trees near meadows or in canyons. While no coniferous trees near streams are located within the project area, there are some riparian thickets nears streams proximate to the ROW. However, the alignment and structure locations for the Proposed Action and alternatives span all substantial aquatic and riparian habitat. The nearest documented EO to the project area for this species is located approximately a mile and a half to the east, where Croy Creek forms off of the Big Wood River. The location of all existing and proposed structures of the Proposed Action and the alternatives eliminates impact to the unique riparian habitat required by this species.

Wilson's Phalarope

Wilson's phalarope is not a BLM special status species; however, it receives protections under the MBTA. Wilson's phalaropes are associated with open water, wetlands, and adjacent grasslands throughout Idaho. Breeding habitat is typically comprised of shallow freshwater and saline ponds, along with marshes and wet meadows having open water, emergent vegetation, and open shoreline. Habitat with these specific characteristics is not present within the Proposed Action or any of the alternatives.

Lesser Goldfinch

The lesser goldfinch utilizes a variety of habitats but is most commonly associated with mesic environments. This is not a BLM special status species; however, it receives protections under the MBTA. Nesting locations are primarily located in trees or shrubs near water or roadsides. This species was not observed during the 2011 or 2014 surveys. The nearest occurrence is approximately 0.6 mile south of the project area in the Hagerman Wildlife Management Area. While this occurrence is proximate to the project area, the habitat found in the WMA is considerably different in composition and scale than the project area.

Dusky Grouse

Formerly known as the blue grouse, this species is associated with coniferous forests with a mix of deciduous trees and shrubs. The dusky grouse is a game species in Idaho. Roost sites are most

often in large conifers with dense foliage. Nesting occurs on the ground, in conifer and deciduous or solely deciduous montane forests. This species was not observed during the 2011 or 2014 survey efforts. The nearest occurrence is approximately four miles from the northern extent of the project area, although BLM reports observations near the Croy Creek area (BLM 2010b) While there is suitable habitat within four miles of the project area, this habitat is not present within the Proposed Action or any of the alternatives.

Ruffed Grouse

The ruffed grouse prefers dense forests or woodlands with some deciduous trees, with a noted affinity for woody riparian plant communities. Ruffed grouse are game species in Idaho. This species nests in forests near the base of trees, shrubs, or stumps. The nearest documented EO is over eleven miles to the north of the project area; however, this species has been observed in the Croy Creek and Upper Rock Creek drainages (Gary Wright, pers. comm.) There are no dense forests found in or immediately adjacent to the project area.

Green-tailed towhee

This BLM Type 2species has a slightly higher preference for higher elevation sagebrush shrubland and forest/shrubland interfaces. There is suitable habitat present in the more hilly or mountainous areas of the northern half of the project area. This species is rarely found below approximately 3,937 feet (1,200 meters). This elevation threshold is met as the transmission line runs adjacent to Highway ID-46 and proceeds north. The variety of sagebrush species found in the sagebrush shrublands provide suitable habitat for this species to utilize. The only documented EO proximate to the project area is approximately a half mile to the west of the project area, just before Bullion Gulch empties into Croy Creek and Gilman Flat. A BLM report (2010b) noted this species in several other drainages near the project area, most notably Kelly Gulch and Elk Creek. Based on the known habitat preferences and the locations of documented occurrence, the forest-shrubland interface habitat is utilized almost exclusively in this area. While the project area provides suitable sagebrush, it lacks these specific interface areas that are nearly exclusively utilized by this species.

Black-throated sparrow

This BLM Type 2 species has a preference for arid deserts; however, it does not have a strong association with any plant species or community. The range map provided by Natureserve indicate that the project area is outside of the species known range. There were no observations of the black-throated sparrow during the 2011 or 2014 surveys. The closest documented EO is approximately 31 miles to the south of the project area. Since the species range occurs outside of the project area and there were no observations, it was not analyzed in the EA.

Grasshopper Sparrow

This species is a BLM Type 2 species. Grasshopper sparrows are commonly found in moderately open grasslands with patchy bare ground, but will occupy areas with shrub cover. No grasshopper sparrows were observed in or near the project during surveys conducted in 2011 or 2014. Additionally, the nearest documented EO was observed just over ten miles from the project area. While grassland does exist in the project area the density and composition may be different from the species preference. The fire record within and adjacent to the project area also likely impacts the potential for this species to utilize the habitat present. With no observations

during two survey efforts and no documented EOs within ten miles of the project area, this species was removed from analysis.

Swainson's Hawk

Swainson's hawk prefers open habitats including agricultural areas for foraging. This is not a BLM special status species; however, it receives protections under the MBTA. This species will nest in shrubs and trees, particularly those that are part of riparian habitat near agricultural areas. Swainson's hawk was not observed during the 2011 or 2014 surveys. The most recent review of the INHP database reveals several occurrences within a mile of the line; however, all of these proximate observations were taken by observers of unknown qualifications. Furthermore, these occurrences are from the eBird dataset and have a location accuracy of ± 31 miles (50,000 meters). Due to the foraging and nesting preferences of the Swainson's hawk, the Proposed Action and all alternatives with their associated conservation measures are not likely to impact to this species.

Big Brown Bat

This BLM Type 2 species will occupy diverse habitats from high mountains to deserts. Use of man-made structures for roosts is fairly common, ranging from buildings, bridges, and tunnels. Hibernation sites are also most commonly associated with man-made structures, but they will also utilize caves. This nocturnal bat is fairly sedentary and foraging flight is typically under 2 hours each night (Natureserve). This species has three occurrences within a mile of the project area. These are all located in or immediately adjacent to the Malad Gorge State Park, and are associated with cliffs and rock outcrops. The ability of this bat to utilize a wide variety of habitats increases its potential to occur within the project area; however, the nocturnal behavior along with the temporal restrictions and the conservation measures of the Proposed Action and alternatives are not likely to result in an impact.

Spotted Bat

This BLM Type 2 species frequents a variety of habitats, including desert, woodlands, and riparian areas. In a study along the Bruneau River in Idaho showed that spotted bats were most commonly associated with canyons, with foraging courses following riparian corridors (Doering and Keller, 1998). Roosting sites are most commonly associated with cliffs, rock ledges, and rock crevices. The closest documented occurrence is approximately a mile away from the project area on the Snake River. The next closest occurrence is approximately ten miles to the south of the project area. While there is potential habitat within and proximate to the project area, the nocturnal behavior of this species coupled with the temporal restrictions and the conservation measures of the Proposed Action and alternatives are not likely to result in an impact.

Townsend's big-eared bat

These bats are most commonly associated with mesic habitats within coniferous and deciduous forests. This BLM Type 2 species prefers cold places for maternity and hibernation colonies, most often in caves and mine tunnels. There are several documented occurrences approximately two and a half miles to the west of the project area near McKinney Butte and Dead Horse Cave. While there is potential habitat within and proximate to the project area, the nocturnal behavior of this species coupled with the temporal restrictions and the conservation measures of the Proposed Action and alternatives are not likely to result in an impact.

Silver-haired Bat

This BLM Type 2 species is associated with coniferous forests adjacent to lakes, ponds, and streams. Roosting sites are associated with dense foliage in trees, under bark and in cavities. Hibernacula sites include mines, caves, house, rock crevices, and under loose bark. The project area does not contain preferred roosting and foraging habitat. Potential hibernacula sites may be present in or near the project area. The silver-haired bat is nocturnal with a diet that consists of insect, most often captured over small bodies of water in forested areas. The only documented EO of this species proximate to the project area is just under one mile to the west of the project area, near the Little City of Rocks. The lack of suitable habitat and the behavior of the silver-haired bat along with the temporal restrictions and the conservation measures of the Proposed Action and alternatives are not likely to result in an impact.

Pallid Bat

The pallid bat is associated with a variety of habitats, although arid habitats with rocky outcrops near water seem to be preferred. Roosting sites vary from caves and rock outcrops to buildings and trees. There is limited information for this BLM Type 2 species on winter hibernacula sites, although caves and mines seem to be preferred. There is only one documented EO near the project area. This occurrence is located where the Malad River empties into the Snake River, approximately a mile away from the project area. The ability of this bat to utilize a wide variety of habitats increases its potential to occur within the project area; however, the nocturnal behavior along with the temporal restrictions and the conservation measures for the Proposed Action and all of the alternatives are not likely to result in an impact.

Hoary Bat

The hoary bat is most commonly associated with deciduous and coniferous forests and woodlands. Open areas and riparian corridors are the most commonly utilized foraging area for this species. This BLM Type 2 species typically does not roost in caves or rock crevices, but rather in the foliage of large deciduous or coniferous trees. The only documented EO of this species near the project area is approximately 8 miles to the west, along Clover Creek and Ferguson Flat. The lack of forested habitat within the project area along with limited observations in the immediate vicinity, limit the potential for impacts.

Long-legged myotis

The long-legged myotis is most strongly associated with coniferous forests in mountainous environments, although there are some accounts of utilization of riparian and desert habitat. The winter hibernacula for this BLM Type 2 species is mostly in caves and mines, but also cliffs and buildings. Daytime roosts include a variety of places such as trees, rock crevices, and buildings; however, there is a tendency to avoid roosting in caves and mines. The closest documented EO for this species is approximately 3 miles to the west of the project area. This observation is from 1939; however, the accuracy of the observation has been verified and a specimen collected. This point is located at Democrat Mine, to the west of where Democrat Gulch terminates at Croy Creek. The Proposed Action and all of the alternatives do not contain any coniferous forest in a montane setting. While there may be some potential hibernacula and warm-weather roosting sites within the project area, the overall preferred habitat along with the lack of proximate EOs indicate that this species would not be impacted.

Long-eared myotis

This BLM Type 2 species of bat has a very wide array of preferred habitat that includes shrubland, woodland, meadow, and forest among others. Habitat associated with waterbodies and wooded streams is also utilized by this species. Similar to the overall habitat preference, the day-time roost sites for the long-eared myotis varies greatly, from buildings, trees, caves, to rock crevices. The nearest occurrence for this species is approximately a mile and a half to the east of the project area, near Thorn Creek Reservoir. Due to the extremely wide ranging habitat preferences of the long-eared myotis, the majority of the project area contains habitat that may be utilized by this species in one way or another. All of the habitat that is present in the project area is also found to a much greater extent outside the ROW boundary. Without any occurrences within the scope of the Proposed Action or any of the alternatives, it is unlikely there would be an impact.

Little brown myotis

This BLM Type 2 species is not tied to any specific habitat; however, proximity to water for foraging activities is fairly consistent. Most foraging is done over water, along streams, and in woodlands proximate to a water source. Attics, caves, tunnels, and mines are common hibernating sites. This species is noted for its use of opportunities provided by human-made structures for hibernating and maternity colonies. There are three separate documented EOs of this species within a mile of the project area, the closest being approximately a quarter-mile from the project area just south of Malad Gorge State Park. This nocturnal species makes good use of anthropogenic features, as evidenced by the maternity colony on the underside of I-84 as it crosses the Malad River Gorge. With the ability to utilize such a wide variety of habitat, and having no clear preference of one over the other, more consideration was given to the documented EOs. In this instance there are several occurrences within a mile of the project area; however, due to the temporal constraints and EPMs associated with the Proposed Action and alternatives, no impacts to this species are expected.

Yuma myotis

The Yuma myotis is a BLM Type 2 species that is most commonly associated with proximity to water, in both upland and lowland habitats. This is inclusive of some very diverse systems, from desert scrub to riparian and forested habitat. Foraging typically takes place over water and in open spaces on land. This species will roost in cliffs, caves, bridges, crevices, and old cliff swallow nests. The closest documented EO for the Yuma myotis is the same EO described in the little brown myotis species account. The occurrence identifies both Yuma and little brown myotis as part of the maternity colony under the interstate bridge. This occurrence is approximately three-quarters of a mile to the east of the ROW. Similar to the little brown myotis, the Yuma myotis would not be impacted.

Western small-footed myotis

This BLM Type 2 species will utilize a wide variety of habitat from arid desert to riparian zones, forests, and cliffs. Maternity colonies are often associated with man-made buildings, although they have been found in cracks and crevices in rocks. Roosting sites vary from natural sites such as caves, boulders, and under loose bark to man-made made structures (i.e. tunnels and buildings). Foraging habitats vary from over water, along tree margins, to just above ground in desert habitat. The only occurrence within a mile is found near the project area at Little City of

Rocks. Due to the temporal constraints and the EPMs associated with the Proposed Action and alternatives, no a impacts are expected.

Canyon bat

This BLM Type 2 species is most commonly associated with rocky outcrops and cliffs near waterbodies and riparian zones; however, they have been observed in coniferous forests at higher elevations. Roost sites vary from cliffs, caves, and rock outcrops to man-made structures such as mines and buildings. This species will even roost in sagebrush. Hibernation sites are most commonly associated with rock crevices, caves, and mines. Their association with water is stronger than any habitat preference previously mentioned. This is evident with the habit of drinking water immediately after leaving roosting sites each evening. There are two occurrences of this species within a mile of the project area. Both of them are near the Snake River and associated rocky outcrops. All other occurrences near in the immediate vicinity are associated with the Snake River, primarily upstream from the project areas southern boundary. While suitable habitat is located in or near the project area, impacts are not expected.

Northern leopard frog

This BLM Type 2 species is associated with permanent waterbodies, typically in shallow, slow or still water with rooted aquatic vegetation. This species will disperse to wet meadows and fields as conditions allow during summer months. Eggs are attached to submerged vegetation just below the surface of the water. There are two occurrences of the northern leopard frog less than a mile from the project area. However, the most recent of these was taken in 1946, and the older occurrence is from 1894. While there may be habitat present in the project area, impact are not expected due to the limited wetland habitat.

Woodhouse's toad

Woodhouse's toad is a BLM Type 2 species that occurs primarily in xeric to mesic grasslands, as well as shrublands, river valleys, and floodplains. This species uses terrestrial habits for the majority of its life cycle with the exception of breeding activities. Breeding is in shallow water, temporary or permanent, with little to no current. During periods of inactivity this species will burrow underground or hide under cover provided by rocks and plants. The IDFG Comprehensive Wildlife Conservation Strategy (CWCS) puts the distribution and range of this species outside of the project area, specifically from Bruneau to Weiser along the Snake River Plain. The nearest documented EO for this species is located approximately 45 miles from the project area. Due to the species range and the known EOs, this species was not considered for analysis.

Western groundsnake

This BLM Type 2 species is found in xeric habitat with sandy, or loose soils; typically in shrublands with sparse vegetation. This species is not commonly encountered; however, it is slightly more likely to be found under rocks or other areas where moisture is held. According to the IDFG CWCS the easternmost extent of the distribution and range for the groundsnake is near the town of Bruneau. The nearest documented EO for this species is nearly 30 miles to the west of the project area. Due to the species range and the known EOs, this species was not considered for analysis.

Terrestrial garter snake

The terrestrial garter snake is not a BLM special status species; however, it is a protected nongame species in Idaho. This species will utilize a wide variety of habitats, spanning grasslands, shrublands, and forests. Terrestrial and aquatic habitats may be utilized depending on locations; however, areas near wetlands, streams, ponds and lakes are used most often. This species has been shown to persist in areas disturbed by humans and may even us man-made structures such as roadbeds and bridges as den sites (Peterson 1995). The closest documented EO is approximately a half-mile from the southernmost portion of the project area. This occurrence is located at the Billingsley Creek Wildlife Management Area, near the creek itself. There are three other occurrences within five miles of the project area, all of which are located in water. While the utilization of terrestrial habitat within the project area is possible, it appears that the riparian and aquatic habitats are sought and utilized to a higher degree near the project area. The Proposed Action and alternatives, with associated EPMs, will not likely have any impact on this species.

Canada Lynx

Canada lynx was listed as Threatened in 2000 and is currently a BLM Type 1 species. Canada lynx are found in boreal forests and are closely associated with the snowshoe hare, their primary prey. However, alternate prey, including many small mammals and grouse, are also important to lynx diets. In Idaho, lynx primarily occur in higher-elevation, cold-forest habitats that support spruce, subalpine fir, whitebark pine, lodgepole pine, or moist Douglas-fir habitat types. Shrub-steppe habitats that occur adjacent to, or are intermixed with, cold-forest habitats in Idaho are used to a limited extent by lynx for foraging and dispersal activities. The average size home range of Canada lynx in the southern extent of boreal forest habitats is approximately 30 to 60 square miles. However, range sizes often increase during periods of low prey availability.

Canada lynx may be present in the SFO; however, none of the BLM-administered land in the field office is designated as lynx critical habitat. While it is possible Canada lynx may be observed in the project vicinity it is highly unlikely given the lack of suitable habitat and existing land uses (e.g., rural, recreational use, cattle grazing). According to the lynx analysis unit (LAU) data that are available, there are approximately 5.9 miles of the project area are located in the "greenhorn-deer" LAU. There are 86,814 acres within this analysis unit alone, and the project area crosses the very southern fringe of this LAU. In 2013 the Beaver Creek Fire burned approximately 45,000 acres within this LAU, all of which are located in or to the north of the project area. Having this fire burn to the north is significant as this is the southernmost LAU associated with the project area, effectively fragmenting the section that did not burn to the south from all of the suitable habitat to the north, including other LAU's. This fragmentation along with the preferred habitat of lynx and the habitat present within the project area remove the potential for the Proposed Action or alternatives to impact this species.

Bald Eagle

The bald eagle was listed as Endangered in 1978 and downgraded to Threatened status in 1995. On June 28, 2007, the bald eagle was taken off of the Endangered Species List. The bald eagle is protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. It is also currently classified as a BLM Type 2 species. This species is typically found near rivers, reservoirs, and lakes perching on snags. Prey mainly consists of fish, waterfowl, and carrion. The

bald eagle is a common winter visitor to the SFO, found primarily along the Snake River as well as some of the Snake River's principle tributaries including the Big Wood River drainages. However, there are no documented active bald eagle nest sites on public land in the SFO.

The project area contains limited preferred habitat in the form of aquatic ecosystems and trees or snags for nesting. The southwestern end of the line is approximately three-tenths of a mile from the Snake River, which could provide suitable habitat. The lack of trees and snags, the preferred nesting areas, along the ROW limit the potential for Bald Eagles to occur. Bald eagles are typically associated with bodies of water that for the most part, are not present in or along the ROW with few exceptions. The proximity to Magic Reservoir and Thorn Creek Reservoir as well as the ROW crossing Camas Creek comprise the exceptions on BLM land. The Big Wood River provides suitable habitat to the east of the project area, most notably near Stanton Crossing (Gary Wright, BLM, pers. comm.). The association of aquatic habitats with standing snags nearby is a habitat characteristic that the project area does not contain; therefore, the bald eagle was not analyzed.

Columbian Sharp-Tailed Grouse

This BLM Type 2 species inhabits sagebrush shrublands and native grasslands. High species and structural diversity is noted in occupied areas, with limited disturbances associated with livestock grazing. The closest documented EO for this species is approximately 40 miles to the southeast of the project area, just west of Kimama Butte. The nearest lek site is approximately 70 miles to the southeast of the project area, with an undetermined management status. While the project area contains areas of suitable habitat, the distance to known occurrences and lek sites imply that the project area is outside of this species distribution.

Yellow-billed Cuckoo

On October 3, 2013, the Service published in the Federal Register a proposed rule to list the western yellow-billed cuckoo as a threatened species under the Endangered Species Act (78

FR 61621). The yellow-billed cuckoo is currently a BLM Type 1 species. Yellow-billed cuckoos are low-shrub nesting birds that require at least five acres of riparian habitat for nesting. Dense understory foliage appears to be an important factor in nest site selection, and cottonwood trees are an important foraging habitat (Laymon, 1999). Information regarding cuckoo populations within Idaho indicates this species is rare; there are only 64 recorded observations in the state. Historic observations of the yellow-billed cuckoo in the general project area were concentrated along the Big Wood River. Surveys conducted in 2003 and 2009 documented yellow-billed cuckoo along the Big Wood River and Silver Creek drainages.

On August 15, 2014, the Service published in the Federal Register proposed designated critical habitat for the yellow-billed cuckoo (79 FR 48548). The Service has proposed critical habitat (1,129 acres) along the Big Wood River (Critical Habitat Unit 71). The proposed critical habitat is a narrow corridor along the Big Wood River, located west of Highway 75 and extending to the

south of Highway 20[20]. None of the proposed critical habitat is within the project area. The yellow-billed cuckoo was not analyzed because of the lack of continuous riparian habitat as well as distance from known EOs and proposed critical habitat. An effect determination has been completed and is on file in the administrative record.

Bliss Rapids Snail

The Bliss rapids snail was listed as Threatened in 1992; however, a subsequent petition has been submitted to the Service to de-list this species. The petition is currently undergoing the review process. This aquatic snail is found in springs and spring-influenced reaches with coarse to rocky substrates. Populations are present along the Snake River and lower reaches of the Malad River between Hagerman and King Hill. Current research indicates that this snail may also inhabit lower reaches of the Snake River in Hells Canyon.

There are several EOs near the project area as it crosses the Malad River State Park. The most recent observation from this area is from 2005. The nearest observation was recorded approximately 280 feet from the project area; however, all of these occurrences are below the rim of the Malad River Gorge. All existing and proposed replacement structures are located above the rim and span the gap created by the river. An effect determination has been completed and is on file in the administrative record.

[20] Proposed critical habitat is a 7-mi (11-km)-long continuous segment of the Big Wood River downstream from Bellevue in Blaine County, Idaho. This unit is consistently occupied by western yellow-billed cuckoos during the breeding season. The unit is at the northern limit of the species' current breeding range.

Appendix D—Lands with Wilderness Characteristics Inventory Summary Report

The inventory for lands with wilderness characteristics was started by determining where past inventories have been conducted, if they can be considered current, and where new inventories need to happen.

Geographic information system (GIS) information was used to divide the project area into polygons to determine if the size criteria outlined in BLM Manual 6310 CFR 43 was met. The initial process was performed for the entire Twin Falls District (TFD) in response to a separate district-wide project. This allowed for consistency in process steps as new projects required lands with wilderness characteristics inventories.

The GIS process listed below was completed for all of TFD:

- Compiled all GIS data for significant linear man-made features that could be used to divide the landscape into areas where "...the imprint of man's work is substantially unnoticeable". Features used were:
    - Burley & Shoshone OHV Inventory Characterizing Improved/Maintained Roads
    - A, B and C Roads as defined in the Craters of the Moon Monument Management Plan (Improved/Maintained Roads)
    - Idaho BLM FAMS Resources Base Data Roads and FAMS Roads (Improved/Maintained Roads)
    - Idaho BLM FAMS Resources Base Data Railroads
    - Idaho BLM FAMS Resources Base Data Transmission Lines
    - USGS NHD Canals/Ditches
- Next these features were buffered by 10' (both sides) to represent the total area, i.e. footprint of the feature. These areas were then 'erased' from BLM lands leaving all potential wilderness characteristics inventory units. Since TFD boundaries do not always follow features used in this process an additional 5 miles beyond the District boundaries was used to ensure the GIS process did not exclude areas that could contain LWC when including neighboring federal jurisdictions.

The inventory units are selected on a project-by-project basis for review by an ID Team. The ID Team evaluates the areas noting whether polygons were greater than or less than 4,500 acres[21] and/or adjacent to Wilderness Study Areas (WSA) or Wilderness areas (BLM or NPS). More

[21] The size criteria required for lands with wilderness characteristics is 5,000 acres however to ensure areas were not inadvertently omitted through the GIS analysis process the size criteria was reduced to 4,500 acres.

detailed GIS data such as NAIP (aerial photography), range improvements, transmission lines, land treatments, etc. were used to further refine these possible inventory unit boundaries. This process identifies which areas qualify for in depth field inventory based on the adjacency and size criteria.

Field inventories are then conducted by ID Team members to further evaluate boundaries, naturalness, and outstanding opportunities for solitude or a primitive and unconfined type of recreation based on the guidance found in BLM Manual 6310.06.C.

ID Team meetings were held to collectively evaluate field inventory data and come to consensus on final determinations of boundaries, naturalness, outstanding opportunities for solitude or a primitive and unconfined type of recreation.

The inventory evaluated wilderness characteristics as defined in Section 2(c) of the Wilderness Act and incorporated in Federal Land Policy and Management Act of 1976 (FLPMA). For an area to qualify as lands with wilderness characteristics, it must possess sufficient size, naturalness, and outstanding opportunities for either solitude or primitive and unconfined recreation. In addition, it may also possess supplemental values.

Areas evaluated satisfied the size criteria by meeting one of the following situations and circumstances:

- Roadless areas with over 5,000 acres of contiguous BLM lands. State or private lands are not included in making this acreage determination.

- Roadless areas of less than 5,000 acres of contiguous BLM lands where they are contiguous with lands which have been formally determined to have wilderness or potential wilderness values, or any Federal lands managed for the protections of wilderness characteristics (e.g., BLM Wilderness Study Areas).

Areas evaluated satisfied the naturalness when they appeared to have been affected primarily by the forces of nature and any work of human beings is substantially unnoticeable. Human impacts were reviewed to assess the presence or absence of apparent naturalness of the areas while using caution to assess the effect of relatively minor human impacts on naturalness. When several minor impacts existed, their cumulative effects were analyzed on the area's degree of apparent naturalness.

In determining if an area provided an outstanding opportunity for solitude, factors such as size, configuration, topographic and vegetative screening, and ability of the visitor to find seclusion were considered as they affect a visitor's opportunity to avoid the sights, sounds, and evidence of other people in the area. In determining if an area provided an outstanding opportunity for primitive and unconfined recreation activities were considered that provide dispersed, undeveloped recreation which do not require facilities, motor vehicles, motorized equipment, or mechanized transport. The area did not have to possess outstanding opportunities for both elements, nor does it need to have outstanding opportunities on every acre, even when an area is contiguous to lands with identified wilderness characteristics. Each area was assessed on its own

merits or in combination with any contiguous BLM Wilderness Study Areas to determine whether an outstanding opportunity exists.

ID	Size Criteria	Acres	Naturalness	Natural Description	Primitive and Unconfined Recreation	Solitude
KWR-23	Yes	20378.5	No	Numerous range improvements that are substantially noticeable and routes that have signs of mechanical maintenance. There are numerous heavily used routes within unit.	NA	NA
KWR-26	Yes based on Adjacent WSA	25.0	No	Unit was originally omitted from the 1980 WSA inventory due to a reserved material site. The status of the material site remains unchanged.	NA	NA
KWR-28	Yes based on Adjacent WSA	14.7	No	Unit was originally omitted from the 1980 WSA inventory due to a reserved material site. The status of the material site remains unchanged.	NA	NA
KWR-29	Yes based on Adjacent WSA	146.0	No	Gravel pit with access routes. All are substantially noticeable.	NA	NA
KWR-30	Yes	20794.8	No	Several routes and some leading to range improvements. Some routes have signs of mechanical maintenance. Mechanically constructed canal bed south of Crist Cabin.	NA	NA
KWR-31	Yes	7998.5	No	Several range improvements with acres routes; gravel pit within western boundary.	NA	NA
KWR-37	Yes	9890.9	No	Several range improvements with access routes. All are substantially noticeable.	NA	NA
KWR-45	Yes	16129.9	No	Unit contains 14 range improvements (reservoirs) with access routes, routes are substantially noticeable.	NA	NA

Appendix E—Plan of Development

Appendix F—Impact to Wildlife Species by Alternative—Supplemental Table

Species	Vegetation Community/ Habitat	Alternative	Total Acreage within 100' ROW	Specific Habitat within 100' ROW	Total Acreage within 60' ROW	Specific Habitat Within 60' ROW	Pulling and Tensioning and Splicing Option Maximum (All Temporary)	Total Service Road Acreage	Service Road Permanent impacts	Service Road Temporary Impacts	Vegetation Management: Permanent Disturbance (D) or Restored (R)	Permanent Impacts Associated with Proposed Action	Temporary Impacts Associated with Proposed Action and Alternative 3: Option 1	Temporary Impacts Associated with Proposed Action and Alternative 3: Option 2
Western Burrowing Owl	**Grassland**	**Proposed Action**	715.95 acres	150.86 acres	n/a	n/a	4.95 acres	128.54 acres	7.04 acres	1.37 acres	2.89 acres R	7.04 acres	6.32 acres	5.38 acres
		Alternative 1	n/a	n/a	429.5 acres	90.57 acres	n/a	n/a	n/a	n/a	2.89 acres D	n/a	n/a	n/a
		Alternative 2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8.41 acres	2.89 acres R	n/a	n/a	n/a
		Alternative 3	n/a	n/a	429.5 acres	90.57 acres	4.95 acres	128.54 acres	7.04 acres	1.37 acres	2.89 acres R	7.04 acres	6.32 acres	5.38 acres
Sagebrush Sparrow, Sage Thrasher, Brewer's Sparrow	**Sagebrush Shrubland**	**Proposed Action**	715.95 acres	456.95 acres	n/a	n/a	18.15 acres	128.54 acres	22.88 acres	0.66 acres	9.25 acres R	22.88 acres	18.81 acres	13.37 acres
		Alternative 1	n/a	n/a	429.50 acres	274.55 acres	n/a	n/a	n/a	n/a	9.25 acres D	n/a	n/a	n/a
		Alternative 2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	23.54 acres	9.25 acres R	n/a	n/a	n/a
		Alternative 3	n/a	n/a	429.5 acres	274.55 acres	18.15 acres	128.54 acres	22.88 acres	0.66 acres	9.25 acres R	22.88 acres	18.81 acres	13.37 acres
Ring-necked Pheasant, Gray Partridge, and Long-billed Curlew	**Agricultural and Grassland**	**Proposed Action**	715.95 acres	201.54 acres	n/a	n/a	6.43 acres	128.54 acres	7.43 acres	4.51 acres	3.76 acres R	7.43 acres	10.94 acres	10.00 acres
		Alternative 1	n/a	n/a	429.5 acres	121 acres	n/a	n/a	n/a	n/a	3.76 acre D	n/a	n/a	n/a
		Alternative 2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11.94 acres	3.76 acres R	n/a	n/a	n/a
		Alternative 3	n/a	n/a	429.5 acres	121 acres	6.43 acres	128.54 acres	7.43 acres	4.51 acres	3.76 acres R	7.43 acres	10.94 acres	10.00 acres
California Quail	**Agricultural and Sagebrush Shrubland**	**Proposed Action**	715.95 acres	507.63 acres	n/a	n/a	19.63 acres	128.54 acres	23.27 acres	3.80 acres	10.12 acres R	23.27 acres	23.43 acres	17.99 acres
		Alternative 1	n/a	n/a	429.5 acres	304.98 acres	n/a	n/a	n/a	n/a	10.12 acres D	n/a	n/a	n/a
		Alternative 2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	27.07 acres	10.12 acres R	n/a	n/a	n/a
		Alternative 3	n/a	n/a	429.50 acres	304.98 acres	19.63 acres	128.54 acres	23.27 acres	3.80 acres	10.12 acres R	23.27 acres	23.43 acres	17.99 acres
Pronghorn Antelope, Chukar, Prairie Falcon, Ferruginous Hawk, Golden Eagle, and Loggerhead Shrike	**Sagebrush Shrubland and Grassland**	**Proposed Action**	715.95 acres	607.81 acres	n/a	n/a	23.1 acres	128.54 acres	29.92 acres	2.03 acres	12.14 acres R	29.92 acres	25.13 acres	18.75 acres
		Alternative 1	n/a	n/a	429.5 acres	365.12 acres	n/a	n/a	n/a	n/a	12.14 acres D	n/a	n/a	n/a
		Alternative 2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	31.95 acres	12.14 acres R	n/a	n/a	n/a
		Alternative 3	n/a	n/a	429.5	365.12 acres	23.1 acres	128.54 acres	29.92 acres	2.03 acres	12.14 acres R	29.92 acres	25.13 acres	18.75 acres
Mourning Dove	**Agricultural, Grassland, and Sagebrush Shrubland**	**Proposed Action**	715.95 acres	658.49 acres	n/a	n/a	24.58 acres	128.54 acres	30.31 acres	5.17 acres	13.01 acres R	30.31 acres	29.75 acres	23.37 acres
		Alternative 1	n/a	n/a	429.5 acres	395.55 acres	n/a	n/a	n/a	n/a	13.01 acres D	n/a	n/a	n/a
		Alternative 2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	35.47 acres	13.01 acres R	n/a	n/a	n/a
		Alternative 3	n/a	n/a	429.5 acres	395.55 acres	24.58 acres	128.54 acres	30.31 acres	5.17 acres	13.01 acres R	30.31 acres	29.75 acres	23.37 acres
Elk	**Elk Wintering Habitat**	**Proposed Action**	715.95 acres	148.39 acres	n/a	n/a	4.11 acres	128.54 acres	9.88 acres	0.18 acres	2.97 acres R	9.88 acres	4.29 acres	4.29 acres
		Alternative 1	n/a	n/a	429.5 acres	89.07 acres	n/a	n/a	n/a	n/a	2.97 acres D	n/a	n/a	n/a
		Alternative 2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	10.06 acres	2.97 acres R	n/a	n/a	n/a
		Alternative 3	n/a	n/a	429.5 acres	89.07 acres	4.11 acres	128.54 acres	9.88 acres	0.18 acres	2.97 acres R	9.88 acres	4.29 acres	4.29 acres
Mule Deer	**Mule Deer Migration Corridor**	**Proposed Action**	715.95 acres	129.19 acres	n/a	n/a	4.48 acres	128.54 acres	7.2 acres	0	2.51 acres R	7.2 acres	4.48 acres	4.48 acres
		Alternative 1	n/a	n/a	429.5 acres	77.50 acres	n/a	n/a	n/a	n/a	2.51 acres D	n/a	n/a	n/a
		Alternative 2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7.2 acres	2.51 acres R	n/a	n/a	n/a
		Alternative 3	n/a	n/a	429.5 acres	77.50 acres	4.48 acres	128.54 acres	7.2 acres	0	2.51 acres R	7.2 acres	4.48 acres	4.48 acres

Species	Vegetation Community/ Habitat	Alternative	Total Acreage within 100' ROW	Specific Habitat within 100' ROW	Total Acreage within 60' ROW	Specific Habitat Within 60' ROW	Pulling and Tensioning and Splicing Option Maximum (All Temporary)	Total Service Road Acreage	Service Road Permanent impacts	Service Road Temporary Impacts	Vegetation Management: Permanent Disturbance (D) or Restored (R)	Permanent Impacts Associated with Proposed Action	Temporary Impacts Associated with Proposed Action and Alternative 3: Option 1	Temporary Impacts Associated with Proposed Action and Alternative 3: Option 2
Mule Deer	**Mule Deer Wintering Habitat**	**Proposed Action**	715.95 acres	341.02 acres	n/a	n/a	5.95 acres	128.54 acres	3.16 acres	0	3.55 acres R	3.16 acres	5.95 acres	4.3 acres
		Alternative 1	n/a	n/a	429.5 acres	204.68 acres	n/a	n/a	n/a	n/a	3.55 acres D	n/	n/a	n/a
		Alternative 2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3.16 acres	3.55 acres R	n/a	n/a	n/a
		Alternative 3	n/a	n/a	429.5 acres	204.68 acres	5.95 acres	128.54 acres	3.16	0	3.55 acres R	3.16 acres	5.95 acres	4.3 acres
Gray Wolf	**Pack Territory**	**Proposed Action**	715.95 acres	5.4 acres	n/a	n/a	1.05 acres	128.54 acres	2.36 acres	0	0.09 acres R	2.36 acres	0	1.05 acres
		Alternative 1	n/a	n/a	429.5 acres	3.24 acres	n/a	n/a	n/a	n/a	0.09 acres D	n/a	n/a	n/a
		Alternative 2	n/a	n/a	n/a2.	n/a	n/a	n/a	n/a	2.36 acres	0.09 acres R	n/a	n/a	n/a
		Alternative 3	n/a	n/a	429.5 acres	3.24 acres	1.05 acres	128.54 acres	2.36 acres	0	0.09 acres R	2.36 acres	0	1.05 acres
Pygmy Rabbit	**Pygmy Rabbit Habitat (BLM)**	**Proposed Action**	715.95 acres	545.6 acres	n/a	n/a	19.7 acres	128.54 acres	29.99 acres	0.72 acres	10.73 acres R	29.99 acres	20.42 acres	15.59 acres
		Alternative 1	n/a	n/a	429.5 acres	327.68 acres	n/a	n/a	n/a	n/a	10.73 acres D	n/a	n/a	n/a
		Alternative 2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	30.71	10.73 acres R	n/a	n/a	n/a
		Alternative 3	n/a	n/a	429.5 acres	327.68 acres	19.7 acres	128.54 acres	29.99 acres	0.72 acres	10.73 acres R	29.99 acres	20.42 acres	15.59 acres
Western Toad	**Aquatic and Riparian**	**Proposed Action**	715.95 acres	12.58 acres	n/a	n/a	0.06 acres	128.54 acres	0.03 acres	0.04 acres	0.14 acres R	0.03 acres	0.10 acres	0.06 acres
		Alternative 1	n/a	n/a	429.5 acres	7.54 acres	n/a	n/a	n/a	n/a	0.14 acres D	n/a	n/a	n/a
		Alternative 2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.07 acres	0.14 acres R	n/a	n/a	n/a
		Alternative 3	n/a	n/a	429.5 acres	7.54 acres	0.06 acres	128.54 acres	0.03 acres	0.04 acres	0.14 acres R	0.03 acres	0.10 acres	0.06 acres
Redband Trout and Wood River Sculpin	**Aquatic**	**Proposed Action**	715.95 acres	2.78 acres	n/a	n/a	0.06 acres* (Malad Gorge State Park)	128.54 acres	0	0.04	n/a	0	00.10	00.04
		Alternative 1	n/a	n/a	429.5 acres	1.64 acres	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		Alternative 2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a
		Alternative 3	n/a	n/a	429.5 acres	1.64 acres	0.06 acres* (Malad Gorge State Park)	128.54 acres	0	0.04	n/a	0	0.10	00.04

[i]Habitat for redband trout and Wood River sculpin calculated for aquatic habitat. Upon further review, these aquatic environments do not provide suitable habitat for these species.
[ii]See description above.