

**UNITED STATES DEPARTMENT OF THE INTERIOR  
BLM, BOISE DISTRICT**

**EA #DOI-BLM-ID-B010-2010-0014-EA**

**Title Page**

|   |                           |                               |   |                                     |
|---|---------------------------|-------------------------------|---|-------------------------------------|
| Applicant (if any): <b>Idaho Power Company</b>  |                           |                               |   |                                     |
| Proposed Action: <b>Langley Gulch Power Plant Rights-of-Way</b><br><b>IDI-36332, IDI-36332-01 and IDI-36332-02</b> (230-kV transmission line, access road and temporary work area); <b>IDI-36333 and IDI-36333-01</b> (water pipeline and access road)<br><b>IDI-36707, IDI-36707-01 and IDI-36707-02</b> (138-kV transmission line, access road and temporary work area); and <b>IDI-5963</b> (amendment to existing 230-kV transmission line) |                           |                               |   |                                     |
| State:<br><b>Idaho</b>  | County:<br><b>Payette</b> | District:<br><b>Boise</b>     | Field Office:<br><b>Four Rivers</b>       | Authority:<br><b>NEPA and FLPMA</b> |
| Prepared By:<br><b>See List of Preparers on Page 4-1</b>  |                           | Title:<br><b>See Page 4-1</b> | Report Date:<br><b>September 22, 2010</b> |                                     |

**LANDS INVOLVED**

| Meridian   | Township             | Range         | Sections       | Acres |
|--|----------------------|---------------|----------------|-------|
| <b>Boise</b>   | <b>6 and 7 North</b> | <b>4 West</b> | <b>Various</b> |       |
| <b>A detained legal description of each right-of-way is in the individual case file.</b> |                      |               |                |       |

| Consideration of Critical Elements      | N/A or Not Present | Applicable or Present, No Impact | Discussed in EA |
|---|--------------------|----------------------------------|-----------------|
| Air Quality                             |                    |                                  | X               |
| Areas of Critical Environmental Concern |                    |                                  | X               |
| Cultural Resources                      |                    |                                  | X               |
| Environmental Justice (E.O. 12898)      | X                  |                                  |                 |
| Farm Lands (prime or unique)            |                    | X                                |                 |
| Floodplains                             |                    | X                                |                 |
| Migratory Birds                         |                    |                                  | X               |
| Native American Religious Concerns      | X                  |                                  |                 |
| Invasive, Non-native Species            |                    |                                  | X               |
| Wastes, Hazardous or Solid              |                    | X                                |                 |
| Threatened or Endangered Species        |                    |                                  | X               |
| Social and Economic                     |                    |                                  | X               |
| Water Quality (Drinking/Ground)         |                    |                                  | X               |
| Wetlands/Riparian Zones                 |                    |                                  | X               |
| Wild and Scenic Rivers (Eligible)       | X                  |                                  |                 |
| Wilderness Study Areas                  | X                  |                                  |                 |



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## Appendices

Appendix A – USFWS Biological Opinion for the Langley Gulch Power Plant Rights-of-Way

Appendix B – Proposed Construction Methods

## Abbreviations and Acronyms

|       |  |
|-------|--|
| AC    | Alternating current                        |
| ACEC  | Area of Critical Environmental Concern     |
| ADT   | Average Daily Traffic                      |
| aMW   | average megawatts                          |
| APE   | area of potential effect                   |
| APLIC | Avian Power Line Interaction Committee     |
| BA    | Biological Assessment                      |
| BGEPA | Bald and Golden Eagle Protection Act       |
| BLM   | U.S. Bureau of Land Management             |
| BMPs  | Best Management Practices                  |
| BOR   | U.S. Bureau of Reclamation                 |
| CCA   | Candidate Conservation Agreement           |
| CEQ   | Council of Environmental Quality           |
| CFR   | Code of Federal Regulations                |
| CO    | carbon monoxide                            |
| cfs   | cubic feet per second                      |
| CWA   | Clean Water Act                            |
| EA    | Environmental Assessment                   |
| EO    | element occurrence                         |
| EPA   | U.S. Environmental Protection Agency       |
| EPM   | environmental protection measure           |
| ESA   | Endangered Species Act                     |
| FLPMA | Federal Land Policy and Management Act     |
| FRFO  | BLM Four Rivers Field Office               |
| GIS   | Geographic Information System              |
| GPS   | global positioning system                  |
| HIP   | Habitat Integrity and Population           |
| HUC   | hydrologic unit code                       |
| I     | Interstate                                 |
| IDAPA | Idaho Administrative Code                  |
| IDEQ  | Idaho Department of Environmental Quality  |
| IDFG  | Idaho Department of Fish and Game          |
| IDWR  | Idaho Department of Water Resources        |
| IFWIS | Idaho Fish and Wildlife Information System |

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|                   |   |
|-------------------|---|
| ITD               | Idaho Transportation Department                                       |
| kV                | Kilovolt  |
| LEPA              | <i>Lepidium papilliferum</i>  |
| LGPP              | Langley Gulch Power Plant   |
| MGD               | million gallons per day   |
| MSA               | Metropolitan Statistical Area   |
| MW                | megawatt  |
| NAAQS             | National Ambient Air Quality Standards                                |
| NEPA              | National Environmental Policy Act                                     |
| NHPA              | National Historic Preservation Act                                    |
| NNG               | Native/Non-native Grassland   |
| NO <sub>2</sub>   | nitrogen dioxide  |
| NO <sub>x</sub>   | oxides of nitrogen  |
| NRHP              | National Register of Historic Places                                  |
| OHV               | off-highway vehicles  |
| O&M               | operation and maintenance   |
| PM <sub>10</sub>  | particulate matter equal to or less than 10 microns in diameter       |
| PM <sub>2.5</sub> | fine particulate matter equal to or less than 2.5 microns in diameter |
| POD               | Plan of Development   |
| PSD               | Prevention of Significant Deterioration                               |
| RMP               | Resource Management Plan  |
| ROD               | Record of Decision  |
| ROW               | Right-of-Way  |
| RV                | recreational vehicle  |
| SHPO              | State Historical Preservation Office                                  |
| SIL               | significant impact levels   |
| SO <sub>2</sub>   | sulfur dioxide  |
| SWPPP             | Storm Water Pollution Prevention Plan                                 |
| TMDL              | total maximum daily loads   |
| USACE             | U.S. Army Corps of Engineers  |
| USC               | United States Code  |
| USFWS             | U.S. Fish and Wildlife Service  |
| USGS              | U.S. Geological Survey  |
| VRM               | Visual Resource Management  |
| WCS               | Wildlife Conservation Strategy  |

## 1.0 Introduction

On October 13, 2008, Idaho Power Company (Idaho Power) filed multiple applications for rights-of-way (ROW) grants with the Bureau of Land Management (BLM) to allow the construction, operation, and maintenance of water and transmission lines and associated service roads to serve the Langley Gulch Power Plant (LGPP). The LGPP is a 300-megawatt (MW) combined-cycle combustion turbine located on private property in the New Plymouth area in southwestern Idaho (**Figure 1.0-1**). The BLM lands crossed by the Proposed Action are managed by the Four Rivers Field Office (FRFO).

### 1.1 Need for and Purpose of Action

#### 1.1.1 Agency

BLM is processing Idaho Power's applications for ROW grants 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 Resource Management Plan (RMP). 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 management direction contained in the Cascade RMP allows BLM to consider ROW applications in areas where utility ROWs are not specifically excluded if there is a demonstrated need and resource conflicts are low or can be mitigated.

As the lead federal agency, BLM determined that an Environmental Assessment (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. In addition to the EA, a Plan of Development (POD) for the Proposed Action would be submitted to BLM in accordance with BLM Handbook H-2801-1 to assist BLM's analysis of the effects of granting the ROWs.

BLM may choose to accept the Proposed Action with or without modification, or develop and authorize a reasonable alternative. BLM also may choose to deny the ROW grant applications; this would constitute the No Action Alternative.

This EA presents an analysis of the potential environmental impacts that may result from implementation of the Proposed Action. The Authorized Officer will determine whether the Proposed Action is a "major federal action" requiring the development of an Environmental Impact Statement (EIS) by assessing the significance of the Proposed Action based on context and intensity (40 CFR 1508.27). Issuing the ROW authorization would allow Idaho Power to implement the Proposed Action.

### 1.1.2 *Proponent*

The purpose of the Proposed Action is to connect the proposed 300-MW LGPP to Idaho Power's transmission system and provide the water necessary to operate the facility. The LGPP is scheduled to be in service by 2012. The primary expected public benefit of the project would be the continued reliable supply of electricity to Idaho Power's residential, government, retail, commercial, and industrial users. Without additional electric generation capacity, the reliability of electric power supply in the region may be compromised.

Idaho Power expects to add about 10,000 new retail customers annually over the next 20 years. This would result in an increase in average annual load of 13 average megawatts (aMW) per year and an increase in peak-hour demand of 53 MW per year over the next 20 years.

Even with considerable efforts toward conservation and energy efficiency, power generated by the LGPP is needed by 2012. The need for the LGPP and associated infrastructure is based on projected energy shortages coupled with the following realistic scenarios:

- 1) hydrologic conditions may not meet projections;
- 2) economic recovery requires adequate energy supplies, and therefore is contingent on having sufficient energy infrastructure;
- 3) customer electricity use in the summer continues to require significant energy imports;
- 4) Idaho Power continues to receive inquiries from potential new large load customers; and
- 5) electric utilities are charged by state and federal regulatory agencies with the responsibility to provide safe, reliable on-demand electric service to their customers.

## 1.2 Summary of Proposed Action

The Proposed Action is to grant ROWs that would allow for the construction, operation, and maintenance of the following project components:

- A new double-circuit 230-kilovolt (kV) transmission line and modification of an existing 230-kV transmission line.
- Replacement of an existing shield wire on the 230-kV transmission line with a shield wire that contains fiber-optic cable.
- A new 138-kV transmission line (constructed as a 230-kV transmission line and initially energized at 138-kV).
- A new water pipeline.
- The use of existing roads, overland travel, and the creation of 0.2 mile of new service roads with a 10-foot-wide ROW to provide access to the new 230-kV transmission line ROW. These roads would be used during construction and for ongoing operations and maintenance (O&M) activities.
- Use of temporary staging areas and pulling and tensioning sites within the temporary ROW during construction of the transmission lines.

BLM's authorization would include Temporary Use Permits for construction; new ROW grants for the water pipeline, electric transmission lines, and roads; and an amended ROW grant for

work on the existing transmission line. Idaho Power has requested a 500-foot-wide temporary and a 150-foot-wide permanent ROW for the new 230-kV transmission line, and a 300-foot-wide temporary and 150-foot-wide permanent ROW for the new 138-kV transmission line. For the water pipeline, Idaho Power has requested a 300-foot-wide temporary and a permanent 30-foot-wide ROW.

The purpose of the transmission lines is to interconnect the proposed LGPP to Idaho Power's existing transmission system. The new transmission lines would enable distribution of LGPP's generated electric power to Idaho Power's customers. The purpose of the new water pipeline, which would originate at a new pump station located near the Snake River, is to provide the water necessary for operation of the proposed LGPP.

Each of the transmission lines and the water pipeline would start at the LGPP, which is located in Sections 33 and 28 of T7N, R4W of the Boise Meridian in Payette County, Idaho. The 2.8-mile 230-kV transmission line would be located entirely on BLM lands and would travel west to connect with Idaho Power's existing Caldwell-Ontario 230-kV transmission line. The new 16-mile 138-kV transmission line would be located on BLM land for approximately 6.5 miles and on private lands for approximately 9.5 miles, and would travel to the southeast and connect with an existing Idaho Power 138-kV transmission line. The 8.6-mile water pipeline would be located on BLM land for approximately 3 miles and on private land for approximately 5.6 miles, and would travel west from the LGPP to the Snake River. The various components of the project are shown in **Figure 1.0-2**.

### 1.3 Location and Setting

The project study area is located in southwestern Idaho and includes portions of Payette, Canyon, and Gem counties (**Figure 1.0-2**). The proposed LGPP site comprises approximately 137 acres and is located in Sections 28 and 33 of T7N R4W in Payette County. The proposed water pipeline is located in T7N R4W and R5W and is located entirely within Payette County. The proposed 230-kV transmission line is located in T7N R4W and T6N R4W and also is located entirely within Payette County. The proposed 138-kV transmission line is the longest of the proposed project features and would extend approximately 16 miles in both Payette and Canyon counties. No proposed project features are located in Gem County.

BLM land within the project study area includes a Long-billed Curlew Habitat Area of Critical Environmental Concern (ACEC) (see Section 3.7.3 for additional information) and a slickspot peppergrass management area (see Section 3.7.2 for additional information).

### 1.4 Conformance with Applicable Land Use Plan

Policies for development and land use decisions within the project study area currently are contained in the *Cascade Proposed Resource Management Plan and Environmental Impact Statement* (BLM 1987) and the *Cascade Resource Management Plan Record of Decision* (BLM 1988). Management activities and development projects selected and approved must

be in conformance with the RMP. The following resource management guidelines are applicable for the management of public lands in the Cascade Resource Area:

- The public lands will be planned and managed under the principles of multiple use and sustained yield as required by FLPMA and other principles as outlined in BLM planning regulations. Any valid use, occupancy, and development of the public lands, including, but not limited to those requiring rights-of-way, leases, and licenses will be considered, subject to applicable environmental review procedures, unless specifically excluded in the plan. In some areas, however, environmental values, hazards, or manageability considerations may require limitations on either the type or intensity of use, or both. Those limitations are identified in the plan's land use allocations and management objectives for specific areas within the public lands. BLM will include stipulations and special conditions as necessary in leases, licenses, and permits to ensure the protection and preservation of resources (BLM 1987, pg. 38).
- Rights-of-way, under Title V of FLPMA, will be considered in the Cascade Resource Area except where specifically identified in the RMP for exclusion. Future locations for ROWs will be encouraged within or adjacent to existing ROWs as much as possible. New sites will be considered if there is a demonstrated need and the resource conflicts are low or can be mitigated (BLM 1987, pg. 43).
- Generally, public lands may be considered for the installation of public utilities, except where expressly closed by law or regulation. Project approval will be subject to preparation of an environmental assessment or environmental impact statement. BLM will work closely with the Idaho Public Utilities Commission, other state and federal agencies, local governments, utility companies, and other interested parties to determine appropriate locations and environmental safeguards for public utilities involving public lands (BLM 1987, pg. 60).

Applicable management guidelines for the ACEC and for the issuance of ROW grants are described below.

Within the ACEC, the following management guidelines are applicable to the proposed project:

- ROW construction activities for transmission lines, pipelines, and other major projects will not be allowed during the nesting and brood-rearing periods (March 15 through June 30 for long-billed curlew nesting areas).
- Road construction will be limited and evaluated on a site-specific basis.

Specific actions (BLM 1987, pg. 2-5) to implement lands and realty objectives include:

- Provide opportunities for utility rights-of-way
- Encourage future rights-of-way to be located within or adjacent to existing rights-of-way
- Restrict rights-of-way in areas with high resource values

## 1.5 Coordination with Other Government Agencies

### 1.5.1 *State and Federal Permits*

In addition to approval by the BLM, other state and federal permits, approvals, and authorizing actions may be required to construct, operate, and maintain the project as noted below:

- U.S. Army Corps of Engineers (USACE) – Permit for water intake/pump station on the Snake River under Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act; individual and/or nationwide permit approval for wetland impacts, and potential impacts to Waters of the U.S. from pipeline construction.
- U.S. Environmental Protection Agency (EPA) – CWA Section 401 Water Quality Certification.
- EPA – National Pollutant Discharge Elimination System Construction Stormwater General Permit.
- Idaho Department of Water Resources (IDWR) Stream Channel Alteration Permit(s) – Snake River and streams crossed by pipelines.
- Idaho Department of Environmental Quality (IDEQ) – Air Quality Permit to Construct.
- Idaho Transportation Department (ITD) – Utility permits for crossing or locating utilities within the ROWs of state highways.

### 1.5.2 *Cooperating Agencies*

Under CEQ regulations, federal agencies responsible for preparing NEPA analyses and documentation may do so in cooperation with federal, state, and local governments and agencies with jurisdiction by law or special expertise (40 CFR 1501.6). No other federal agencies have been identified to participate in the preparation of this EA.

### 1.5.3 *Other Federal Agencies*

The U.S. Fish and Wildlife Service (USFWS) has prepared a Biological Opinion (dated May 28, 2010) regarding the effects of the proposed LGPP Rights-of-Way on the slickspot peppergrass (*Lepidium papilliferum*) (LEPA). In a letter dated April 7, 2010, BLM requested formal consultation with the USFWS under section 7 of the Endangered Species Act (ESA) for its proposal to carry out the action. BLM determined that the proposed action is likely to adversely affect the slickspot peppergrass. As described in the Biological Opinion, and based on the Biological Assessment developed by the BLM and other information, the USFWS concluded that the action, as proposed, is not likely to jeopardize the continued existence of the slickspot peppergrass. A copy of the USFWS Biological Opinion is provided in Appendix A.

## 1.6 Relationship to Statutes, Regulations, and Other Requirements

### 1.6.1 *Federal Policies, Plans, and Programs*

The EA was prepared in accordance with NEPA as amended (42 United States Code [USC] §§ 4321 to 4370e) 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) (USDO I 2005); BLM Guidelines for Assessing and Documenting Cumulative Impacts [BLM 1994a], and Considering Cumulative Effects under NEPA [CEQ 1997].

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 RMP (discussed above). The proposed project is also subject to the requirements of the ESA, the National Historic Preservation Act (NHPA), the CWA, and the Clean Air Act (CAA). As the lead agency, BLM is responsible for analyses and documents that conform to NEPA, CEQ, and other pertinent federal laws and regulations.

### 1.6.2 *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” (USDO I, BLM Manual Handbook H-8120-1). Tribal coordination and consultation responsibilities are implemented under laws and executive orders that are specific to 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 NHPA; 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.

## 1.7 Scoping and Development of Management Concerns

A conference call with BLM staff was held on April 29, 2009, to introduce the LGPP project and identify the issues of primary concern that should receive detailed treatment in the EA. The issues of primary concern that were identified during this call included:

- Vegetation
- Special status wildlife species and wildlife habitat (long-billed curlew)
- Special status plant species, including threatened and endangered species
- Cultural resources

These issues are introduced in the sections below and are discussed in more detail in Chapter 3.0.

### 1.7.1 *Vegetation*

BLM staff requested that the EA include a general discussion of the upland vegetation in the area, including noxious and invasive weeds and weed control measures and practices. BLM staff indicated that rehabilitation should include short stature grass.

Vegetation in the proposed ROWs on BLM land is comprised primarily of the native/non-native grassland (NNG) plant community. The native grasses Sandberg bluegrass (*Poa secunda*) and sixweeks fescue (*Vulpia octoflora*), and the non-native cheatgrass (*Bromus tectorum*) are the most abundant species.

Native shrubland plant communities occur along the proposed 138-kV transmission line ROW. The native shrubland is dominated by Wyoming big sagebrush (*Artemisia tridentata* ssp. *wyomingensis*), rubber rabbitbrush (*Ericameria nauseosa*), and green rabbitbrush (*Chrysothamnus viscidiflorus*). A detailed discussion of vegetation and the potential impacts of the project is included in Section 3.5 and in the Botanical Technical Report (Idaho Power 2009a).

### 1.7.2 *Special Status Species*

BLM Manual 6840, Special Status Species Management, provides policy and guidance for the conservation and management of BLM special status species and the ecosystems upon which they depend on BLM-administered lands. As a federal agency, BLM is obligated to protect listed species and determine whether its actions are likely to affect those species. Listed species are protected from adverse effects through the ESA Section 7 consultation process.

BLM special status species include (1) species listed or proposed for listing under the ESA, (2) species requiring special management consideration to promote their conservation and reduce the likelihood and need for future listing under the ESA, which are designated as BLM sensitive by the State Director(s), and (3) delisted species in the 5 years following delisting. The following special status species are known to occur in the project study area:

- slickspot peppergrass (*Lepidium papilliferum*)
- golden eagle (*Aquila chrysaetos*),
- Swainson's hawk (*Buteo swainsoni*),
- long-billed curlew (*Numenius americanus*)

The Proposed Action could directly or indirectly impact these BLM sensitive species during construction and operation activities. The proposed action has been modified to avoid known slickspot peppergrass occurrences. Service roads could increase the likelihood of fire and recreational use in the area, which would have an indirect adverse effect on slickspot peppergrass and its habitat. Species productivity could be indirectly impacted by soil compaction, accelerated erosion, or noxious weed introduction. Adherence to Idaho Power's existing Avian Protection Plan (Turley and Dumas 2008) would reduce potential impacts to raptors and other avian species.

The potential impacts of the project on these sensitive species are discussed in Section 3.7.

### 1.7.3 Cultural Resources

Section 106 of the NHPA requires federal agencies to review all actions that may affect a property listed on the National Register of Historic Places (NRHP), or which may affect a property eligible for listing. Historic and prehistoric cultural resources occur in the project study area. Modifications to existing transmission lines and structures, construction in the existing and proposed ROWs, and continued O&M of the transmission lines and water pipeline – particularly those activities involving ground disturbance – potentially could impact the integrity of cultural resources. In addition, traditional cultural properties, if identified by Native American tribes, could be at risk.

## 1.8 Public Outreach and Issues

### 1.8.1 Open Houses

Several public open house meetings have been held for the LGPP and associated project components for purposes of obtaining conditional use permits from Payette and Canyon counties. The first was held on April 2, 2009, in New Plymouth, Idaho, in preparation for the Comprehensive Plan Change application to Payette County. Approximately 60 people attended the meeting to learn about the project. Four or five people left notes in the comment box; comments were about another Idaho Power project and were supportive of the LGPP. No environmental issues were raised. Shortly after this meeting, public hearings were held in Payette County before Planning and Zoning and the Board of Commissioners. During the

public hearings, several people provided comments and the Comprehensive Plan Change was approved.

A follow-up open house was held in New Plymouth on July 1, 2009. The purpose of the meeting was to provide a project update and seek input on the proposed transmission line routing in Payette County. Approximately 300 people were invited to this open house, including 195 local property owners in the general vicinity of the potential routes. Approximately 45 people attended the open house. Questionnaires were distributed to meeting attendees to obtain feedback on the transmission line, and 18 questionnaires with comments were received. The following responses were received:

- 1 commenter suggested that the new transmission line parallel the existing transmission line
- 2 commenters requested avoiding rangeland
- 12 commenters requested avoiding private land
- 11 commenters requested avoiding cultivated farm ground
- 1 commenter requested avoiding undeveloped land adjacent to road ROW
- 10 commenters requested avoiding developed land adjacent to road ROW

No comments were received that suggested revisions to the 230-kV transmission line route. Three potential route alternatives were suggested for the 138-kV transmission line to Caldwell. These routes were addressed at the Canyon County open house discussed below.

Another open house was held in Canyon County, at the Purple Sage Elementary School, on August 6, 2009. The purpose of the meeting was to provide a project update and seek input on transmission line routing in Canyon County. Three potential transmission line routes were reviewed that came out of the July open house held in Payette County. A total of 950 landowners were invited from a 29-square-mile area in Canyon County where the transmission line potentially could be located. This open house was focused on receiving public input for the new 138-kV transmission line between LGPP and the existing Caldwell-Willis 138-kV transmission line adjacent to Willis Road. A total of 74 comment sheets with the following responses were received:

- 11 commenters suggested that the new transmission line parallel the existing transmission line
- 20 commenters requested using a route that avoided Highway 30
- 3 commenters requested avoiding public lands
- 1 commenter requested avoiding rangeland
- 37 commenters requested avoiding private land
- 48 commenters requested avoiding cultivated farm ground
- 14 commenters requested avoiding undeveloped land adjacent to road ROW
- 38 commenters requested avoiding developed land adjacent to road ROW

In addition to the scoping issues raised by BLM, some members of the public also raised concerns about ground water; some were concerned about the plant using and potentially depleting ground water in the area, and others were concerned about impacts to water quality as a result of discharging cooling water once it has been used in the plant.

Idaho Power had looked at the option of using injection wells to discharge used cooling water. Based on concerns about and potential impacts to ground water quality, Idaho Power determined that an on-site evaporation pond would be constructed and used. This would result in no discharge and no potential impacts to ground water quality.

### 1.8.2 NEPA Scoping Document

On March 9, 2010, BLM posted the NEPA scoping document for the LGPP transmission and water lines on the Idaho BLM NEPA Documents for Review website (<http://www.id.blm.gov/planning/nepa/databases/index.php>) and on the USDO I BLM NEPA Register website ([https://www.blm.gov/epl-front-office/eplanning/nepa/nepa\\_register.do](https://www.blm.gov/epl-front-office/eplanning/nepa/nepa_register.do)) to solicit public comments on the proposed project. The public comment period for the LGPP project ended on April 16, 2010 and, in accordance with NEPA requirements, the BLM would consider all public comments received in making a decision on the ROW grants. A total of 31 comment sheets, 3 letters, and 3 e-mails with comments were received on the public scoping package by May 6, 2010. The comment sheets contained the following responses:

- 2 commenters suggested that the new transmission line parallel the existing transmission line
- 6 commenters requested using a route that avoided Highway 30
- 3 commenters requested avoiding rangeland
- 17 commenters requested avoiding private land
- 12 commenters requested avoiding cultivated farm ground
- 5 commenters requested avoiding undeveloped land adjacent to road ROW
- 21 commenters requested avoiding developed land adjacent to road ROW

In addition to the comment sheets, the following letters and e-mails providing comments on the public scoping package were received:

- Letter from landowner dated 4/14/10 requested that the project avoid private land.
- Letter from Idaho Department of Fish and Game dated 4/15/10 expressed concerns with development within the long-billed curlew habitat ACEC, increased motorized access, and the impacts of the project on bird migration, bats, reptiles, amphibians, raptors, fire occurrence, and habitat fragmentation.
- Letter from Idaho Conservation League dated 4/16/10 requested that the project parallel existing infrastructure, and expressed concerns regarding protection of wildlife habitat, spread of noxious weeds, water quality, and other issues.
- E-mail from landowner dated 4/13/10 regarding avoiding the route down Old Highway 30.
- E-mail from landowner dated 4/15/10 requesting that the new transmission line parallel the existing transmission line on BLM land.

- E-mail from landowner dated 4/16/10 concerned with impacts on private property.

### 1.8.3 *Summary of Comments Received*

As a result of the project open houses held on July 1 and August 6, 2009, and the public scoping package published on the BLM website, a total of 123 separate comment sheets, 3 letters, and 3 e-mails were received. A summary of the letters and e-mails received on the public scoping document is presented in Section 1.8.2. An overall summary of the comment sheets received is presented below:

- 14 commenters (11 percent of comments received) suggested that the new transmission line parallel the existing transmission line
- 26 commenters (21 percent of comments received) requested using a route that avoided Highway 30
- 3 commenters (2.4 percent of comments received) requested avoiding public lands
- 6 commenters (5 percent of comments received) requested avoiding rangeland
- 66 commenters (54 percent of comments received) requested avoiding private land
- 71 commenters (58 percent of comments received) requested avoiding cultivated farm ground
- 20 commenters (16 percent of comments received) requested avoiding undeveloped land adjacent to road ROW
- 69 commenters (56 percent of comments received) requested avoiding developed land adjacent to road ROW

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## 2.0 Description of the Alternatives

This section describes the Proposed Action and No-action alternatives that were carried forward for detailed analysis in this EA. Alternatives that were considered but not analyzed in detail are discussed in Section 2.1. The proposed action and the No Action Alternative are described in Section 2.2.

### 2.1 Alternatives Considered But Not Analyzed in Detail

Alternatives were developed based on Idaho Power's Integrated Resource Plan (IRP), BLM scoping comments (see Section 1.7), and comments from the public (See Section 1.8.1), Alternatives to the proposed project include:

- Meeting demand through conservation and energy efficiency improvements
- Alternative transmission line and water pipeline routes on BLM land
- Alternative transmission line and water pipeline routes that avoided BLM land: these facilities would be located on private and public lands and in road ROWs, and would not require a ROW grant from the BLM

As a regulated utility, Idaho Power does need to consider costs when developing a project. The Idaho Public Utilities Commission (IPUC) has authority to supervise and regulate Idaho's investor-owned utilities, assuring adequate service and affixing just and reasonable rates (Idaho Code Title 61). Also, "...it is the duty of this Commission to exercise its statutory authority in an effort to shape the future of the industry so that all customers of Idaho's regulated electric utilities continue to receive high quality service at reasonable rates." Order No. 26555.

*On March 6, 2009, Idaho Power Company (Idaho Power; Company) filed an Application with the Idaho Public Utilities Commission (Commission; IPUC) for a Certificate of Public Convenience and Necessity (Certificate; CPCN) authorizing construction of the Langley Gulch Power Plant (Project) and inclusion of the Project in the Company's rate base. (Idaho Code 61-526, -528; RP 112). An electrical corporation is prohibited from beginning the construction of a generating plant without having first obtained from the Commission a certificate that the present or future public convenience and necessity require or will require such construction. Idaho Code 61-526. (IPUC Order No. 30892, P. 1)*

*Idaho Power's Commitment Estimate for the Project is \$427,400 000 and includes the power plant and two related transmission projects (2.5 miles Ontario-Caldwell; 18 miles Caldwell- Willis). On a 20-year net present value (NPV) basis the Project is estimated to have a revenue requirement impact approximately \$95 million lower than the next least expensive proposal in the Company's Request for Proposal process (Smith, Tr. p. 22). The Company commits to procure and construct the Project for an amount that will not exceed the Commitment Estimate. (IPUC Order No. 30892, P. 2)*

Because of the IPUC's Order addressing the transmission projects related to the power plant and the water pipeline that was considered part of the power plant, the inclusion of costs in the IPUC Order, and the receipt of a CPCN, Idaho Power did consider costs when developing and evaluating alternatives. Potential impacts to natural resources, relative construction difficulty (e.g., reducing the number of turns in a water pipeline), public comments, and the willingness of private landowners to grant Idaho Power an easement were also considered.

A description of the alternatives considered but not analyzed in detail is presented in the following sections.

### ***2.1.1 Energy Conservation and Efficiency Improvement***

Idaho Power's IRP is a comprehensive look at present and future demands for electricity, as well as a plan for meeting those demands over the next 20 years. The IRP describes the company's projected need for additional electricity and the resources necessary to meet that need while balancing cost, risk, and environmental concerns. A new IRP is prepared every two years in order to account for changes in the economy, the regulatory environment, forecast load growth, the cost of new resources and many other assumptions that are used in the IRP.

Demand for electricity within Idaho Power's service territory continues to increase. Idaho Power's latest resource plan, the 2009 IRP, estimates that approximately 10,000 new customers would be added each year over the next 20 years. At the end of 2008, Idaho Power was serving over 485,000 retail customers, which is expected to increase to over 682,000 customers by the end of 2029. This forecast growth results in an increase in average annual load of 13 average megawatts (aMW) and an increase in peak-hour demand of 53 megawatts (MW) annually over the next 20 years.

One of the primary goals of Idaho Power's IRP process is to treat supply-side resources and demand-side measures on an equal basis. This is accomplished by implementing all cost effective demand-side management (DSM) programs prior to evaluating supply-side resource options necessary to eliminate any remaining deficits.

Existing and new energy efficiency programs are expected to reduce summer energy deficits by approximately 60 aMW in 2012 and demand response programs are forecast to reduce peak-hour load in the summer of 2012 by 380 MW.

Even with the implementation of all cost effective DSM, the 2009 IRP indicates there is still a need to increase capacity and energy production. Without the LGPP, the 2009 IRP projects monthly summer energy deficits of 126 aMW in 2012 and 192 aMW by the summer of 2013. Adding the LGPP eliminates these near-term energy deficits and results in substantially reduced energy deficits for 2014 and beyond. A similar reduction in monthly peak-hour

deficits is projected as a result of adding the LGPP. Without the LGPP, the 2009 IRP projects Idaho Power would have a capacity deficit of 190 MW in the summer of 2012.

The deficits forecast in the 2009 IRP are based on Idaho Power's planning criteria assumptions and several scenarios exist that could make these deficits greater than forecast. These include:

- 1) Hydrologic conditions may be worse than forecast,
- 2) Economic recovery could take place sooner than forecast,
- 3) New, large-load customers could decide to locate in Idaho Power's service area, and
- 4) Energy efficiency and demand response programs may not perform as expected.

Once filed, the IPUC reviews and either accepts or rejects the IRP. At the time the IPUC considered Idaho Power's request for a CPCN for the LGPP, the 2006 IRP (and 2008 IRP Update) were the most recent planning documents filed by Idaho Power. In the CPCN case, the IPUC found that energy efficiency and demand-side management were not sufficient for providing reliable and adequate electric service, as indicated the passage below from the final CPCN order:

*In considering the Commission determinations required under Idaho Code ~ 61-541(4)(a)(i-v) we make the express finding that Idaho Power has in effect a Commission-accepted Integrated Resource Plan, the Company's 2006 IRP (and 2008 update). We find the services and operations resulting from the proposed Langley Gulch Power Plant to be necessary for the providing of adequate and reliable electric service and in the public interest. We find that Idaho Power in its IRP planning and in the record developed in this case has demonstrated that it has considered other sources for long-term electric supply, i.e., energy efficiency, demand-side management, and transmission options and that the addition of Langley Gulch is reasonable when compared to same. We further find and acknowledge that Idaho Power participates in a regional transmission planning process (IPUC Order No. 30892, P. 38).*

Idaho Power has continued the practice of implementing all cost effective DSM in planning for the future energy needs of its customers. The 2009 IRP reaffirms that energy efficiency and demand response measures alone are not able to meet Idaho Power's future energy and capacity needs.

### **2.1.2 Alternative Water Pipeline Routes**

Idaho Power initially identified three alternative routes for the water pipeline in addition to the proposed route. These routes were evaluated for constructability, cost, and potential impacts to private property owners and natural resources. The water pipeline was estimated to cost approximately \$1 million per mile to install. The three alternatives and the proposed route

(Route 1b) are shown in **Figure 2.1-1**. The three alternative routes that were not analyzed in detail are described below.

Route 1 alignments, including 1a, 1b (proposed route), and 1c, have the same alignment as they leave the power plant and diverge approximately 1 mile west of the plant. The proposed route and alternative 1c would impact approximately the same acreage of BLM lands and alternative 1a would impact additional BLM lands; routes 1a, 1b, and 1c would also impact private property and road rights-of-way. Impacts within the slickspot peppergrass management area and long-billed curlew ACEC would be approximately the same for routes 1a and 1b; impacts for route 1c would likely be greater because a portion of the route would require the construction of a new access road because none currently exist.

- **Route 1a:** The northernmost option that would use BLM lands and follow road ROW along 3<sup>rd</sup> Avenue and Elmore Road prior to turning east on private lands before entering BLM managed lands. This route would require acquisition of land from seven private property owners and require over 10 miles of pipeline. Private property owners near the proposed diversion area at the Snake River were contacted; however, Idaho Power was not able to identify a willing seller.

The route also poses many design challenges with the severe vertical grade differences where it would enter BLM lands northeast of Hurd Gulch. The undulating topography would result in additional mechanical devices to release air entrained in the line. The devices require regular maintenance and visual inspections, so continued access throughout the year is necessary to these below grade structures. This would result in a higher number of visits by Idaho Power crews for the life of the pipeline. Additionally, this route has the longest linear ROW requirement of BLM lands relative to the other alternatives.

This alternative was not considered for further analysis because of the added length of BLM impact, lack of a willing private property seller for the diversion area, identification of private property owners willing to enter into agreements with Idaho Power along the proposed route, and constructability challenges. Moreover, this route does not result in substantially different impacts to key resources such as slickspot peppergrass habitat, the long-billed curlew ACEC, or cultural resources.

- **Route 1c** The southernmost BLM option would follow Echo Avenue east to BLM lands. At 7.8 miles, this route would have been the shortest route; however, the route included seven private property crossings, undulating roadway conditions along Echo Avenue, and difficult terrain across BLM land. This route would parallel the A-Line Canal for nearly a half mile which results in a very winding pipeline route. As a result, more bends and fittings would be required, and would have required a long term access agreement with the Bureau of Reclamation. As the route diverges from route 1b, it also leaves existing roads and new roads would need to be created for construction and long-term access. This alternative would result in the most amount of new disturbance on BLM lands and could impact slickspot peppergrass habitat and the long-billed curlew ACEC. Similar to

route 1a, this route would also require more frequent visits for maintenance because of the increased number of vaults to accommodate the undulating terrain. This alternative was not considered for more detailed analysis because of the increased impact to key resources and the lack of private property owners willing to enter into agreements with Idaho Power.

- **Route 2:** This approximately 11 mile long alternative would avoid BLM lands and use private lands and road ROW. In order to avoid BLM lands, the water line would be routed east along SW 3<sup>rd</sup> Avenue, south on Butte Road, east on SW 4<sup>th</sup> Avenue, and south along U.S. Highway 30 eventually to the power plant site. This alternative has many constructability challenges including the following:
  - No immediate willing seller for the diversion site at the Snake River;
  - Two long, angled, bores to go under Interstate-84 and associated bore pits on private property;
  - Construction parallel to irrigation canals and ditches which occur on both sides of the roadway in some cases;
  - Steep roadway banks that would require the alignment to be located in the middle of the roadway or on private property;
  - Numerous sag and crest vertical curves which require additional mechanical devices in the pipeline to eliminate air-lock of the pipeline; and
  - Significantly more public impact due to the sheer number of properties fronting the alignment.

Due to the constructability challenges with roadway cross-slopes and roadside features, significantly more public inconvenience, and the added cost and long-term maintenance to construct around the features, this alternative was not considered in more detail.

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### ***2.1.3 Alternative 230-kV Transmission Line Routes and Configuration***

The 230-kV line needs to be a double circuit line (in and out) from the Langley Gulch Substation (located at the power plant) because of the critical nature of the generation (this is a baseload resource that would operate almost continually). If this 230-kV line is only a tap (i.e., single circuit) off the existing Caldwell-Ontario 230-kV line, any fault along this line would take the power plant out of service. The new double-circuit transmission line would break the Caldwell-Ontario transmission line and create a new Caldwell-Langley Gulch 230-kV line and a new Langley Gulch-Ontario 230-kV line by tapping into the existing 230-kV transmission line. The proposed double circuits help to limit the exposure to any faults, as well as providing two options for keeping service to the power plant. If a fault occurs on the Caldwell-Langley Gulch section of this line, the Langley Gulch-Ontario section would remain energized. If a fault occurs on the Ontario-Langley Gulch section of the 230 kV transmission line, the Caldwell-Ontario section of the line would remain energized. For an outage of the Langley Gulch-Ontario 230-kV line section, the power plant can continue to operate. For a Caldwell-

Langley Gulch transmission outage, however, a second source to the Caldwell substation and Treasure Valley Transmission grid is required. During this scenario, the Langley Gulch-Ontario 230-kV line section becomes overloaded and would also trip out of service when the power plant is operating at normal generation output. The 138-kV line is required as a second source to the Caldwell substation, which eliminates this scenario. With the Langley Gulch-Ontario 230-kV line and the 138-kV line to Caldwell, the power plant can operate without any contingencies or limitations.

The proposed 230-kV transmission line route was adjusted from an originally proposed ROW that followed the same general alignment. The proposed route was changed to maximize the use of existing roads and minimize impacts to potential slickspot peppergrass habitat. Other alternatives for the 230-kV line across BLM lands were looked at on a preliminary basis but were not developed further because they did not provide any benefit over the proposed route. Topography, existing roads, natural resources, construction costs, and access for operations and maintenance were considered.

In addition to the proposed route which would cross BLM land, an alternative route was identified for the 230-kV transmission line that would avoid BLM land. This alternative route would follow a similar route as the water pipeline Route 2 described above, but would tap the existing Ontario-Caldwell transmission line near Elmore Road, continue north to SW 3<sup>rd</sup> Avenue, east to U.S. Highway 30, and south to the LGPP. Due to the increased length of this route construction would cost approximately 4.5 times as much as the proposed route, and Idaho Power did not apply for this route. However, if the BLM decides not to issue a ROW grant for the proposed 230-kV line, Idaho Power would consider this alternative or a similar route. The potential impacts of this route are addressed in the No-action alternative. Other potential routes in the area that do not use BLM lands are expected to have similar impacts.

#### **2.1.4 Alternative 138-kV Transmission Line Routes**

As discussed above, the 138-kV transmission line is necessary to provide an alternative path for the export of energy from the power plant. The 138-kV line is being insulated at 230-kV but operated at 138-kV initially. Construction to 230-kV standards is done to plan for future growth and changes to Idaho Power's transmission system in the Treasure Valley.

In addition to the proposed route, four alternative routes (with variations) were identified for the 138-kV transmission line. Development of alternatives and selection of the proposed 138-kV line route was primarily based on input from the public (see Section 1.8), willingness of private landowners to sign easements, and avoidance of impacts to known occurrences of slickspot peppergrass. The majority of public comments emphasized a route that would maximize the use of BLM lands, avoid cultivated farm lands, and avoid developed land adjacent to road ROW. These alternative routes and the proposed route (Route 4a) are shown on **Figure 2.1-2**. The four alternative routes that were not analyzed in detail are described below:

- **Alternative 1:** This route followed the west side of Interstate 84 (I-84) for approximately 2 miles south of the generation plant, then turned south to Oasis Road (mostly on BLM land) and used Old Highway 30 road ROW. This route was discouraged by local residents because of the concern of adding lines along Oasis Road, proposed developments along the route, and a large dead-end pole that would be necessary at the corner of Oasis Road and Sand Hollow Road (Old Highway 30). The northern portion of this route would have also passed between known occurrences of slickspot peppergrass. While the route would have avoided direct impacts to the element occurrences, the USFWS and BLM were concerned that potentially significant indirect impacts would occur. The middle portion of this route is the same as the proposed route and would have the same impacts. Similar to Alternative 5, this route would need to cross the existing Caldwell-Ontario 230-kV transmission line twice. While crossing existing transmission lines is not prohibited by any regulation, it is a utility standard to avoid or minimize the number of line crossings as this can adversely affect reliability. If one line goes out, the likelihood that it may cause an outage on another line is increased if the outage occurs at or adjacent to a crossing. Line crossings may also pose safety risks to crews that are working in the area of the crossing. This route was not considered further because of the potential impacts to slickspot peppergrass, objections to the location on private lands at the southern end, and the middle portion would have the same impacts as the proposed route.
- **Alternative 2:** This route is very similar to Alternative 1 but would extend further south prior to crossing the Interstate and turning east along Old Highway 30, would remain on BLM and private land south of Oasis Road, and turn east to Old Highway 30 on Homer Road. The majority of input received from the open house opposed this alternative route. The meeting participants agreed that Old Highway 30 would be the best route south, but did not favor a route across private land south of Oasis Road and the Sand Hollow exit. This route was not considered further because of the objections to the location on private lands at the southern end and the middle portion would have the same impacts as the proposed route.
- **Alternative 3:** This route followed the west side of I-84 for approximately 2 miles, then went east across I-84 about 1.5 miles, turned southeast to Tunnel Road, south on Tunnel Road to Sand Hollow Road, and south on Sand Hollow Road to Willis and Old Highway 30. Similar to Alternative 1, this route would have passed between known occurrences of slickspot peppergrass and could have resulted in potentially significant indirect impacts. This route would have also passed through more occurrences of intact sagebrush than the proposed route or other alternatives. This route was not analyzed further because of concerns about proximity of a transmission line to the existing gas pipeline (this may result in the need for Idaho Power to install additional facilities to protect the gas pipeline from adverse effects of the transmission line), potential impacts to slickspot peppergrass and intact sagebrush, public concerns, and higher costs due to the increased length.
- **Alternative 5 (non-BLM route, not shown on Figure 2.1-2):** This potential alternative route that would avoid BLM lands could be routed from the LGPP, north on U.S. Highway 30, then east, and then south along U.S. Highway 30 to the existing Caldwell-

Willis transmission line. Such a route would be substantially longer than the proposed route and would require the construction of approximately 8 additional miles of new transmission line. In addition, this alternative route would need to cross the existing Caldwell-Ontario 230-kV transmission line twice. While crossing existing transmission lines is not prohibited by any regulation, it is a utility standard to avoid or minimize the number of line crossings as this can adversely affect reliability. If one line goes out, the likelihood that it may cause an outage on another line is increased if the outage occurs at or adjacent to a crossing. Line crossings may also pose safety risks to crews that are working in the area of the crossing.

If the BLM decides not to issue a ROW grant for the proposed 138-kV line, Idaho Power would consider this alternative or a similar route. The potential impacts of this route are addressed in the No-action alternative. Other potential routes in the area that do not use BLM lands are expected to have similar impacts.

## 2.2 Description of the Proposed Action and No Action Alternatives

In this analysis, the No Action Alternative means that Idaho Power would continue current operation and maintenance of the existing transmission lines on BLM and private land and would not undertake the Proposed Action on BLM lands. However, the LGPP facility would still be constructed and all linear project components would be constructed on private lands, although the specific alignments and lengths of the water pipeline and transmission lines are unknown.

The Proposed Action includes the modification of an existing 230-kV transmission line; the construction, operation, and maintenance of a new double-circuit 230-kV transmission line and new single-circuit 138-kV transmission line; construction, operation, and maintenance of a new water pipeline and associated equipment and interconnection facilities; and construction of new service roads to reach the new 230-kV transmission line ROW. For the purposes of this EA, BLM is considering the LGPP facility, the gas pipeline, and the water intake structure as cumulative impacts that would result from issuing the ROW grants.

### 2.2.1 *Actions Common to Both Alternatives*

**Operation and Maintenance Requirements:** Idaho Power performs O&M activities to keep transmission lines operational and in good repair. These activities are either planned (such as routine patrols, inspections, and scheduled maintenance) or unplanned (such as emergency maintenance in cases where public safety and property are threatened). Under both alternatives, O&M of the existing transmission lines would continue. Typical transmission line inspection and maintenance activities are described in more detail in Appendix B.

**Permitted Uses:** Land uses that are compatible with safety regulations required for a transmission line may be permitted by BLM in and adjacent to the ROW and allowed on private property. Existing land uses, such as grazing, generally have been permitted within

the ROW. Incompatible land uses within the ROW include construction and maintenance of structures or dwellings, as well as any use requiring changes in surface elevation that would affect existing facilities (e.g., reduce the clearance between the conductor and ground to levels below industry standards). Compatible uses of the ROW on public lands would have to be approved by BLM and on private lands by the landowner in conformance with their easement for the transmission line.

## 2.2.2 *Proposed Action*

The Proposed Action would be to issue ROW authorizations on public lands administered by BLM for the following LGPP project components:

1. Construction of a new double-circuit 230-kV transmission line interconnection from the LGPP site to the existing 230-kV Caldwell-Ontario transmission line.
2. Modification of the existing Caldwell-Ontario 230-kV transmission line at the tie-in point with the new 230-kV line.
3. Replacement of a shield wire on the existing Caldwell-Ontario 230-kV transmission line with a shield wire that contains fiber-optic cable.
4. Construction of a new 138-kV transmission line from the LGPP site to an existing 138-kV transmission line located at the intersection of Old Highway 30 and Willis Road, north of Caldwell.
5. Construction of a new water pipeline from the Snake River to the LGPP site.
6. Operation and maintenance of the proposed 138-kV and 230-kV transmission lines, the water pipeline, and access and service roads.
7. Construction of new service roads from existing roads to reach the new 230-kV transmission line ROW.
8. Use of the temporary construction ROW for overland travel and the establishment of temporary construction staging areas, structure assembly areas, and wire stringing areas.

Details regarding each project component, including length of ROW and temporary and permanent ROW width requirements are provided in the following sections.

### 2.2.2.1 230-kV Transmission Line

The new 230-kV transmission line segment would cross BLM lands in a new 2.8-mile ROW, and would connect the existing Caldwell-Ontario 230-kV transmission line to the LGPP via a new double-circuit 230-kV transmission line (**Figure 2.2-1**). The new double-circuit transmission line would break the Caldwell-Ontario transmission line and create a new Caldwell-Langley Gulch 230-kV line and a new Langley Gulch-Ontario 230-kV line by tapping into the existing 230-kV transmission line.

Construction of the 230-kV transmission line would occur within a 500-foot temporary easement (250 feet on either side of the centerline), and the line would be operated and maintained within a 150-foot-wide permanent ROW. The transmission line ROW would be

generally accessed using existing roads and overland travel; however, two new graded service roads would be constructed in Sections 32 and 33. The total length of these new service roads is approximately 0.2 mile. During construction, vehicles would travel overland within the 2.8-mile temporary easement. Wire pulling and tensioning sites would also be located within the temporary ROW easement.

The 230-kV line would be constructed using single pole, galvanized steel double-circuit structures, with drilled pier steel-reinforced concrete foundations. Pole heights would vary from 80 to 120 feet, depending on structure type. Span lengths could range from 800 to 1,200 feet and the number of structures could range from 15 to 20. The proposed structure types for the 230-kV transmission line are shown on **Figure 2.2-2**.

### 2.2.2.2 138-kV Transmission Line

A new 138-kV transmission line is proposed from the LGPP to an existing 138-kV transmission line located at the intersection of Old Highway 30 and Willis Road, north of Caldwell. This route would travel east out of the LGPP to the west side of I-84, then south along the west side of I-84 about 1.5 miles, then south 3.5 miles along the west edge of private property, then southeast 1 mile, and then east 1.7 miles to the west side of I-84, then south along the west side of I-84 for 0.75 miles, then east 0.4 mile to the east side of Old Highway 30 (Sand Hollow Road in Payette County), then south along the east side of I-84 to the intersection of Old Highway 30 and Willis Road.

Approximately 6.5 miles of the new 138-kV transmission line would cross BLM lands, and the remaining 9.5 miles of line would be located on private property and would affect approximately 78 private landowners. The new 138-kV transmission line would be built using 230-kV construction, but initially would be operated at 138-kV. The proposed route for the 138-kV transmission line is shown on **Figure 2.2-3**.

Construction of the 138-kV transmission line would occur within a 300-foot-wide temporary easement (150 feet on either side of centerline), and the line would be operated and maintained within a 150-foot-wide permanent ROW. No new service roads are proposed for the 138-kV transmission line, and the ROW would be accessed using existing roads and overland travel for approximately 6.5 miles on BLM lands.

The 138-kV line would utilize two types of structures. The single-circuit H-frame steel pole structures, ranging in height from 60 to 80 feet, would be used in uncultivated areas. These steel H-frame structures would be direct buried. Single steel pole single-circuit structures would be utilized along road ROWs and would range in height from 95 to 120 feet. The single steel poles would have a single concrete foundation. In places where there is an existing distribution line, this line would be installed on the same structures in an underbuild configuration. Approximately 120 to 140 poles would be required for the entire route. The proposed structure types for the 138-kV transmission line are shown on **Figure 2.2-4**.

### 2.2.2.3 Fiber Optic Shield Wires

A 24-pair fiber-optic shield wire would be placed at the top of the proposed 230-kV transmission line structures; this would serve as a shield wire and as a fiber-optic circuit. This fiber-optic shield wire also would replace one of the existing shield wires on the two-pole H-frame structures along the existing Caldwell-Ontario transmission line. This fiber-optic circuit serves as a communication link for the LGPP facilities to Idaho Power's dispatch center in Boise and would not be available for use by other parties. Following construction of the 138-kV transmission line, a second redundant fiber-optic line would be installed on this line to serve as a backup communications link.

### 2.2.2.4 Water Pipeline

The pipeline would cross three private properties and would be approximately 8.6 miles in length, with approximately 3 miles of the route located on BLM land (**Figure 2.2-5**). The remainder of the water pipeline would be located within road ROW. From the Snake River pump station, the water line would be constructed on private property to Whitley Drive, south on Whitley to Fairview Avenue, east along Fairview Avenue in the county road ROW (including a crossing under U.S. Highway 95) to Elmore Road, where it would cross onto private property and then traverse across BLM land until it reaches the project site. On BLM land, the water pipeline would follow an existing dirt road for 13,497 feet (2.6 miles). Temporary overland access would be required where the water pipeline departs from the existing road. Construction of the water pipeline would occur within a 300-foot-wide temporary ROW easement and the pipeline would be operated and maintained within a 30-foot-wide permanent ROW.

The water pipeline would be a combination of 12-inch steel or ductile iron pipe in the high pressure section, with the lower pressure section being constructed of polyvinyl chloride (PVC) or high density polyethylene (HDPE) pipe. The pipeline design includes air-release and isolation valves. The pipe would be buried a minimum of 4 feet deep, but the necessary air-release valve manholes would rise approximately 6 to 12 inches above grade on BLM ground. The air-release valve manholes would have 6-foot-square concrete tops with lockable lids. There would be approximately 40 manholes along the entire alignment. The isolation valve housing pads would be approximately 2 square feet, would rise approximately 6 to 12 inches above grade, and would have a locking cap. There would be 10 isolation valves along the pipeline route. The air-release and isolation valves are necessary for proper operation and maintenance of the pipeline.

### 2.2.2.5 New Service Roads

As noted previously, new graded service roads would be constructed between existing roads and the new 230-kV transmission line. Approximately 0.2 mile of a 10-foot-wide ROW would be constructed (**Figure 2.2-1**). No new service roads would need to be constructed for the 138-kV transmission line or the water pipeline; however, overland travel during construction and maintenance activities would likely result in the creation of a permanent two-track road within the ROW for each of these project components.

### 2.2.2.6 Construction Staging Areas

Two temporary construction staging areas would be required for construction of the new 230-kV transmission line. The staging areas would be 500 feet x 500 feet in area and would be located within the 500-foot-wide temporary construction ROW. Staging and laydown areas for the 138-kV transmission line and water pipeline have not yet been identified, but they would be located on private property.

### 2.2.2.7 Construction Schedule

Construction of the Proposed Action is anticipated to begin during the fall of 2010 and be completed by spring 2012. Construction work on the 230-kV transmission line is expected to occur during the fall and early winter of 2010 and be completed by spring 2011. Construction of the 138-kV transmission line is expected to occur in summer 2011 and be completed by June of 2012. The proposed water pipeline is proposed to be under construction by summer 2010 and completed in 2011. Construction of the LGPP and other project components is expected to occur simultaneously, and all project components are expected to be completed by December 2012.

## 2.2.3 *Environmental Protection Measures*

The following environmental protection measures (EPM) are part of the Proposed Action and would be implemented by Idaho Power. These measures have been designed to avoid or reduce the impacts of the Proposed Action.

General work area environmental protection measures would include:

- WA-1. All construction and future O&M activities authorized by the BLM would occur within Idaho Power's temporary and permanent ROW.
- WA-2. All waste products and food garbage from construction sites would be deposited in a covered waste receptacle and removed regularly. Garbage would be hauled to a suitable disposal facility.
- WA-3. Ground disturbance would be limited to that necessary to safely and efficiently install and maintain the proposed facilities.
- WA-4. Existing improvements (e.g., fence, gate) would be repaired or replaced to their condition prior to disturbance if they are damaged or destroyed by construction and O&M activities, as agreed to by the parties involved.
- WA-5. If blasting is necessary, appropriate safety guidelines would be followed, as required by state and federal regulations relating to blasting operations.
- WA-6. No paint or permanent discoloring agents would be applied to rocks to indicate limits of survey or construction activity.
- WA-7. All stakes and flagging would be removed from the construction area and recycled or disposed in a state-approved landfill. No orange materials would be used for flagging or fencing.

- WA-8. Fencing or other measures should be installed during construction of the water pipeline and transmission structures to minimize the possibility that livestock, wildlife, or persons could fall into the excavations.
- WA-9. Holders of the grazing allotments should be informed of the construction schedule to minimize grazing conflicts during the construction period.
- WA-10. Existing utilities would be identified and located prior to and during construction, and avoided where possible. Where existing utilities cannot be avoided during construction, Idaho Power would work with the utility owner to avoid or minimize service disruptions to the extent feasible.

**Water Quality** – The following environmental protection measures would be implemented to protect water quality:

- WQ-1 Prior to construction, Idaho Power would develop and implement a Storm Water Pollution Prevention Plan (SWPPP).
- WQ-2 Storage or transfer of fuels, lubricants, and other hazardous materials would not be allowed within 100 feet of wetlands or other surface water bodies.
- WQ-3 Construction activities, staging areas, and service roads would be located to minimize direct effects on ground water or surface water.
- WQ-4 Trenching activities for installation of the water pipeline across intermittent drainages would be curtailed when water is flowing in the drainages. If installation of the water pipeline must occur during periods of active flow, in-stream construction methods (including dam and flume) would be used to minimize impacts on surface water quality.

**Site Access and Road Maintenance** – Idaho Power describes roads necessary for the construction and O&M of transmission lines as either service roads or access roads. The sole purpose of service roads is to provide maintenance crews ingress to the transmission lines. These roads would not exist if the transmission lines did not exist. Public use of service roads would be determined on a case-by-case basis with the BLM.

In contrast, access roads serve a broader purpose, such as contributing to the BLM, county or state road systems. Access roads provide direct or indirect access to the transmission lines, but that access is not their primary purpose. Idaho Power would be responsible for road closures mutually agreed to by Idaho Power and the BLM (that is, roads that are closed to the public, but accessible to the BLM and Idaho Power for maintenance purposes). No closures of existing access roads are anticipated for this project.

The following environmental protection measures would help to minimize the effects of road construction and maintenance activities on resources:

- RD-1. Appropriate traffic control measures, where necessary, would be used to ensure public safety during construction. Prior notice would be given for any extended delays or road closures.

- RD-2. Overland travel, where feasible, would be used to minimize ground disturbance. Large rocks and vegetation may be moved within these areas to allow vehicle access. Overland travel on steep slopes should be avoided.
- RD-3. Any damage to existing roads that may occur during construction, operation, or maintenance activities would be repaired as soon as possible following completion of the activity.
- RD-4. All existing roads would be left as close to their existing condition as possible without creating environmental degradation (e.g., erosion or rutting from poor water drainage) or unsafe conditions.
- RD-5. Where appropriate, roads would be maintained to have crossroad drainage to minimize the amount of channeling or ditches needed. Water bars would be installed at all alignment changes (curves), significant grade changes, and as requested by the Authorized Officer.
- RD-8. All existing road drainage structures would be maintained by Idaho Power during construction and future O&M activities.
- RD-9. If necessary, best management practices (BMPs) to minimize fugitive dust from service roads and other areas of ground disturbance within the construction areas would be implemented. This may include the use of water, vehicle speed limits, gravel, or a combination of these or similar control measures may be used.
- RD-10. Following construction, Idaho Power would monitor the use of the new service roads during line inspections, and if use of the new service roads by the public becomes problematic and results in excessive erosion or causes extensive resource damage, Idaho Power would consult with BLM as to whether gates should be installed to control access to service roads.

Service roads would be inspected concurrently with line inspections. Maintenance requirements would vary depending on the type of road, level of use, and condition of the road. Typically, maintenance would be conducted when road conditions threaten resource values or public safety, or impede access for transmission line maintenance personnel.

**Noxious Weed Control** – Idaho State law (Idaho Administrative Procedures Act [IDAPA] 2, Title 6, Chapter 22) lists modes of action that are capable of disseminating noxious weeds and the duties to control the spread of listed noxious weeds. Equipment and supplies necessary for transmission line construction and future O&M activities, and the activities themselves, are possible agents for the spread of noxious weeds. To decrease the potential for the introduction or spread of undesirable vegetation, the following environmental protection measures would be followed during construction and O&M activities:

- NW-1. Personal vehicles, sanitary facilities, and work areas would be confined to areas specified in the POD.
- NW-2. The responsible party would clean all equipment that may operate off-road or disturb the ground before beginning construction or O&M activities within a pre-determined area. This process would clean tracks and other parts of the equipment that could trap soil and debris and would reduce the potential for introduction or spread of

undesirable exotic vegetation. Preferably, the cleaning would occur at an Idaho Power operation center, commercial car wash, or similar facility. Vehicles traveling only on established paved roads are not required to be cleaned.

- NW-3. Idaho Power would prepare a revegetation plan in consultation with the BLM when necessary. The plan would specify appropriate revegetation timing, techniques, and seed mixes. Adherence to this plan also would help limit the spread and establishment of undesirable vegetation. Certified, weed-free seed must be used on all areas to be restored. Other construction material, such as fill, also shall be free of undesirable vegetation seeds.
- NW-4 As directed by the Authorized Officer, the Holder shall be responsible for control of noxious weed species that result or would result from the construction, use, or maintenance of their grant. These control efforts and requirements include the following as applicable:
- If herbicides are used, the Holder shall comply with all applicable federal and state laws and regulations. Herbicides shall be used only in accordance with their registered uses within the limitations imposed by the Secretary of the Interior. Prior to the use of herbicides, the Holder shall obtain from the Authorized Officer written approval of a Herbicide Use Proposal Plan showing the type and quantity of herbicide to be used, weed(s) to be controlled, method of application, and any other information deemed necessary by the Authorized Officer.
  - Applicator(s) shall hold a current State of Idaho applicator's license or be under the direct supervision of a licensed applicator.
  - For areas and acres treated, the Holder shall submit to the BLM a completed "BLM Pesticide Application Record" form.
  - Other control methods include, but are not limited to, annual mowing.

**Cultural Resources** – Any cultural and/or paleontological resource (fossil[s] or historic or prehistoric site or object) discovered by Idaho Power, or its designated contractor, on BLM land shall be immediately reported to the Authorized Officer. 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 Authorized Officer, by telephone and 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 and protected for 30 days or until notified to proceed by the Authorized Officer. Idaho Power's construction inspector would immediately implement the following measures:

- a. Flagging would be erected to prohibit potentially destructive activities.
- b. Idaho Power's archaeologist would make a preliminary assessment of the newly discovered resource.

- c. If the archaeologist determines that the discovery represents a potential new site or an undocumented feature of a documented site, the BLM would be notified and processes identified by the BLM would be followed.
- d. Construction would not resume in the identified area until cleared by the archaeologist (private land) or Authorized Officer (public lands managed by the BLM).

Environmental protection measures for cultural resources include the following:

- CR-1. Prior to construction, all supervisory personnel would be instructed on the protection of cultural resources, the confidentiality of site location information, and that the collection of cultural material is prohibited. The construction contract would address (a) federal and state laws; (b) the importance of these resources; (c) the purpose and necessity of protecting them; and (d) methods for protecting sensitive resources.
- CR-2. Overland travel and other disturbance would be restricted near known sites. Where a road intersects a site, the road sides would be posted to indicate that no off-road activity may occur. Marking would be coordinated with the BLM and done by personnel appointed by Idaho Power. After construction or the O&M activity is complete or no longer poses a threat to the cultural resources, the stakes promptly would be removed to protect the site's significance and location from unwanted attention.
- CR-3. Contractors would be provided with maps showing avoidance areas; these would include established work zones as well as ROW areas where overland travel should be avoided.
- CR-4. All human interments would be treated with the respect accorded them by state and federal laws applying to human remains. If the discoveries are unanticipated, state law does not distinguish between historic or prehistoric burials as far as what steps are required for initial notification or disinterment. If human remains are discovered on BLM lands during construction or future O&M activities, Idaho Power would stop all work in the immediate area to protect the integrity of the find and notify the county sheriff and BLM as soon as possible. In addition, the location of the find would be flagged or fenced off to protect it from further impacts. The BLM would determine what mitigation is necessary, and once the mitigation is complete, work can resume in the area.

**Sensitive Species** – The following environmental protection measures would minimize project effects on sensitive plant and wildlife species.

- SS-1. Prior to construction, all supervisory personnel would be instructed on the protection of natural resources, including sensitive species and habitats. This would include (a) federal and state laws; (b) the importance of these resources; (c) the purpose and necessity of protecting them; and (d) methods for protecting sensitive resources.
- SS-2. Sensitive species that occur within or adjacent to the ROW and work areas would be marked on the ground, where practical, to ensure that the species are avoided. If species are discovered during the work, Idaho Power would establish a spatial buffer

zone and immediately contact the BLM. The Authorized Officer may evaluate the adequacy of the buffer on a case-by-case basis. Unless Idaho Power is informed otherwise, work outside of the buffer area would continue. If Idaho Power needs to conduct work within the buffer area, Idaho Power would work with the BLM to develop a solution that is acceptable to both parties and would allow Idaho Power to complete the necessary work in a timely manner and/or within the scheduled outage window, if applicable. Once the project has been completed or no longer poses a threat to the species, the marking (stakes) promptly would be removed to protect the site's significance and location from unwanted attention.

- SS-3. For sensitive resource issues where marking is not appropriate, work in designated areas would be modified or curtailed during critical periods. The Authorized Officer, in advance of construction or maintenance, would approve sensitive areas and time frames. Emergency repair situations are excluded from this restriction.
- SS-4. If sensitive wildlife species are killed or injured due to construction or O&M activities, the local Idaho Department of Fish and Game (IDFG) conservation officer and Authorized Officer would be notified.
- SS-5. The Construction Manager must ensure all construction workers are knowledgeable of the legal harvest seasons, methods of take, and bag limits for game species. All on-site personnel would be made aware that all birds of prey are protected by federal and state laws.
- SS-6. New structures would be built in accordance with raptor-safe standards specified in Avian Power Line Interaction Committee (APLIC) (2006) and Idaho Power's raptor protection policy.
- SS-7. Idaho Power would follow the Cascade RMP restrictions (no major construction activities from March 15 through June 30) for the Long-billed Curlew Habitat ACEC on BLM managed lands.
- SS-8. Overall construction impacts to reptiles and amphibians are expected to be very low. However, if a large (hundreds of snakes) hibernaculum is unearthed during construction; activity temporarily should be halted to allow the snakes to disperse to other cover.
- SS-9. If inactive raptor nests are discovered within the ROW, Idaho Power would obtain the appropriate permit or approval to remove those nests prior to construction. In the unlikely event that nests with eggs or young are discovered, Idaho Power would consult with BLM, IDFG, and the USFWS to decide on the proper action.

**LEPA Habitat Protection** – In addition, to comply with the BLM 6840 Manual direction, the USDI Conservation Agreement (2009), and 2006 Candidate Conservation Agreement (CCA) (as amended), the following measures would be employed for any selected overland travel routes and proposed transmission line ROWs. A BLM botanist, ecologist, or approved knowledgeable Idaho Power or contract botanist would accompany construction crews to identify the access and coordinate the actual power pole locations on BLM lands.

- LP-1. Surveys would be conducted during the appropriate 2010-11 season in the proposed transmission line ROWs and access and service roads to identify avoidance areas (slickspots).
- LP-2. Overland crossing of any LEPA plants or habitat would be avoided as much as possible, as determined by the LEPA consideration zone or survey.
- LP-3. During construction, soil and materials would not be stored on slickspots, and excess soil would not be spread on slickspots.
- LP-4. Impacts to sagebrush would be minimized to the maximum extent possible.
- LP-5. Areas disturbed within sagebrush plant communities as a result of construction of project components (excluding overland travel and established roads) would be seeded with a BLM-approved certified weed-free seed mix appropriate for the area. Native plants would be used in the seed mix. Forbs also should be included in seed mixes to increase diversity and pollen sources for pollinators. Reseeding would result in 50 percent perennial cover (measured after two growing seasons) unless site-specific conditions preclude this level of cover. Seeding techniques that minimize soil disturbance (e.g., no-till drills and rangeland drills equipped with depth bands) would be used and identified slickspots would be avoided during reseeding efforts.

**Air Quality** – The following environmental protection measures would minimize project effects on air quality.

- AR-1. Road construction would include dust control measures as necessary.
- AR-2. All requirements of those entities having jurisdiction over air quality matters would be followed, and any permits needed for construction activities would be obtained. Burning of construction trash and discarded poles or pole pieces would not be allowed.

**Health, Safety, Noise** – The following environmental protection measures would minimize project effects on health, safety, and noise.

- HS-1. Hazardous materials would not be drained onto the ground or into streams or drainage areas. Totally enclosed containment would be provided for all solid waste.
- HS-2. Vehicle maintenance activities that have the potential to release hazardous materials (e.g., oil change, repair of a hydraulic line) would be conducted in approved work areas and with appropriate BMPs (e.g., spill containment).
- HS-3. Any required blasting would be conducted in strict compliance with all applicable safety orders and rules. All employees engaged in the handling and use of explosives would obtain the appropriate certification required by the state or county in which such operation is located.

**Fire Protection Measures** – Idaho Power would regularly inspect the transmission lines for fire hazards. Idaho Power crews and contractors would have the following equipment when working in or around the transmission and water lines on BLM lands:

- FP-1. Fire protection measures would be followed, as required by state and federal regulations, to prevent wildfires.
- FP-2. All power-driven equipment, except portable fire pumps, shall be equipped with one fire extinguisher having an Underwriters Laboratories (UL) rating of at least 5 BC, and one "D" handled or long handled round point shovel, size "0" or larger. In addition, each motor patrol, truck, and passenger-carrying vehicle shall be equipped with a double-bit axe or Pulaski, 3-1/2 pounds or larger.
- FP-3. Each internal combustion engine shall be equipped with a spark arrester meeting either (1) U.S. Department of Agriculture Forest Service Standard 5100-1a, or (2) appropriate Society of Automotive Engineers (SAE) recommended practice J335(b) and J350(a) as now or hereafter amended unless it is:
  - i. Equipped with a turbine-driven exhaust supercharger such as the turbocharger. There shall be no exhaust bypass.
  - ii. A passenger-carrying vehicle or light truck, or medium truck up to 40,000 gross vehicle weight (GVW), used on roads and equipped with a factory-designed muffler complete with baffles and an exhaust system in good working condition.
  - iii. A heavy duty truck, such as a dump or log truck, or other vehicle used for commercial hauling, used only on roads and equipped with a factory designed muffler and with a vertical stack exhaust system extending above the cab.
- FP-4. Exhaust equipment, including spark arresters and mufflers, shall be properly installed and constantly maintained in serviceable condition.
- FP-5. Smoking is not allowed outside of vehicles or construction trailers.

#### **2.2.4 *No Action Alternative***

BLM would not amend or grant ROW authorization. The existing lines would remain in place, interconnection facilities would not be constructed on BLM land, and Idaho Power would continue operation and maintenance as it currently does under the existing BLM ROW grant. However, the LGPP facility would still be constructed and all linear project components would be constructed on private lands and all impacts would occur on private lands.

Implementation of this alternative would preclude impacts on BLM land associated with the Proposed Action; however, it would not preclude environmental impacts from occurring. If this alternative were adopted, other transmission and water line routes would need to be developed for the LGPP, which would have their own environmental consequences. If no federal lands were to be crossed and no federal funds were used, NEPA would not likely be triggered and the project could be constructed pursuant to applicable state and federal regulations.

## 2.3 Cumulative Actions

Cumulative actions are proposed actions that potentially have a cumulatively significant impact together with other proposed actions, and “should be discussed” in the same NEPA document (40 CFR 1508.25[a][2]) (BLM 2008). Cumulative actions within the project study area include:

- Urban development in Emmett, New Plymouth, and Middleton
- Proposed geothermal leasing activity, and
- The following components of the LGPP facility that would be constructed on private lands:
  - Construction and operation of the proposed LGPP
  - Construction of a natural gas pipeline to bring fuel to the LGPP
  - Construction of water supply wells and pump station

These cumulative actions are described below and the impacts of these cumulative actions are described in Chapter 3.0.

### 2.3.1 *Urban Development*

Urban development in the nearby communities of Emmett (Gem County), New Plymouth (Payette County), and Middleton (Canyon County) has the potential to result in increased use of BLM lands within the project study area.

### 2.3.2 *Geothermal Leasing*

BLM has received a lease nomination of approximately 23,000 acres for geothermal exploration. The nominated lands include areas within the Long-billed Curlew Habitat ACEC and Slickspot Peppergrass Management Area 1. If leasing occurs, exploration drilling would likely occur in the summer of 2011. Approximately 10 holes would be drilled on each 5,000 acres across the landscape, thus 40 drill sites may occur. Good roads would be necessary to access each drill site. If existing roads are insufficient to access the sites, new roads would be constructed, possibly several miles of them. Each drill site would occupy a 40-foot x 60-foot pad (0.06 acres). Thus, geothermal exploration may construct or reconstruct several miles of road and occupy 4± acres of drill sites. After drilling, each hole would be plugged and the site reclaimed. If a suitable geothermal resource exists, subsequent development would include a geothermal power plant, permanent wells, supply and return pipes between the wells and power plant, access roads, and new transmission lines.

### 2.3.3 *Langley Gulch Power Plant*

The proposed LGPP is a natural gas-fired combined-cycle combustion turbine (CCCT) power plant with a nameplate capacity of approximately 300 MW. Other major components include a warehouse, office, and operation control buildings to support the plant.

Idaho Power is building the LGPP on 137 acres of undeveloped private rangeland adjacent to I-84, immediately southwest of Exit 9 in rural Payette County (**Figure 1.0-2**). The site is

bounded by I-84 to the north and east and BLM land to the south and west. The plant site, staging areas, switchyard, evaporation pond, and access roads are estimated to occupy approximately 70 acres of the site. The remaining 67 acres would be largely undisturbed and would remain as vegetated grassland habitat.

### ***2.3.4 Natural Gas Supply***

Idaho Power has transportation rights on Williams' Northwest Pipeline from Sumas, Washington, to Elmore County, Idaho. Idaho Power intends to deliver natural gas to the LGPP site via Williams' Northwest Pipeline. The Northwest Pipeline would be tapped and a short lateral line, approximately 1 mile in length, would be constructed by the gas company to connect the LGPP to the Northwest Pipeline. The pipeline extension to supply the facility with natural gas is expected to run along the U.S. Highway 30 ROW and would not cross BLM land.

### ***2.3.5 Water Supply***

The LGPP will be water-cooled using ground water rights that are tributary to the Snake River. The quantity of water applied for was 4.73 cubic feet per second (cfs), or 2,230-acre-feet per year. The water would be supplied by wells located adjacent to the Snake River and would be pumped and delivered to the site via underground pipeline. As part of the LGPP project, Idaho Power would construct a pump station and an 8.6-mile water pipeline to bring water from the Snake River to the plant site. Approximately 3 miles of the pipeline route is located on BLM land and as a result, the water pipeline itself is included as part of the Proposed Action.

There is an existing 8-inch water well located on the LGPP site. The well is located near the east property line in SE1/4, NE1/4, Section 33, T7N, R4W. The well was drilled in 1998 and is 440-feet deep with a static water level of 178 feet. A pump was installed at a depth of approximately 300 feet and during operations, drawdown is not expected to exceed pump depth. Idaho Power does not anticipate any effect on nearby wells because the LGPP would be using less water than what was originally proposed and approved for a subdivision that was planned for the same location. Moreover, the Idaho Department of Water Resources would not have issued Idaho Power a permit if they anticipated an effect on nearby wells. The primary use of this well would be to supply potable water to the site. The well would also serve as a backup source for cooling and industrial water. In June 2009, Idaho Power applied for the right to use 2.0 cfs, or 700-acre-feet per year of ground water from this well. Idaho Power received the approval notice from IDWR in December 2009.

An additional existing water right (65-23312) currently is appropriated to the LGPP property for commercial and residential use, which was established from a planned development previously proposed for the site. Idaho Power does not plan to file for proof of beneficial use on this existing right and will let this water right expire.

### 2.3.6 *Water Use and Disposal*

Water will be used to operate the LGPP, with the majority used as cooling media for condensing steam back into water. Water will be treated through a clarifier system and stored in a tank prior to use in the plant. One of the primary uses of the water is in the closed-loop steam cycle. The water will be treated through a second process to create the pure, demineralized water necessary for the steam cycle. Once treated and stored, the process water will flow through a boiler, which converts it to steam. From the boiler, steam flows to a steam turbine to generate power. Once the steam is used for power generation, it flows to a condenser that converts the steam back into water, and the cycle starts again.

The second primary use of the water is for cooling purposes. This second process takes water from the storage tank into a cooling tower basin. From the cooling tower, cool water is pumped into the condenser tubes that have the steam flowing around them. As the steam in the first use is converted to water, the cooling water is warmed. This warm water is pumped back to the top of the cooling tower. In the cooling tower, the warm water trickles across media and is broken up. Fans are used to draft air through the water to cool it prior to falling into the basin and pumping through the cycle again. A significant amount of the water is lost to evaporation.

Each of these uses of water requires a blowdown stream to maintain water chemistry within the system. The blowdown is then processed through a treatment stream, including reverse osmosis, filter presses, and other treatment equipment to send the treated blowdown back into the primary storage tank. The waste stream generated from blowdown treatment is then sent to on-site evaporation ponds for final disposal by means of evaporation.

The LGPP will employ a zero discharge evaporation pond for wastewater disposal. The pond is expected to be a 13-acre lined facility located on the south/center side of the site, adjacent to the power block. Cooling water would be pre-treated to increase the cycles of concentration and then post-treated with reverse osmosis to reduce the volume of flow. Preliminary estimates indicate that approximately 30 gallons (4 cubic feet) per minute of wastewater flow would be discharged to the evaporation pond.

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### 3.0 Affected Environment and Environmental Consequences

This chapter of the EA describes the current conditions (affected environment) and the expected environmental effects on the following natural and human resources that could be caused by implementation of the Proposed Action or the No Action Alternative:

- Land Use
- Geology, Minerals, and Soils
- Air Quality
- Water Resources
- Vegetation and Wetlands
- Wildlife and Wildlife Habitat
- Special Status Species
- Areas of Critical Environmental Concern (ACEC)
- Recreation
- Transportation and Access
- Visual Resources
- Economic and Social Values
- Cultural and Historic Resources

The project study area includes project features and resources that may be affected, either directly or indirectly, by project activities. The project study area is located in southwestern Idaho in Payette, Gem, and Canyon counties (**Figure 3.1-1**). The project study area was defined to incorporate all of the features of the Proposed Action, and existing data primarily were used to characterize the resources in the project study area.

BLM land within the project study area is undeveloped. Within the project study area, the BLM land generally is surrounded by rural agricultural lands. The southern portion of the project study area encompasses some residential development and extends into the northern portion of the city of Caldwell.

Resource-specific surveys were conducted for botanical, wildlife, and cultural resources. For these resources, the information presented and the impacts are specific to the survey area. The survey area is a subset of the project study area and includes the proposed ROW and adjacent area for each project component. Specific survey areas are defined in the appropriate sections below.

For most of the resource topics, published and publically available data from a variety of sources were used to describe the affected environment and determine potential impacts of the Proposed Action. These published data were supplemented by field surveys conducted by AECOM ecologists on BLM land from May 12 through 18 and June 22 through 24, 2009. These initial field surveys were followed up with surveys of potential slickspots on November 30 and December 10, 2009, and January 6, 2010. The specific subjects of the biological resources surveys were vegetation and wetlands, wildlife and wildlife habitat, and special status species; however, information collected during the field surveys also was used to

augment published data for the other environmental resources as well. Results of the field surveys were documented in a Botanical Technical Report (Idaho Power 2009a), a Wildlife Technical Report (Idaho Power 2009b), and a Biological Assessment (Idaho Power 2010c).

Separate surveys were conducted by archaeologists from Ethnoscience between November 11 and November 17, 2009, to document cultural and historic resources within the temporary ROWs that potentially could be affected by the project. Results of these cultural resources surveys were documented in a Class III Cultural Resource Inventory Report (Fandrich and Hope 2010).

In order to describe the potential impact of the project on sensitive resources, the following thresholds were used to describe the degree, level, or magnitude of the effect:

- **No effect:** No discernable effect.
- **Negligible:** The impact is barely detectable and/or would result in no measureable or perceptible change to the resource of interest.
- **Minor:** The impact is slight but detectable and/or would result in small but measurable changes to the resource.
- **Moderate:** The impact is apparent and/or would be detectable by casual observers. Potential changes or effects on the resource generally would be localized and short-term.
- **Major:** The effect is readily apparent and would result in potentially substantial changes to the character of the resource. Impacts generally would be long-term and/or extend over a wide area.

The potential impact of an effect is influenced by the duration that the effect would last. For the purposes of this EA, short-term impacts are defined as those that would last for less than one year (generally during the construction period), and long-term impacts are those that would last for more than one year (generally resulting from the operation of the facility).

## 3.1 Land Use

This section describes land ownership and existing land use on federal, state, and private land, and the potential effects of the Proposed Action and the No Action Alternative on land use in the project study area.

### 3.1.1 *Affected Environment*

Land within the project study area includes federal land managed by BLM and the Bureau of Reclamation (BOR), state land, and privately owned land. The project study area also includes portions of one municipality – the city of Caldwell, Idaho. Major land uses are described in the following sections.

#### 3.1.1.1 Federal Land

Federal lands occupy a high percentage of the upland portion of the project study area, generally those areas that are not suited for cultivation. The majority (99 percent) of these federal lands are managed by the BLM. The BOR manages several small parcels scattered

through the project study area that total 289 acres. These small parcels of BOR land are managed cooperatively with BLM (BLM 1987).

BLM land within the project study area is part of the BLM FRFO planning area, and is managed according to the Cascade Proposed RMP and Final EIS (BLM 1987). The BLM FRFO is currently preparing an updated RMP and EIS to guide management decisions within the Four Rivers planning area. Land uses on BLM land within the project study area include livestock grazing, oil and gas exploration and production, utility corridors, communication facilities, and recreation. BLM land within the project study area is located within the Long-billed Curlew Habitat ACEC and also is managed for wildlife conservation, which is described in detail in Section 3.7 (Special Status Species). Livestock grazing, utility corridors, and communication facilities are described briefly below. Recreational activities on BLM land within the project study area are discussed in Section 3.9.

### Livestock Grazing

The BLM manages livestock grazing on public lands as guided by federal laws, including the Taylor Grazing Act (1934), ESA (1973), FLPMA (1967), and the Public Rangelands Improvement Act (1978). Grazing management includes administering permits and leases held by ranchers who graze their livestock, mostly cattle and sheep, at least part of the year on grazing allotments under BLM management. Grazing allotments may include other public land under BLM management, as well as private grazing land managed by BLM. Permits and leases generally cover a 10-year period and are renewable (BLM 2009a).

Grazing allotments that occur within the project study area encompass BLM, BOR, state, and privately owned land. A portion of 10 BLM grazing allotments occur within the project study area (BLM 2009b). As shown in **Figure 3.1-2**, these grazing allotments encompass some state, BOR, and private land holdings, in addition to BLM land.

Two grazing allotments would be affected by the proposed project: the Black Canyon (Shaw) (#20135) Allotment and the Black Canyon Allotment (#00310). The Black Canyon (Shaw) (#20135) Allotment is used to graze cattle during the spring (March 1 through May 31) and winter (November 15 through February 28) (BLM 2009d). Portions of the Black Canyon Allotment (#00310) are used to graze sheep during the spring (March 11 through May 23) and winter (December 1 through December 31) (BLM 2009d).

### Utility Corridors and Communication Facilities

Existing utilities and communication facilities on BLM land are shown in **Figure 3.1-1**. Under FLPMA and the Mineral Leasing Act, BLM issues ROW grants for electrical power generation, transmission, and distribution systems; systems for the transmission and reception of electronic signals and other means of communication; oil and natural gas gathering, transmission, and distribution pipelines and related facilities; other pipelines; highways; and railroads (BLM 2009c).

Existing utility ROWs within the project study area that traverse BLM land include the following:

- Idaho Power owns and operates a 230-kV electrical transmission line (Caldwell-Ontario 230-kV line) that traverses the project study area from northwest to southeast.
- Chevron owns and operates a refined products pipeline that traverses the project study area from northwest to southeast.
- Williams Northwest Gas owns and operates a gas pipeline that traverses the project study area from northwest to southeast, generally parallel to the Chevron pipeline.
- Intermountain Gas owns and operates a gas pipeline that traverses the project study area from east to west between the cities of Emmett and Parma (not pictured on **Figure 3.1-1**).

In addition to these utility ROWs, numerous communication structures are located within the project study area, including cellular, microwave, and paging towers, and other communication facilities. Communication structures located on BLM land within the project study area include:

- A microwave tower located in the northern portion of the project study area.
- A microwave tower located on the east side of Sand Hollow Road.
- Several cellular towers and private land mobile communication facilities located near the Black Canyon Interchange.

### 3.1.1.2 State Land

The State of Idaho owns one contiguous 240-acre parcel of land within the project study area, west of I-84 and east of the existing 230-kV transmission line. This parcel of state land is entirely encompassed within a BLM grazing allotment.

### 3.1.1.3 Private Land

The majority of private land within the project study area is intensively cultivated through a combination of flood and center pivot irrigation systems. These lands are mostly zoned as agricultural or rangeland, with a few rural residential, commercial, and industrial zoning districts (Canyon County 2005; Gem County 2007; Payette County 2006). As described above, some privately owned land within the project study area is contained within the existing BLM grazing allotments. Residential, commercial, and industrial areas primarily are located in the southern portion of the project study area within the city of Caldwell.

## 3.1.2 *Environmental Consequences*

### 3.1.2.1 Methodology

Impacts on land use would be major if a substantial portion of land within the project study area were to be converted to another use, or if existing uses would be precluded as a result of the Proposed Action. Impacts on land use would be minor if there was a temporary disruption of land use and authorized activities during the construction period.

### 3.1.2.2 Alternative A—Proposed Action

Construction activities, roads, and facilities would disturb up to 1,065 acres over the short-term construction period and up to 373 acres over the long-term. Long-term disturbances would be related to operation and maintenance activities and the physical footprint of transmission structures and manholes associated with the water pipeline. **Table 3.1-2** summarizes the length and area of temporary and permanent land use impacts by ownership, followed by a description of the impacts.

Table 3.1-2: Land Use Impacts by Ownership

| Land Ownership<br>Project Facility   | BLM Land |                           |  | Private Land |                           |  | Total |                           |  |
|--|----------|---------------------------|--|--------------|---------------------------|--|-------|---------------------------|--|
|  | Miles    | Temporary Impacts (acres) | Permanent Impacts <sup>1</sup> (acres) | Miles        | Temporary Impacts (acres) | Permanent Impacts <sup>1</sup> (acres) | Miles | Temporary Impacts (acres) | Permanent Impacts <sup>1</sup> (acres) |
| Water Pipeline:<br>- 8.6 miles<br>- 300-ft-wide construction easement<br>- 30-ft-wide permanent ROW  | 3        | 109                       | 11                                     | 5.6          | 204                       | 20                                     | 8.6   | 313                       | 31                                     |
| 138-kV Transmission Line:<br>- 16 miles<br>- 300-ft-wide construction easement (width varies on private land)<br>- 150-ft-wide permanent ROW | 6.5      | 236                       | 118                                    | 9.5          | 346                       | 173                                    | 16    | 582                       | 291                                    |
| 230-kV Transmission Line:<br>- 2.8 miles long<br>- 500-ft-wide temporary construction easement<br>- 150-ft-wide permanent ROW                | 2.8      | 170                       | 51                                     | 0            | 0                         | 0                                      | 2.8   | 170                       | 51                                     |
| <b>TOTAL</b>   | --       | 515                       | 180                                    | --           | 550                       | 193                                    | --    | 1,065                     | 373                                    |

<sup>1</sup>The permanent impacts identified would be a subset of the temporary impacts.

The Proposed Action would have minor direct short-term construction-related effects on agriculture and livestock grazing within the proposed temporary construction ROWs, and would have minor indirect long-term maintenance and operational related effects on potential future land uses within the proposed permanent utility ROWs. These effects are described below.

#### 3.1.2.2.1 Construction Impacts

The proposed transmission lines and water pipeline traverse the Black Canyon (#00310) and the Black Canyon (Shaw) (#20135) grazing allotments. During construction, existing

permitted land use activities within the temporary construction ROWs, such as livestock grazing, would be temporarily disrupted due to vegetation removal and other land-disturbing activities until construction activities are completed. Vegetation removal, soil disturbance, and compaction would result in a temporary decrease in grazing quality within the ROWs until vegetation is successfully re-established. These impacts would be considered minor due to the limited acreage affected and limited duration of disturbance.

The proposed transmission lines and water pipeline are not expected to have any impacts on existing utilities or communication facilities on BLM land during construction. The proposed water pipeline would cross beneath the existing Caldwell-Ontario 230-kV transmission line, but would not intersect any of the major pipelines described above in Section 3.1.1.

### 230-kV Transmission Line

The proposed 230-kV transmission line would cross approximately 2.65 miles of the Black Canyon (Shaw) (#20135) grazing allotment. The temporary ROW for the 230-kV transmission line encompasses approximately 162.5 acres (approximately 0.01 percent) of this grazing allotment. Construction of the 230-kV transmission line may coincide with time periods when livestock grazing occurs within the allotment. Holes excavated for the transmission line structures that are left open overnight or for more than one day would pose a risk to livestock grazing in the area. These would be covered and/or fenced where practical to minimize the potential risk to livestock. Approximately 0.25 acres of grazing land would be lost due to the construction of service roads. Overall impacts from construction of the 230-kV transmission line would be minor.

### 138-kV Transmission Line

The proposed 138-kV transmission line would traverse approximately 6.5 miles of BLM land, including 2.79 miles through grazing allotment #20135 and 3.55 miles through grazing allotment #00310. The 138-kV transmission line ROWs encompass approximately 101.3 acres (less than 0.01 percent) of grazing allotment #20135 and approximately 128.2 acres (less than 0.01 percent) of grazing allotment #00310. Construction of the 138-kV transmission line would have similar impacts to livestock grazing as those discussed above for the 230-kV transmission line.

The proposed 138-kV transmission line would cross approximately 9.5 miles of private, predominantly agricultural and rural residential lands. The 138-kV transmission line would parallel Old Highway 30 (**Figure 3.1-1**) and be located within or adjacent to the easement for an existing distribution line. Construction of the 138-kV transmission line through private lands could temporarily disrupt activities on immediately adjacent agricultural lands.

Residences within and adjacent to the construction corridor may experience temporary disruptions in property access and periodic interruptions in electric power during the construction period; however these impacts would be minor short-term impacts. Other existing utilities within the ROW would be located and avoided during construction to the extent feasible. Where existing utilities cannot be avoided during construction, Idaho Power

would work with the utility owner to avoid or minimize service disruptions. Overall impacts from construction of the 138-kV transmission line would be minor.

### Water Pipeline

The proposed water pipeline would cross approximately 3.0 miles of the Black Canyon (Shaw) (#20135) grazing allotment. Approximately 109 acres of the Black Canyon (Shaw) (#20135) grazing allotment (less than 0.01 percent of the total allotment area) occurs within the temporary construction ROW and could be disturbed during construction. Small sections of the trench may be left open overnight; these would be covered, fenced, or otherwise marked to minimize the chance of animals or people falling in.

Trenching for the pipeline would cause temporary fragmentation of grazing allotment #20135 and would act as a barrier to livestock movement during construction. Additionally, livestock could be at risk of falling into or being trapped in the trench. Per EPM WA-9, Idaho Power would inform grazing allotment lease holders of the construction schedule, and the impact on livestock grazing would be negligible to minor.

The proposed water pipeline would cross approximately 5.6 miles of private land and would parallel road ROW along Fairview Avenue. Construction of the water pipeline through private lands could temporarily disrupt activities on immediately adjacent agricultural lands. The extent of disruption would be limited to the easements obtained for the project. In areas where the pipeline would be installed through cultivated fields, Idaho Power would restore the fields to their preconstruction condition to the extent feasible. Idaho Power would consult with landowners regarding the construction schedule and the resulting impacts to agricultural areas would be short-term and minor.

The water pipeline may intersect existing municipal or private buried utilities serving private land in areas where the pipeline runs adjacent to roadways or across private parcels. By locating existing utilities prior to and during construction, in accordance with EPM WA-10, impacts from construction of the water pipeline on existing utilities would be minor to moderate.

#### 3.1.2.2.2 Operational Impacts

Land uses (such as livestock grazing) that currently are permitted by BLM and are compatible with transmission line operations may continue within the transmission line ROWs once construction is completed. However, certain activities (e.g., erection of structures) would not be allowed within the permanent ROWs of the transmission lines or the water pipeline. Overall long-term impacts of the Proposed Action on land use on BLM land are expected to be negligible.

Easements on private land may contain conditions that would limit certain activities, such as tree planting or erection of structures, within the permanent easements. The majority of current agricultural and rural residential activities could continue within the permanent easements. Overall long-term impacts of the Proposed Action on land use on private property

are expected to be minor. Potential impacts of the proposed transmission line on property values are discussed in Section 3.12.

### 3.1.2.3 Alternative B—No Action

The alternative route for the 230-kV transmission line that avoids BLM lands would be more than twice the length of the proposed route, and would have impacts on agricultural lands and rural residences at several locations. Impacts on agricultural lands could include disturbance during the growing season, and the possible removal of small areas of land from cultivation if structures would need to be located on the edges of cultivated fields. Several homes along SW 3<sup>rd</sup> Avenue are within 60 to 90 feet of the edge of the road, but there may be opportunities for the transmission line to cross the road to avoid impacts to these residences.

An alternative route for the 138-kV transmission line that avoids BLM lands would have impacts on private agricultural lands and rural residences along much of its length, although a detailed analysis of potential impacts has not been conducted due to routing uncertainties; however, overall impacts would be similar to those described for the Proposed Action.

Impacts from constructing the water pipeline along a road would be similar to those described above. This alternative route would be approximately 11 miles long, which is approximately 2 miles longer than the proposed route.

Other land use impacts, including cumulative effects associated with construction and operation of the power plant would be the same as described above for the Proposed Action.

Current operation and maintenance of the existing transmission line on BLM land and on adjacent private land would continue. However, there would be no new impacts on BLM land or existing authorized facilities or activities.

### 3.1.2.4 Cumulative Impacts

Cumulative impacts were considered within the project study area and included known projects that were likely to occur within the next five to ten years. Construction of the LGPP facility would result in a permanent conversion of approximately 70 acres of existing privately owned rangeland/grassland habitat to industrial use. This impact includes the footprint of the LGPP facility, staging areas, station switchyard, evaporation pond, access roads, and administration buildings. However, given the extent of available rangeland within the project study area, this impact is considered minor, and the Proposed Action would not be expected to have any substantial long-term cumulative impacts on existing land use within the project study area.

## 3.2 Geology, Minerals, and Soils

### 3.2.1 *Affected Environment*

#### 3.2.1.1 Geology

##### 3.2.1.1.1 Stratigraphy

The project study area is located within the western Snake River Plain located on Tertiary-aged basin fill sediments and volcanic rocks and terrace deposits composed of gravel capped by loess (Othberg et al. 1996). The project study area is located between major alluvial valleys of the Boise River to the south, Snake River to the west, and Payette River to the north. The only bedrock outcrops in the project study area are basalt flows of the Indian Creek formation in the area of Caldwell (Othberg and Stanford 1992). A sequence of terrace gravels is present along the ancestral Boise River drainage valley, and Tertiary-aged sand and mudstone of stream and lake deposits dominate the project study area between the major alluvial valleys. Terrace deposits are pebble to cobble gravel with a coarse sand matrix. Thin, wind-blown deposits of loess differentially cover the terrace surfaces. The southern portion of the project study area is an upland plain of unconsolidated lacustrine and fluvial materials that has been dissected by the Snake and Boise rivers.

##### 3.2.1.1.2 Topography

Elevations range from below 2,400 feet above mean sea level in the area of Caldwell to greater than 2,600 feet in the central portion of the project study area (**Figure 3.2-1**). Elevations again drop below 2,400 feet in areas of the Snake River and Payette River valleys that flank the northeastern and northwestern boundaries of the project study area.

##### 3.2.1.1.3 Geological Hazards

Because of the relatively low relief in the project study area, landslides are not expected to pose a hazard. There are no documented landslides in the vicinity of the project study area (Adams and Breckenridge 1991).

Southwest Idaho is not a seismically active area. From 1872 to 2000, there were no recorded or felt earthquakes in the Canyon, Payette, and Gem counties area (Breckenridge et al. 2004a). No active faults have been identified in the vicinity of the proposed site (Breckenridge et al. 2004b). There are no potential subsidence or karst hazards in the project study area (National Atlas of the U.S. 2010a).

##### 3.2.1.2 Minerals

A search of the Idaho Geological Survey's Mines and Prospects Digital Database was performed for the townships included in the project study area (IGS 2006). The database contains information on over 8,000 mining properties in Idaho compiled from published and unpublished reference materials, the U.S. Geological Survey's (USGS) Mineral Resources Data System, and the U.S. Bureau of Mines' Mineral Industry Location Subsystem. Four mineral records were found in the search and are located on the periphery or outside of the project study area. Two possible oil and gas tests were located in Section 3, T6N, R3W; and

another was located in Section 27, T5N, R3W. A gold placer prospect is located outside of the project study area in Section 7, T6N, R5W.

The general area of northern Payette County, north of new Plymouth, has low to medium potential for the occurrence of natural gas (BLM 2010a). However, the project study area lies within an area considered to have zero to low potential for hydrocarbon resources. The last oil and gas leasing in the FRFO planning area occurred in 1995, but leasing decisions have been deferred pending completion of the FRFO RMP/EIS (BLM 2008).

There are potential sand and gravel resources in the project study area, but only one quarry is located in the project study area (Section 33, T5N, R3W). However, the proposed routes for the linear project components would not cross the quarry site (National Atlas 2010b).

### 3.2.1.3 Soils

Soils information for the project study area was obtained from Soil Conservation Service published soil surveys for Payette County (Rasmussen et al. 1976), Gem County (Troeh et al. 1965), and Canyon County (Priest et al. 1972). Soil resources in the project study area are extremely diverse. This diversity is the result of the variability in parent materials, slope, aspect, elevation, climate, vegetation patterns, and time in place.

The project study area generally is dominated by silt loam and sandy loam soil types. The southern portion of the project study area generally includes lower slope grade, while the mid to more northern portion of the project study area is interspersed with soils of greater slopes (**Figure 3.2-2**). Silt loams and the steep Lolalita-Saralegui association soils, as well as the Tindahay coarse sandy loam soils are present along the transmission line corridors. Runoff on the Lolalita-Saralegui association soils tends to be very rapid and the erosion hazard is very high (Rasmussen et al. 1976). Runoff on the Tindahay coarse sandy loam soils tends to be medium, and the erosion hazard is moderate in nonirrigated areas and high in irrigated areas.

Soils in the Snake River Valley area are derived predominantly from river and windborne materials. The soils generally have weakly developed profiles, are unleached, alkaline, and have high natural fertility. Soil textures found in the river valley are silty and sandy loams in the river bottoms, and terraces and loamy sands and sandy loams in the foothills (Priest et al. 1972). Some of the soils within the project study area are designated as prime farmland if irrigated (NRCS 2010).

Soil types that exhibit high shrink-swell potential can pose structural problems for foundations, permanent facilities, and pipelines. The project study area is dominated by soil types with a low to medium shrink-swell potential (**Figure 3.2-3**). There are no soil types with a high shrink-swell potential mapped in the project study area.

The portion of the project study area in Canyon County is dominated by soils that are slightly susceptible to wind erosion, while the portion of the project study area in southern Payette County is fairly evenly divided between soils that are slightly to highly susceptible to wind

erosion (**Figure 3.2-4**). The northern portion of the project study area is dominated by soils that are moderately and slightly susceptible to wind erosion.

## 3.2.2 *Environmental Consequences*

### 3.2.2.1 Methodology

Impacts on geological resources would be considered major if unique or protected geological resources would be impacted or irreparably damaged by the proposed project. Impacts on mineral resources would be considered major if the proposed project would preclude development of mineral resources, or impact existing or planned mineral extraction operations. Impacts on soils would be considered major if the project potentially would cause substantial increases in erosion or increase the potential for landslides or mass movement of soil, or could result in substantial soil contamination.

### 3.2.2.2 Impacts Common to Both Alternatives

#### 3.2.2.2.1 Geology

There are no known unique or protected geological resources or geological hazards within the project study area. Potential impacts on geological resources would be limited to near surface impacts associated with pipeline trenching and excavation for transmission structure foundations. Areas of bedrock outcrops would be avoided to the extent practicable during final engineering. Therefore, neither the Proposed Action nor the No Action Alternative would have any substantial effects on geological resources. Neither alternative is expected to be affected by geological hazards.

#### 3.2.2.2.2 Mineral Resources

No known oil and gas wells or sand and gravel quarries would be crossed by any components of either alternative. Known mineral resources would be avoided to the extent practicable during final engineering. Therefore, the construction and operation of either alternative would not preclude access to the development of mineral resources, and no impact would be anticipated.

### 3.2.2.3 Alternative A—Proposed Action

#### 3.2.2.3.1 Construction Impacts

##### 230-kV and 138-kV Transmission Lines

Direct and short-term impacts to soils associated with construction of the transmission lines would result from soil compaction related to overland vehicle travel, construction of two permanent service roads for the 230-kV transmission line, and excavation for the transmission line structure foundations. These activities could result in disturbance to soils, soil erosion, and accelerated runoff and sedimentation. Approximately 406 acres of land are located within the temporary construction easements for the transmission lines on BLM land. Areas of soil disturbance within the construction easements would be less than 406 acres.

In addition, soil contamination could result from inadvertent spills of hazardous materials from vehicles and heavy equipment. Impacts to soils would be minimized by adhering to the

environmental protection measures described in Chapter 2.0 and implementation of the SWPPP. Overall impacts to soils associated with construction of the transmission lines would be short-term and minor to moderate. Construction of the new service roads could represent a long-term moderate impact to soils, as the road surface would be devoid of vegetation and would be subject to erosion.

### Water Pipeline

Temporary minor to moderate impacts to soils would occur during construction of the water pipeline. Trenching for the water pipeline would result in the temporary removal of soil from the trench, which could result in wind erosion, water erosion, and soil compaction. The water pipeline route would generally follow existing roads and avoids steep slopes, so soil erosion would be limited in most locations along the water pipeline route. However, in places where the water pipeline crosses drainages or cuts across steeper slopes, additional soil stabilization measures and BMPs to control erosion may be required before the grassland vegetation becomes re-established. Adherence to the environmental protection measures identified in Chapter 2.0 would minimize potential impacts to soils, and the overall impacts to soils resulting from construction of the water pipeline are expected to be minor to moderate. Additional BMPs may be necessary if excessive soil erosion is observed. A description of the planned and contingency BMPs would be detailed in the SWPPP.

#### 3.2.2.3.2 Operational Impacts

Once the pipeline has been installed and disturbed areas have been reseeded, long-term impacts to soils are anticipated to be negligible. Pipeline inspection vehicles would use existing roads to the extent practicable and would minimize overland travel.

#### 3.2.2.4 Alternative B—No Action

There would be negligible to minor impacts on soils on BLM lands resulting from operation and maintenance activities along the existing transmission line. Periodic overland travel could expose soils to potential erosion, although this impact would be minor. Temporary impacts to soils, including soil erosion and compaction, could occur on private lands along the entire water pipeline route, and at locations along the 230-kV and 138-kV transmission lines where excavation for structure foundations would occur. To the extent that the water pipeline crossed areas of designated prime farmland, impacts to soils could be greater than for the Proposed Action due to the longer length of the alternative pipeline route. However, the specific impacts cannot be determined since the specific alternative route for the water pipeline is unknown. Impacts to soils would be minimized by adhering to the environmental protection measures described in Chapter 2.0.

## 3.3 Air Quality

### 3.3.1 *Affected Environment*

#### 3.3.1.1 Regulatory Environment

The Clean Air Act (42 USC 7401 et seq. as amended in 1977 and 1990) is the principal federal statute governing air pollution. The Clean Air Act empowered the EPA to set National

Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. These pollutants are called “criteria” air pollutants and include carbon monoxide (CO), ozone, nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), lead, particulate matter equal to or less than 10 microns in diameter (PM<sub>10</sub>), and fine particulate matter equal to or less than 2.5 microns in diameter (PM<sub>2.5</sub>). The NAAQS include primary standards designed to protect human health and secondary standards to protect public welfare, including visibility and damage to crops and vegetation.

Regions of the country that meet the NAAQS are considered “attainment” areas, and regions that do not meet the NAAQS are designated as “nonattainment” areas. Certain rural parts of the country do not have extensive air quality monitoring networks; these areas are considered “unclassifiable” and are presumed to be in attainment with the NAAQS. The project study area includes portions of Canyon, Gem, and Payette counties. Air quality in each of these counties falls into the categories of either “better than national standards” or “unclassifiable/attainment” for all criteria air pollutants (EPA 2009a).

Air quality within the State of Idaho is regulated by the IDEQ. Stationary sources of air pollution require a permit to construct, and major sources of air pollution require a Tier I (Title V) operating permit from the IDEQ. In addition, the Idaho Administrative Code (IDAPA) (IDAPA 58.01.01.650 and 651) contains provisions that require that all reasonable precautions be taken to prevent the generation of fugitive dust. In determining what is reasonable, IDAPA Section 651 states that “consideration will be given to factors such as the proximity of dust emitting operations to human habitations and/or activities, the proximity to mandatory Class I Federal Areas, and atmospheric conditions which might affect the movement of particulate matter.”

### 3.3.1.2 Local Emission Sources and Air Quality Conditions

With the exception of the industrial and manufacturing facilities located in and near the city of Caldwell (in the southernmost portion of the project study area), there are no known large emission sources within the project study area. Emission sources within and near the project study area include vehicular travel on paved and unpaved roads, residences, agricultural operations, and periodic controlled and uncontrolled burns. Based on the lack of nearby large emission sources and the air quality attainment status of the three counties, air quality within the project study area is expected to be good.

## 3.3.2 *Environmental Consequences*

### 3.3.2.1 Methodology

Impacts on air quality would be considered major if the project would cause or contribute to a violation of the NAAQS or would exceed any applicable emission standard. Impacts on air quality also would be considered major if the project would result in visible plumes of smoke or dust that would travel off-site and result in nuisance complaints from nearby residents or travelers through the area. Impacts would be considered moderate if the potential air quality impacts of the project would be close to an applicable standard, and impacts would be

considered minor if there were a wide margin between project-related impacts and the applicable air quality standard, or if the impacts would be short-term in nature.

### 3.3.2.2 Alternative A—Proposed Action

#### 3.3.2.2.1 Construction Impacts

During construction, air quality impacts would be short-term and would primarily occur in the immediate vicinity and downwind of construction activities. Short-term air quality impacts would include both fugitive dust emissions and exhaust emissions; however, fugitive dust would be the primary pollutant of concern. Fugitive dust emissions would result from excavation, mechanical movement of soil, and vehicular travel on unpaved roads and within the construction ROW. Emissions of fugitive dust are a function of several factors, including soil moisture, the height from which excavated soil is dropped, wind speed, and vehicular speed on unpaved roads.

Exhaust emissions of nitrogen oxides (NO<sub>x</sub>), CO, SO<sub>2</sub>, volatile organic compounds, and PM<sub>10</sub> would be generated as a result of the operation of heavy-duty diesel construction equipment, worker vehicles, welding equipment, generators, and other types of construction equipment. Emissions from these types of mobile sources are a function of the number of hours operated, vehicle speed, vehicle type, and fuel burned.

Given the current attainment status of the counties and the relatively short duration of construction activities, construction of the project would not be expected to result in a degradation of local or regional air quality or result in any exceedances of the NAAQS. Overall construction impacts on air quality would be minor. Due to the shorter length of the transmission lines and water pipeline, impacts from construction would be expected to be less than those of the No Action Alternative.

As construction of the 230-kV transmission line is proposed to occur during the winter months when soil moisture content tends to be highest, fugitive dust emissions would be minor. In accordance with EPM RD-9, BMPs to minimize fugitive dust from service roads and other areas of ground disturbance would be implemented as necessary to reduce fugitive dust, and the resulting impacts would be minor.

Because work on the 138-kV transmission line could span a full year, fugitive dust could be generated as a result of vehicular travel on unpaved roads, vegetation clearing, and excavation for structure foundations, particularly during low soil moisture conditions. However, the implementation of dust control measures would reduce dust generation, and the resulting impacts would be minor.

Construction of the water pipeline also could span nearly a full year. Primary concerns with fugitive dust include vehicular travel on unpaved roads and excavation and stockpiling of soil associated with the pipeline trench. When compared with the proposed transmission line construction activities, construction of the water pipeline would expose the greatest surface area of soil to potential wind erosion. Excavated soil would have higher soil moisture

immediately following excavation, but the soil would tend to dry out over time. Consequently, replacement of the soil in the trench following installation of the pipeline could have the highest potential to generate fugitive dust. As described above, supplemental dust control measures would be implemented as needed, and the resulting impacts would be minor.

### 3.3.2.2 Operational Impacts

Operation of the water pipeline and the electric transmission lines would have no measurable impact on air quality within the project study area or Canyon, Gem, or Payette counties. Periodic maintenance activities would have the potential to generate minor amounts of fugitive dust, but the air quality impact would be negligible.

### 3.3.2.3 Alternative B—No Action

Short-term air quality impacts would be somewhat greater than the Proposed Action due to the increased length of the water pipeline and the increased lengths of the transmission lines, and the corresponding increase in the construction schedule and amount of disturbed area. Long-term air quality impacts would be identical to those described above for the Proposed Action.

### 3.3.2.4 Cumulative Impacts

Operation of the LGPP facility would be subject to the terms and conditions of the air quality permit that would be issued by the IDEQ prior to construction. The equipment associated with the LGPP would include the following:

- One F Class combustion turbine
- One emergency diesel generator (requested limit of 60 hours per year and 4 hours per day)
- One diesel fire pump (requested limit of 60 hours per year and 4 hours per day)
- One cooling tower

Total criteria pollutant emissions from the LGPP facility, as presented in the draft air quality permit application, are presented in **Table 3.3-1**.

Table 3.3-1: LGPP Emissions of Criteria Pollutants

| Pollutant   | Project Potential to Emit (tons/year) |
|---|---------------------------------------|
| CO  | 278.3                                 |
| NO <sub>x</sub>   | 88                                    |
| SO <sub>2</sub>   | 12.5                                  |
| Particulate Matter (PM <sub>10</sub> )  | 51                                    |
| Other Pollutants, including Fluorides, Lead, Total Reduced Sulfur, Hydrogen Sulfide, and Reduced Sulfur Compounds | Insignificant emissions               |

Air quality impacts from the LGPP were examined in detail in the air permit application and air modeling analysis, which indicated that the facility would result in impacts on local (near-field) and regional (far-field) air quality that are below the significant contribution levels (SCLs). The 1-hour CO impacts were found to exceed the SCLs, and therefore a full impact analysis was performed. AERMOD modeling results indicate that the proposed LGPP would not cause or significantly contribute to an exceedance of the NAAQS or the Prevention of Significant Deterioration (PSD) increments (Table 3.3-2). The refined modeling approach using AERMOD includes site-specific data, such as the actual facility boundary, site-specific meteorological data, direction-specific building downwash, and actual receptor elevations and terrain heights.

Table 3.3-2: LGPP Modeling Results

| Pollutant        | Averaging Period | Refined Modeling Using AERMOD (ug/m <sup>3</sup> ) | Significant Contribution Level (ug/m <sup>3</sup> ) | NAAQS (ug/m <sup>3</sup> ) |
|------------------|------------------|--|---|----------------------------|
| NO <sub>2</sub>  | Annual           | 0.20   | 1   | 100                        |
| PM <sub>10</sub> | 24-hour          | 1.9  | 5   | 150                        |
| PM <sub>10</sub> | Annual           | 0.2  | 1   | 50 (former standard)       |
| CO               | 1-hour           | 4,060.8  | 2,000   | 40,000                     |
| CO               | 8-hour           | 129.5  | 500   | 10,000                     |
| SO <sub>2</sub>  | 3-hour           | 1.8  | 25  | 1,300                      |
| SO <sub>2</sub>  | 24-hour          | 0.34   | 5   | 365                        |
| SO <sub>2</sub>  | Annual           | 0.01   | 1   | 80                         |

Toxic air pollutants also were modeled using both the SCREEN3 and AERMOD air quality models. The model results indicated that the predicted emissions of toxic air pollutants would not exceed the IDEQ significance thresholds.

The modeling analysis for the LGPP included far-field (long-distance) modeling for air quality-related values in Class I areas. The modeling results indicated that air quality impacts would be far below the Class I significant impact levels (SILs), and indicate that the LGPP would not cause or significantly contribute to an exceedance of the Class I increments. The results of the PSD Class I SIL modeling are presented in **Table 3.3-3**.

Table 3.3-3: PSD Class I Significant Impact Levels

| Pollutant        | Averaging Period | AERMOD Results<br>(ug/m <sup>3</sup> ) | PSD Class I SIL<br>(ug/m <sup>3</sup> ) |
|------------------|------------------|--|---|
| NO <sub>2</sub>  | Annual           | 0.006                                  | 0.1                                     |
| PM <sub>10</sub> | 24-hour          | 0.141                                  | 0.3                                     |
| PM <sub>10</sub> | Annual           | 0.003                                  | 0.1                                     |
| SO <sub>2</sub>  | 3-hour           | 0.248                                  | 1.0                                     |
| SO <sub>2</sub>  | 24-hour          | 0.038                                  | 0.2                                     |
| SO <sub>2</sub>  | Annual           | 0.004                                  | 0.1                                     |

Overall, the modeling indicates that the cumulative air quality impacts from operation of the LGPP, when combined with the emissions of existing and planned emission sources, would be minor to moderate. The facility and additional nearby sources would contribute to slightly increased pollutant levels in the region, but the modeling indicates that no NAAQS would be exceeded.

### 3.4 Water Resources

#### 3.4.1 *Affected Environment*

##### 3.4.1.1 Climate and Precipitation

The climate of the project study area may be described as mid-latitude, semi-arid, on the boundary between steppe (semi-arid) and desert (arid). This type of climate typically has warm dry summers, relatively low annual precipitation, and sparse natural vegetation (Priest et. al. 1972). A characteristic of precipitation in all dry climates is the great variability. In the vicinity of the project study area, annual precipitation totals can range from slightly more than 5 inches to more than 16 inches, with an average of 10.75 inches (Desert Research Institute [DRI] 2009). Moisture from snowfall is variable; however, the annual average of 16.4 inches of snow at Payette is evidence that snowfall is not uncommon.

##### 3.4.1.2 Surface Water Features

The project study area is located between and incorporates portions of three river drainages (**Figure 3.4-1**). Three USGS hydrologic unit code (HUC)-8 sub-basin watersheds are located within the project study area, including the Middle Snake-Payette (17050115), the Payette (17050122), and the Lower Boise (17050114). These are all within the HUC-6 Middle Snake-Boise basin and the HUC-4 Middle Snake subregion.

The Payette River is located just outside the north/northeastern portion of the project study area, and flows northwestward to join the Snake River approximately 7 miles north of the project study area. The Snake River flows north through the western portion of the project study area. The Boise River enters the southern portion of the project study area near Caldwell, and flows westward where it joins the Snake River approximately 4 miles south of the project study area. The only other named natural drainages in the project study area are

Homestead Gulch and Ashlock Gulch—both east-west trending tributaries to the Snake River; and Sand Hollow Creek—a tributary/canal flowing east/southeast in the Lower Boise Watershed. Numerous irrigation canals/ditches traverse the project study area, primarily outside of BLM lands. The existing 230-kV transmission line crosses two irrigation canals in the northwest portion of the project study area and five to six canals in the southern portion of the project study area.

The Snake River gauging station at Nyssa, Oregon, represents the nearest gauging station on the Snake River to the proposed water pumping station. Peak flows on the Snake River occur between March and May (average of approximately 17,700 cfs), with a minimum average of 8,400 cfs occurring in August (**Table 3.4-1**).

There are 100-year floodplains (FEMA 1984) located along the Snake River valley and along two adjoining tributaries (Homestead Gulch and Ashlock Gulch) (**Figure 3.4-1**). The floodplains in the Snake River valley range between 2 miles to less than 0.1 mile wide. According to the Flood Insurance Rate Map for Payette County (FEMA 1984), there are no other 100-year floodplains mapped in Payette County and no floodplains are mapped on BLM lands within the county. Flood maps for Canyon and Gem counties were not available.

### 3.4.1.3 Groundwater

The Lower Boise valley is underlain by two aquifers: (1) the shallow, unconfined Boise River gravel aquifer, and (2) the deep, semi-confined to confined Idaho Group aquifer. An unconfined aquifer is one that is open to receive water from the surface, and whose water table surface is free to fluctuate up and down, depending on the recharge/discharge rate. There are no overlying "confining beds" of low permeability to physically isolate the groundwater system. During the winter and spring, the water table typically rises since there usually is abundant water on the surface. During the dryer months of the year, into summer and fall, the water table slowly drops as there is less recharge, and the ground water slowly moves to other parts of the aquifer. Also, use of the ground water by pumping wells typically leads to a decline in the water table surface. A semi-confined (leaky) aquifer is a completely saturated aquifer overlain by a semi-impervious layer and underlain by an impervious layer. The boundaries of the aquifer system are related to changes in the types and occurrence of lake and river sediments, and crustal faulting.

Primary water yielding strata are interbedded sand, silt, and claystone of the Idaho Group (Squires et al. 1992). Canal seepage and irrigation application can be a major source of recharge to the shallow aquifer.

Table 3.4-1: Monthly Mean Discharge (cubic feet per second) for Gauging Stations near the Project Study Area

| Station                                     | Period of Record | Jan    | Feb    | Mar    | Apr    | May    | Jun    | Jul   | Aug   | Sep    | Oct    | Nov    | Dec    |
|---|------------------|--------|--------|--------|--------|--------|--------|-------|-------|--------|--------|--------|--------|
| Boise River<br>(USGS 13206000)              | 1938–2009        | 720    | 1,020  | 1,760  | 2,550  | 2,830  | 2,060  | 1,190 | 895   | 610    | 412    | 309    | 419    |
| Boise River<br>(USGS 13210050)              | 1974–1997        | 318    | 347    | 346    | 536    | 751    | 505    | 385   | 288   | 273    | 273    | 307    | 328    |
| Boise River<br>(USGS 13213000)              | 1971–2009        | 1,400  | 1,890  | 2,310  | 2,700  | 2,860  | 1,960  | 963   | 794   | 970    | 1,050  | 1,010  | 1,060  |
| Payette River<br>(USGS 13249500)            | 1925–2009        | 1,690  | 2,010  | 2,960  | 5,110  | 7,100  | 6,640  | 2,360 | 1,570 | 1,350  | 1,180  | 1,330  | 1,590  |
| Payette River<br>(USGS 13251000)            | 1935–2008        | 2,130  | 2,490  | 3,360  | 5,110  | 6,610  | 6,320  | 1,990 | 1,300 | 1,380  | 1,410  | 1,650  | 1,950  |
| Snake River at Nyssa, OR<br>(USGS 13213100) | 1974–2008        | 13,300 | 14,300 | 16,400 | 18,800 | 17,800 | 14,800 | 8,420 | 8,400 | 10,100 | 11,600 | 11,900 | 12,300 |

USGS 2009

Langley Gulch Power Plant Project  
Environmental Assessment

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#### 3.4.1.4 Water Supply

Groundwater and surface water from the Payette River are the principal sources of water supply in the project study area. Most crops in the project study area depend on irrigation, and the main source of such water is the Payette River (Priest et. al. 1972). The Noble Ditch diverts water on the south side of the Payette River and irrigates about 5,600 acres in Payette County. The Farmers Cooperative Ditch diverts water from the Payette River near Emmett in Gem County and irrigates about 17,800 acres, including the town of New Plymouth. The Black Canyon Irrigation Canal (this is the A-Line Canal as extended west) diverts water from the Payette River at the Black Canyon Dam in Gem County and irrigates about 19,500 acres (Priest et. al. 1972). Several smaller ditches in the project study area also divert water from the Payette River. In addition to the major ditches and canals, some water is pumped for individual farms from both the Payette and Snake rivers.

Groundwater also is a major source of irrigation water in the project study area. Average well depths for irrigation water supply are about 400 feet (Priest et. al. 1972). Water for domestic use in area communities and rural residences generally comes from wells. A study of groundwater resource information for Payette County conducted in 1986 concluded that “groundwater levels are generally stable with little evidence of water level decline” (Deick and Ralston 1986).

There are a total of 2,966 wells within the project study area. The majority of these wells (2,761 wells) are domestic water supply wells. In addition, there are 93 irrigation wells, 28 monitoring wells, 23 injection wells, 15 municipal wells, 14 stock water wells, 5 public water supply wells, and 27 miscellaneous wells used for other unspecified purposes. The closest wells to the LGPP site include the L&K Cattle Co. well (208 feet deep), which is located approximately 1,500 feet north of the LGPP site; and the Brig Allred well (181 feet deep), which is located approximately 670 feet east of the LGPP site (IDWR 2010).

#### 3.4.1.5 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 IDEQ is responsible for regulating water quality in the State of Idaho. Water quality standards and beneficial uses have been designated by the IDEQ 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 total maximum daily loads (TMDLs), which establish allowable pollutant loads set at levels to achieve water quality standards.

The IDEQ has identified a segment of the Snake River (from the Boise River inflow to Weiser River inflow) as impaired for bacteria, dissolved oxygen, nutrients, pH, sediment, mercury, pesticides, and temperature in accordance with section 303(d) of the CWA. IDEQ has designated cold water aquatic life, primary contact recreation, domestic water supply, special resource water, and salmonid spawning as beneficial uses within this segment. TMDLs for nutrients/dissolved oxygen, pesticides, sediment, temperature, and total dissolved gas have been developed by IDEQ (IDEQ and ODEQ 2004). TMDLs for rivers in the project study area are shown in **Table 3.4-2**.

Table 3.4-2: Impaired Waters and TMDLs

| Stream Segment—<br>303(d) Listed                        | Watershed<br>(HUC Number) | Beneficial Uses Affected  | Pollutants and Issues<br>of Concern   | TMDLs Developed  |
|---|---------------------------|---|---|--|
| Snake River (Boise River inflow to Weiser River inflow) | 17050115                  | Cold water aquatic life, primary contact recreation, domestic water supply, special resource water, salmonid spawning | Bacteria, dissolved oxygen, nutrients, pH, sediment, mercury, pesticides, temperature | Nutrients/dissolved oxygen, sedimentation/siltation, temperature |

IDEQ 2009

### 3.4.2 Environmental Consequences

#### 3.4.2.1 Methodology

Impacts on water resources would be considered major if the project were to cause water quality standards to be exceeded, or if the project would result in a substantial decrease of surface or groundwater availability to existing water users.

To assess the potential impacts to water resources, the following information sources were evaluated: aerial and topographical maps of the project study area; websites for IDWR, IDEQ, and USGS; and proposed construction and operating activities and data for the project.

#### 3.4.2.2 Alternative A—Proposed Action

##### 3.4.2.2.1 Construction Impacts

One of the primary concerns for transmission line construction is surface water or groundwater quality degradation during or after construction from spills or leaks of hazardous materials that could seep into shallow aquifers used for domestic, agricultural, or public water supplies. Proper handling practices and adherence to the environmental protection measures identified in Chapter 2.0 would minimize the risk of spills. In addition, the volumes of hazardous materials that would be used during construction of the transmission line are expected to be small, and construction and emergency response personnel would be able to respond to an incident quickly before contaminants are able to migrate into groundwater. The potential impact on groundwater quality from inadvertent spills or leaks of hazardous materials would be minor.

### 230-kV and 138-kV Transmission Lines

The 230-kV transmission line ROW would not cross any surface water or perennial streams; however, the ROW would cross a few small intermittent drainages associated with Ashlock Gulch. No potable water wells have been identified on BLM lands.

The ROW for the 138-kV transmission line on BLM lands would cross the A-Line Canal and several intermittent drainages associated with Sand Hollow Creek to the east. However, the A-Line Canal would be spanned and would not be affected by construction of the transmission line. Based on implementation of BMPs, as described in the SWPPP and EPM WQ-3, impacts on surface water resulting from construction of the transmission lines would be minor. Based on the average depth to groundwater of approximately 400 feet, there would be no impacts to groundwater quality resulting from construction of the transmission lines.

### Water Pipeline

Construction activities on the water pipeline would last approximately 12 months. During that time, ground disturbance would occur along the entire ROW. The ROW on BLM lands would cross several intermittent drainages associated with Hurd Gulch. The ROW on private land, west of BLM lands, would cross the A-Line Canal twice and one of the canal's spurs once. However, the water pipeline would be installed beneath the canals using a jack-and-bore construction method, so canal operation and water quality in the canals would not be affected.

Potential impacts on groundwater quality from inadvertent spills or leaks of hazardous materials would be minor. Were a spill to occur on the ground surface, attending personnel would be able to respond to an incident before contaminants would be able to migrate into groundwater. Storage and transfer of hazardous materials would not be allowed within 100 feet of wetlands or surface water bodies. In areas with near-surface groundwater or in work areas adjacent to the Snake River, additional protective measures would be implemented, as described in the SWPPP.

For surface water, potential issues associated with construction of the water pipeline would include:

- Water quality degradation from temporary increases in suspended solids concentrations during wetland or in-stream construction activities, or erosion from disturbed lands.
- Increased sedimentation in the Snake River resulting from nearby construction activities.
- Water quality degradation in wetlands or the Snake River from spills or leaks of fuel, lubricants, or hazardous materials during construction.

If water is present in the intermittent drainages or wetlands during construction, installation of the pipeline could cause temporary degradation of water quality due to increased suspended solids concentrations resulting from in-stream construction. Per EPM WQ-4, work within intermittent drainages would be curtailed during periods of active flow, or the use of

appropriate in-stream construction techniques would be required. Construction of the water pipeline would result in minor to moderate impacts on surface water quality.

#### 3.4.2.2 Operational Impacts

Operation and maintenance of the linear project components would not adversely affect groundwater or surface water quality or use. Maintenance vehicles would travel on existing roads to the extent feasible. If overland travel is necessary, drivers would minimize crossing drainages when water is present and minimize disturbance to existing vegetation. Impacts on water quality from operation and maintenance activities associated with the linear project components are expected to be negligible.

#### 3.4.2.3 Alternative B—No Action

Impacts to water resources on BLM land would be negligible and would be primarily associated with ongoing maintenance activities on the existing transmission line. However, the LGPP facility still would be constructed on the same privately owned parcel, and the transmission lines and water pipeline would be constructed entirely on private land. Impacts to water resources could be greater when compared with the Proposed Action due to the increased length of the transmission lines and water pipeline.

Impacts on groundwater withdrawal would be the same as the cumulative impacts described below for the Proposed Action.

#### 3.4.2.4 Cumulative Impacts

##### Groundwater Use – Existing On-Site Well

Groundwater use from the existing on-site well would be approximately 2.0 cfs, or 700 acre-feet per year. Based on the static water level and the depth to the pump, maximum drawdown is anticipated to be 122 feet in the vicinity of the well. Idaho Power does not expect this drawdown to have an effect on any nearby wells, including the L&K Cattle Co. well or the Brig Allred well. The overall impact of this groundwater use would be minor.

##### Groundwater Use – New Tributary Wells

Water for the LGPP would be obtained from new tributary wells located on parcels near the Snake River. Based on the average annual flow discharge of the Snake River, the tributary water right applied for (4.73 cfs) would represent 0.06 percent of the average total flow of the Snake River during August (its lowest average flow month). Based on this rate of water use, water withdrawal for the LGPP would not cause a perceptible decrease in river water level, an impact on water quality, or a noticeable effect on the availability of water for other beneficial uses. Annual water consumption of the LGPP project would be monitored by IDWR to ensure compliance with the water use limitation, and the impacts on water availability in the Snake River would be minor.

### Water Disposal

The LGPP will employ an evaporation pond for wastewater disposal and approximately 30 gallons per minute of wastewater flow would be discharged to the evaporation pond. This equates to disposal by evaporation of approximately 48.4 acre-feet per year. Since the facility would be a zero discharge facility, there would be no impacts to surface or groundwater associated with the operation of the evaporation pond.

## 3.5 Biological Resources - Vegetation and Wetlands

For purposes of the biological resources sections (Section 3.5, Vegetation and Wetlands; Section 3.6, Wildlife and Wildlife Habitats; and Section 3.7, Special Status Species), the term “survey corridor” refers to the 500-foot-wide corridor that was surveyed during the various field surveys conducted for the project. The corridor that was surveyed generally was 250 feet on either side of the centerline of each proposed project component on BLM land.

### 3.5.1 *Affected Environment*

AECOM ecologists conducted a field survey for the project on BLM land from May 12 through 18, and June 22 through 24, 2009. From information gathered during these surveys and a review of existing literature, a Botanical Technical Report was prepared in July 2009 that included a detailed description of botanical resources for the proposed ROWs (Idaho Power 2009a). Idaho Power used this information to reconfigure the proposed routes. These new routes were then surveyed by Tetra Tech on November 30 and December 10, 2009; and January 6, 2010. A Vegetation Baseline Technical Report was completed in March 2010 from this updated information (Idaho Power 2010a). In addition, on December 1, 2009, Tetra Tech conducted a wetland delineation along the proposed water pipeline route (Idaho Power 2010b). This section summarizes the descriptions of existing vegetation, non-native invasive plants, and wetland and other waters of the U.S. in the project study area from all of the above resources.

#### 3.5.1.1 Vegetation

The RMP/EIS for the FRFO, which includes the Cascade Resource Area, currently is under development. The draft RMP includes a revised vegetation classification system (PNNL 2001) that describes 22 general cover types and up to seven sub-categories in the RMP planning area. The project study area is mapped primarily as Exotic Annual, which is described as primarily cheatgrass and non-native mustards (BLM 2008). The dominant Native/Non-native Grassland (NNG) vegetation mapped by Idaho Power in the proposed ROWs (Idaho Power 2009a) includes a strong component of cheatgrass, an introduced annual grass species, and non-native mustards (see NNG description below). The BLM cover type that best correlates to the NNG cover type is a mixture of the BLM’s Exotic Annual and Bunch Grass plant communities

The NNG vegetation in the project study area is representative of a larger downward trend in the quality and quantity of big sagebrush (*Artemisia tridentata*) habitats in the southern part of the Four Rivers Field Office (BLM 2008). Wildfires, livestock grazing, proliferation of invasive

annual exotic species, increasing recreational use, and encroaching human populations are all identified as factors that facilitate the proliferation of herbaceous vegetation in the project study area (BLM 2008). Wildfires, in particular, have altered most of the native shrubland in the project study area on BLM land.

Native shrubland on BLM land occurs only on the proposed 138-kV transmission line ROW, where green rabbitbrush, rubber rabbitbrush, and big sagebrush (*Artemisia tridentata* spp.) comprise generally small, isolated stands (**Table 3.5-1**). These observations are similar to BLM descriptions of Rabbitbrush Scrub, Big Sagebrush, and Big Sagebrush Mix cover types in the FRFO RMP planning area (BLM 2008). Current management objectives in the 1987 Cascade Resource Area RMP are to improve the poor and fair quality rangeland, similar to rangeland found in the project study area, and the BLM has implemented efforts to rehabilitate burned rangelands in the project study area.

Bluebunch wheatgrass (*Pseudoroegneria spicata*), crested wheatgrass (*Agropyron cristatum*), and intermediate wheatgrass (*Thinopyrum intermedium*) were observed on burned BLM lands in the project vicinity during the Tetra Tech field surveys. These species presumably were planted as part of post-fire rehabilitation efforts. However, only crested wheatgrass was observed in a few isolated locations on the proposed 230-kV transmission line, 138-kV transmission line, and water pipeline temporary ROWs. Other cover types that occur only on private land within the proposed ROWs include agriculture and rural residential areas. The two major cover types on BLM land within the proposed ROWs include NNG and native shrubland, as described in detail below. The distribution and acreage of cover types in the proposed ROWs on BLM and private lands are provided in Table 3.5-1 and mapped in Figure 3.5-1.

Table 3.5-1: Distribution and Acreage of Plant Communities in the Proposed ROWs

| Project Component <sup>1</sup> | Cover Types   | Temporary ROW |              |               | Permanent ROW |              |              |
|--------------------------------|---|---------------|--------------|---------------|---------------|--------------|--------------|
|                                |   | Private       | BLM          | Total Temp.   | Private       | BLM          | Total Perm.  |
| 230-kV Transmission Line       | Native/Non-Native Grassland (cheatgrass-Sandberg bluegrass-sixweeks fescue) | 0             | 158.9        | 158.9         | 0             | 47.4         | 47.4         |
|                                | Native/Non-Native Grassland (purple three-awn)                              | 0             | 0.4          | 0.4           | 0             | 0            | 0            |
|                                | Roads   | 0             | 3.3          | 3.3           | 0             | 1.0          | 1.0          |
|                                | <b>Subtotal</b>   | <b>0</b>      | <b>162.6</b> | <b>162.6</b>  | <b>0</b>      | <b>48.4</b>  | <b>48.4</b>  |
| 138-kV Transmission Line       | Native/Non-Native Grassland (cheatgrass-Sandberg bluegrass-sixweeks fescue) | 39.8          | 208.4        | 248.2         | 19.2          | 103.3        | 122.5        |
|                                | Native/Non-Native Grassland (purple three-awn)                              | 0             | 1.9          | 1.9           | 0             | 1.0          | 1.0          |
|                                | Native Shrubland (sagebrush)  | 7.2           | 2.0          | 9.2           | 3.9           | 0.7          | 4.6          |
|                                | Native Shrubland (rabbitbrush)  | 0             | 8.0          | 8.0           | 0             | 4.0          | 4.0          |
|                                | Roads   | 2.1           | 9.0          | 11.1          | 1.2           | 5.9          | 07.1         |
|                                | Agriculture <sup>2</sup>  | 290           | 0            | 290           | 140           | 0            | 140          |
|                                | Canal   | 0.4           | 0.2          | 0.6           | 0.3           | 0.1          | 0.4          |
|                                | <b>Subtotal</b>   | <b>339.5</b>  | <b>229.5</b> | <b>569</b>    | <b>164.6</b>  | <b>115.0</b> | <b>279.6</b> |
| Water Pipeline                 | Native/Non-Native Grassland (cheatgrass-Sandberg bluegrass-sixweeks fescue) | 51.2          | 100.5        | 151.7         | 3.6           | 5.6          | 9.2          |
|                                | Native/Non-Native Grassland (purple three-awn)                              | 0             | 0.9          | 0.9           | 0             | 0.1          | 0.1          |
|                                | Native Shrubland (sagebrush)  | 6.7           | 0            | 6.7           | 0.3           | 0            | 0.3          |
|                                | Roads   | 16.7          | 4.7          | 21.4          | 10.1          | 4.3          | 14.4         |
|                                | Agriculture   | 105.7         | 0.1          | 105.8         | 5.7           | 0            | 5.7          |
|                                | Canal   | 2.2           | 0            | 2.2           | 0.04          | 0            | 0.04         |
|                                | Rural Residential   | 18.1          | 0            | 18.1          | 0.5           | 0            | 0.5          |
|                                | Riparian and Wetland <sup>3</sup>   | 5.1           | 0            | 5.1           | 0.3           | 0            | 0.3          |
|                                | <b>Subtotal</b>   | <b>205.7</b>  | <b>106.2</b> | <b>311.9</b>  | <b>20.5</b>   | <b>10.0</b>  | <b>30.5</b>  |
| <b>Totals</b>                  |   | <b>545.2</b>  | <b>498.3</b> | <b>1043.5</b> | <b>185.1</b>  | <b>173.4</b> | <b>358.5</b> |

1. The water pipeline and 230-kV transmission line overlap on 10.78 acres; 10.5 acres temporary NNG and 0.37 acres permanent NNG.

2. The cover types on private agricultural lands along 8 miles at the south end of the 138-kV transmission line have not been mapped in detail. Using aerial photos only; the entire 8-mile stretch has been categorized as "Agriculture" which includes all crop fields, roads, canals and private residences.

3. The wetland habitats included here are the 0.3 acres of potential jurisdictional waters of the U.S. delineated by IPC on the proposed permanent water pipeline ROW (Idaho Power 2010b) (See Section 3.5.1.3 below for a discussion of wetland habitats.)

### Native/Non-Native Grassland

Vegetation in the proposed ROWs on BLM land is primarily comprised of the NNG plant community. The plant species composition of NNGs is described in detail in the Botanical Technical Report (Idaho Power 2009a).

The native grass species, Sandberg bluegrass and sixweeks fescue, and the non-native cheatgrass are the most abundant species. The relative abundance of each of the grass species changes often along each ROW, depending on aspect, prevalence of ground disturbance, and topographic position as it relates to changes in substrate conditions.

More exposed aspects and ridgetops generally support a relatively greater abundance of cheatgrass, while abundance of Sandberg bluegrass and sixweeks fescue is relatively greater on cooler aspects and valley bottoms. The non-native species tumble mustard (*Sisymbrium altissimum*), redstem storksbill (*Erodium cicutarium*), and clasping pepperweed (*Lepidium perfoliatum*) are ruderal herb species that co-dominate the herb layer, with the non-native grass species generally in more disturbed portions of the post-fire BLM rangelands. In addition, relative abundance of ruderal herb species, primarily clasping pepperweed, generally is greatest in areas where livestock use is concentrated, particularly on drier, more exposed aspects, and on the exposed sub-soil mounds of Piute ground squirrel (*Spermophilus mollis idahoensis*) colonies that are ubiquitous at varying and often high densities.

The native grass, purple threeawn (*Aristida purpurea*), also occurs in isolated, typically small patches in areas protected from fire. This bunchgrass species is strongly associated with Sandberg bluegrass, and the patches are believed to be remnants of bunchgrass vegetation, once more common on BLM land prior to wildfire. The largest of these bunchgrass patches are on the water pipeline and the 230-kV transmission line ROWs (**Figure 3.5-1**).

### Native Shrubland

Native shrubland plant communities occur along the proposed 138-kV transmission line ROW. The native shrubland is dominated by Wyoming big sagebrush, rubber rabbitbrush, and green rabbitbrush, as summarized for each project component in **Table 3.5-1**. The big sagebrush plant community represents the remaining stands that have survived wildfires on BLM land. The shrub canopies of these stands are often open and have an abundant herb layer consisting primarily of Sandberg bluegrass, sixweeks fescue, tumble mustard, and occasionally bluebunch wheatgrass. Areas dominated by green rabbitbrush are found on generally low-gradient surfaces with alkaline soils with a sparse cover of cheatgrass and tumble mustard. Rubber rabbitbrush formed an abundant shrub layer in just one location and had an herb layer similar to the other native shrubland assemblages.

### Agriculture

Agriculture occurs only on private land along the proposed 138-kV transmission line and water pipeline ROWs. Agriculture includes managed and unmanaged pastures and cultivated cropland.

### 3.5.1.2 Non-Native Invasive Plants

The following section describes non-native invasive plant occurrence within the proposed ROWs on BLM land; private lands were not surveyed. BLM land in the proposed ROWs includes four species of noxious weeds that are on the Idaho State Department of Agriculture's (ISDA) statewide containment list (ISDA 2009). These four species are diffuse knapweed (*Centaurea diffusa*), Scotch thistle (*Onopordum acanthium*), rush skeletonweed (*Chondrilla juncea*), and Russian knapweed (*Acroptilon repens*) (Idaho Power 2009a, 2010) (**Table 3.5-2** and **Figure 3.5-1**). Mediterranean sage (*Salvia aethiopsis*) has been reported by BLM (pers. comm., M. Steiger 2009) to occur on BLM land in the vicinity of the proposed ROWs, although this species was not observed during field surveys. As described above, the non-native invasive annual grass species, cheatgrass, is widespread and abundant within each of the three project components on BLM lands.

Table 3.5-2: Area and Number of Infestations of Invasive Plants on ROWs on BLM Land

| Scientific Name<br>Common Name                | Surveyed Corridors                          |                                       |                                      | Totals <sup>1</sup>                   |
|---|---|---------------------------------------|--------------------------------------|---------------------------------------|
|   | 138-kV<br>Transmission<br>Line <sup>1</sup> | 230-kV<br>Transmission<br>Line        | Water Pipeline                       |                                       |
| <i>Centaurea diffusa</i><br>Diffuse knapweed  | 0   | 98.3 acres<br>1 infestation           | 2.1 acres<br>24 infestations         | 100.4 acres<br>25 infestations        |
| <i>Onopordum acanthium</i><br>Scotch thistle  | >0.1 acre<br>1 infestation                  | 1.1 acres<br>11 infestations          | 1.3 acres<br>43 infestations         | 2.4 acres<br>55 infestations          |
| <i>Chondrilla juncea</i><br>Rush skeletonweed | 0   | 0                                     | >0.01 acre<br>1 infestation          | >0.01 acre<br>1 infestation           |
| <i>Acroptilon repens</i><br>Russian knapweed  | 0   | >0.01 acre<br>6 infestations          | >0.01 acre<br>2 infestations         | >0.01 acre<br>8 infestations          |
| <b>Totals</b>                                 | <b>&gt;0.1 acre<br/>1 infestation</b>       | <b>99.5 acres<br/>18 infestations</b> | <b>3.4 acres<br/>70 infestations</b> | <b>103.0 acre<br/>89 infestations</b> |

<sup>1</sup>Weed surveys on BLM land within the project study area (Idaho Power 2009a). Additional weed survey in December 2009 documented Russian knapweed in 6 locations (Idaho Power 2010a); infestation area estimated at ca. 0.01 acre per infestation.

In total, 25 infestations of diffuse knapweed covering approximately 100 acres were mapped. Diffuse knapweed is the most abundant weed species in the proposed ROWs. However, 98 acres is part of one large infestation mapped within the proposed 230-kV transmission line temporary ROW (**Table 3.5-2**). The most infestations of diffuse knapweed occur on the water pipeline (24 infestations).

Fifty-five infestations of Scotch thistle were documented within the three project components. The total area for this species was approximately 2.4 acres. Most infestations of this species are very small, isolated, and consist of just one to a few plants; the largest infestation occurred on the water pipeline and consisted of approximately 1,000 plants on 0.5 acres. A Payette County weed control contractor was observed spraying herbicide on Scotch thistle on

BLM land in the project study area along one of the eliminated routes during field surveys in May 2009 (Idaho Power 2009a).

Rush skeletonweed was observed at one location on the water pipeline ROW and consisted of 15 rosettes and 12 stems within a 1-foot radius.

Russian knapweed was observed on BLM land at a total of eight locations: six locations along the 230-kV transmission line ROW and two locations along the water pipeline ROW (Idaho Power 2010a).

### 3.5.1.3 Wetlands and Riparian

A wetland reconnaissance was conducted as part of the vegetation surveys and determined that no wetlands occurred within the proposed transmission line ROWs on BLM land. However, during this reconnaissance, wetlands were identified within the water pipeline ROW on private lands near the Snake River. Based on guidance from the USACE, a routine wetland delineation was conducted on December 1, 2009, within the water pipeline ROW on BLM land and private land east of the Snake River (Idaho Power 2010b). Wetlands and other waters were delineated on private land within the proposed pipeline ROW (**Figure 3.5-2**). These wetlands and other waters are described in detail in the Langley Gulch Power Plant Wetland Delineation report (Idaho Power 2010b). Key characteristics are summarized below.

The pump house proposed for the water pipeline is located along the banks of the Snake River and intersects two water features. The intake pipe for the pump house is estimated to overlap with less than 450 square feet (0.01 acres) of potential jurisdictional waters of the U.S. within the banks of the Snake River; the wetland vegetation is palustrine emergent. In addition, an existing irrigation ditch overlaps 0.1 acres of the proposed water pipeline ROW. This ditch was flowing at the time of the delineation, when most irrigation had been shut off, and supported a narrow palustrine emergent wetland along the margins of the 6-foot-wide ditch. The irrigation ditch appears to flow into an adjacent agricultural field with no apparent surface water or groundwater connection to a Traditional Navigable Water (TNW), therefore it is likely non-jurisdictional. Just east of the pump house location, a natural, unnamed intermittent drainage supports 5.1 acres of woody riparian vegetation dominated by cottonwood (*Populus deltoides*) and bluejoint (*Calamagrostis canadensis*) within the 300-foot-wide temporary ROW. The 30-foot-wide permanent ROW for the proposed water pipeline ROW overlaps the drainage in four locations, totaling approximately 0.2 acres of palustrine forested wetland. The drainage and riparian area is bisected by Whitely Road without a culvert, thus there is no apparent hydrologic surface connection to the Snake River. It is not clear whether the USACE would take jurisdiction over these potentially isolated wetland habitats. The A-Line Canal is crossed twice by the proposed water pipeline and is likely a jurisdictional drainage due to its connectivity to the Snake River. Hurd Gulch is an intermittent drainage and considered likely non-jurisdictional.

No wetlands or riparian areas were observed on BLM land within the proposed transmission line ROWs during the wetland reconnaissance conducted in 2009 (Idaho Power 2009a).

However, three drainages were observed on BLM land within the proposed transmission line ROWs (**Figure 3.5-2**). All of the three drainages have a defined bank and scoured bed. Drainages 1 and 2 are in the Payette River watershed, while drainage 3 occurs in the Boise River watershed. Drainages 1 and 2 are intersected by the 230-kV transmission line and the 138-kV transmission line ROWs, respectively. I-84 intercepts and diverts water from these two drainages to low-lying areas along the highway, thus potentially preventing surface connectivity to potential jurisdictional drainages (i.e., Langley Gulch, A-Line Canal). Drainage 3 also crosses the 138-kV transmission line, and its surface connectivity is interrupted via a siphon that diverts flows into C-Line Canal West, which is connected to various other canals (i.e., D-line and H-Line canals, Sand Hollow Wasteway) and also possibly Sand Hollow Creek. Several additional drainages occur on BLM land within the proposed ROWs. These drainages are topographic valley features where debris collects. The drainage bottoms have NNGs, except where cattle have trampled a path. No surface water or saturated soils were observed during the field surveys. These drainages are likely non-jurisdictional. In addition, culverts are in place where access roads cross the drainages.

The National Wetlands Inventory (NWI) maps (USFWS 2010) indicate that there are nine freshwater ponds and two emergent wetlands within 0.5 mile of the 138-kV proposed transmission line ROW; however, none of these NWI wetlands overlap with the proposed 138-kV transmission line ROW. The land use in this area is predominantly agriculture, and aerial photo-interpretation of National Agriculture Imagery Program (NAIP) imagery shows intensive crop irrigation and suggests a high potential for additional wet features. The National Hydrographic Data (NHD) and aerial photography show 10 canal sections crossed by the proposed 138-kV transmission line ROW: three on C-Line, one on D-Line, two on unidentified canals, one on Conway Gulch, and three on Notus Canal (**Figure 3.5-2**). Sand Hollow Creek also is crossed by this project component and appears in aerial photographs to be highly linear and incised.

## 3.5.2 *Environmental Consequences*

### 3.5.2.1 Methodology

Potential effects on botanical resources were assessed based on the federal, state, and local regulations addressing biological resources and the degree of change that would be caused by the proposed project. Determination of the degree of potential effects on botanical resources was based on the assessment of short- and long-term impacts, as well as whether the impacts would be temporary or permanent. The No Action Alternative and the Proposed Action would potentially result in a major effect on botanical resources if they would:

- Have a substantial adverse effect, either directly or indirectly, on sensitive, regulated habitats such as wetlands and other waters of the U.S.; or
- Cause non-native invasive plants to proliferate in the proposed ROWs in violation of federal, state, or local regulations.

### 3.5.2.2 Alternative A—Proposed Action

The proposed temporary construction and permanent ROW impacts associated with the transmission lines and water pipeline are described below. The impacts to botanical resources are those stemming directly and indirectly from temporary and permanent ground disturbing activities associated with construction and operation of the proposed project components. The intensity of ground disturbance and the impacts varies depending upon the type of project element. For example, overland travel on flatter terrain would be accomplished simply by driving on the vegetation; however, creation of the 0.2 mile of new service roads would require grading. In addition, the pipeline trench would require excavation, and the transmission structure locations may require preparation through minor grading and some excavation.

Construction-related impacts are generally temporary and are considered to be short-term and minor due to the implementation of EPMs. Long-term impacts are generally those associated with permanent project components.

#### 3.5.2.2.1 Construction Impacts

##### 230-kV and 138-kV Transmission Lines

###### Vegetation

Ground disturbance during construction of the proposed 230-kV transmission line would occur on approximately 158.9 acres of NNG (cheatgrass-Sandberg bluegrass-sixweeks fescue) and 0.4 acres of NNG (purple three-awn) vegetation on BLM land. These impacts are considered temporary because it is anticipated that revegetation would occur through natural regeneration. If natural regeneration fails, then revegetation efforts would be implemented by Idaho Power in consultation with BLM to minimize the potential for long-term effects. The timeline for monitoring and revegetation efforts would be determined by Idaho Power and BLM. The timeline for monitoring and revegetation efforts would be determined by Idaho Power and BLM. The temporary loss of early-seral NNG vegetation is considered minor given its abundant, widespread distribution in southwest Idaho. However, the consequences of degrading and removing the existing vegetation cover can indirectly affect other botanical resources (see the discussion of impacts on Non-native Invasive Plants and Wetlands below).

Impacts to vegetation located outside the temporary ROW are also possible due to erosion and deposition resulting from mismanaged construction-related ground disturbance. These potential indirect effects would be avoided and minimized through implementation of EPMs and BMPs during construction.

Ground disturbing activities on the proposed 138-kV transmission line ROW would occur in NNG vegetation (cheatgrass-Sandberg bluegrass-sixweeks fescue) on approximately 208.4 acres on BLM land and 39.8 acres on private land; and NNG vegetation (purple three-awn) on approximately 1.9 acres on BLM land.

Construction of the 138-kV transmission line on BLM land would impact approximately 8 acres of native sagebrush shrubland on BLM land, 7.2 acres of native rabbitbrush shrubland on BLM land, and 2 acres of native rabbitbrush shrubland on private land. Individual woody plants would be avoided to the maximum extent possible during construction; however, ground disturbing activities could damage or destroy native shrub cover in some areas. Revegetation of bare areas within the native shrub habitat, damaged during construction, would minimize long-term impacts of this already uncommon vegetation type in the project study area.

An additional 9.5 miles of agriculture and rural residential cover types would be disturbed on private land. The impacts to agricultural lands resulting from ground disturbing activities are the same as those described for NNG and native shrubland. Revegetation of disturbed agricultural areas on private lands would be coordinated between Idaho Power and the landowners,

#### Non-native Invasive Plants

Construction vehicles could transport the seeds of non-native invasive species to and from the transmission line ROW. Areas disturbed by construction would be susceptible to weed propagation; however, implementation of EPMS would minimize the establishment of weeds, and the overall impacts would be minor. Re-establishing vegetation cover soon after construction would help reduce the risk of invasive species colonization. Idaho Power would implement noxious weed control measures in accordance with BLM land use plans and Idaho State law (IDAPA 2, Title 6, Chapter 22), and the impacts resulting from construction would be minor.

### Wetlands and Other Waters

The 230-kV transmission line ROW crosses one water feature, an ephemeral drainage (Drainage 1) in the headwaters of Langley Gulch that appears to have disjunct surface flows at I-84 downstream of the transmission line ROW. Several existing dirt roads on BLM land cross this drainage in the vicinity of the 500-foot-wide temporary ROW. One or more of the dirt roads crossing these drainages would be used and possibly upgraded to meet the access needs during construction. Ground disturbance at these temporary drainage crossings would be minimized to the maximum extent possible, and the drainage bed and banks would be recontoured following construction to ensure that the drainage remains capable of conveying an ephemeral flow regime. BMPs would be implemented to reduce the potential for soil erosion along the drainage during the construction period. Construction and subsequent restoration activities within this drainage are not expected to take more than six months. Resulting impacts on this ephemeral drainage would be minor because the disturbance would be confined to the temporary ROW and the drainage would be returned to its preconstruction condition once construction of the waterline is completed within this area.

The 138-kV transmission line ROW crosses two ephemeral drainages (drainages 2 and 3) on BLM land in the headwaters of Langley Gulch and Sand Hollow Creek, respectively. The current roads may require an upgrade to accommodate construction-related activities. Construction activities would not occur within the drainages during periods when the drainages are flowing, and BMPs would be implemented to reduce the potential for soil erosion along the drainage during the construction period. Implementation of BMPs would ensure that impacts to these ephemeral drainages would be minor.

The 138-kV transmission line would span the canals and Sand Hollow Creek, and no impacts on wetlands or waterways on private land are anticipated.

### Water Pipeline

#### Vegetation

Construction of the proposed water pipeline ROW would disturb 100.5 acres of NNG vegetation (cheatgrass-Sandberg bluegrass-sixweeks fescue) on BLM land and 51.2 acres on private land. Additionally, 0.9 acres of NNG vegetation (purple three-awn) on BLM land would be disturbed. Possible short-term direct impacts could occur as a result of ground disturbing activities and indirect impacts could include erosion and sediment deposition. Long-term impacts could include introduction of noxious weed species that currently do not occur in the area or the creation of conditions that would favor the spread of existing noxious weeds. EPMs would minimize the potential for short-term impacts resulting from construction-related activities, and the long-term impacts on vegetation would be minor to moderate.

Approximately 105.7 acres of private property devoted primarily to agricultural land use would be temporarily affected during construction of the water pipeline. This impact would be short-

term and could last for the duration of a single growing season. Long-term impacts of the water pipeline on agricultural lands would be negligible to minor.

#### Non-native Invasive Plants

The anticipated short-term, construction-related impacts on non-native invasive plants would be similar to those described for the transmission lines.

#### Wetland and Riparian

The proposed water pipeline ROW crosses or partially intersects several water features located on private land west of BLM land. The water pipeline ROW also crosses the A-Line Canal twice, but would avoid impacts because the pipeline would be installed under the canal using a jack-and-bore construction method. Direct impacts to wetlands could occur as a result of ground disturbing activities. Indirect impacts to nearby wetland and riparian areas are possible due to improper management of bare soils and surface runoff during construction, resulting in erosion or deposition in wet areas outside the construction footprint. The USACE would take jurisdiction over some, and perhaps all, of these wet areas. The total area of wetland features is 0.28 acres. Nationwide Permits, should they be granted by the USACE, would require the avoidance and minimization of impacts to the greatest extent possible, and impacts on wetlands would be minor.

#### **3.5.2.2 Operational Impacts**

Idaho Power would conduct O&M activities in a manner that minimizes permanent impacts on vegetation cover and complies with BLM land use plans, EPMS, and other applicable environmental laws and policies. The existence of new service roads could facilitate increased use by off-highway vehicles (OHVs), which would constitute potential indirect impacts to botanical resources. OHV travel can transport noxious weeds and seed to new locations, and can disturb intact vegetation. OHV travel and use of the project study area could also increase the risk for more frequent wildfires. However, with the existing road network and overland travel currently in the project study area it is unlikely that the Proposed Action would contribute significantly to an increase in OHV use in the area. Idaho Power would monitor use of service roads and would consult with BLM should the use of service roads by the public become an issue. Typical O&M activities would have no direct effects on wetlands within the ROW. Overall operational impacts on vegetation would be minor.

There is also a potential that the transmission lines could cause a wildfire. Idaho Power's operation and maintenance is designed to identify and correct potential problems before that happens. However, vandalism, weather conditions, and faulty equipment do 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 with potential slickspot peppergrass habitat, the effect would be considered more significant.

### 3.5.2.3 Alternative B—No Action

Temporary and permanent ground disturbing activities associated with construction and operation of the linear project components are similar to those described for the Proposed Action; however, these activities would occur on private lands that have been largely converted to agricultural and rural residential land uses. Private lands are typically managed for noxious weeds by private landowners and the county in agricultural areas. Idaho Power would contribute to these management efforts on their ROWs. Impacts to wetlands and other waters of the U.S. would be similar to those described for the Proposed Action. Impacts to wetlands would be minimized through avoidance and adherence to USACE permit conditions. The No Action Alternative would likely result in minor impacts on botanical resources and these impacts would occur on private lands.

### 3.5.2.4 Cumulative Impacts

Implementation of the Proposed Action, when added to other activities and projects, has the potential to contribute to cumulative vegetation impacts. Past grazing activities and recreation has affected vegetation in the long-billed curlew habitat ACEC. These past activities have resulted in the loss of native habitat. Future projects could have an impact on vegetation resources that could result in the loss of vegetation cover, an increase in non-native invasive plants, and an increase in the frequency of wildfires. Construction of the proposed LGPP would result in a loss of approximately 70 acres of grassland habitat.

Idaho's human population is expanding and recreational uses in the area would likely increase with increasing population. Wildfire frequency is also expected to increase as human population expands and recreational use increases on public lands (BLM 2010b). These cumulative actions would have impacts that could result in the loss of vegetation cover, create opportunities for non-native invasive plant proliferation, and potentially degrade sensitive wetland habitats, similar to the potential impacts described above for the Proposed Action. However, the contribution of the proposed LGPP impacts to impacts from all the various activities in the area is minimal, and cumulative effects of the combined impacts over the long-term would be negligible, particularly considering that the baseline condition of the vegetation is already low quality grassland habitat infested with non-native invasive species, such as cheatgrass.

The minor effects of the Proposed Action on vegetation would likely have only incremental additive effects, when considered in combination with other past, ongoing, and reasonably foreseeable actions in the project vicinity.

## 3.6 Biological Resources—Wildlife and Wildlife Habitat

### 3.6.1 *Affected Environment*

A detailed description of wildlife and wildlife habitats in the proposed ROWs is provided in the Wildlife Technical Report (Idaho Power 2009b). Supplemental information for habitats on private lands was taken from the Vegetation Baseline Report (Idaho Power 2010a). Information from the reports is summarized in the following sections.

The project study area consists of primarily grassland habitats and agricultural areas. Small areas of riparian, wetland, and shrublands are scattered throughout the project study area. Descriptions of vegetation type, habitat each provide, and wildlife species are described below by habitat type. Areas of habitat types in the proposed ROWs are summarized in **Table 3.5-1**. Photos of wildlife habitats are provided in **Figure 3.6-1**. Wildlife habitat conditions within a vegetation type at a specific location vary and depend on several factors, including: level of human disturbance; diversity of native plant species, vegetation layers, and structural complexity.

Figure 3.6-1: Photos of Wildlife Habitats



Grassland - 230-kV (BLM)



Grassland - Water Pipeline (BLM)



Shrubland- 138-kV (BLM)



Riparian and Wetland - Water Pipeline (Private)



Canal - Water Pipeline (Private)



Agriculture and Mixed Rural - 138-kV (Private)

### 3.6.1.1 Grassland Habitat

Grassland habitat in the project study area is primarily delineated by the Long-billed Curlew Habitat ACEC. Grassland habitat occurs on approximately 55 percent of the proposed ROWs. The grassland habitat in the proposed ROWs is degraded from recreational uses, livestock grazing, wildfires, and the prevalence of non-native species. The grassland habitat in the proposed ROWs on BLM land are subject to livestock grazing, which has a major influence on the structure and composition of vegetation through trampling, soil compaction, and the deposition of feces.

Reptiles such as the western fence lizard (*Sceloporus occidentalis*), side-blotched lizard (*Uta stansburiana*), and gopher snakes (*Pituophis catenifer*) are associated with this habitat and common in the region. Birds associated with this habitat include red-tailed hawk (*Buteo jamaicensis*), northern harrier (*Circus cyaneus*), American kestrel (*Falco sparverius*), California quail (*Callipepla californica*), western kingbird (*Tyrannus verticalis*), horned larks (*Eremophila alpestris*), black-billed magpie (*Pica pica*), common raven (*Corvus corax*), and song sparrow (*Melospiza melodia*). Mammals include Piute ground squirrels (*Spermophilus mollis idahoensis*), badger (*Taxidea taxus*), and coyote (*Canis latrans*). Piute ground squirrels are abundant, with dense colonies contiguous throughout the proposed ROWs. These colonies provide an abundant prey base for a variety of wildlife in the project study area. Raptors regularly forage in these grasslands.

Special status species observed during the field surveys included golden eagle (*Aquila chrysaetos*), prairie falcon (*Falco mexicanus*), and long-billed curlew (*Numenius americanus*). These special status wildlife species are described in Section 3.7.

### 3.6.1.2 Agriculture and Mixed Rural Habitat

Agricultural and mixed rural habitats occur on approximately 40 percent of the habitats in the proposed ROWs. This habitat is the dominant cover type and is contiguous throughout the project study area. The agriculture and mixed rural habitats include pasture, cultivated cropland, and rural residential areas. These habitats occur only on private lands along the proposed 138-kV transmission line and water pipeline ROWs.

Most wildlife species using these habitats are either seasonal migrants, or use these areas in conjunction with grassland habitat or other adjacent habitats. No amphibians or reptiles are closely associated with these habitats. Typical birds found in this habitat include the ring-necked pheasant (*Phasianus colchicus*), cliff swallow (*Petrochelidon pyrrhonota*), killdeer (*Charadrius vociferus*), horned lark, and western kingbird.

### 3.6.1.3 Native Shrubland Habitat

Native shrublands occur on approximately 4 percent of the habitats in the proposed ROWs and have a similar abundance in the project study area. Native shrubland habitat occurs in small, discrete patches on BLM and private lands in the proposed 138-kV transmission line ROW, and only on private land in the water pipeline ROW. The habitat has been disturbed

and is fragmented, and non-native species (including cheatgrass and other non-native plants) have become established in the herbaceous layer. Non-native species have spread from livestock grazing and following repeated wildfire disturbances. The few remnant areas of sagebrush are too small to support sagebrush-obligate wildlife species. Common wildlife species in this habitat included red-tailed hawk, northern harrier, mourning dove (*Zenaida macroura*), western kingbird, horned lark, barn swallow, jackrabbit (*Lepus* spp.), and cottontail (*Sylvilagus* spp.).

Special status species observed during the 2009 field surveys included Swainson's hawk (*Buteo swainsoni*) and Brewer's sparrow (*Spizella breweri*). These special status wildlife species are described in Section 3.7.

### 3.6.1.4 Riparian and Wetland Habitat

Riparian and wetland habitats occur on less than 1 percent of the habitats in the proposed ROWs. Riparian and wetland habitats only occur on private land in the proposed water pipeline ROW. These habitats are associated with the Snake River, streams, and canals. Riparian, wetland, canal, and stream habitats typically have a high degree of diversity because of lateral inputs of organic matter, disturbance regimes, microclimate, and proximity to water (Johnson and O'Neil 2001). These riparian and wetland habitats are disturbed and fragmented. Livestock grazing in riparian and wetland communities has degraded wildlife habitat value (Saab et al. 1995).

The riparian and wetland habitats in the project study area support species that nest in the canopy (e.g., Bullock's oriole [*Icterus bullocki*], yellow warbler [*Dendroica petechia*]), cavities (e.g., downy woodpecker [*Picoides pubescens*]), young tree layer (e.g., yellow warbler), shrubs (e.g., willow flycatcher [*Empidonax traillii*]), and ground (e.g., song sparrow [*Melospiza melodia*]) (IPIF 2000).

## 3.6.2 Environmental Consequences

### 3.6.2.1 Methodology

To conduct the analysis, AECOM ecologists assessed the affected environment through site visits characterizing wildlife and wildlife habitat, and prepared a Wildlife Technical Report (Idaho Power 2009b). The affected environment is the baseline for evaluating potential effects on wildlife distribution, abundance, movement, and sensitive periods of their life cycle (i.e., migrating, nesting). The following factors were considered in determining the type, degree, and level of impacts on wildlife and wildlife habitats. Effects on wildlife and wildlife habitat are analyzed based on the following:

- Conflict with any state or local policies or ordinances protecting wildlife or wildlife habitats.
- Conflict with the provisions of an approved regional, state, or local habitat conservation plan or game management plan.

- Interfere with wildlife movement, migration corridors, or habitat connectivity that may diminish the chances for long-term survival of a species.
- Substantially disrupt local biological communities (e.g., from construction impacts).

### 3.6.2.2 Alternative A—Proposed Action

The proposed temporary construction and permanent ROW impacts associated with linear components (i.e., 230-kV and 138-kV transmission lines, and the water pipeline) are described below. In addition, each linear project component crosses the Long-billed Curlew Habitat ACEC, as designated by BLM. Idaho Power would ensure that no major construction activities would occur from March 15 through June 30 in the long-billed curlew habitat ACEC. Effects on the long-billed curlew and BLM sensitive species are described in Section 3.7, *Special Status Species*. Several elements of the project could potentially affect wildlife and wildlife habitat, including:

- Construction-related noise disturbance
- Construction-related wildlife mortality
- Construction-related short-term habitat loss and disruption of movement
- Construction-related long-term habitat loss
- Construction-related spread of noxious and invasive plant species
- Habitat fragmentation
- Bird collision and electrocution from overhead power lines
- New raptor and raven perch sites and predation

#### 3.6.2.2.1 Construction Impacts

Short-term effects of construction on wildlife resources would include noise, wildlife mortality, habitat loss, disruption of wildlife movement, and the spread of noxious weeds. Disturbances caused by heavy equipment and construction crews may cause wildlife to move away from the construction zone. Because grassland habitat found along the proposed temporary construction ROWs are connected to other similar grassland habitats, most mobile wildlife species (e.g. birds) may relocate in these nearby areas during construction. These impacts would end with the completion of project construction.

Construction of the transmission lines would have a minor long-term effect on wildlife habitat, which would include overland travel, vegetation clearing, and soil grading at the transmission structure locations. These activities within the ROW could result in the mortality of individual small mammals, such as ground squirrels. Species with limited mobility or that occupy burrows within the construction zones could be crushed during clearing and grading activities (Trombulak and Frissell 2000). The threat of mortality would be limited to the duration of construction, and would not be substantial given the ability of most wildlife species to avoid vehicles and equipment.

Approximately 159.3 acres of grassland habitat would be disturbed within the temporary construction ROW for the 230-kV transmission line. This is a relatively small area of

grassland habitat within the context of the Long-billed Curlew Habitat ACEC, which is primarily grassland habitat. The timing of construction would substantially reduce the impacts on wildlife that start to breed in spring, but may have a moderate effect on overwintering wildlife.

Construction of the 138-kV transmission line would have a minor effect on wildlife species associated with grassland and native shrubland habitat. Impacts along the proposed 300-foot-wide construction ROW would result in temporary disturbance of approximately 210.3 acres of grassland and 10 acres of native shrubland habitats on BLM land. Impacts on private land would result in the temporary disturbance of approximately 39.8 acres of grassland, 7.2 acres of native shrubland, and 299 acres of agriculture and mixed rural areas habitats. Areas of native shrubland habitat between the structure locations would be avoided during construction to the extent practicable.

Construction of the water pipeline would have a minor effect on wildlife species closely associated with grassland habitat. Habitat modification would be the primary short- and long-term construction-related impact associated with the water pipeline; all of the expected disturbance would occur in grassland habitat. Impacts along the proposed 300-foot-wide temporary ROW for the water pipeline during construction would include the disturbance of approximately 101.4 acres of grassland habitat on BLM land. Impacts on private land would result in the temporary disturbance of approximately 51.2 acres of grassland, 6.7 acres of native shrubland, 123.8 acres of agriculture and mixed rural areas, and 5.1 acres of riparian and wetland habitats.

Trenching for the pipeline would cause temporary fragmentation of habitat, act as a barrier to wildlife movement, and displace foraging areas during construction. Trenching and soil disturbance may compromise soil integrity and permanently displace the use by ground-dwelling mammals, such as the Piute ground squirrel and badger. Because of the construction timing and depth of trenching, the proposed water pipeline would have a moderate impact that could result in mortality to ground squirrels.

The spread of noxious and invasive plant species during construction could have a long-term effect on wildlife habitat quality through degradation and fragmentation (Westbrooks 1998), but these effects would be minimized through the implementation of EPMs to minimize the spread and introduction of noxious weeds. The overall impact of the spread of noxious weeds would be minor to moderate.

#### 3.6.2.2.2 Operational Impacts

##### 138-kV and 230-kV Transmission Line

Operational effects of the proposed transmission lines on wildlife would be associated with fragmentation of habitat, the presence of new raptor and raven perch sites, and increased bird collision and electrocution. Transmission line structures provide perches and nesting areas for raptors and ravens (Steenhof et al. 1993). In areas where vegetation is low and the terrain relatively flat, power poles provide an attractive hunting and roosting perch, as well as

nesting stratum for many species of raptors (Steenhof et al. 1993). Power poles increase a raptor's range of vision, allow for greater speed during attacks on prey, and serve as territorial markers (Steenhof et al. 1993). Where natural perches are limited, raptors may actively seek out power poles. This may result in increased predation within the home range of raptors or ravens (Engels and Young 1992).

The proposed 150-foot-wide permanent ROW for the 230-kV transmission line would include approximately 47.4 acres of grassland habitat on BLM land. Although the actual footprint for the structures would be considerably less than the available habitat within the ROW, the overhead power lines provide perching opportunities for predatory species and may therefore modify the habitat for certain species, both within and beyond the ROW. A transmission line ROW represents a special case of habitat fragmentation. Transmission line ROWs may be characterized as long, linear features that can be visually distinct from the surrounding landscape. There may be some minor effects on birds, small mammals, and reptiles from the additional habitat fragmentation, but given the general low quality of the grassland habitat, this effect is considered minor.

New service roads associated with the 230-kV transmission line could facilitate increased use of new area by humans. The potential effects from the establishment of new roads include hunting and recreation. Most recreational hunting in the area is directed at the Piute ground squirrel, and the new roads could result in a minor increase in mortality to ground squirrel populations.

In addition to large portions of native grassland habitat, the proposed 138-kV transmission line would fragment the sagebrush habitat in the area, further limiting the potential nesting opportunities for sagebrush-obligate species. However, because the existing sagebrush habitat already is fragmented, the proposed 138-kV transmission line would have a minor effect on habitat for these species.

The proposed overhead transmission lines represent a potential long-term threat to movements of resident and migratory birds because of the potential for collisions. While birds do occasionally collide with transmission lines and poles, research indicates that the risk of collision may be largely related to the location of the line relative to bird concentration areas (APLIC and USFWS 2005). However, the 230-kV transmission line route has been located along a low-lying ridge away from bird concentration areas (e.g. Snake River Birds of Prey National Conservation Area) and major migratory flyways (Pacific Flyway Council 2010), and would be designed according to APLIC standards. The risk for bird collisions is considered minor due to these siting and design considerations and the size of the conductors. Specific effects on BLM sensitive species, including the long-billed curlew and sagebrush-obligate species, are described in Section 3.7, Special Status Species.

Concern over raptor electrocutions has resulted in the development of avian-safe design guidelines for new transmission lines (APLIC 2006, APLIC and USFWS 2005). Research indicates that most avian electrocutions occur on low-voltage transmission lines (4 to 69 kV)

that have a small separation distance between conductors. Avian-safe design standards would be implemented for the proposed transmission lines and would minimize the potential for avian electrocutions.

In the long-term, as evidenced by the avian and wildlife activity around the existing nearby Caldwell-Ontario 230-kV transmission line, birds likely would continue to use the area for nesting, roosting, foraging, and dispersal. Common mammals, such as ground squirrels and badgers, would continue to use the connected and similar habitat for feeding, reproduction, and dispersal. The overall impact of the transmission lines on wildlife species would be minor.

The proposed 30-foot-wide permanent ROW for the water pipeline would include approximately 5.7 acres of grassland habitat on BLM land; and approximately 3.6 acres of grassland habitat and 16 acres of agriculture and mixed rural areas habitat on private land. Unlike the transmission lines, the water pipeline would have a limited number of above-ground structures on BLM land, including manholes, pipeline markers, and small valve boxes, and therefore would have minor effects on wildlife resources. When construction is complete, birds would continue to use the area for nesting, roosting, foraging, and dispersal. Ground-dwelling mammals also would continue to use the affected area for feeding, reproduction, and dispersal.

### 3.6.2.3 Alternative B—No Action

Impacts to wildlife and wildlife habitat would include construction-related noise disturbance, wildlife mortality, short-term habitat loss, disruption of movement, long-term habitat loss, spread of noxious and invasive plant species, habitat fragmentation, bird collision and electrocution from overhead power lines, new raptor and raven perch sites, and predation. All of these impacts would occur on private lands.

The impact on wildlife habitat would be somewhat greater than the Proposed Action due to the increased length of the water pipeline and transmission lines. As a result of the increased length of these linear project components, the construction schedule would be lengthened and disturbances to wildlife would be increased. However, the No Action Alternative would have fewer impacts on grassland habitats and greater impacts on agricultural and mixed rural habitats compared with the Proposed Action. Overall impacts would be comparable to those impacts described above for the Proposed Action.

### 3.6.2.4 Cumulative Impacts

Potential cumulative impacts for the proposed project would be added to other activities, including construction and operation of the proposed LGPP, construction of a natural gas pipeline to bring fuel to the LGPP, increased development, recreation, and geothermal resource development. These cumulative actions would result in additional wildlife habitat loss and degradation.

Past grazing activities, wildfire, and recreation have affected wildlife habitat in the project vicinity and in the ACEC. Future projects could have an impact on wildlife resources that

result in the loss of wildlife habitat, increase in disturbance and interaction with humans, and increase in competition for resources.

The proposed LGPP would result in a loss of approximately 70 acres of primarily non-native grassland habitat. Because recreational uses would increase throughout the ACEC, wildlife mortality from hunting would also increase. However, these cumulative impacts would not affect regional populations of general wildlife.

The minor effects of the proposed action on wildlife would likely have only incremental additive effects when considered in combination with other past, ongoing and reasonably foreseeable actions in the project vicinity.

### 3.7 Biological Resources - Special Status Species

#### 3.7.1 *Affected Environment*

To evaluate the effects of the project alternatives on special status species, the affected environment has been defined as those special status species and their habitats known to occur in the proposed ROWs, or likely to occur in the project study area given the presence of suitable habitat and known distribution.

Special status plant species considered in this report were identified from USFWS, BLM, and IDFG species lists. The USFWS list includes ESA listed, proposed, and candidate species for Payette, Canyon, and Gem counties, Idaho (USFWS 2009a, 2009b, 2009c). The BLM list includes FRFO special status plants (BLM 2000, 2007). The IDFG list includes rare plants in Payette, Canyon, and Gem counties (IDFG 2009a, 2005) and species of greatest conservation needs in the Owhyee Uplands Ecological Section (IDFG 2005d). All species from these lists were considered unless it could be reliably determined that they would not occur within the proposed ROWs. Preliminary information on special status species is based on a review of existing data and field surveys.

Other sources used in the development of this section include correspondence with BLM specialists (pers. comm., J. Holderman 2009; pers. comm., M. Steiger 2009; and pers. comm., K. Kershaw 2009); a database search for special status species records through the Idaho Fish and Wildlife Information Systems (IFWIS, formerly the Idaho Conservation Data Center) (2009); Idaho Native Plant Society (INPS) Rare Plant List (2007); and the Idaho Comprehensive Wildlife Conservation Strategy (WCS) (IDFG 2005d).

#### 3.7.2 *Federally Listed, Proposed, and Candidate Species*

Slickspot peppergrass was listed as threatened by the USFWS on December 7, 2009, because it is "likely to become endangered within the foreseeable future throughout all or a significant portion of its range" (**Table 3.7-1**). Based on a review of existing data and field surveys, there is suitable habitat (bare slickspot soils) for slickspot peppergrass within the proposed 230-kV transmission line, 138-kV transmission line, and water pipeline ROWs (Idaho Power 2009a, 2010a, 2010b, 2010c). No occurrences of this species are documented

in the proposed ROWs on BLM land, although known occurrences do occur in close proximity.

Table 3.7-1: Federally Listed, Proposed, and Candidate Species that Occur in the Proposed ROWs

| Common Name           | Scientific Name              | Status     | Habitat Association  |
|-----------------------|------------------------------|------------|----------------------|
| Slickspot peppergrass | <i>Lepidium papilliferum</i> | Threatened | Bare slickspot soils |

Source: USFWS 2009a, 2009b, and 2009c.

**Slickspot Peppergrass (*Lepidium papilliferum*)**

**Habitat Association** – The habitat of slickspot peppergrass can be broadly characterized as semi-arid, sagebrush steppe habitats in southern Idaho. Slickspot peppergrass is associated with basalt ridges and plains, stable piedmont, and alluvial floodplains and deposits. Slickspot peppergrass can be found in visually distinct microsites, known as slickspots that act as small water basins where moisture tends to linger longer than surrounding non-slickspot areas and where the sodium and clay content is higher than adjacent, unoccupied habitat (Fisher et al. 1996). Most populations occur on flat to gently sloping terrain. The distribution of slickspots occurs mainly along ridgelines (CCA 2003).

**Previously Documented Occurrence within the Project Study Area** – As part of the CCA for slickspot peppergrass, 12 management areas were established by agreement between the BLM and the State of Idaho through the Governor’s Office of Species Conservation, the Idaho National Guard, and nongovernmental cooperators to provide an organizational structure that facilitates the conservation of slickspot peppergrass in distinct segments across its range (CCA 2003). The areas that were surveyed for the LGPP project are located in a portion of the New Plymouth/Canyon County Slickspot Peppergrass Management Area (**Figure 3.7-1**). This management area is located on BLM land south of New Plymouth on either side of I-84. This is the northwest extent of the species’ known range. Most of the area has burned in the past and converted to annual grassland vegetation, with small, scattered remnant stands of unburned sagebrush steppe vegetation.

A database search of the IFWIS indicated that four slickspot peppergrass element occurrences (EOs) are documented within the project study area (IFWIS 2009). Three of these four occurrences are more than 0.5 mile from the proposed ROWs that were surveyed for the LGPP project and include the following:

- EO #69 [ID 9352]: East of Ashlock Gulch
- EO #66 [4450]: New Plymouth SW
- EO #70 [ID 9353]: West of Graveyard Gulch

These three occurrences had observations of flowering plants in 2008. The East of Ashlock Gulch occurrence (EO #69) is located in an Idaho Power ROW for the 230-kV Caldwell to Ontario transmission line. In 2008, the occurrence was surveyed by Idaho Conservation Data Center botanists and a BLM permittee. This survey indicated a population with good vigor,

with 6,754 plants observed on a Habitat Integrity and Population (HIP) monitoring transect. The East of Ashlock Gulch EO (#69) is 0.5 mile northwest of the proposed 230-kV transmission line ROW.

The fourth occurrence (EO #68 [ID 6035]: South of New Plymouth/ I-84) is documented east of the proposed 138-kV transmission line ROW. This occurrence has three subpopulations (sub-EO 1, 2, and 3). In 2002, sub-EO 1 and 2 had several thousand genets described as occurring in a 5-acre area. Some plants were growing out of badger holes and in and around cow pies (IFWIS 2009). In 2004, a new subpopulation (sub EO-3) was recorded with 631 to 1,277 genets. However, in 2005, poor population vigor was observed with nine flowering genets in one slickspot along HIP transects. In 2008, 224 genets were observed on HIP transects.

**Observed Occurrence within the Proposed ROWs** – On May 12 through 18 and June 22 through 24, 2009, Idaho Power conducted field surveys intended to document vegetation types, potential wetlands and other waters, special status plant species, and noxious weeds on the proposed LGPP ROWs on BLM lands. The special status plant survey was conducted using the intuitive controlled survey for special status plants based on the BLM survey protocol for vascular plants (BLM 1998). The survey focused on detecting slickspot peppergrass in potential slickspot habitat microsites, described by BLM as occurring mostly along ridgelines within the New Plymouth/Canyon County Slickspot Peppergrass Management Area (Mancuso et al. 2002; CCA 2003). Prior to the rare plant survey, a visit was made to EO #68, which is located approximately 200 feet outside and east of the proposed 138-kV transmission line ROW. The intent of the visit was to observe a known slickspot microsite, and to determine the phenological status of slickspot peppergrass plants that were found in a healthy, flowering condition in May 2009.

The ridgeline habitats observed along the three proposed ROWs were NNG dominated by various proportions of Sandberg bluegrass, sixweeks fescue, and cheatgrass. The potential slickspot habitat microsites along the ridgelines typically support varying amounts of these three species and various introduced weedy herbs, such as clasping pepperweed and tumble mustard. Some of the potential slickspots have been disturbed by ground squirrels, which are abundant in the area.

In summer 2009, potential habitat initially was mapped for slickspot peppergrass in those areas where remnant Native Shrub cover types and potential slickspots occurred together, because this combination of characteristics was considered to have the highest potential to support slickspot peppergrass habitat (Fisher et al. 1996). Individual slickspots along ridgelines, upper hillslopes, and relatively flat ground were not mapped initially because the BLM already had identified these areas as harboring microsites for slickspot peppergrass. The proposed 138-kV transmission line route was revised to avoid most of the native shrub habitats, which included portions of EO#68, after the initial potential habitat mapping exercise and after the USFWS listed slickspot peppergrass. Subsequently, Idaho Power conducted additional field surveys in December 2009 and January 2010 to map individual potential

slickspot microsites, primarily on ridgelines, within the proposed 230-kV transmission line, water pipeline, and revised 138-kV transmission line ROWs (Idaho Power 2010a). This mapping effort included documentation of some additional native shrub habitats on the rerouted portions of the 138-kV transmission line. These habitats were dominated by big sagebrush and rubber rabbitbrush shrubs, interspersed with numerous slickspot habitat microsites. No new occurrences were documented during this field effort, although none were expected given the timing of surveys outside the growing season. Data from these combined surveys were compiled for a comprehensive potential habitat map. However, Idaho Power's surveys for slickspot peppergrass in 2009 are inadequate to determine the presence or absence of slickspot peppergrass in potential slickspot habitat; definitive determination of slickspot peppergrass requires survey be conducted for a minimum of 3 years within a 12-year period in years with normal or above normal precipitation.

Existing data on slickspot peppergrass occurrence on BLM land in the New Plymouth/Canyon County Slickspot Peppergrass Management Area describe EO #s 66, 68, and 69 in the immediate project vicinity west of I-84. EO #s 68 and 69 occur in NNG habitat (Mancuso et al. 2002) that also dominates the proposed ROWs. The existing EOs occupy a very small percentage of the overall potential slickspot habitat mapped by the BLM in the New Plymouth/Canyon County Slickspot Peppergrass Management Area. As described below, a variety of possible reasons could account for the lack of slickspot peppergrass occurrence in potential habitat in the proposed ROW.

One possible reason for the unoccupied potential slickspots is that some of them are marginal or unsuitable habitat with regard to their soil chemistry. The EO #68 site had a subtle concave topography and evidence of recent ponding, and a clearly evident light-colored vesicular crust. The majority of slickspots observed did not appear to have the same degree of ponding; and if any vesicular crust was present at all (only hardpan present), it was not nearly as reflective. This may indicate that many of the observed microsites may no longer pool enough water to support growth and reproduction of slickspot peppergrass. These "drier" microsites, however, may become prime habitat for slickspot peppergrass should the climate become wetter in the future.

The prevalence of unoccupied habitat also may be related to slickspot peppergrass' dual life history strategy, whereby it has both an annual and a biennial growth form. These life history strategies are dynamic and an adaptation in response to the growing conditions. However, the seed banking ability of slickspot peppergrass allows it to remain viable as seed in the soil and undetectable to field observation. Slickspot peppergrass seeds can remain viable in the seed bank for up to 12 years. The aboveground plants represent a portion of the population, and the seed bank represents the majority of the population (CCA 2003). A map of potential slickspot peppergrass habitat microsites in the proposed ROWs is provided in the Biological Assessment (BA) (Idaho Power 2010c).

The USFWS lists the following factors as potentially affecting slickspot peppergrass throughout its range: modified fire regime, non-native invasive plants, development, livestock use, wildfire management and post-fire rehabilitation, military use, and recreation.

### 3.7.3 BLM Sensitive Species

In addition to the slickspot peppergrass, several special status species have the potential to occur in the project study area (**Table 3.7-2**). For most of the species, no formal surveys have been conducted, so specific occurrences are unknown. The following sub-sections describe each species' (or species guild) habitat requirements, and the likelihood and location of occurrence within the project study area.

Table 3.7-2: BLM Special Status Species that May Occur in the Project Study Area

| Common Name   | Scientific Name                                      | Status <sup>a</sup>   | Habitat Association <sup>b</sup>   |
|---|--|-----------------------|--|
| <b>Plants</b>   |  |                       |  |
| Slickspot peppergrass                                     | <i>Lepidium papilliferum</i>                         | BLM Type 1            | Bare slickspot soils within big sagebrush.   |
| Mulford's milkvetch                                       | <i>Astragalus mulfordiae</i>                         | BLM Type 2            | Sandy slopes and ridges, south-facing slopes; 2000–2,500 ft.   |
| Calcareous buckwheat                                      | <i>Eriogonum ochrocephalum</i> var. <i>calcareum</i> | BLM Type 3            | Sparsely vegetated clay hills; 1,900–3,000 ft.   |
| Cronquist's stickseed                                     | <i>Hackelia cronquistii</i>                          | BLM Type 3            | Sandy or loamy soils of sagebrush-bunchgrass; 2,000–2,500 ft.  |
| <b>Amphibians and Reptiles</b>                            |  |                       |  |
| Common garter snake                                       | <i>Thamnophis sirtalis</i>                           | BLM Type 3            | Canals and intermittent ponds, prairie swales, and roadside ditches.   |
| Mojave black-collard lizard (Great Basin collared lizard) | <i>Crotaphytus bicinctores</i>                       | BLM Type 3            | Arid habitats with sparse vegetation and rocks 0.25–1 m in diameter.   |
| Woodhouse toad  | <i>Bufo woodhousii</i>                               | BLM Type 3            | Xeric to slightly mesic grassland and shrubland, often in washes, floodplains, or riparian areas.                                    |
| Western toad  | <i>Bufo boreas</i>                                   | BLM Type 3            | Canals and sagebrush/ grassland within 2 miles of water.   |
| Night snake   | <i>Hypsiglena torquata</i>                           | BLM Type 5            | Rocky and sandy areas in sagebrush and in areas with no sagebrush. Typically only near rock outcrops.                                |
| <b>Raptors</b>  |  |                       |  |
| Golden eagle  | <i>Aquila chrysaetos</i>                             | BGEP Act <sup>c</sup> | Foraging habitat only, in grassland and sagebrush. Requires cliffs or platforms on utility towers for nesting.                       |
| Bald eagle  | <i>Haliaeetus leucocephalus</i>                      | BGEP Act <sup>c</sup> | Near open water. Closest open water is the Snake River, approximately 5 miles west. Overwintering habitat exists in survey corridor. |
| Prairie falcon  | <i>Falco mexicanus</i>                               | BLM Type 3            | Foraging habitat only, in grassland and sagebrush. Nests on cliffs.  |
| Ferruginous hawk  | <i>Buteo regalis</i>                                 | BLM Type 3            | Grassland and sagebrush. Nests in trees, on cliffs, utility poles, and ground.   |

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| Common Name                 | Scientific Name               | Status <sup>a</sup> | Habitat Association <sup>b</sup>   |
|-----------------------------|-------------------------------|---------------------|--|
| Swainson's hawk             | <i>Buteo swainsoni</i>        | BLM Type 5          | Foraging habitat only, in grassland and sagebrush. Nests in trees. Closest known nest is 0.5 mile south of the survey corridor |
| Burrowing owl               | <i>Athene cunicularia</i>     | BLM Type 5          | Grassland and sagebrush, during nesting season. Nests underground.   |
| Short-eared owl             | <i>Asio flammeus</i>          | BLM Type 5          | Grassland and sagebrush, during nesting season. Nests on the ground.   |
| <b>Shrubland Birds</b>      |                               |                     |  |
| Brewer's sparrow            | <i>Spizella breweri</i>       | BLM Type 3          | Sagebrush, especially big sagebrush, during nesting season.  |
| Sage sparrow                | <i>Amphispiza belli</i>       | BLM Type 3          | Sagebrush, especially big sagebrush, during nesting season.  |
| Loggerhead shrike           | <i>Lanius ludovicianus</i>    | BLM Type 3          | Open sagebrush, grasslands during nesting season.  |
| Sage thrasher               | <i>Oreoscoptes montanus</i>   | BLM Type 5          | Sagebrush, especially big sagebrush, during nesting season.  |
| Brewer's blackbird          | <i>Euphagus cyanecephalus</i> | BLM Type 5          | Shrubland, prairies, and agricultural fields.  |
| <b>Grassland Birds</b>      |                               |                     |  |
| Grasshopper sparrow         | <i>Ammodramus savannarum</i>  | BLM Type 3          | Open grassland with patchy bare ground, during nesting season.   |
| Long-billed curlew          | <i>Numenius americanus</i>    | BLM Type 5          | Prefers open, recently grazed shrub steppe containing short vegetation for nesting; often feeds in agricultural areas.         |
| <b>Bats</b>                 |                               |                     |  |
| Spotted bat                 | <i>Euderma maculatum</i>      | BLM Type 3          | Forages in various habitats from desert to montane. Roosts in cracks and crevices in cliffs and canyons.                       |
| Townsend's big-eared bat    | <i>Plecotus townsendii</i>    | BLM Type 3          | Forages in sagebrush. Roosts colonially in caves, buildings.   |
| Yuma myotis                 | <i>Myotis yumanensis</i>      | BLM Type 5          | Forages in sagebrush. Roosts in caves, tunnels, or buildings.  |
| Western small-footed myotis | <i>Myotis ciliolabrum</i>     | BLM Type 5          | Forages in sagebrush. Roosts in caves, mine tunnels, crevices in rocks, buildings.   |

<sup>a</sup> Status:

BLM Type 1: Threatened, Endangered, Proposed, and Candidate species. These species are listed by the USFWS or they are proposed for listing under the Endangered Species Act.

BLM Type 2: Rangelwide/global imperilment species. Species that are experiencing significant declines throughout their range with a high likelihood of being listed under the ESA in the foreseeable future because of their rarity and/or significant endangerment factors.

BLM Type 3: Regional/state imperilment species. Species that are experiencing significant declines in population or habitat and are in danger of regional or local extinctions in Idaho in the foreseeable future.

BLM Type 4: Peripheral species in Idaho. Species that are generally rare in Idaho with the majority of their breeding range outside the state.

BLM Type 5: Watch list species. Species that are not considered Idaho BLM sensitive species, but current population or habitat information suggests that species may warrant sensitive status in the future.

<sup>b</sup> BLM 2000, IDFG 2005d, INPS 2007, Scott et al. 2002, Ehrlich et al. 1988.

<sup>c</sup> BGEP Act: The Bald and Golden Eagle Protection Act (16 USC 668a–d) prohibits the taking or possession of and commerce in bald and golden eagles.

A discussion of each of the species listed in **Table 3.7.2** is presented in the following sections.

### Plants

Four special status species plants were determined to have potential to occur in the project study area based on their current or historic occurrence within Payette, Canyon, or Gem counties (IDFG 2005a, 2005b, and 2005c), generally within approximately 20 miles of the project study area. Assessments were based on habitat requirements based on information available for special status species (BLM 2000); inspection of soil survey maps; aerial photography, and field observations made during rare plant surveys in 2009 (Idaho Power 2009a).

Of the four plant species listed in Table 3.7-2, only the slickspot peppergrass was determined to have relatively high potential to occur in the project study area. Potential habitat does exist for Mulford's milkvetch and Cronquist's stickseed, although habitat conditions in general have been degraded by factors such as frequent wildfire, livestock grazing, and non-native invasive species. These species were not observed during the 2009 field surveys, but some of the soil types observed in the project study area could support these species. Habitat for calcareous buckwheat was not observed during rare plant surveys in 2009. A portion of the 138-kV transmission line ROW was realigned late in 2009 and subsequently, habitat surveys for rare plants was conducted in winter and outside the growing season when rare plants lack distinctive features required for accurate identification. Because of this survey timing, presence or absence of special status plant species cannot be confidently confirmed within the ROWs (Idaho Power 2010a). As stated in the BA, pre-construction surveys for slickspot peppergrass would be conducted in potential slickspot habitat during the appropriate season (Idaho Power 2010c). The pre-construction surveys for slickspot peppergrass are not protocol level surveys that determine definitive presence or absence. It is assumed that all potential slickspots are potentially occupied by slickspot peppergrass seed. Surveys for other BLM sensitive species would be conducted on the new 138-kV transmission line ROW at the appropriate time of year to facilitate accurate identification. A summary of the likely occurrence of these special status plant species is provided in Table 3.7-3.

Table 3.7-3: Suitable Habitat and Likelihood of Occurrence of Special Status Plant Species

| Common Name<br><i>Scientific Name</i>                 | Potential Occurrence  |
|---|---|
| Slickspot peppergrass<br><i>Lepidium papilliferum</i> | Suitable slickspot habitat microsites occur on the 138-kV, 230-kV, and water pipeline ROWs. The species has been documented on BLM lands in the project study area in proximity to the 138-kV transmission line ROW along I-84. No plants were observed during the 2009 rare plant survey visit. May still occur in potential slickspot microsites. |
| Mulford's milkvetch<br><i>Astragalus mulfordiae</i>   | Closest known population is 15 miles north of the project study area. South-facing slopes are not abundant, but this habitat could occur along the new 138-kV transmission line ROW. There is a minor potential of this species occurring in the project study area.  |

| Common Name<br>Scientific Name  | Potential Occurrence  |
|---|---|
| Calcareous buckwheat<br><i>Eriogonum ochrocephalum</i><br>var. <i>calcareum</i> | Closest known occurrence is historic population 8 miles northeast. The presence of clay hill habitat is unlikely along the new 138-kV transmission line ROW. Included as a potential species, in part, due to nearby historic occurrence.   |
| Cronquist's stickseed<br><i>Hackelia cronquistii</i>                            | Closest known population is 20 miles north. Loamy soils formerly dominated by native shrub communities are present in the project study area. This species was not observed during rare plant survey in 2009, but habitat could occur along the new 138-kV transmission line ROW. There is a minor potential of this species occurring in the project study area. |

### Amphibians and Reptiles

Amphibians require a water source on a regular basis (IDFG 2005d), but there are no perennial water sources on BLM land within the proposed ROWs. Ephemeral drainages in the proposed ROWs likely provide water for short periods after a rain. Because of the lack of a reliable water source and the disturbed condition of the grasslands, the western toad and Woodhouse toad are not likely to occur within the proposed ROWs on BLM land. However, water features (including wetlands) occur on private land within the proposed water pipeline ROW.

The common garter snake occupies virtually any type of wet or moist habitat (IDFG 2005d). The common garter snake may be seasonally present and would be active above ground from about March through October. The Mojave black-collard lizard (Great Basin collared lizard; *Crotaphytus bicinctores*) and night snake occur in rocky, sparsely vegetated habitat (Scott et al. 2002). These species are not expected to occur because substantial areas of rocky habitat do not exist along the proposed ROWs or the surrounding areas.

### Raptors

Raptor species of special concern in the proposed ROWs include the golden eagle, prairie falcon, ferruginous hawk, Swainson's hawk, burrowing owl, and short-eared owl. Because of the abundance of prey species (e.g. ground squirrels) throughout the proposed ROWs, each of these raptor species could potentially use the proposed ROWs for foraging.

The golden eagle prefers open areas and typically builds its nest on cliffs (Scott et al. 2002). The species is a fairly common nester along the Snake River Canyon east of the proposed ROW. Golden eagles were observed roosting and foraging in the proposed 230-kV transmission line ROW. However, no golden eagle nests or nesting habitat were documented or observed in the proposed ROWs.

Prairie falcons nest on cliffs in sagebrush communities and dry mountainous habitat. It winters at lower elevations (Ehrlich et al. 1988). It feeds primarily on small mammals and passerine birds. The species is a common nester in southern Idaho along the Snake River Canyon. A prairie falcon was observed flying north of the proposed water pipeline ROW

during field surveys in May 2009. However, no suitable nesting cliffs occur in the proposed ROWs.

Ferruginous hawks are closely associated with sagebrush and are sensitive to human activity near their nest site. This species historically has nested on the ground, but it has adapted to artificial nesting structures. Because of the proximity to I-84 and the fragmented sagebrush habitat, ferruginous hawks are not likely to nest on BLM land in the proposed ROWs. However, they may use the proposed ROWs as foraging or dispersal habitat.

Swainson's hawks nest and forage near agricultural areas with scattered trees. The Swainson's hawk is considered abundant and stable in Idaho (IDFG 2005d). An active nest was observed during the field survey 0.7 mile east of the proposed 138-kV transmission line ROW and east of I-84. Swainson's hawks reuse nests, and the nest that was observed during the field survey may likely be active for many years.

The burrowing owl nests and forages in open grasslands, deserts, and agricultural lands (Ehrlich et al. 1988). Burrowing owls nest underground. Burrowing owls were not observed during the field surveys in the proposed ROWs, but habitat exists and this species likely occurs in the project study area.

Short-eared owls are typically associated with open landscapes such as marshes, grasslands, and agricultural lands (Ehrlich et al. 1988). Short-eared owls nest on the ground. Short-eared owls were not observed during the field surveys in the proposed ROWs, but habitat exists and this species likely occurs in the project study area.

#### Shrubland Birds

Native shrublands are fragmented and isolated in the project study area, with patches along the proposed 138-kV transmission line ROW on BLM land. BLM sensitive shrubland bird species that potentially could occur in the project study area include the Brewer's sparrow, sage sparrow, sage thrasher, and loggerhead shrike.

Sage and Brewer's sparrows are closely associated with sagebrush. The sage thrasher is considered a sagebrush-obligate, generally dependent on large patches and expanses for successful breeding (Ehrlich et al. 1988). Sage sparrows or sage thrashers were not observed during wildlife surveys but may occur here; however, both of these species are sensitive to disturbance and are not likely to nest within any of the proposed ROWs because of the proximity to I-84 and fragmented sagebrush habitat. The loggerhead shrike prefers open habitats with short vegetation and typically nests in tall shrubs. Shrikes may forage throughout the project study area, but nesting habitat is limited.

#### Grassland Birds

BLM sensitive grassland bird species that may occur in the project study area include the grasshopper sparrow and long-billed curlew (IDFG 2005d). The grasshopper sparrow prefers moderately open grasslands and prairies with patchy bare ground for catching grasshoppers

(Ehrlich et al. 1988). In Idaho, it is an uncommon to rare breeder, but it could be present from May to July in grassland habitats throughout the proposed ROWs.

#### Long-Billed Curlew (*Numenius americanus*)

Portions of the proposed ROWs are within the Long-billed Curlew Habitat ACEC (**Figure 3.7-2**). The ACEC program is a conservation ecology program managed by the BLM. The program was conceived in the FLPMA, which established the first conservation ecology mandate for the BLM. The FLPMA broadly mandates the BLM to protect important riparian corridors, habitats of threatened and endangered species, cultural and archeological resources, and unique scenic landscapes that the agency assesses as in need of special management attention (BLM 2005 and 43 CFR 1610.7-2(b)). In this case, the ACEC was designated to conserve the long-billed curlew.

The 1987 RMP estimated 1,000 breeding pairs of long-billed curlews in the ACEC (BLM 1987). In 2006, the IDFG Idaho Bird Inventory and Survey (IBIS) program initiated standardized long-billed curlew surveys in the ACEC (IDFG 2007). Curlews were surveyed according to the Long-billed Curlew Rangewide Survey and Monitoring Guidelines (Jones et al. 2003). Within the ACEC, "off-road" (2-track) survey routes were delineated and surveyed. One of these survey routes, the New Plymouth route, covers a large portion of the proposed ROWs on BLM land. In 2006, 85 curlews were detected in the ACEC. However, only two curlews were observed along the New Plymouth route. In 2008, 178 curlews were detected in the ACEC (IDFG 2009b). However, only 11 curlews were detected along the New Plymouth route. Although these surveys cover a specific portion of the proposed ROWs, the results provide a relative index for abundance of long-billed curlews in the proposed ROWs.

The long-billed curlew prefers open, short-grass habitat with level to slightly rolling topography (IDFG 2005d), which occurs throughout the proposed ROW. Nests are placed on the ground in areas of notably patchy vegetation. However, most of the proposed ROW traverse existing dirt roads where nesting and foraging habitat is absent. One long-billed curlew was observed flying over the proposed 138-kV transmission line ROW where grasslands are prevalent. The curlew was first observed flying 20 feet above ground over Pearl Road, then circled up to more than 200 feet. A nest search was conducted in the immediate area of this observation, but no nest was found.

The proposed ROW falls within the Long-billed Curlew Habitat ACEC. The long-billed curlew is a large shore bird that nests and raises its young in short grass habitat. During the 1970s and 1980s, a range-wide decline in curlew population was occurring. Much of the curlews' historic breeding grounds (wetlands and short grass prairies) had been lost to development and the draining of wetlands. These changes led to the 1988 designation of the area as an ACEC for breeding and nesting habitat (USDI 1988a, USDI 1988b). Currently, the long-billed curlew is considered a BLM "watch" species, a Species of Greatest Conservation concern on the State of Idaho species list, and a Bird of Conservation Concern by the USFWS. Protecting habitat and nesting areas have been identified as conservation actions for this species in Idaho's Comprehensive WCS, and the ACEC directly addresses this conservation

need. They are protected by the Migratory Bird Treaty Act (MBTA) from takings that have been defined as "to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or any attempt to carry out these activities." Recreational shooting and fencing are some factors that can potentially result in take of this species under MBTA.

Curlews are generally present in the area from mid-March through the end of June (Allen 1980, Redmond and Jenni 1986). They migrate into the area about the third week of March and begin courtship activities. The birds nest on the ground, preferring low-stature, sparsely vegetated grasslands, but will build their nests near cow patties or bushes to help hide the nests from predators (BLM 2010b). During the 28-day incubation period, females incubate the eggs during the day and males incubate at night. Curlews use distraction behaviors, such as calling or flying threats to lure predators away or to deter them.

### Bats

Four BLM sensitive bat species may be present in the project study area for at least part of the year: the spotted bat, Townsend's big-eared bat, Yuma myotis, and western small-footed myotis (IDFG 2005d). Within the proposed ROWs, these bat species typically would forage nocturnally for insects. Occurrence in the proposed ROWs is unknown, although it is unlikely that there are any concentrated roosting areas since no caves, rocky cliffs, or lava tubes occur inside any of the proposed ROWs.

## 3.7.4 *Environmental Consequences*

This section analyzes the potential effects of the project alternatives on the special status species within the proposed ROWs, and includes a description of the methods, thresholds of significance, and an analysis of environmental consequences.

### 3.7.4.1 Methodology

#### BLM Sensitive Plants

The project alternatives were evaluated for their potential to affect slickspot peppergrass. The impacts discussion for slickspot peppergrass summarizes the analysis of the BA (Idaho Power 2010c). The analysis of effects on other BLM sensitive plants considers the potential for these species to occur near proposed construction activity and project features.

#### BLM Sensitive Wildlife

The proposed temporary construction and permanent ROW impacts associated with the primary components of the Proposed Action (i.e., 230-kV and 138-kV transmission lines, and the water pipeline) are described below. BLM sensitive wildlife species share habitat with general wildlife species; therefore, project effects described in Section 3.6 *Wildlife and Wildlife Habitats* also apply to special status wildlife species, including construction-related noise disturbance, wildlife mortality, short-term habitat loss and disruption of movement, long-term habitat loss, and spread of noxious and invasive plant species; habitat fragmentation, bird collision and electrocution from overhead power lines, and new raptor and raven perch sites and predation.

Each of these elements is described in detail in Section 3.6 *Wildlife and Wildlife Habitats*; this section briefly summarizes potential effects of each element specific to BLM sensitive wildlife species. In addition to these elements, there is specific concern about the effect of new roads causing increased use of areas by humans and a potential increase in illegal recreational hunting of the BLM sensitive species (pers. comm., Holderman, 2010). BLM sensitive amphibian, reptile, and bat species described in the affected environment section are not likely to occur in the proposed temporary construction and permanent ROWs; these wildlife species would be unaffected by the Proposed Action and are not described further.

### 3.7.4.2 Alternative A—Proposed Action

#### 3.7.4.2.1 Construction Impacts

##### Slickspot Peppergrass

There are no known occurrences of slickspot peppergrass within the proposed ROWs for the transmission lines and water pipeline. However, Idaho Power is working under the assumption that slickspot habitats potentially support slickspot peppergrass or harbor its seed. Ground disturbance in slickspots – excavation, grading, trampling, burying – would be a direct impact to the species. The types of impacts to slickspots are not considered to be temporary short-term impacts because the fragile soil layers are easily destroyed and the recovery of the soil layers is not considered a short-term process, and may not be possible under the current dry climate regime. It is likely that slickspots can withstand only the mildest direct compaction by rubber tired vehicles during the driest times of the year, or during the coldest times of year when the ground is frozen. Burying, grading, and excavation of slickspots are likely to result in permanent loss of slickspots. In an attempt to minimize these impacts, Idaho Power would avoid slickspot areas to the maximum extent possible, and also avoid work during wet ground conditions when the slickspots are most vulnerable to compaction and disruption of the vesicular crust. Preconstruction surveys in slickspot habitat during the growing season would also be conducted to avoid direct impacts to slickspot habitat supporting slickspot peppergrass plants (should they be found), and to minimize direct impacts by choosing the best possible routes for access roads and placement of power pole in areas with relatively lower slickspot density and quality.

Indirect impacts on slickspot peppergrass would occur where construction-related ground disturbance resulted in degradation of slickspot habitat by increasing the proliferation of invasive non-native plant species, including noxious weeds, and increasing the frequency or likelihood of human-induced wildfires. In the proposed ROWs and throughout most of the range of slickspot peppergrass, these factors are known to have negative effects on slickspots by maintaining degraded grassland habitats and encouraging the proliferation of invasive species in slickspots. Idaho Power would minimize their contribution to these impacts by applying EPMs that re-establish vegetation cover and discourage weed proliferation, as discussed in the preceding sections. Idaho Power would minimize the potential for starting fires during construction by adhering to federal, state, and county requirements relating to fire prevention and suppression during construction.

Idaho Power relocated the proposed 138-kV transmission line ROW early in the planning process to increase the distance from known EOs and to avoid running the transmission line between two EOs. This relocation would minimize the potential for indirect impacts to known occurrences, and also help to minimize the project's potential to create habitat fragmentation, a factor known to isolate EOs and discourage pollination.

The BLM requested formal consultation on the determination under section 7 of the Endangered Species Act that the proposed project is likely to adversely affect the slickspot peppergrass. The USFWS issued a Biological Opinion (USFWS 2010) that concluded that the proposed project would not jeopardize the survival and recovery of the slickspot peppergrass. No critical habitat has been designated for the species, therefore none would be affected.

The USFWS concluded that direct and indirect effects to the slickspot peppergrass would be limited to some loss of slickspot microsites (which may or may not have the ability to support or currently contain the slickspot peppergrass), minimal increases in invasive nonnative plant cover within habitat known to contain slickspot microsites, an increased risk of wildfire ignition and invasive nonnative plant spread due to future public use of new ROW access roads in the New Plymouth Management Area, and minimal effects to insect pollinator populations due to habitat fragmentation and ground disturbance associated with construction and O&M activities. The effects of the proposed action on the slickspot peppergrass would occur at a localized level, and are not expected to result in direct or indirect impacts to known slickspot peppergrass EOs in the New Plymouth Management Area on either BLM or private lands. The USFWS expects that the numbers, distribution, and reproduction of the slickspot peppergrass in the action area, in the New Plymouth Management Area, and for the species rangewide in southwestern Idaho would not be significantly changed as a result of this proposed action. As such, the USFWS concluded that the survival and recovery of the slickspot peppergrass would not be jeopardized by activities associated with the proposed action.

The USFWS reached this no-jeopardy determination on the basis that the proposed action avoids direct and indirect impacts to all known slickspot peppergrass EOs, and avoids, to the extent possible, adverse impacts to slickspot microsites of unknown slickspot peppergrass occupancy within the action area on BLM-administered lands. Conservation measures are used to minimize impacts where potential impacts to slickspot microsites in the action area cannot be avoided, although a higher level of conservation effort is provided on BLM-administered lands than on private lands located within the proposed ROWs.

The slickspot peppergrass conservation measures being implemented by the BLM and Idaho Power in conjunction with the proposed LGPP ROWs action considered in the Biological Opinion are either specific measures designed to reduce impacts to the species and its habitat at the local level, or general measures designed to improve the ecological condition of native sagebrush-steppe vegetation at a landscape scale. The specific measures include management actions such as taking actions to reduce the risk of wildfire ignitions during

construction and O&M activities, reducing the spread of nonnative plants, and locating ROWs away from known extant EOs. These specific conservation measures are intended to reduce the amount or extent of localized impacts, although localized adverse effects are not completely eliminated. The general conservation measures include management actions designed to maintain cover of native shrubs, forbs, and grasses, conserve existing sagebrush stands through fire protection, and implement BMPs to minimize erosion associated with ground disturbance. Some of these conservation measures are also identified for implementation on the portions of the ROWs that occur on private lands. The Biological Opinion is incorporated into this EA by reference.

#### Other BLM Sensitive Plants

As stated in **Table 3.7-3**, the three other BLM sensitive plant species (Mulford's milkvetch, calcareous buckwheat, and Cronquist's stickseed) have only a small potential to occur along the relocated or new portion of the 138-kV transmission line. Should these species be found in surveys conducted prior to construction, then appropriate protection measures would be implemented in consultation with BLM.

#### Raptors

Short-term effects on BLM sensitive raptors associated with construction in the proposed ROWs are similar to those described in Section 3.6; these primarily include construction-related noise disturbance and disruption of movement and foraging. Suitable foraging habitat found in the proposed temporary construction ROWs are connected to other similar and larger habitats; individual raptor species may temporarily relocate in these nearby areas during construction, and foraging would not be substantially limited. With the implementation of EPMs, construction-related impacts on BLM sensitive raptors would be minor.

#### Shrubland Birds

Short-term effects on BLM sensitive shrubland birds include construction-related noise disturbance, potential bird mortality, and habitat loss and disruption of movement. Major construction activities would not occur between March 15 and June 30 in the ACEC. Noise associated with construction activities would be limited in duration. The threat of mortality would not be substantial given the ability of most shrubland bird species to avoid vehicles and equipment. Initial impacts would result in temporary disturbance of approximately 8 acres of native shrubland habitats on BLM land and 15 acres of native shrubland on private land. Areas of native shrubland habitat between the structure locations would be avoided during construction to the extent practicable. Based on these factors, construction-related impacts to BLM sensitive shrubland birds would be minor with implementation of EPMs.

#### Grassland Birds

The number of successful breeding pairs of curlews, and consequently overall population numbers, would be expected to decline on and near portions of the proposed ROW on grassland habitats over the short and long-term (BLM 2010). Improved access would result in increases in disturbance, habitat loss, predation, and other mortality factors that would be the

primary factors contributing to the decline. Curlews can tolerate occasional disturbance by humans; however, if disturbance is too frequent or prolonged, it may cause abandonment of territories or nests or displacement of the family unit to a less suitable area, thereby decreasing the probability of successful breeding (Redmond and Jenni 1982).

Short-term effects on BLM sensitive grassland birds include construction-related noise disturbance, potential bird mortality, and habitat loss and disruption of movement. Timing restrictions (March 15 to June 30) would ensure that grassland birds, including the long-billed curlew, are not impacted during the nesting season. Noise associated with construction activities and the threat of mortality would be limited to the duration of construction. Based on the acreage calculations presented in Table 3.5-1, temporary disturbance of approximately 471 acres of grassland habitats on BLM land and 91 acres on private land would occur. Disturbance would persist until habitat is fully restored to baseline conditions. Construction-related impacts on the long-billed curlew and BLM sensitive grassland birds would be moderate with the implementation of EPMS.

#### 3.7.4.2.2 Operational Impacts

##### Slickspot Peppergrass

Operation and maintenance of the proposed project would potentially have direct and indirect impacts on slickspot peppergrass and/ or its habitat throughout the life of the project. Direct impacts to slickspots are unlikely during most maintenance activities on permanent facilities, such as access roads and power pole pads, since these areas have already been disturbed during construction. Burying, grading, and excavation of slickspots within undisturbed portions of the permanent ROWs are likely to result in permanent loss of slickspots and would potentially occur during some maintenance-related or emergency activities that require overland travel within the permanent ROW. In an effort to minimize this potential impact, Idaho Power would conduct overland travel in slickspot areas only in emergency situations (and as a last resort in non-emergency maintenance situations) and only during the summer and early fall when the slickspot areas are dry or when the ground is frozen and the seed in the seed bed (slickspot) is dormant.

The main indirect impacts from O&M activities are related to the proposed project's potential to degrade slickspot habitat by increasing the proliferation of invasive non-native plant species including noxious weeds. Idaho Power would minimize the potential indirect impacts by conducting O&M activities in a manner that minimizes disturbance to vegetation. In addition, the implementation of EPMS would minimize the proliferation of non-native invasive plants.

Increased OHV by the public on service roads poses another indirect threat to slickspot habitat. The service roads would increase access to new areas on BLM land and the potential for overland travel by OHV, which can degrade vegetation cover and promote proliferation of invasive plants and potentially increase the frequency of human-caused

wildfire, all of which can indirectly impact slickspot peppergrass habitat. OHV traffic can also directly affect slickspots and even nearby EOs, potentially resulting in permanent losses of slickspot habitat. However, with the existing road network and overland travel currently in the project study area it is unlikely that the Proposed Action would contribute significantly to an increase in OHV use in the area. Idaho Power would monitor use of service roads and would consult with BLM should the use of service roads by the public become an issue.

There is also a potential that the transmission lines could cause a wildfire. Based on Boise District fire data (BLM 2010c); there were a total of 112 fires in the Boise District within a 15-year period from 1995 through 2009. Seventy-two of these fires were associated with electric power line equipment failures, 39 fires were associated with bird strikes or feces buildup, and 1 fire was associated with lightning striking a power pole. Idaho Power's operation and maintenance is designed to identify and correct potential problems before a failure occurs. Vegetation clearing around transmission structures would help minimize the potential for fire starts and fire prevention measures would also be implemented to minimize the potential for project-related fires. However, vandalism, weather conditions, and faulty equipment do occur and there is a low potential for wildfires. Wildfires could directly impact the slickspot peppergrass if fires occurred when the plant was above ground or impacted the seed bank; indirect impacts could include the loss of sagebrush within the project study area. The USFWS concluded that the proposed project would not jeopardize the species and that BLM and Idaho Power's proposed environmental protection measures would provide sufficient protection (USFWS 2010).

#### Other BLM Sensitive Plants

There is a small potential for other BLM sensitive species to occur along the relocated or new portion of the 138-kV transmission line. Should these species be found in surveys conducted prior to construction, then appropriate protection measures would be implemented in consultation with BLM.

#### Raptors

Long-term effects on BLM sensitive raptors associated with operation of the project would be similar to those described in Section 3.6; these primarily include fragmentation of habitat, the presence of new raptor and raven perch sites, and increased potential for bird collision and electrocution. Although the new transmission structures may benefit BLM sensitive raptors by providing perches and increased efficiency for hunting, they may increase predation on BLM sensitive birds, including the long-billed curlew.

The new transmission line would be designed according to APLIC standards, which would minimize the potential for raptor collision and electrocution. Overland travel for construction and O&M activities could result in the creation of a permanent 2-track road within the proposed permanent ROW, which may facilitate increased human use of the area and may affect raptors through increased poaching and illegal hunting (Trombulak and Frissell 2000). However, operational impacts of the transmission lines on BLM sensitive raptors would be minor with the implementation of the EPMS.

### Shrubland Birds

Long-term effects on BLM sensitive shrubland birds are similar to those described above for raptors and in Section 3.6; these primarily include fragmentation of habitat, increased bird collision and electrocution, and a potential increase in illegal recreational hunting related to new roads. Suitable habitat for BLM sensitive shrubland birds may be permanently impacted. Approximately 4 acres of native shrubland habitat on BLM land and 4 acres of native shrubland habitat on private land would be modified. Areas of native shrubland habitat between the structure locations would be avoided during construction to the extent practicable. In the long-term, shrubland birds would continue to use the area for nesting, roosting, foraging, and dispersal. Overall, the operational impacts on BLM sensitive shrubland birds would be minor with implementation of the EPMs.

### Grassland Birds

Long-term effects on BLM sensitive grassland birds are similar to those described above and in Section 3.6. Suitable habitat for BLM sensitive grassland birds may be permanently impacted. Approximately 157 acres of grassland habitat on BLM land and 23 acres on private land are within the proposed permanent ROWs and would be permanently modified and periodically re-disturbed during O&M activities. In the long-term, grassland birds would continue to use the area for nesting, roosting, foraging, and dispersal. The proposed ROW would fragment curlew brood rearing habitat (BLM 2010b). Curlew mortality caused by recreational shooting would likely increase over the long-term. Because of new maintenance roads, shooters would be able to access new areas during curlew nesting periods. Operational impacts on BLM sensitive grassland birds, including the long-billed curlew, would be moderate with implementation of the EPMs.

#### 3.7.4.3 Alternative B—No Action

The transmission lines and the water pipeline would not be constructed within the New Plymouth/Canyon County Slickspot Peppergrass Management Area on BLM land. The project components would be located on private lands that have primarily already been converted to intensive agricultural and urban land uses, including crop production, livestock grazing, rural and urban residential development, and roads. There are likely to be very few, if any, EOs for the federally threatened slickspot peppergrass and, at most, only isolated patches of slickspots that could potentially support slickspot peppergrass. The same can be said for other BLM sensitive plant species. The No Action Alternative likely would have no impacts on slickspot peppergrass or any other BLM sensitive plant species.

Long-billed curlew population numbers would be expected to remain similar to current levels over the short and long-term when compared with the Proposed Action. Human activities (vehicle travel, human disturbances, and recreational shooting) in the ACEC would remain the same as current levels. Mortality from recreational shooters would be expected to occur at similar levels to historic losses. Long-billed curlew's conspicuous vocalizations, large size, and tendency to mob intruders increase their vulnerability to being shot illegally. Losses caused by livestock trampling nests would remain similar to current levels. The benefits from

grazing (maintaining low vegetation height for suitable nesting habitat) would continue over the long-term to offset these losses.

#### 3.7.4.4 Cumulative Impacts

Implementation of the proposed action and the other cumulative projects could contribute to cumulative special status species impacts. Past grazing activities, wildfire, and recreation has affected special status species in the project vicinity specifically in the Long-billed Curlew Habitat ACEC and the Slickspot Peppergrass Management Area. These past activities have resulted in the loss of native habitat. Future projects could have an impact on special status species resources that result in the loss of habitat, increase in disturbance and interaction with humans, and increase in competition for resources. However, the BLM's current management of special status species includes objectives and measures to minimize impacts on these resources.

It is assumed that cumulative projects would avoid direct impacts on slickspot EOs. However, these projects could have direct and indirect impacts on slickspot peppergrass habitats (slickspots). For example, although it is being constructed on private lands, the proposed LGPP would result in a loss of approximately 70 acres of primarily grassland habitat that supports many potential slickspots (Idaho Power 2010c, Figure 6).

BLM sensitive plant and wildlife species share habitat with general plant and wildlife species; therefore, cumulative effects described in the previous sections also apply to special status species. In addition, because recreational uses would increase throughout the ACEC, wildlife mortality from hunting would also increase that may include illegal hunting of the long-billed curlew (BLM 2010b). These cumulative impacts may have a moderate effect on these species populations.

These moderate effects of the Proposed Action on the slickspot peppergrass and long-billed curlew may have major additive effects on their populations when considered in combination with other past, ongoing and reasonably foreseeable actions in the project vicinity.

### 3.8 Areas of Critical Environmental Concern

As discussed in Section 3.7, the project study area is within the Long-billed Curlew Habitat ACEC. The ACEC program is a conservation ecology program managed by the BLM. The program was established by FLPMA (1976), which created the first conservation ecology mandate for the BLM. The FLPMA mandate directs the BLM to protect important riparian corridors, threatened and endangered species habitats, cultural and archeological resources, and unique scenic landscapes that the agency assesses as in need of special management attention (BLM 2005 and 43 CFR 1610.7-2(b)).

Potential impacts of the proposed project on the long-billed curlew and within the ACEC were discussed in section.3.7.3

## 3.9 Recreation

This section describes recreational resources and opportunities in the project study area; applicable plans, policies, regulations, and laws; and the effects of the project alternatives on recreation.

### 3.9.1 *Affected Environment*

As described in Section 3.1, Land Use, the project study area includes both public and private lands in Payette, Gem, and Canyon counties. Public lands include both BLM land and state land. Recreational opportunities are available within the project study area on BLM land, and outside of BLM lands along the Snake and Boise rivers. Other recreational resources and opportunities in the project study area include a golf course, recreational vehicle (RV) park, community park, and an historic trail that passes just north of Caldwell. These recreational resources are shown in **Figure 3.9-1**.

#### 3.9.1.1 Recreation on BLM Land

BLM lands within the project study area are managed by the FRFO. The FRFO is currently preparing a consolidated RMP and EIS to guide management decisions (including recreation management) within the Four Rivers planning area. Public meetings were held in April and June 2008 to provide information to the public regarding the development of the RMP and EIS, and to provide the opportunity for questions and comments. A variety of public comments and questions were received regarding recreation in the FRFO planning area (BLM 2008), including the following:

- Would recreational opportunities be further limited?
- The BLM should pursue the development of Special Recreation Management Areas sustaining nonmotorized trail opportunities.
- Several comments were received regarding managing recreational conflicts (OHVs, horses, recreational shooting, and a desire for nonmotorized use).
- Less restricted access through public lands.
- What lands should be available or not available for special recreation permits?
- How would the BLM respond to increasing demand for recreational activities and access to public land?

The nature of the comments and questions received indicated a strong public interest in access to recreational opportunities on BLM lands in the Four Rivers planning area.

The BLM manages public land to provide a variety of recreational opportunities. Most BLM lands are available for casual, dispersed recreation. A variety of casual, dispersed recreational opportunities are available, including hiking, dispersed camping, mountain biking, horseback riding, OHV use, and hunting.

Several dirt roads cross BLM land throughout the project study area, and horseback riders and evidence of OHV use were observed on some of these roads during the field surveys in

June 2009. The seasonal hunting of ground squirrels also is a common activity on BLM lands within the project study area (BLM 2009g); approximately 10 groups of hunters were using the area during the June 2009 field surveys.

There currently is only one OHV intensive use area on BLM land within the project study area, the Dewey OHV Play Area, located in the eastern portion of the project study area (BLM 1987; BLM 2009f). The Parma OHV Play Area is located on BLM lands just to the west of the project study area.

OHV use on BLM lands is placed into one of three categories: open, limited, or closed. With the exception of the Dewey and Parma OHV play areas, all BLM lands within the project study area currently are designated as limited. Under this category, motorized vehicles are permitted, subject to specified conditions such as seasonal limitations, speed limits, and designated routes of travel. OHV use in the long-billed curlew habitat ACEC is limited to existing roads and trails (overland travel is not permitted) and, under the 1987 RMP, is restricted during the long-billed curlew nesting season (BLM 1987).

### 3.9.1.2 Recreation on Non-BLM Land

Recreational resources within the project study area on non-BLM lands include the following:

- Boating and fishing access along the Snake and Boise rivers (IDFG 2009c).
- Purple Sage Municipal Golf Course – located approximately 3 miles north of Caldwell at the intersection of Old Highway 30 and Purple Sage Road.
- Country Corners Campground and RV Park located at the intersection of Oasis Road and Old Highway 30.
- Curtis Park – a 15-acre municipal park located in Caldwell in the southernmost portion of the project study area, east of Old Highway 30 and along the Boise River.
- The Historic Oregon Trail crosses the project study area just north of Caldwell.

These features are shown in **Figure 3.9-1**.

## 3.9.2 *Environmental Consequences*

### 3.9.2.1 Methodology

Impacts on recreation would occur if the proposed project were to result in a permanent displacement or preclusion of recreational opportunities. Certain types of recreational activities on BLM land may be temporarily disrupted during construction, and this short-term disruption would be considered a minor impact.

### 3.9.2.2 Impacts Common to the No Action Alternative and the Proposed Action

Construction of the LGPP facility would result in the permanent closure of the existing access road at the I-84 interchange. However, the impact of this closure is considered minor because the road crossing the privately owned parcel has been gated and closed to public

access prior to Idaho Power obtaining the property. The public would still be able to access BLM land from other roads that traverse the project study area.

### 3.9.2.3 Alternative A—Proposed Action

During construction activities for each of the linear project components, recreational access on BLM land in the immediate area of construction and along the associated access roads may be temporarily disrupted. Roads proposed to be used for access during construction of the 230-kV transmission line are shown in **Figure 2.2-1**. During construction activities and operation of the plant, roads leading to the power plant site would be posted with signs alerting recreational users that access to the Interstate is not available. During active construction, areas could be temporarily closed through the use of appropriate traffic control measures (e.g., closures for up to one day and/or the use of detours) and signs would be posted alerting recreational users of the construction activities, use of heavy equipment, and other potential hazards. There would be minor impacts to recreational users on BLM land associated with the construction of each of the project components. The Proposed Action would not result in impacts to users of Curtis Park or the Historic Oregon Trail.

During construction of the transmission lines, recreational access on roads crossed by or adjacent to the transmission line ROW could be restricted, and roads could be closed during periods of active construction and when construction equipment is present on roadways. Recreational users would be able to use roads that are crossed by the transmission line during periods when no active construction or vehicular activity is occurring in the immediate area. Because of the nature and sequencing of transmission line construction and the existing road network in the project study area, impacts to recreational users are expected to be minor. The Proposed Action would not impact users of either the Dewey or the Parma OHV play areas.

The proposed 138-kV transmission line would have a minor impact on users of the Country Corners RV Park and the Purple Sage Golf Course. The transmission line would be located approximately 220 feet west of one of the structures associated with the Country Corners RV Park and would be visible to recreational users of this RV park. The impact of the transmission line on the users of the RV park is expected to be minor.

The transmission line also would be located approximately 75 feet west of one of the fairways of the Purple Sage Golf Course. The transmission line and the monopole structures would be clearly visible to users of the golf course, and could have a minor impact on users' enjoyment of that recreational facility.

During the construction period for the water pipeline, recreational access along the road parallel to the water pipeline ROW would be restricted, and the road may be temporarily closed during periods of active construction and when construction equipment is present on the roadway. If the road would need to be closed for more than one day, Idaho Power would provide a detour. Road closures are expected to be minimal and could occur sporadically along the length of the proposed route. Since the pipeline trench would be excavated, pipe

installed, and the trench filled in segments, long stretches of road are not expected to be closed. Since this road is one of the primary north-south routes across BLM land in this portion of the project study area, impacts to recreational users would be minor to moderate. Idaho Power and its construction contractor would work with the BLM to maintain access along this road to the extent feasible for the duration of the construction period.

### 3.9.2.4 Alternative B—No Action

The LGPP facility would still be constructed on the same privately owned parcel, and the transmission lines and water pipeline would be constructed entirely on private land. There would be no construction activities on BLM land, although periodic maintenance activities on the existing transmission line would continue. With the exception of the impacts described in Section 3.9.2.2 above, there would be no additional impacts to recreation on BLM lands.

### 3.9.2.5 Cumulative Impacts

There would be no cumulative impacts on BLM land associated with the construction or operation of the Proposed Action. With the exception of the impacts described in Section 3.9.2.2 above, recreational access to BLM land would be restored following the completion of construction activities.

## 3.10 Transportation and Access

### 3.10.1 *Affected Environment*

Transportation features within and near the project study area include federal and state highways; county, local, BLM, and private roads; two railroad lines; three public airports; and three private airports. These features are shown in **Figure 3.10-1** and are described in the following sections.

#### 3.10.1.1 Roadways and Access

The project study area is located within Idaho Transportation Department (ITD) District 3. The four major transportation routes within the project study area are I-84, U.S. Highway 30, U.S. Highway 95, and Sand Hollow Road. Average daily traffic (ADT) counts for I-84 and the US highways are presented in **Table 3.10-1**.

Table 3.10-1: ADT for Major Roadways in the Project Study Area<sup>1</sup>

| Roadway and Location  | Average Daily Traffic (ADT) | Data Year |
|---|-----------------------------|-----------|
| I-84 Automatic Traffic Recorder #25 near Sand Hollow Road     | 17,629                      | 2008      |
| I-84 Automatic Traffic Recorder #123 Black Canyon Interchange | 17,499                      | 2008      |
| US Hwy 95 Automatic Traffic Recorder #111 near Parma          | 3,525                       | 2008      |
| US Hwy 30 at I-84   | 1,700                       | 2007      |

<sup>1</sup> 2008 data from ITD, Roadway Data Section. <http://itd.idaho.gov/planning/roadwaydata/>

2007 data from ITD District 3, 2007 Rural Traffic Flow Map.

In addition to the major roadways shown in **Table 3.10-1**, Sand Hollow Road, which also is known as Old Highway 30, runs from the city of Caldwell on the southern boundary of the project study area to the intersection of State Highways 52 and 72, approximately 2.5 miles southeast of New Plymouth, Idaho.

The agricultural areas within the project study area have a network of county roads that run along section lines and property boundaries. Within Canyon County, public ROWs, roads, and bridges west of I-84 are maintained by Notus-Parma Highway District Number 2, and roads east of I-84 are maintained by Canyon Highway District Number 4. Within Payette County, the remainder of the roads outside Payette that are not considered state highways are maintained by the Payette County Road and Bridge Department and Highway District Number 1.

Numerous dirt, 2-track roads traverse the BLM-owned lands within the project study area. BLM land can be accessed from numerous points surrounding the property. As discussed in the recreation section above, these roads provide access to BLM lands for hunting and recreational opportunities.

#### 3.10.1.2 Railroads

Two principal railroad lines run near and/or through the project study area: the Union Pacific Railroad and the Idaho Northern and Pacific Railroad. The Union Pacific Railroad runs through the city of Caldwell and follows U.S. Highway 20 northwest through the towns of Notus and Parma. As the railroad nears the Snake River, it turns north and crosses the Snake River into Oregon just south of Nyssa. The railroad then continues north into the project study area on the Oregon side of the Snake River.

The Idaho Northern and Pacific Railroad parallels the Payette River just northeast of the project study area. The railroad then turns west and runs through the town of New Plymouth before continuing to the north.

#### 3.10.1.3 Airports

There are no airports within the project study area; however, there are three public airports and three private airports near the project study area. The closest airport is a private airport is located approximately 2 miles from the project study area. The nearest public airport is located approximately 3.5 miles from the project study area, and the other 4 airports are located 6 or more miles from the project study area.

The public airports include Parma Airport (located just south of the town of Parma), Caldwell Industrial Airport, and Emmett Municipal. The Caldwell Industrial Airport is not shown on **Figure 3.10.1** since it is located south of the mapped area.

The three private airports, all located to the east of the project study area, include Hubler Field (located southwest of Middleton), Snake River Skydiving Airport (near Star, Idaho and northeast of Middleton), and Lanham Field (near Emmett, Idaho).

### 3.10.2 *Environmental Consequences*

#### 3.10.2.1 Methodology

Significant impacts on transportation could occur if the proposed project were to result in a permanent closure of key roads as a result of the project and no alternative routes could be provided. Short-term closures of lanes or roadways that result in temporary detours around active construction areas would be considered a minor impact.

#### 3.10.2.2 Impacts Common to the No Action Alternative and the Proposed Action

Construction of the LGPP facility would result in the permanent closure of the existing access road at the U.S. Highway 30 interchange and several minor roads in Section 33 that branch off this access road. As described in Section 3.9.2.2, the impact of this closure is considered minor because the road crossing the privately owned parcel currently is controlled by a gate.

#### 3.10.2.3 Alternative A—Proposed Action

##### 230-kV Transmission Line

The 230-kV transmission line crosses two roads in Section 33, and nearly parallels the route of the water pipeline across Section 33 and into Section 32. In the southern portion of Section 32, the 230-kV transmission line parallels and then crosses a road that would be used for access to the ROW during construction. Near the junction with the existing Caldwell-Ontario transmission line, the proposed 230-kV transmission line crosses a triangular-shaped intersection of several roads. Each of these roads would experience periodic closures during the construction period. Impacts on transportation as a result of constructing the 230-kV transmission line are expected to be short-term and minor. There would be no long-term impacts on transportation resulting from operation of the 230-kV transmission line. Roads proposed to be used as access roads during construction of the 230-kV transmission line are shown in **Figure 2.2-1**.

##### 138-kV Transmission Line

The proposed 138-kV transmission line would cross a road on private land in T6N R4W Section 3. Further south in Section 10, the proposed transmission line would cross one road and parallel a second road for approximately 1.5 miles across Sections 10 and 15. In Section 15, the proposed transmission line would cross two additional roads. At the south end of Section 22, the transmission line would cross Pearl Road and then parallel Pearl Road to the southeast for approximately 1 mile. The transmission line would then turn east and cross two roads in Section 26 prior to reaching I-84. In Section 25, the transmission line would turn south and parallel I-84 for approximately 0.6 mile, and then turn east again and cross I-84, a service road along the D Line Canal, and Old Highway 30.

Roads crossed by the proposed 138-kV transmission line would experience periodic closures during the construction period, particularly when active construction is occurring in the area. Idaho Power and its construction contractor would obtain permits and coordinate closely with the ITD when crossing I-84 and Old Highway 30. Detours would be established should these

roadways need to be closed when conductors are being installed over the roads. Depending on the construction techniques used and the required positioning of construction equipment within the road ROW, periodic or daytime lane closures may be required on Old Highway 30 while the transmission line structures and conductors are being installed on the east side of the road.

Idaho Power and its construction contractor also would obtain permits and coordinate necessary detours and road closures with the Payette and Canyon counties' public works departments for crossings of county roads within their jurisdictions. With the exception of Oasis Road, which is located on the county line, all of the county roads to be crossed by the 138-kV transmission line are located in Canyon County. These roads include:

- Early Road
- Hollow Road
- Slade Road
- Farmway Road
- Goodson Road
- Douglas Lane
- Griffin Lane
- Purple Sage Road
- Machen Place
- Willis Road

In addition to these county roads, several private driveways and an access road along the canal would be crossed by the proposed 138-kV transmission line. Idaho Power and its construction contractor would coordinate with the affected private landowners and canal operators regarding the timing of the crossings of these private roadways. As a result of coordination with the respective public works, transportation departments, and private landowners, impacts on transportation from construction of the 138-kV transmission line would be short-term and minor. There would be no long-term impacts on transportation resulting from operation of the 138-kV transmission line.

#### Water Pipeline

From the Snake River, the water pipeline would be located on private land for 0.25 mile, and would turn south and follow Whitley Road for approximately 0.33 mile. The pipeline would then turn to the southeast and cross a cultivated agricultural field parallel to a riparian channel. The pipeline would be installed beneath Berts Lane, and would then parallel Fairview Avenue for approximately 2.5 miles to Elmore Road. The pipeline would be installed beneath U.S. Highway 95, Elmore Road, and the A-Line Canal using a jack and bore method. East of Elmore Road, the pipeline would be installed along the edge of a cultivated field and would travel across BLM land for approximately 1.25 miles to the access road. The pipeline would then follow the access road to the LGPP facility.

Periodic or daytime closures of lanes, or the entire roadway, may be required on Fairview Avenue, U.S. Highway 95, and other county roads while the pipeline is being installed. Idaho Power and its construction contractor would obtain permits and coordinate necessary detours and road closures with the ITD for crossing U.S. Highway 95 and the Payette County Public Works Department for crossing county roads. As a result of coordination with the respective public works and transportation departments, impacts on transportation from construction of the water pipeline would be short-term and minor. There would be no long-term impacts on transportation resulting from operation of the water pipeline.

#### 3.10.2.4 Alternative B—No Action

The LGPP facility would still be constructed on the same privately owned parcel, and the transmission lines and water pipeline would be constructed entirely on private land. There would be no construction activities on BLM land, although periodic maintenance activities on the existing transmission line would continue. With the exception of the impacts described in Section 3.10.2.2, there would be no additional impacts to transportation on BLM lands.

### 3.11 Visual Resources

#### 3.11.1 *Affected Environment*

The landscape in the vicinity of the project is characterized by expansive views of rolling hills and river valleys common to this region of Idaho. Major travel routes, transmission lines, and other built facilities generally are visible on the landscape. The general character of the landscape is agricultural, with irrigated fields generally extending on both banks of the Snake and Boise Rivers. The density of urban land uses throughout the project region is relatively low, except in and around towns.

The landscape of the project study area is characterized by rolling topography that supports a semi-desert type vegetative community (BLM 1987). The majority of the BLM land within the project study area is characterized by open areas with typical (to this region of Idaho) grassland/herbaceous vegetation. Private lands surrounding the BLM parcels generally consist of agricultural uses, with some commercial and industrial uses. The landscape and atmospheric conditions in the project study area (and region) allow for long viewing distances. As such, built structures, including transmission lines, communication towers, and buildings tend to be visible from great distances.

While most of the typical grassland habitat in the project study area appears undisturbed (to the casual observer), it generally is degraded from livestock grazing, the prevalence of non-native grasses, and recreational uses. The existing man-made landscape in the project study area consists of one interstate highway (I-84), two U.S. highways (U.S. Highway 95 and U.S. Highway 30), and numerous local and 2-track BLM roads. In addition, the existing Caldwell-Ontario 230-kV transmission line passes through the project study area on the west side of I-84. The locations of existing roads and utilities within the project study area are shown on **Figure 3.1-1**. A typical 2-track BLM road in the project study area is shown on **Figure 3.11-1**,

and a photograph of an H-frame structure on the Caldwell-Ontario transmission line is shown on **Figure 3.11-2**.

There also are several communications facilities and other structures on BLM land within the project study area. A microwave tower is located in the northern portion of the project study area and a second microwave tower is located on the east side of Sand Hollow Road. A photograph of the microwave tower in the northern portion of the project study area is shown in **Figure 3.11-3**. There also are several cellular towers and other mobile communication facilities located on private lands in the southeast portion of the project study area. Given viewing conditions in the project study area, these built structures tend to be highly visible on the landscape. The locations of microwave and cellular towers also are shown in **Figure 3.1-1**.

Visual resources on BLM lands are managed in accordance with the Cascade RMP Record of Decision (ROD) (BLM 1988). For visual resource management purposes, all of the BLM lands within the project study area are defined as Class III per the BLM's Visual Resource Management (VRM) system (BLM 1987).

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 (BLM 2007b). There are four VRM classes (I, II, III, and IV) that have been established under the VRM system. All BLM lands within the Proposed Action area are designated VRM Class III. The primary objective of Class III areas is to partially retain the existing character of the landscape. BLM guidelines for Class III areas indicate that the level of change to the characteristic landscape should be moderate, these changes should repeat the basic elements found in the predominant natural features of the characteristic landscape, and management activities may attract attention, but should not dominate the view of the casual observer.

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 with the management objectives outlined in the RMP for a given planning area (BLM 2007a). The BLM's VRM system uses a contrast rating system to systematically analyze the potential visual impact of proposed projects on BLM lands. 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 (BLM 2007b).



Figure 3.11-1: Typical 2-Track Road on BLM Land in the Project Study Area



Figure 3.11-2: Existing Caldwell-Ontario 230-kV Transmission Line



Figure 3.11-3: Microwave Tower Located on BLM Land

### 3.11.2 *Environmental Consequences*

#### 3.11.2.1 Methodology

To assess project related visual impacts in the project study area, the BLM's VRM contrast rating system (BLM 2007b) was used to compare the existing landscape character to the proposed level of change. The degree of contrast generally is measured by comparing the proposed project's features with the major features in the existing landscape. The basic design elements of form, line, color, and texture are used to make this comparison and to describe the visual contrast created by the Proposed Action. The magnitude of contrast for each project component is then assigned a value of major, moderate, or minor.

For purposes of this EA, the overall degree of visual change was determined on the basis of the following:

- The duration (short-term or long-term) of the action and associated visual contrast,
- The magnitude of anticipated visual contrast created between each project component and the existing landscape, and
- The distance and distribution, or extent, of contrast visibility.

As described in Section 3.11.1, the Proposed Action is located within a BLM VRM Class III area. The anticipated degree of visual change was compared to the BLM VRM Class III definition to determine whether the changes would be within the management guidelines. In general, an impact is considered significant if the degree of visual change resulting from the proposed project (or project component) exceeds Class III guidelines.

### 3.11.2.2 Alternative A—Proposed Action

Overall, the proposed project would result in minor to moderate visual contrasts with the surrounding landscape on BLM lands. In particular, construction of the transmission lines and the water pipeline would be highly visible from the primary travel routes through the project study area. Additionally, the transmission lines would remain a long-term presence on the landscape. While the proposed project would result in both short- and long-term visual impacts on BLM lands, the degree of visual change is generally consistent with the BLM's VRM Class III designation. As such, the proposed project is not anticipated to result in significant visual resource impacts on BLM lands.

#### 3.11.2.2.1 Construction Impacts

##### 230-kV and 138-kV Transmission Lines

During the construction phase of the transmission lines, construction equipment, materials, and work crews would be visible in the transmission line ROW. Heavy equipment would be used to prepare work areas, excavate transmission structure holes, assemble and erect structures, install conductors and ground wires, and reclaim the site following construction. In addition to construction equipment and activities, periodic clouds of dust would be generated during surface clearing and vegetation removal activities. Travelers on I-84 would be able to see construction equipment and activities, particularly as construction of the 230-kV transmission line moves closer to the LGPP site (which is in proximity to and more highly visible from I-84).

Construction activities likely would result in moderate to high contrasts, depending on the phase of construction and the location of the viewer, with the existing landscape character of BLM lands in the project study area. However, temporary construction activities generally are consistent with Class III visual resource objectives. Furthermore, construction activities on the 230-kV transmission line are only expected to last approximately 6 months from start to finish. Given the short duration and consistency with BLM visual resource objectives, none of the construction related activities associated with the transmission lines are anticipated to result in significant visual resource impacts. Following construction, the transmission line ROW would be reseeded and visual contrasts in the ROW would be expected until the vegetation is reestablished.

##### Water Pipeline

Construction-related visual resource impacts associated with the water pipeline would be similar to those described for the transmission lines. Effects would include the presence of construction equipment, materials, and work crews. Excavated subsoil and topsoil would be

stockpiled along the water pipeline trench within the temporary ROW. On BLM lands, these types of construction activities generally are consistent with Class III visual resource objectives. Additionally, due to the location and topography around the pipeline alignment, most of the construction activities would be fully or partially hidden from viewers travelling along I-84 and/or U.S. Highway 30.

Construction activities associated with the pipeline likely would result in moderate contrasts with the existing landscape, but would not be highly visible. Construction activities on the pipeline are expected to last a maximum of 12 months. Given the short duration and consistency with BLM visual resource objectives, none of the construction-related activities associated with the water pipeline are anticipated to result in significant visual resource impacts. Following construction, the pipeline ROW would be recontoured and may be revegetated, and visual contrasts in the ROW would be expected until the vegetation is reestablished.

### 3.11.2.2.2 Operational Impacts

#### 230-kV Transmission Line

Once constructed, the proposed 230-kV transmission line and associated access road would extend from the LGPP site in a southwesterly direction for approximately 2.8 miles across BLM lands to connect with the existing Ontario-Caldwell 230-kV transmission line. The transmission line structures would be highly visible to viewers on the U.S. Highway 30 interchange and would be briefly visible to northbound and southbound viewers on I-84. At a distance of 1 to 2 miles, the transmission structures visually fade into the background and the transmission lines generally would not be visible to passing motorists.

The long-term presence of the proposed 230-kV transmission line generally meets the VRM Class III objectives by partially retaining the existing character of the landscape. The transmission line would result in minor to moderate long-term contrasts with the existing landscape, but would not dominate the view of the casual observer. Although the transmission line would be highly visible from portions of I-84 and U.S. Highway 30 in proximity to the LGPP, at greater distances from these travel routes, the transmission line would tend to fade into the background and would blend into the colors, lines, and textures found in the predominant natural features of the landscape. No long-term significant impacts to visual resources on BLM lands are anticipated from operation of the proposed 230-kV transmission line.

#### 138-kV Transmission Line

The 138-kV transmission line and associated access road would extend from the LGPP site in a southeasterly direction for a total of 16 miles. However, only approximately 6.5 miles of the new 138-kV transmission line would be located on BLM lands. On BLM land, the transmission line generally would be set back from I-84. The distance between the transmission line on BLM lands and I-84 helps reduce the potential visual contrast of the transmission line. The remaining sections of the 138-kV transmission line would be located

on private lands and generally would parallel I-84 and Old Highway 30. Most of this section of the transmission line would be visible to travelers along I-84 and/or Old Highway 30.

As with the proposed 230-kV transmission line, the proposed 138-kV transmission line also generally meets VRM Class III objectives by partially retaining the existing character of the landscape. The 138-kV transmission line would result in minor to moderate visual contrasts with the surrounding landscape, but would not dominate the view of casual observers, except in several specific locations. Where the transmission line parallels and crosses I-84 or Old Highway 30, it would tend to dominate the view of travelers along these routes. However, these portions of the transmission line are not on BLM lands and the resulting view is similar to other landscapes with transmission lines that parallel or cross highways and other travel routes. Overall, no long-term significant impacts to visual resources on BLM lands are anticipated from operation of the proposed 138-kV transmission line.

### Water Pipeline

Following construction and revegetation, the only aboveground elements of the water pipeline would be air-release valve manholes, isolation valves, and pipeline marker signs. Both the air-release valve manholes and isolation valves would be seated on concrete pads (6-foot square and 2-foot square, respectively) and extend 6 to 12 inches above grade. An estimated 14 to 15 air-release valve manholes and an estimated 3 to 4 isolation valves would be located along the segment of pipeline on BLM lands. As with the construction-related impacts along the pipeline, the location and topography around the pipeline alignment would fully or partially shield it from viewers travelling along I-84 and/or U.S. Highway 30. Additionally, the low height of the above-ground elements along the pipeline would largely not be noticeable to the casual observer, and no significant visual impacts are anticipated on BLM lands.

### 3.11.2.3 Alternative B—No Action

Since the proposed project would not be developed on BLM lands, there would be no direct or indirect visual resource impacts on BLM lands. The LGPP facility would still be constructed on the same privately owned parcel, and the transmission lines would be constructed entirely on private land. There would be no construction activities on BLM land, although periodic maintenance activities on the existing transmission line would continue. There would be minor to moderate cumulative impacts on visual resources since the LGPP facility and connecting transmission lines would be visible from the surrounding BLM land.

### 3.11.2.4 Cumulative Effects

Construction of the LGPP and associated linear support facilities (e.g., transmission lines, pipelines, etc.) generally would dominate foreground views and some middleground views for viewers along the primary travel routes in the vicinity of the proposed project. This would result in a long-term moderate to high change to the visual character of the existing landscape of the project study area. However, only those portions of the transmission line and water pipeline components that are constructed on BLM lands are governed by visual resource regulations.

Despite the high degree of contrast (in particular in the foreground), significant cumulative visual resource impacts are not anticipated from the proposed project and applicable cumulative actions due to the rolling nature of the topography and areas of higher ground that separate the LGPP site from areas of surrounding BLM land. Visibility of the LGPP site is anticipated to be low to moderate from most portions of BLM land, and would only be visible from foreground viewing distances. At distances of more than 1 mile, intervening topography would screen most components of the LGPP from view; however, due to its greater height, the stack of the combustion turbine would be visible from greater distances and from more viewpoints.

## 3.12 Economic and Social Values

### 3.12.1 *Affected Environment*

This section describes the social and economic characteristics of the project study area and surrounding communities, which includes portions of Canyon, Gem, and Payette counties in western Idaho. Nearby cities in this analysis include New Plymouth (which is located within 1 mile of the northern border of the project study area), and Caldwell (a portion of which is located within the southern boundary of the project study area). Other cities near the project study area include Parma (estimated 2007 population of 1,831), Middleton (estimated population of 5,870), and Emmett (estimated 2007 population of 6,341) (U.S. Census 2000a and Middleton 2009).

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.

#### 3.12.1.1 Population

The population trends for the project study area are summarized in **Table 3.12-1**. The table presents population data for the period from 1990 through 2007 (cities) or 2008 (counties). During this time, population increased for all cities and counties within the project study area. The population of Canyon County more than doubled during this time period, and the population of Gem and Payette counties increased approximately 40 percent. Among the cities evaluated, Caldwell more than doubled to nearly 40,000 residents and New Plymouth increased by 10 percent.

Table 3.12-1: Population

| Area           | 1990   | 2000    | 2007/2008* | Percent Change<br>(1990 to 2007/8) |
|----------------|--------|---------|------------|------------------------------------|
| New Plymouth   | 1,313  | 1,400   | 1,444      | 10                                 |
| Caldwell       | 18,400 | 25,967  | 39,889     | 117                                |
| Canyon County  | 90,076 | 131,441 | 183,939    | 104                                |
| Gem County     | 11,844 | 15,181  | 16,513     | 39                                 |
| Payette County | 16,434 | 20,578  | 22,966     | 40                                 |

Source: U.S. Census 2000a

\* 2007/2008 Census Data are based on estimates from the 2000 Census. 2007 is used for cities and 2008 is used for counties

### 3.12.1.2 Employment and Income

Employment and income statistics for the state of Idaho and the cities and counties within and near the project study area are shown in **Table 3.12-2**. In 2000, Gem County had lower unemployment rates than the state average of 5.5 percent. The median per capita income in all cities and counties in the project study area is lower than Idaho’s state average of \$21,844.

Table 3.12-2: Employment and Income

| Area                   | Employment<br>(in labor force) | Unemployment<br>Rate (percent) | Median Per Capita<br>Income |
|------------------------|--------------------------------|--------------------------------|-----------------------------|
| New Plymouth           | 634                            | 8.0                            | \$12,624                    |
| Caldwell               | 12,194                         | 6.1                            | \$13,657                    |
| Canyon County          | 63,525                         | 5.9                            | \$15,155                    |
| Gem County             | 6,753                          | 5.1                            | \$15,340                    |
| Payette County         | 9,349                          | 6.2                            | \$14,924                    |
| Idaho State            | 730,360                        | 5.5                            | \$21,844                    |
| Malhuer County, Oregon | 13,046                         | 7.6                            | \$23,164                    |

Source: U.S. Census 2000b

It is expected that the main source of construction workers would be from the Boise Metropolitan Statistical Area (MSA) (which includes Ada, Boise, Canyon, Gem, and Owyhee counties) and the City of Ontario and portions of Malhuer County, Oregon. Employment by industry sector and average annual earnings for the Boise MSA is shown in **Table 3.12-3**. Similar to sector breakdowns for the state, the largest percentage of employees in the MSA are employed in government, professional and business services, and retail trade. Average annual earnings generally are higher in the Boise MSA than the state.

Table 3.12-3: Boise MSA Employment by Industry and Average Annual Earnings

|                              | % of Total |       | Average Annual Earnings |           |
|------------------------------|------------|-------|-------------------------|-----------|
|                              | Boise MSA  | Idaho | Boise MSA               | Idaho     |
| Construction                 | 7.1%       | 8.0%  | \$ 41,465               | \$ 35,401 |
| Manufacturing                | 11.3%      | 10.1% | \$ 73,789               | \$ 58,631 |
| Transportation/Utilities     | 2.9%       | 3.2%  | \$ 51,662               | \$ 46,102 |
| Wholesale Trade              | 4.6%       | 4.3%  | \$ 57,744               | \$ 49,190 |
| Retail Trade                 | 12.2%      | 12.7% | \$ 29,492               | \$ 26,228 |
| Information                  | 1.7%       | 1.7%  | \$ 46,740               | \$ 39,675 |
| Financial Activities         | 5.3%       | 4.9%  | \$ 36,581               | \$ 28,632 |
| Prof/Business Services       | 14.7%      | 12.7% | \$ 50,298               | \$ 44,535 |
| Education/Health Services    | 11.9%      | 11.2% | \$ 38,429               | \$ 33,945 |
| Leisure/Hospitality Services | 9.0%       | 9.7%  | \$ 15,899               | \$ 14,878 |
| Other Services               | 2.9%       | 3.0%  | \$ 18,315               | \$ 16,450 |
| Government                   | 15.0%      | 17.9% | \$ 49,209               | \$ 45,965 |

Source: Moody's Economy, August 2008

**Table 3.12-4** highlights relative growth for selected economic indicators in the Boise MSA. As shown, employment growth increased steadily between 2003 and 2007, with the overall growth rate declining in 2007 from the relatively strong growth rate recorded from 2005 to 2006. The unemployment rate decreased steadily from 2003-2007, with annual personal income growth of over 5 percent recorded each year from 2004-2007.

Table 3.12-4: Boise MSA Economic Indicator Growth Trends

|      | Employment |          | Unemployment Rate | Personal Income Growth |
|------|------------|----------|-------------------|------------------------|
|      | Total      | % Change |                   |                        |
| 2001 | 234,400    | --       | 4.1%              | 4.9%                   |
| 2002 | 233,600    | -0.3%    | 5.1%              | 3.0%                   |
| 2003 | 234,600    | 0.4%     | 5.0%              | 2.9%                   |
| 2004 | 241,900    | 3.1%     | 4.3%              | 9.9%                   |
| 2005 | 254,800    | 5.3%     | 3.5%              | 6.2%                   |
| 2006 | 271,500    | 6.6%     | 2.8%              | 10.2%                  |
| 2007 | 277,000    | 2.0%     | 2.6%              | 6.2%                   |

Source: Moody's Economy, August 2008

### 3.12.1.3 Temporary Housing

Temporary housing in the project study area consists of available vacant housing units, as well as motels and campground facilities. **Table 3.12-5** lists vacant housing as identified by to the 2000 U.S. Census. Canyon County is the most populated county within the project study area and has the most housing units, the most housing vacancies, and the most seasonal/occasional vacancies.

No temporary housing facilities have been identified in New Plymouth. Temporary housing in Caldwell includes five hotels/motels and four RV facilities including the Country Corners Campground and RV Park. Temporary housing in Boise includes 58 hotels/motels, one extended stay facility and, two bed and breakfasts, two campgrounds, and two RV facilities (Yahoo Travel 2009).

#### 3.12.1.4 Community Services and Infrastructure

Caldwell is a medium-sized city that contains the typical amenities and community services of comparably sized cities. These services and amenities include restaurants, grocery stores, entertainment and recreational facilities, and various community services provided by municipal government. Several restaurants located in Caldwell include a wide variety of venues, from fast-food chains, lunch and dinner sit-down chains, to local establishments. There also are several retail establishments that sell groceries and fuel. Caldwell has a municipal police and fire department that provides emergency response inside the city as well as in some of the surrounding areas.

The Caldwell Fire & Rescue Department includes two fire stations that serve 12 square miles within the city and 120 square miles of surrounding rural areas, which includes the southern portion of the project study area. Fire department personnel include 39 career firefighters, 21 paid on-call firefighters, 4 administrative personnel, and one office clerk (City of Caldwell 2009).

The northern portion of the project study area is served by the New Plymouth Fire District. Other fire protection services that serve portions of the project study area include Parma Rural Fire District, Nyssa Fire District, Caldwell Rural Fire District, and the Middleton Rural Fire District. Police protection in Payette and Canyon counties is provided by the Payette County Sheriff and the Canyon County Sheriff, respectively.

Emergency medical services are provided by the West Valley Medical Center in Caldwell, which is the nearest hospital to the project study area that provides emergency services.

### 3.12.2 *Environmental Consequences*

#### 3.12.2.1 Methodology

This section includes estimates of the potential socioeconomic impacts of the LGPP facility and its linear components. The main sources of impact are attributed to construction and corresponding employment. Under the Proposed Action, impacts are estimated for employment, housing, fiscal (tax benefits), public service costs, and property values. The relative impacts of the Proposed Action are then compared with the No Action Alternative.

Table 3.12-5:  
Housing Characteristics

| Housing Type                               | Canyon County |         | Gem County |         | Payette County |         | New Plymouth |         | Caldwell |         |
|--|---------------|---------|------------|---------|----------------|---------|--------------|---------|----------|---------|
|  | Units         | Percent | Units      | Percent | Units          | Percent | Units        | Percent | Units    | Percent |
| Total housing units                        | 63,555        | n/a     | 5,888      | n/a     | 8,707          | n/a     | 566          | n/a     | 9,603    | n/a     |
| Occupied                                   | 59,557        | 93.7    | 5,538      | 94.1    | 7,966          | 91.5    | 524          | 92.6    | 8,963    | 93.3    |
| Vacant                                     | 3,998         | 6.3     | 349        | 5.9     | 741            | 8.5     | 42           | 7.4     | 640      | 6.7     |
| Homeowner vacancy (rate)                   | n/a           | 2.5     | n/a        | 2.3     | n/a            | 1.1     | n/a          | 3.7     | n/a      | 0.2     |
| Rental vacancy (rate)                      | n/a           | 6.9     | n/a        | 7.1     | n/a            | 2.9     | n/a          | 10.0    | n/a      | 2.5     |
| Seasonal/occasional housing vacancy (rate) | 251           | 0.5     | 36         | 0.6     | 59             | 0.7     | 2            | 0.4     | 23       | 7.9     |

Source: U.S. Census 2000c

Langley Gulch Power Plant Project  
Environmental Assessment

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### 3.12.2.2 Alternative A—Proposed Action

#### 3.12.2.2.1 Construction Impacts

The construction phase of the project is anticipated to take approximately 2.5 years to complete and would be scheduled for completion by December of 2012. It is estimated that a total of 120 construction jobs would be generated at the plant site during the construction period. Construction workers would include qualified local electricians, pipefitters, steelworkers, excavators, carpenters, concrete workers, and laborers. Since construction is anticipated to progress in stages, the total number of workers involved in the construction of the project at any one time would likely vary.

Construction of the transmission lines could involve several crews operating at the same time at different locations. Idaho Power and contract construction crews would complete construction activities. Idaho Power expects that 12 to 20 crew members would be required for each construction crew, and equipment could include, but is not limited to, low drill, bucket trucks, line beds, wire pulling trailer, concrete trucks, crane, crew cab pickups, and flat bed trailers.

#### Temporary Housing

Temporary workers needed to construct the proposed pipeline and transmission lines are expected to be Idaho Power employees or contract workers. Any required temporary construction workers from outside the area would be anticipated to use temporary housing facilities, including local campgrounds, RV facilities, and hotel/motels in nearby cities, including New Plymouth, Caldwell, and Boise. It is expected that sufficient temporary housing would be available, particularly in the Caldwell and Boise areas.

#### Employment, Sales, and Income Taxes

Temporary indirect benefits during construction would include local expenditures from construction workers for food and services, increased employment, and local expenditures for construction materials and services. The purchase of commodities and construction materials could include concrete, rebar, and steel, and the rental of equipment.

Total forecast sales and income tax revenues have been estimated for the construction period using standard estimation techniques and assumptions. The analysis is summarized in **Table 3.12-6**. It is estimated that total construction costs would total \$427 million. Assuming an industry standard that 85 percent of total construction costs are considered hard costs (i.e., “brick and mortar” expenses), then \$363.0 million would be spent on construction labor and materials. Using the average annual construction wage of \$41,465 (source: Moody’s Economy, August 2008), total labor expenses over the 2.5-year construction period are expected to total approximately \$12.44 million. Based on these average wages, income taxes are calculated to be approximately \$970,000 over the 2.5-year construction period.

Using these assumptions, expenditures for construction materials are expected to be approximately \$350.5 million (\$363.0 million minus \$12.44 million). The estimated

construction materials budget of \$350.5 million is then used to estimate the sales tax income generated from the project. For the LGPP project, it was assumed that approximately 20 percent of construction materials would be sourced locally; and based on a 6 percent sales tax rate, the purchases would generate one-time sales tax revenues of \$4.2 million.

Table 3.12-6: Construction Phase Tax Impacts

| SUMMARY OF CONSTRUCTION PHASE IMPACTS     |                | Reference/Explanation                |
|---|----------------|--------------------------------------|
| Estimated Cost of Construction Materials  | \$ 350,520,000 | Hard costs net of labor              |
| Estimated Cost of Labor                   | \$ 12,440,000  | see below                            |
| Total Assumed Hard Costs                  | \$ 362,960,000 | Industry standard of 85% of total    |
| Total Assumed Soft Costs                  | \$ 64,040,000  | Total construction net of hard costs |
| Total Estimated Construction Costs        | \$ 427,000,000 | Idaho Power estimate                 |
| <b>Breakout of Construction Wages</b>     |                |                                      |
| Total estimated FTE employees             | 120            | Idaho Power estimate                 |
| Average annual construction wage          | \$ 41,465      | Moody's Economy, August 2008         |
| Total Construction Period (years)         | 2.5            |                                      |
| Total Construction Wages                  | \$ 12,440,000  | = (120 workers)*(2.5yrs)*\$36,080    |
| <b>Estimated Construction Sales Taxes</b> |                |                                      |
|   | State          |                                      |
| Construction Materials                    | \$ 350,520,000 | See above                            |
| Purchased Locally                         | \$ 70,104,000  | Assume 20% sourced locally           |
| Sales Tax Rate                            | 6.00%          |                                      |
| Total Construction Sales Tax Revenues     | \$ 4,206,000   |                                      |
| <b>Estimated Income Tax Revenues</b>      |                |                                      |
| Income Tax Rate                           | 7.80%          |                                      |
| Total Construction Income Tax Revenues    | \$ 970,300     |                                      |

### 3.12.2.2.2 Operational Impacts

#### Community Services and Infrastructure

It is anticipated that the proposed LGPP would provide 18 full-time equivalent jobs on a permanent basis. Given the relatively small number of permanent employees, existing housing, schools, and emergency services within the region should be more than sufficient to accommodate the increase in the number of households (assuming that each power plant employee represents one household).

Since the LGPP facility and much of the land within the project study area is located in Payette County, the Payette County Sheriff likely would be a first responder to any emergencies associated with construction and operation of the facilities.

#### Employment, Sales, and Income Taxes

Permanent employment would provide continued direct and indirect benefits within the local economy. Direct benefits include estimated payroll and subsequent income tax revenue gains. Based on average wages for plant and system operators, as determined in a 2009

Wage Survey for the Southwestern Regional Area of Idaho (Idaho Department of Labor), total annual income tax revenues attributable to on-site employees are estimated at just over \$60,000. **Table 3.12-7** summarizes the expected permanent employment payroll and income tax benefits. Indirect benefits would continue to accrue within the local economy as goods and services are purchased, thereby generating additional sales tax revenue and demand for these services.

Table 3.12-7: Permanent On-Site Employment Impacts

|                                   |              |
|-----------------------------------|--------------|
| <b>On Site Employment</b>         |              |
| Total Estimated On-site Employees | 18           |
| Average Annual Wage               | \$ 43,118    |
| Total Estimated Payroll           | \$ 776,131   |
| <b>Income Tax Revenues</b>        |              |
|                                   | <b>State</b> |
| Tax Rate                          | 7.80%        |
| Total Annual Revenues             | \$ 60,538    |

Source: Idaho Department of Labor

### Property Taxes and ROW Easements

Increased property tax revenues would accrue as a result of Idaho Power paying property taxes for the improved land once the power plant is built. In addition, compensation for necessary easements for the pipeline and transmission lines would be provided to affected landowners.

### Potential Impact on Property Values

The construction of transmission lines on private property also may impact associated property values, although based on ongoing research, the potential impact remains a topic of debate. The topic has been researched extensively, and a recent study by the Appraisal Institute (which reviewed several earlier studies), found that it is “fair to presume that the direction of the effect would in most circumstances be negative, but the existence of a measureable effect and the magnitude of such an effect can only be determined by empirical analysis of actual market transactions.” In sixteen empirical studies reviewed within the Appraisal Institute’s paper, the findings included:

- Over time, there is a consistent pattern with about half of the studies finding negative property value effects and half finding none.
- When effects have been found, they are almost always less than 10% and usually in the range of 3%–6%.
- Where effects are found, they decay rapidly as distance to the lines increases and usually disappear at about 200 feet to 300 feet (61 meters to 91 meters)

However, the research paper does recognize the intensity of opposition that new transmission line corridors generate. A survey revealed that between one-half and three-

fourths of the respondents have negative feelings about new transmission lines and that these negative feelings typically center on the fear of health effects, aesthetics, and property-value effects (Chalmers and Voorvaart 2009).

### 3.12.2.3 Alternative B—No Action

The LGPP facility and all linear components would be constructed on private lands. As a result of the greater length required for the transmission lines and pipeline, it is assumed that the construction costs would be greater for the No Action Alternative when compared with the Proposed Action. Accordingly, local sales tax and income tax revenues could be slightly greater and this would be a minor incremental beneficial impact on local government revenues. The long-term socioeconomic impacts associated with operations of the LGPP would be identical under both alternatives. To the extent that alternative routes for the transmission lines would affect more property owners, the potential negative impacts on property values could be greater under this alternative.

## 3.13 Cultural Resources

### 3.13.1 *Introduction*

The prehistoric use of the area dates back to about 11,000 years before present; however, based on research; no prehistoric sites have been previously recorded in the area of potential effect (APE) of the proposed project. The APE for the Proposed Action is the surveyed area within the temporary construction ROW for each of the linear project components.

Documentary evidence indicates historic activity throughout the vicinity of the project study area, dating to the Exploration Period, Settlement Period, and Phase I period. The semi-arid climate of the project study area generally limited homesteading and other claims until the Phase II period, when most of the land claims were filed. Subsequent development focused on agriculture, irrigation, and transportation. Farm productivity improved with the construction of irrigation systems under the direction of the BOR. Residential properties continued to develop along the transportation corridors during the Interwar and Pre-Modern periods, and into the Modern period.

An examination of homestead claim records indicates that the majority of the privately held properties in the project study area was patented between 1911 and 1914 (though some areas were patented as late as 1960) and has been in private ownership since that time (BLM 2009h). As such, there is a moderate probability for the location of Phase II, Interwar, Pre-Modern, and Modern period cultural resources.

Early private irrigation efforts (such as the Mill Ditch located near present day Middleton, 3 miles southeast of the south end of the project study area) effectively had irrigated only 6,000 acres of cropland by 1871 (Mauser 2002). It was not until BOR formed the Black Canyon Irrigation District in 1910 that hope of irrigation development spread among prospective farmers. The proposed irrigation development stimulated settlement of the area in the early 1910s, but irrigation construction did not begin until 1918, by which time many

settlers had been forced to leave due to poor crops and lack of income. The Black Canyon Irrigation District ultimately stimulated agricultural productivity in the region. Much of the land excluded from irrigation within the center of the irrigation district came under the administration of the BLM. The irrigation district, along with other public lands, documents a theme of public land management and conservation.

In Payette County, fruit orchards became an economically viable crop with the expansion of irrigation. The introduction of effective irrigation in the late 1940s further diversified crops within the project study area and stabilized agriculture production within and around the project study area, making agriculture an important theme in the region. Settlers found that apples tended to grow and produce very well in the Payette River Valley and there was a strong market for crops (Goldsmith 1953). It was not long before fruit became an especially important cash crop in Payette County and many orchards were in operation, raising apple and prune crops.

In the early twentieth century, increased settlement patterns brought with it an urgent need for more transportation. The Idaho State Legislature responded by establishing the State Highway Commission in 1913, to plan, build, and maintain a state highway system. The commission was instructed to establish a highway system, not only to connect the large population centers, but to grant access to and from population centers to the remote parts of the state that still had the potential for substantial development (ITD 1985:36). The Federal-Aid Highway Act of 1921 (42 Stat. 212) further increased road construction funding by matching federal funds with state funds on a 50/50 basis. Idaho has since fostered expansion and maintenance of a good road system throughout the project study area. Important roads in the project study area include U.S. Highway 30, U.S. Highway 95, and I-84. Taken together, these roads establish the historical importance of transportation to the area.

### ***3.13.2 Survey Results and Environmental Consequences***

#### ***3.13.2.1 Methodology***

A Class III cultural resources survey was conducted by Ethnoscience, Inc. in fall 2009 within the proposed temporary ROW for the 230-kV transmission line, the 138-kV transmission line, and the water pipeline. The surveyed area was limited to public lands and accessible private lands along each project component. Surveys of the private property portion are incomplete due to the lack of access permission by all of the landowners.

Ethnoscience, Inc. prepared a cultural resource report for the surveyed area that contains detailed information regarding the background research, description, materials, and integrity of each resource identified during the survey. The report evaluates and recommends eligibility of each resource for submission to the NRHP.

The survey corridor varied in width, depending upon the width of the proposed construction ROW, property access, and land ownership. On BLM lands, the survey corridor for the proposed water pipeline was 300 feet wide. The width of the pipeline corridor on private lands

varied from approximately 40 to 500 feet in areas where staging areas were proposed. On BLM lands, a 500-foot-wide corridor was surveyed for the 230-kV transmission line, and a 300-foot-wide corridor was surveyed for the 138-kV transmission line. A 300-foot-wide corridor for the 138-kV transmission line also was surveyed on private lands on the west side of I-84 and on the private properties immediately east of I-84. Where the transmission line follows Old Highway 30 and would be located immediately adjacent to the road ROW, the surveyed corridor was 40 feet wide.

The entire area within the ROWs was intensively surveyed, using parallel pedestrian transects spaced at 30-meter (m) or less intervals. Magellan GPS units and compass bearings were used to navigate and control accuracy of transect direction and spacing. Animal burrow back dirt, rock formations, and other exposures were examined for cultural material or features. When cultural resources were encountered, transects spaced 5 meters or less apart were used in the area surrounding the resource to a distance of at least 30 meters to determine boundaries of the resource. Artifacts were marked with pin flags, which were removed after fully recording the site or isolated find. Site sketch maps were completed for each site using GPS units. All sites and features were photographed and inventory lists of artifacts were completed. The Idaho Archaeological Survey Inventory form was used for documentation.

### 3.13.2.2 Alternative A—Proposed Action

#### 3.13.2.2.1 230-kV Transmission Line

During the Class III pedestrian survey, no cultural resources were identified within the temporary ROW of the 230-kV transmission line. If any cultural resources are discovered during the construction of the project, the proponent would implement the EPMs as described in Chapter 2.0.

#### 3.13.2.2.2 138-kV Transmission Line

##### Cultural Resources Identified Within the ROW

Four cultural resource features were identified in the proposed 138-kV transmission line corridor. Three are linear features and one is a point location consisting of several elements. The cultural features in this corridor include the following:

- Langley-2: segment of the C West Line Canal and associated laterals
- Langley-3: segment of the D Line Canal and associated laterals
- Langley-4: a complex of features consisting of a store, residence, and support structures
- Langley-5: an original segment of U.S. Highway 30

Langley-2 consists of a segment of the C West Line Canal and two segments of concrete-lined laterals. The canal was developed in the late 1940s as part of the Black Canyon Irrigation District, which brought irrigation to portions of Payette, Canyon, and Gem counties. Irrigation significantly improved agricultural productivity and economic prosperity in

the region. However, the site is not directly associated with the productive careers of significant individuals in the region. The design and method of construction of the irrigation features is common and unremarkable, and the site has no archaeological component and is unlikely to yield significant information about the history of the area. Based on this determination, the site is recommended eligible for listing in the NRHP under Criterion A; and is recommended not eligible for listing in the NRHP under Criteria B, C, and D. The integrity of the site is excellent. The site retains excellent integrity of location, design, materials, workmanship, and association. The integrity of setting and feeling has diminished slightly because of encroaching urbanization, but the site retains sufficient integrity to convey its historic character.

Langley-3 consists of a segment of the D Line Canal and associated laterals. The canal was developed in the late 1940s as part of the Black Canyon Irrigation District system in Payette County, Idaho. The site within the current inventory area consists of a segment of the D Line Canal and one of its lateral segments. Construction of the D Line Canal within the Second Irrigation Unit began circa 1947 and was completed in 1949. The D Line Canal and its associated lateral distribution system were periodically improved during the following 60 years. The improvements were made to accommodate new agricultural techniques, new crops, and changes in the landscape, such as construction of the I-84 corridor. The function and character of the canal, however, remained effectively consistent with its original construction. Similar to the C West Line Canal, the site is recommended eligible for listing in the NRHP under Criterion A; and is recommended not eligible for listing in the NRHP under Criteria B, C, and D. The integrity of the site is excellent. The site retains excellent integrity of location, design, materials, workmanship, and association. The integrity of setting and feeling has diminished slightly because of encroaching urbanization, but the site retains sufficient integrity to convey its historic character.

Langley-4 is a mixed-style and period complex of various structures and features, primarily consisting of a store, residence, and support structures. A detailed description of the structures and other features is contained in the Cultural Resources Report prepared for the LGPP project (Ethnoscience 2010). The site is recommended not eligible for listing in the NRHP under Criteria A, B, C, and D. The site is not associated with any significant historical events. The property initially was used as farmland and later developed as a store and gas station. The site is not associated with any individual whose specific contribution to history is demonstrably important and can be identified. In addition, the architecture of the site is unremarkable and has undergone significant modification since it was constructed.

Langley-5 consists of an original segment of U.S. Highway 30, currently serving as a local access road. The highway was designated by the Joint Board on Interstate Highways in 1926 and the current alignment dates to at least 1936. The two-lane road has an asphalt surface and measures 22 feet wide. The 138-kV transmission line would cross a portion of U.S. Highway 30 in Payette County, Idaho; and then would parallel the east side of the road south into Canyon County, Idaho. The road is recommended eligible for listing in the NRHP under Criterion A, but it is recommended not eligible for listing in the NRHP under Criterion B, C,

and D. The road is recommended eligible for listing in the NRHP under Criterion A because of its association with the development of transportation. Although numerous individuals worked on the design, construction, and funding of the road, the site has no specific ties with the careers of any people associated with the history of the road’s creation and operation. Although the road still conveys its historic character from when it was first paved in the 1930s, the materials and method of construction have changed.

**Potential Impacts to Identified Resources**

Potential impacts to cultural resource features that would be crossed by the 138-kV transmission line are shown in **Table 3.13-1**. As shown in the table, all of the sites would be spanned by the proposed transmission line, and the line has been determined to have no effect on these cultural resources.

**Table 3.13-1: Summary of Potential Impacts of 138-kV Transmission Line**

| Cultural Resource No. | Type of Property | NRHP Eligibility         | Effect    | Comment               |
|-----------------------|------------------|--------------------------|-----------|-----------------------|
| Langley-2             | Irrigation Canal | Recommended Eligible     | No Effect | Site would be spanned |
| Langley-3             | Irrigation Canal | Recommended Eligible     | No Effect | Site would be spanned |
| Langley-4             | Store            | Recommended Not Eligible | No Effect | Site would be spanned |
| Langley-5             | Highway          | Recommended Eligible     | No Effect | Site would be spanned |

**3.13.2.2.3 Water Pipeline**

**Cultural Resources Identified Within the ROW**

A total of three cultural resources have been identified within the water pipeline corridor. These three cultural resources are:

- Site 75014765: the A-Line Canal
- Site 75014852: U.S. Highway 95
- Langley-1: an historic trash dump

These three sites and their NRHP eligibility are described in the following paragraphs.

The previously recorded irrigation canal that could be affected by construction of the water pipeline is identified as site number 75014765, and is known as the A-Line Canal and associated lateral segments. The canal was developed in the 1940s as part of the Black Canyon Irrigation District system in Payette County, Idaho. The portion of the site observed along the water pipeline route borders cultivated fields and crosses Fairview Avenue at a few locations. The canal would be crossed twice by the proposed water pipeline and paralleled for short segments. Although the canal has undergone periodic improvements over the years, the function and character of the canal have remained effectively consistent with its original construction. The site is significant for its association with irrigation and agricultural and

economic development of the region, and was previously determined eligible for listing in the NRHP under Criterion A. Current research supports the previous NRHP eligibility determination.

The previously recorded site number 75014852 is U.S. Highway 95. The highway would be crossed by the proposed water pipeline near the intersection with Fairview Avenue in Sections 21 and 28, T7N R5W, although the specific crossing location has not yet been determined. The portion of the site observed during the survey was originally constructed in the early 1940s and consists of a paved road measuring 26 feet wide. Construction of the southern extension of the highway began in 1940 and was completed by circa 1943. Although some alignment changes have been made to the highway since its original construction, the overall route effectively follows its historic corridor. The site previously was recommended eligible for listing in the NRHP under Criterion A because of its association with significant transportation development in Idaho. Ethnoscience research supports the previous NRHP eligibility recommendation.

Site number Langley-1 is an historic trash dump. Artifacts at the site are concentrated in five clusters, with a few isolated artifacts between clusters. The separate Cultural Resource Report details the area and contents of the historic trash dump. The artifact assemblage predominantly dates to the 1950s with some material from the 1960s mixed in, and the assemblage suggests it is household trash. The site is recommended not eligible for listing in the NRHP under Criteria A, B, C, or D. The site has no meaningful historic context, which is typical of many small trash dumps. There is no evidence associating the site with a significant historical event. The site has no association with the productive work of an individual significant in the history of the area. The site has no architectural or artistic character. The artifact assemblage suggests that the dumping of common household items, primarily from the 1950s, formed the site. The lack of associative context further limits the information potential of the site. In addition, the integrity of the site is poor.

#### Potential Impacts to Identified Resources

Potential impacts to cultural resource properties that would be crossed by the water pipeline are shown in **Table 3.13-2**. As shown in the table, at the crossing locations, the pipeline would be bored under the irrigation canal and U.S. Highway 95. In places where the pipeline would be installed parallel to the irrigation ditch, it is recommended that construction activities be located away from the base of the canal to avoid damaging the physical integrity of the canal. Assuming that construction of the water pipeline would not physically damage the structure or historic context of the canal or the highway, installation of the pipeline was determined to have no effect on these NRHP-eligible properties. Pipeline construction may have an impact on the historic trash dump, but the site is recommended as not eligible for the NRHP, so the cultural resources effect determination is classified as “not applicable.”

Table 3.13-2: Summary of Potential Impacts of Water Pipeline Construction

| Cultural Resource No. | Type of Property | NRHP Eligibility  | Effect    | Comment                              |
|-----------------------|------------------|---|-----------|--------------------------------------|
| 75014765              | Irrigation Canal | Eligible by SHPO  | No Effect | Site would be bored under            |
| 75014852              | Highway          | Previously Recommended Eligible – No SHPO Determination | No Effect | Site would be bored under            |
| Langley-1             | Trash Dump       | Recommended Not Eligible                                | N/A       | Site may be impacted by construction |

**3.13.2.3 Alternative B—No Action**

The LGPP facility would still be constructed on the same privately owned parcel and the transmission lines and water pipeline would be constructed entirely on private land. There would be no construction activities on BLM land, although periodic maintenance activities on the existing Caldwell-Ontario 230-kV transmission line would continue.

Existing aboveground and underground cultural resources would remain in place. Their condition gradually would deteriorate over time unless preserved by an outside action. Underground cultural resources would remain in place and would be undisturbed.

**3.13.3 Summary of Impacts and Potential Threats to the Integrity of Cultural Properties**

There are no anticipated threats to the integrity of properties recommended as NRHP eligible or to building properties. These properties would be avoided during construction, either by boring under the property (such as irrigation canals) or by spanning over the property (such as buildings). Sites recommended not eligible for listing in the NRHP require no further cultural work or avoidance.

Five cultural properties are recommended eligible for the NRHP under Criterion A. Avoidance of the sites 75014765, 75014852, Langley-2, Langley-3, and Langley-5 during project construction activities by boring or spanning would avert negative impacts. Two cultural properties in the project study area are recommended not eligible for listing in the NRHP, and therefore require no further cultural work or avoidance. Cultural resource clearance with no further work is recommended for the linear components of the LGPP project subject to adherence to the EPMs for cultural resources identified in Section 2.2.4.

## 4.0 Consultation and Coordination

### 4.1 List of Preparers

The key team members who conducted the environmental analyses and prepared the EA are listed in **Table 4.1-1** below.

Table 4.1-1 Interdisciplinary Review Team

| Name                                      | Title   | Area of Responsibility                                   |
|---|---|--|
| <b>U.S. Bureau of Land Management</b>     |   |  |
| Effie Schultsmeier                        | Realty Specialist   | BLM Project Manager                                      |
| Mark Steiger                              | Botanist  | Botany/Rare plants                                       |
| Jill Holderman                            | Wildlife Biologist  | Wildlife/Long-billed curlew                              |
| Dean Shaw                                 | Archaeologist   | Cultural Resources                                       |
| Mike Truden                               | Resource Management Supervisor                              |  |
| Larry Ridenhour                           | Outdoor Recreation Planner                                  | Recreation   |
| Matt McCoy                                | NEPA Specialist   |  |
| Christina Handy                           | Rangeland Management Specialist                             |  |
| Jon Beck                                  | Four Rivers RMP Lead Planning and Environmental Coordinator |  |
| Paul Seronko                              | Environmental Protection Specialist                         | Soil, Water and Air Resources                            |
| Pat Kane                                  | Weeds Management Specialist                                 | Noxious and Invasive Weeds                               |
| <b>Consulting Team</b>                    |   |  |
| Tom Keith, AECOM                          | Principal-in-Charge   | Senior Review  |
| Joan DeGraff, AECOM                       | Senior Environmental Planner                                | Project Manager/ Contract Manager for Cultural Resources |
| John Van Kirk, AECOM                      | Environmental Planner                                       | Assistant Project Manager; Air Quality                   |
| Glen Mejia, AECOM                         | Natural Resource Specialist                                 | Wildlife, Threatened and Endangered Species              |
| Rich Dwerlkotte, AECOM                    | Natural Resource Specialist                                 | Vegetation and Wetlands                                  |
| Jim Keany, AECOM                          | Senior Natural Resource Specialist                          | Senior review biological resources sections              |
| Linda Howard, AECOM                       | Natural Resource Specialist                                 | Land Use   |
| Ashli Gornall, AECOM                      | Natural Resource Specialist                                 | Recreation   |
| Joe Chuita, AECOM                         | GIS Technician  | Project mapping and GIS analysis                         |
| Linda Spangler and Debbie Thompson, AECOM | Technical Editor  | Technical Editing/ Document Production                   |
| Bill Berg, AECOM                          | Senior Environmental Planner                                | Geology and Soils  |
| Jean Decker, AECOM                        | Senior Environmental Planner                                | Water Resources  |
| Sergio Capozzi, AECOM                     | Environmental Planner                                       | Visual and Aesthetic Resources                           |
| David Madej, AECOM                        | Economist   | Socioeconomics   |
| Darin Miller, AECOM                       | Senior Economist  | Socioeconomics   |
| Lynelle Peterson, Ethnoscience, Inc.      | Principal Investigator                                      | Cultural Resources                                       |

## 4.2 List of Agencies, Organizations, and Individuals Consulted

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Hardy, Christina, BLM Range Management Specialist. Email correspondence to Linda Howard, Environmental Planner, AECOM, regarding grazing allotment permittee information for grazing allotments within the project study area. Dated July 14, 2009.

Holderman, Jill, Wildlife Biologist, Four River Field Office, Bureau of Land Management, Boise, Idaho. Correspondence regarding wildlife resources in the Langley Gulch Power Plant Project study area with Glen Mejia, Ecologist, AECOM, Seattle, Washington. April 9, 13, and July 3, 2009.

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# **Appendix A**

## USFWS Biological Opinion for the Langley Gulch Power Plant Rights-of-Way

NOTE: In the electronic copy, this information is presented separately.

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# **Appendix B**

## Proposed Construction Methods

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## Transmission Line Construction

### *Introduction*

Idaho Power would not initiate any construction or other surface disturbing activities on the public land portion of the ROW until authorized by BLM. Such authorization would consist of a written notice to proceed (Form 2800-15). Idaho Power would conduct all activities associated with construction, operation, and maintenance of the transmission line within the authorized limits of the ROW and in strict conformity with the POD. A copy of the complete ROW authorization, including all stipulations and the approved POD, would be made available to construction personnel. BLM personnel would ensure compliance through project monitoring and ROW grant stipulations.

Construction of the transmission lines would include the following general activities:

1. Survey and stake centerline;
2. Maintain and repair access and service roads;
3. Prepare (e.g., clear and/or grade) work areas as needed;
4. Excavate structure holes;
5. Assemble and erect structures;
6. Install conductors and ground wires; and
7. Site reclamation.

Various phases of construction would occur at different locations for each project component throughout the construction process. Construction would involve several crews operating at the same time at different locations. The preliminary construction schedule is addressed in Section 2.2.3.7.

### *Survey and Stake Centerline*

Survey work for the transmission lines would consist of determining centerline location, specific pole locations, ROW boundaries, work area boundaries, and service roads to work areas. Design plans for the structure locations, work areas, and service road maintenance within the ROW would be included in the final POD, which would be approved by BLM prior to the start of construction.

Locations where the line changes angles or the ROW is not clear may be marked with painted laths or flags as needed to keep the contractor within the ROW. Marking would be maintained until final cleanup and/or reclamation is completed, after which the ROW markers would be removed and recycled or disposed of at a state approved landfill.

### *Maintain and Repair Access and Service Roads*

The existing and proposed ROWs have access and service roads in or adjacent to the Proposed Action components. In most cases, where the existing road system can

accommodate construction equipment or vehicles, no maintenance would be necessary. Areas where overland travel is proposed would be marked to protect natural and cultural resources prior to the start of construction activities. Creation of the 0.2 mile of new service roads for the 230-kV transmission line would involve clearing vegetation and grading. Equipment to maintain and repair access and service roads may include hand tools, bulldozers, graders, and crew-haul vehicles.

### *Prepare Work Areas*

Temporary construction yards and work areas would primarily be located on private land. The work areas may include field construction office trailers, reporting locations for workers, parking spaces for vehicles and equipment, and storage areas for construction materials. Two temporary staging areas for the construction of the 230-kV transmission line are proposed on BLM lands. Each staging area would be approximately 500 feet by 500 feet and would be located within the 500-foot-wide temporary construction ROW.

### *Excavate Structure Holes*

Excavations for all structures would be done with a vehicle-mounted power auger. If rocky areas are encountered, blasting may be required. Structures would be set using a crane and material trucks.

For directly embedded structures, cylindrical holes would be drilled in the ground using a power auger. Hole depth typically would vary from 8 to 12 feet deep, depending on soil characteristics and structure height and loading. For structures with foundations, cast in place, concrete foundations consist of a cylindrical column of concrete embedded in the ground, anywhere from 15 to 25 feet deep, depending on soil conditions. Poles are attached to the concrete via embedded anchor bolts.

Structure holes left open or unguarded overnight or for more than a day would be covered and may be fenced where practical 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.

Any required blasting would be conducted in strict compliance with all applicable safety orders and rules. All employees engaged in the handling and use of explosives would obtain the appropriate certification required by the state or county in which such operation is located. Idaho Power's on-site Construction Manager is a licensed "employee possessor." Accurate accounting of all explosives would be maintained, and any shortages would be reported immediately to Idaho Power's on-site Construction Manager and the county sheriff. No explosives would be stored in the ROW; they would be stored at Idaho Power's material storage yard. The magazines and site would meet all federal requirements. Safeguards, such as blasting mats, would be employed when needed to protect adjacent property. In extremely sandy areas, soil may be stabilized by water or a gelling agent prior to excavation.

*Assemble and Erect Structures*

Sections of the transmission structures and associated hardware would be moved to each structure assembly area by truck and would be assembled at that location (**Figure B-1**). Assembly areas would need to be large enough to accommodate the entire length of the structures while cross-arms and insulators are mounted to them. Cross-arms would then be installed and rigged with insulator strings and stringing sheaves at each ground wire and conductor position. This process is done while the pole is on the ground. The assembled structures are then hoisted into place by crane.

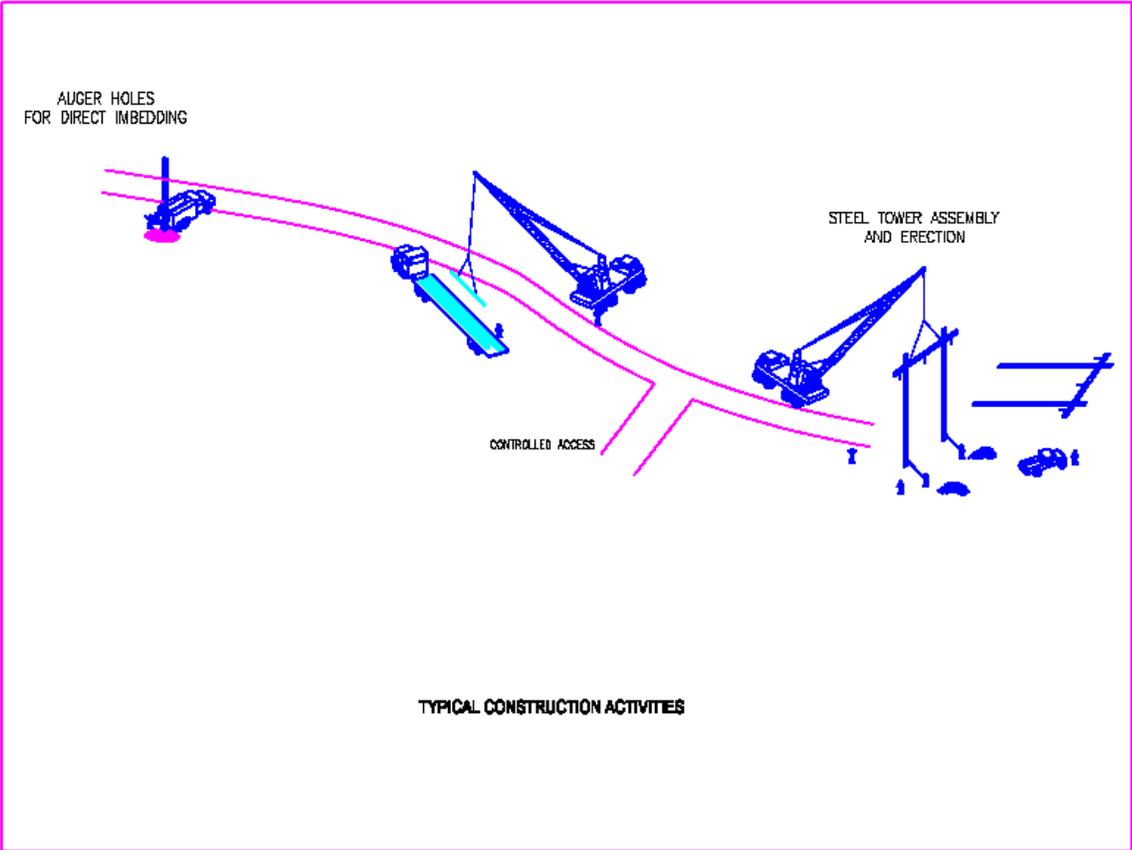


Figure B-1 Typical Construction Activities

*Install conductors and ground wires*

Fiber-optic shield wires and conductors would be strung using powered pulling equipment at one end and powered braking or tensioning equipment at the other end. Once poles 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 conductor are pulled through all sheaves (**Figure B-2**).

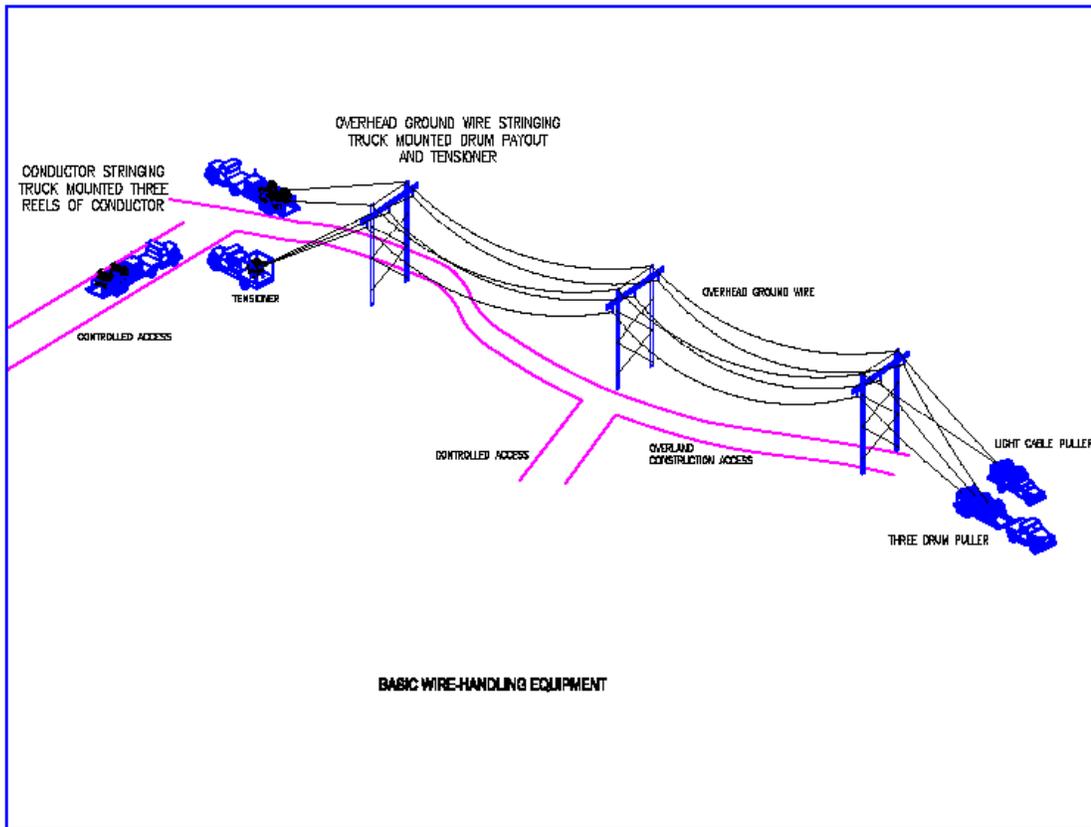


Figure B-2 Typical Wire Stringing Activities

Guard structures would be installed as needed to ensure the safety of construction personnel and the public during construction (e.g., 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.

Conductor splicing would be required at the end of a conductor spool or if a conductor is damaged during stringing. The work would occur in the same work areas used for the poles or pulling/tensioning sites. Pulling/tensioning sites are approximately 100 feet by 300 feet and would be cleared of vegetation and graded to allow for safe operation of the pulling/tensioning equipment. Equipment to clear the areas would include a small dozer, backhoe,

and excavator, depending on the specific location. After construction, the areas would be restored in accordance with the BLM-approved POD.

Splice boxes for the fiber-optic cable would be required approximately every 4 miles, where the cable spool ends. The boxes would measure approximately 36 inches by 48 inches by 36 inches, and would be mounted on the side of the pole approximately 10 feet above the ground.

## Water Pipeline Construction

As described in Section 2.2.3.4, much of the pipeline route on BLM land follows an existing access road. In areas where the pipeline ROW leaves the existing access road, overland travel may be necessary. In addition, improvements to existing access roads in the project study area may be necessary to accommodate construction vehicles as described in the POD.

Construction of the proposed waterline would involve surveying the centerline, removing vegetation as needed, removing and stockpiling topsoil and subsoil, excavating a trench, laying pipe sections along the trench, welding the pipe, lowering the pipe into the trench, backfilling the trench, pressure testing the pipe, replacement of topsoil and topsoil stabilization, recontouring, and revegetation. The activities would occur sequentially along the entire length of the pipeline; however, as sections of the pipeline are completed, they would be buried. Small sections of trench may be left open overnight; these would be covered, fenced, or otherwise marked to minimize the chance of animals or people falling in.

Sections of pipe and other materials would be staged along the pipeline corridor and at additional designated material staging areas on privately owned lands as necessary. The trench would be approximately 5 feet deep and 4 feet wide, depending on subsurface material. Topsoil and subsoil from trench excavation would be stockpiled along the open trench. Where the pipeline route crosses small drainages, a temporary swale or other feature would be installed to allow for continued water flow and to prevent runoff from entering the trench. Once the pipeline trench has been excavated, sections of pipe that have been staged along the ROW would be welded together and lowered into the trench, and the trench would be backfilled and compacted with subsoil. Following backfill and compaction, the stockpiled topsoil would be spread over the disturbed area to begin the restoration and final stabilization process.

## Site Reclamation

Disturbed areas within the ROW would be finish-graded and reseeded as specified in the POD. The natural drainage pattern along the ROW would be restored as nearly as practical to the original pattern. Work sites would be restored to preconstruction conditions and reseeded as necessary using BLM-approved methods. The contractor would dispose of excess soil materials, rock, and other objectionable materials that cannot be used in

restoration work, as approved by the Authorized Officer and as directed by Idaho Power's on-site Construction Manager.

## Additional General Construction Practices

### *Construction Waste Disposal*

Construction sites, material storage yards, and service roads would be kept in an orderly condition throughout the construction period. Refuse and trash would be removed from the sites and disposed of 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 stored and disposed of in accordance with all applicable laws and regulations. Construction practices would comply with all applicable federal, state, and local laws and regulations concerning the use, storage, transportation, and disposal of hazardous materials. No burning of construction trash would occur without BLM approval.

### *Fire Protection*

A fire plan is included in the POD and would be approved by the Authorized Officer. It documents all applicable fire laws and regulations to be observed during the construction period, including any BLM notice of restricted activities due to high fire danger. All personnel would be advised of their responsibilities under the applicable fire laws and regulations. In general, Idaho Power is responsible for inspecting the transmission line for fire hazards. Fire regulations generally are effective between April 1 and October 31, and at other times with unusual weather conditions. Detailed fire protection measures are specified in measures FP-1 through FP-5 in Section 2.2.4.

If Idaho Power becomes aware of an emergency situation that is caused by a fire on or threatening BLM lands and that could damage transmission lines or their operation, it would notify BLM. Likewise, if BLM becomes aware of an emergency situation that is caused by a fire on or threatening BLM lands and that could damage transmission lines or their operation, it would notify Idaho Power.

## Operation and Maintenance

### *Transmission Line Operation and Maintenance*

**Operational Characteristics**—The nominal voltage for the LGPP to the Caldwell-Ontario transmission line is 230-kV alternating current (AC). The nominal voltage for the LGPP to the Caldwell-Willis transmission line is 138-kV AC. As described above, the LGPP to Caldwell-Willis transmission line would be constructed to 230-kV specifications, but initially would be operated at 138-kV. Depending on load flow, there may be minor variations in voltage of up to 5 percent above the nominal level.

**Safety**—Safety is a primary concern in the design of the transmission systems. An AC transmission line is protected with power circuit breakers and related line relay protection

equipment. If conductor failure occurs, line switches automatically open and the line is re-energized. The overhead ground wires, along the top of the line, provide lightning protection. Electrical equipment and fencing at the substations are grounded.

**Maintenance**—Idaho Power performs O&M activities to keep transmission lines operational and in good repair. These activities either are planned (such as routine patrols, inspections, scheduled maintenance, and scheduled emergency maintenance) or unplanned (such as emergency maintenance in cases where public safety and property are threatened). Other than routine inspections, the level of maintenance anticipated would be relatively low.

A patrolman using a pickup or all-terrain vehicle would conduct a ground patrol twice a year, once in the spring and once in the fall, and identify line and structure conditions in need of repair. Follow-up maintenance on problems typically is then scheduled for the fall (October through November); however, maintenance activities are dependent upon whether the line needs to be taken out of service and when maintenance can be conducted. A detailed climbing or aerial inspection of the structures, conductors, and associated hardware would take place approximately once every 10 years. During a climbing inspection, structural hardware is checked and tightened. Climbing inspections can take place from April through October. Follow-up maintenance to the detailed inspection usually occurs the following fall. Vegetation treatments to clear the ROW would be minimal because of the lack of tall shrubs or trees within the ROW.

Idaho Power may clear vegetation within a 10-foot radius of each structure to reduce possible damage from fires. Following vegetation clearing, licensed applicators would apply herbicides to minimize vegetation regrowth. Idaho Power would coordinate these activities with BLM to ensure that sensitive plant and wildlife resources are not negatively impacted.

Maintenance activities also would be conducted on access and service roads as required. Maintenance activities may include grading, repair of eroded areas, and installation of water bars and dips to control erosion and stormwater runoff.

**Emergency Situations**—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 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.

The POD provides a more detailed description of operation and maintenance activities that would occur in response to emergency situations.

### *Water Pipeline and Pump House Inspection and Maintenance*

There also would be periodic visual inspections of the water pipeline route (twice a year at the most). Maintenance would be conducted as needed and repairs would occur if pipe failure occurs. Pigging also may be conducted (once every 5 to 10 years) if buildup occurs. The pump house maintenance would depend on the type of intake Idaho Power selects. If the traditional in-stream intake is used, the accumulation of algae would be an ongoing maintenance requirement. Maintenance would be minimal if Idaho Power selects a well field option. Regardless of which option is selected, there would be periodic inspections of the pumps and controls in the pump house building.