EXECUTIVE SUMMARY

INTRODUCTION

Idaho Power Company and PacifiCorp (doing business as Rocky Mountain Power), collectively known as the Proponents, applied to the Bureau of Land Management (BLM) for a right-of-way (ROW) grant to use the National System of Public Lands for portions of the Gateway West Transmission Line Project (Gateway West or Project) on May 7, 2007. The original application was revised in October 2007, August 2008, May 2009, and January 2010 to reflect changes and refinements in their proposed Project. This application was assigned the case file numbers of IDI-35849 for Idaho and WYW-174598 for Wyoming.

The Proponents propose to construct and operate approximately 990 miles of new 230-kilovolt (kV) and 500-kV electric transmission system consisting of 10 segments between the Windstar Substation at Glenrock, Wyoming, and the Hemingway Substation approximately 30 miles southwest of Boise, Idaho. The proposed transmission line would supplement existing transmission lines and relieve operating limitations, increase capacity, and improve reliability in the existing electric transmission grid. This would allow for the delivery of up to 1,500 megawatts (MW) of additional energy for the Proponents' larger service areas, principally in Utah and Idaho, and to other interconnected systems. The Project includes three proposed substations, an expansion at one planned substation to be constructed for other purposes, and expansions at eight existing substations. Other associated facilities include communication systems, optical fiber regeneration stations, and substation distribution supply lines.

Changes between the Draft and Final Environmental Impact Statement (EIS) include numerous minor edits, many in response to comments by agencies and the public. These include corrections to the text, figures, and tables, as well as typographical errors. A design centerline has been developed by the Proponents for portions of the Proposed Route in Segments 1W(a), 1W(c), 2, 3, 4, and 7. Changes from the centerline identified in the Draft EIS resulted from improved information; compliance with clearance and set-back codes; and as the result of consultations with landowners and local governments. These changes range from less than 100 feet to several miles. Major changes to the Project are discussed in Chapter 1, Section 1.1.1. They include dropping Segment 1E, revising the Proposed Route in Segment 4 to follow the existing Bridger transmission lines, and dropping Alternatives 7H, 7I, and 7J, as well as the proposed Rogerson Substation. Two new alternative routes, 4G and 7K, have been added. No routes crossing into Nevada are still being considered. Proposed management plan amendments have been revised due to these changes. The Design, Schedule, and Structure Variations have also been dropped.

PURPOSE AND NEED

BLM is the lead federal agency under the National Environmental Policy Act and will coordinate the preparation of the environmental analysis. The cooperating agencies include the U.S. Department of Agriculture Forest Service (Forest Service) (the Caribou-

Targhee, Medicine Bow-Routt, and Sawtooth National Forests); the National Park Service (including the National Trails Office, Minidoka National Historic Site, Hagerman Fossil Beds National Monument, Fossil Butte National Monument, Craters of the Moon National Monument and Preserve, and the City of Rocks National Reserve); the U.S. Fish and Wildlife Service (USFWS; Ecological Services Division, Seedskadee and Cokeville Meadow National Wildlife Refuges [NWRs]); the U.S. Army Corps of Engineers (USACE); the Bureau of Indian Affairs; the States of Idaho and Wyoming; Idaho Army National Guard (IDANG); Cassia, Power, and Twin Falls Counties, Idaho; Lincoln, Sweetwater, and Carbon Counties, Wyoming; the Medicine Bow and Saratoga Encampment-Rawlins Conservation Districts in Wyoming; and the City of Kuna in Idaho.[1]

The purpose of the federal action on federally managed lands is to decide whether to grant, grant with modifications, or deny an application to construct and operate a transmission line on public lands. The need for the action is established by the federal agencies' responsibility under the Federal Land Policy and Management Act[2] to respond to an application for a ROW. The Forest Service will also use this document to determine whether to issue a Special Use Authorization for the transmission line to cross National Forest System (NFS) lands. In addition, the USACE must respond under the Clean Water Act[3] to an application for a permit to discharge dredged or fill material into waters of the United States, including wetlands.

ISSUES

Issues raised through scoping include effects on visual resources, cultural resources, socioeconomics, environmental justice, plants and wildlife, including special status species, water resources, land use, conformance with land use plans, agriculture, reclamation, control of invasive plant species, recreation, wilderness characteristics, transportation, air quality, noise. electrical environment, and public safety. Chapter 3 of the Final EIS discusses how the Proposed Route and the Route Alternatives would affect key issues.

PROPOSED ACTION, PLAN AMENDMENTS, AND ALTERNATIVES

PROPOSED ACTION

The Project would begin at the Windstar Substation in Glenrock, Wyoming (Figure ES-1) and would follow or parallel an existing 230-kV line proposed for reconstruction to the proposed Aeolus Substation near Medicine Bow, Wyoming. It would then proceed as a single-circuit 500-kV line from Aeolus to the Populus Substation near Downey Idaho. A 345-kV line would connect the Anticline Substation with the Jim Bridger Power Plant. From Populus to the Hemingway Substation southwest of Boise, Idaho, the Project would consist of two single-circuit 500-kV roughly parallel paths—Segments 5, 6, and 8 would travel on a more northerly route toward the Hemingway Substation through the Borah and Midpoint Substations, while Segments 7 and 9 would travel a

[1] BLM and the cooperating agencies may be referred to collectively hereafter as "the Agencies."
[2] Federal Land Policy and Management Act of 1976, as amended, 43 United States Code (U.S.C.) § 22
[3] Clean Water Act of 1972, as amended, 33 U.S.C. § 1251

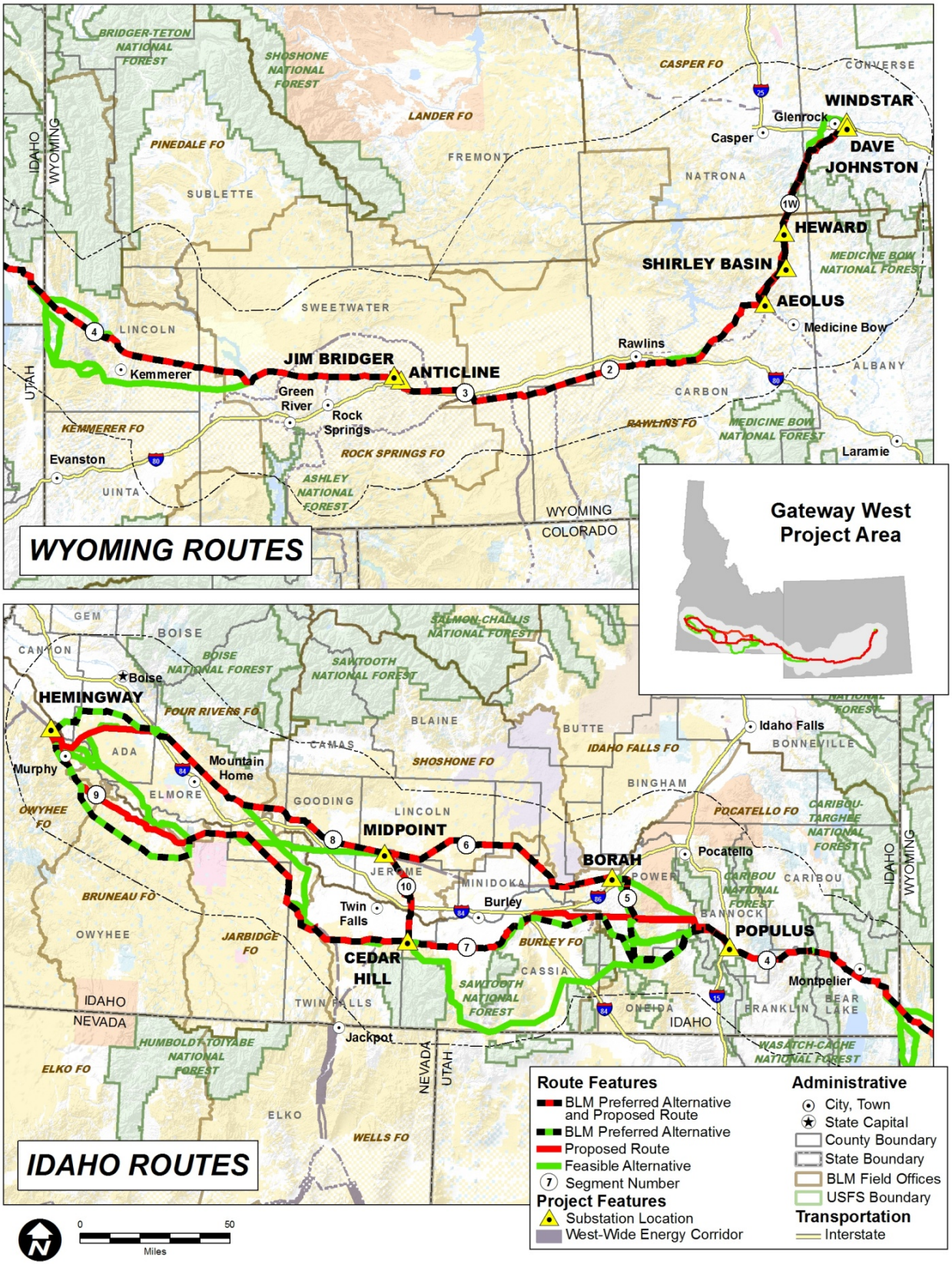

Figure ES-1. Project Overview

more southerly route through the proposed Cedar Hill Substation near Murtaugh, Idaho, to the Hemingway Substation. Segment 10 would provide an interconnection between the Cedar Hill and Midpoint Substations and also provide an interconnection between the more northerly and more southerly routes. The Proponents have proposed this split because of the need to serve loads along the way and also to increase reliability.

The Proponents' overall Project approach was to use the West-wide Energy (WWE) corridor and other designated ROW corridors and existing utility corridors, if feasible and unless there was a compelling reason to avoid them. In many cases, the proposed routing closely follows the WWE corridor; however, the WWE corridor is only designated across federally managed lands, and about half the land along the route is privately owned. In some locations, the WWE corridor is too narrow to allow for the required separation (generally 1,500 feet) from existing transmission lines already in the corridor.

The transmission line segments would cross federal, state, and private lands. Table ES-1 summarizes miles crossed by ownership for the Proposed Action. The ROW width requested for the transmission line ranges from 125 feet for the single-circuit 230-kV segment to 250 feet for single-circuit 500-kV segments. The 345-kV segment would have a 150-foot ROW.

Table ES-1. Proposed Action Summary of Miles and Percent Crossed by Ownership

Segment	Length (Miles)						Percent of Total				
	BLM	NF[1/]	State	Private	Other [2]	Total	BLM	NF	State	Private	Other
Segment 1W(a) – Windstar to Aeolus	27.0	2.3	17.5	27.0	0.1	**73.8**	36.6	3.1	23.6	36.5	0.1
Segment 1W(c) – Dave Johnston to Aeolus	24.7	2.3	16.1	30.4	0.1	**73.6**	33.6	3.2	21.8	41.3	0.1
Segment 2 – Aeolus to Creston	37.6	–	4.7	49.5	0.1	**91.9**	41.0	–	5.1	53.9	0.1
Segment 3 – Creston to Anticline	22.5	–	1.0	22.5	–	**45.9**	48.9	–	2.2	48.9	–
Segment 3A— Anticline to Jim Bridger 345-kV	3.2			1.9		**5.1**	63.0			37.0	
Segment 4 – Anticline to Populus	72.0	9.1	12.5	100.7	3.3	**197.6**	36.4	4.6	6.3	50.9	1.7
Segment 5 – Populus to Borah	13.2	–	3.6	38.9	0.1	**55.7**	23.7	–	6.5	69.8	.1
Segment 6 – Borah to Midpoint[3/]	–	–		0.5	–	**0.5**		–		100.0	–
Segment 7 – Populus to Cedar Hill	28.3	–	4.3	85.6	–	**118.2**	24.0	–	3.6	72.4	–
Segment 8 – Midpoint to Hemingway	87.1	–	9.3	31.5	3.6	**131.5**	66.2	–	7.1	24.0	2.7
Segment 9 – Cedar Hill to Hemingway	129.2	–	4.6	28.4	–	**162.2**	79.7	–	2.8	17.5	–
Segment 10 – Mid-point to Cedar Hill	16.2	–	–	18.0	0.1	**34.4**	47.2	–	–	52.5	0.3
Total Project[4/]	**461.1**	**13.7**	**73.4**	**434.9**	**7.3**	**990.5**	**46.6**	**1.4**	**7.3**	**43.9**	**0.7**

Percentages provided in other chapters of the EIS may vary slightly due to differences in the analysis area used for various resources.
1/ Totals reflect mileage crossed on National Forest System (NFS) land.
2/ Other includes Bureau of Reclamation, U.S. Fish and Wildlife Service, etc.
3/ Segment 6 does not include ground-disturbing activity except in association with the expanded Borah and Midpoint Substations.
4/ Totals may not equal 100 percent due to rounding.
BLM – Bureau of Land Management; NF – National Forest

Details of construction and operations, common to all alternatives, are summarized in Section 2.1 of the Final EIS and detailed in Appendix B. Environmental protection measures (EPMs), proposed by the Proponents, are provided in Table 2.7-1 and Appendix B and are considered part of the Project description for the proposed and alternative routes.

PROPOSED BLM LAND USE PLAN AMENDMENTS

Table ES-2 lists the 18 proposed BLM Resource Management Plan and Management Framework Plan Amendments associated with the BLM Preferred Alternative for the Project.

Table ES-2. Proposed BLM Plan Amendments

Plan	No.	Routes	Proposed Amendment
Green River Resource Management Plan (RMP)	1	Preferred 4	Allow the construction and placement of the Gateway West Transmission Line on public land classified as VRM Class II in section 10, T. 20 N., R. 109 W.
Kemmerer RMP	2	Preferred 4	Allow the Gateway West Project to cross the Sublette NHT in section 11, T. 23 N, R. 118 W. Place towers as far from the trail as feasible.
	3	Preferred 4	Allow the Gateway West Project without changing the VRM class for areas north and east of highway 30/State Highway 89 affected by the route.
	4	Preferred 4	Allow the Gateway West Project where it would otherwise be in conflict with the historic viewshed preservation management actions. Micrositing and mitigation measures will be implemented to minimize visual impacts to affected historic sites and trail segments.
	5	Preferred 4	Allow the Gateway West Project where it would otherwise be in conflict with the management objectives of Decision 7014. Micrositing and mitigation measures will be required to minimize impact to affected areas and resources.
Twin Falls Management Framework Plan (MFP)	6	Preferred 9	Allow the Gateway West Transmission Line ROW outside of existing corridors.
	7	Preferred 9	Allow the Gateway West Project without changing the VRM classification in the VRM class II designated area near Salmon Falls Creek. Allow the Gateway West Transmission Line Project to cross Salmon Falls canyon through the ACEC. Tower location and crossing alignment will be sited to miminize visual intrusion.
Jarbidge RMP	8	Preferred 8	The current Lands decision is amended to reclassify the area identified as restricted in Section 35, T. 04 S., R. 09 E. to 'avoidance' in order to accommodate a 500-kV powerline right of way.
	9	Preferred 9	Allow the Gateway West Transmission Line Project to cross the canyon and Special Designation Areas (including the Salmon Falls Creek ACEC, SRMA, and ONA). Tower locations and crossing alignment will be sited to minimize visual intrusion.
	10	Preferred 9	Allow the Gateway West Transmission Line Project to cross VRM II classified land across Salmon Falls Creek and from Lilly Grade, northwest, paralleling the canyon for approximately 4 miles.

Table ES-2. Proposed BLM Plan Amendments (continued)

Plan	No.	Routes	Proposed Amendment
Jarbidge RMP (cont.)	11	Preferred 8	The existing ruts of the main route, north and south alternate routes of the Oregon Trail and Kelton Road will be protected by not allowing incompatible uses to occur within ½ mile corridor through which these routes pass, except where the Gateway West Transmission Line Project crosses the trail, where no surface disturbance will be allowed within 330 feet of the trail.
	12	Preferred 8	The VRM Management decision and Map 9 are amended to accommodate a major powerline R/W. Approximately 5,200 acres of VRM Class I associated with the Oregon Trail is reclassified to Class III.
	13	Preferred 9	The area within the WWE Corridor will be reclassified as VRM III.
Morley Nelson Snake River Birds of Prey National Conservation Area RMP	14	Preferred 9	Restrict major utility developments to the two utility corridors identified (Lands Map 3[1/]) and allow an additional major powerline ROW.
Bennett Hills/ Timmer-man Hills MFP	15	Preferred 8	The VRM Class II area within 3,000 feet to the north of the existing transmission line ROW will be reclassified to VRM III (including the existing ROW).
	16	Preferred 8	Prohibit all land disturbing developments within 330 feet of the Oregon Trail and manage archaeological sites as required by Section 106 of the National Historic Preservation Act.
Kuna MFP[2/]	17	Preferred 8	L-4.1– Confine major new utility R/Ws (i.e., 500 kV or larger or 24-inch pipeline) to existing corridors as shown on Overlay L-4. The R/Ws will be subject to reasonable stipulations to protect other resource uses. Amend Overlay L-4 to add a major transmission line (500 kV) right of way.
	18	Preferred 8	Allow one transmission line crossing with micrositing required to minimize presence in the restricted area such that the transmission line will not affect the railroad's status as a Historic Place.

1/ Segment 8 uses the designated corridor in Township 3 South, Range 7 East east of Mountain Home, Idaho. Segment 9 uses the designated corridor in Township 3 South, Range 1 and 2 West between Oreana and Murphy, Idaho.
2/ Additional alternatives would cross the area managed under the Kuna MFP; however, these are addressed under the SRBOP RMP, which replaces the Kuna MFP in the NCA.
ACEC – area of critical environmental concern; NHT – National Historic Trail; ONA – Outstanding Natural Area; ROW – right-of-way (also R/W – right-of-way in some plans); SRMA – Special Recreation Management Area; VRM – Visual Resource Management; WWE – West-wide Energy (also WWEC – West-wide Energy Corridor in some plans)

Additional amendments would be required for the Medicine Bow and Caribou National Forest Land and Resource Management Plans (Forest Plans) if the Preferred Routes that would cross these Forests are approved by the Forest Service.

ROUTE ACTION ALTERNATIVES

Alternatives were developed within each Project segment rather than from the beginning (Windstar Substation) and end points (Hemingway Substation) of the entire project. Project segments are defined by substations since these are the logical connection points of the Gateway West Project with other transmission and distribution lines.

Several alternatives were considered but eliminated from detailed study because it became clear that they provided no environmental benefit over the Proposed Action or one of the other alternatives considered in detail; they were not feasible for environmental, physical, or economic reasons; or they did not reasonably meet the Proponents' Purpose and Need.

Alternatives considered in detail are compared with the Proposed Action based on the same beginning and ending points so all the Action Alternatives can be compared equally. Not all of the Proposed Action segments had feasible alternatives, and some segments only had alternatives proposed for part of their length. Alternatives considered in detail are shown on Figure A-1 in Appendix A; alternatives eliminated from detailed study are shown in Appendix O. The Proposed Route and alternatives considered in detail are discussed in detail for each resource in Chapter 3 of the Final EIS.

Alternative routes were analyzed for route segments 1W(a), 2, 4, 5, 7, 8, and 9. No alternatives were identified for Segment 6 because it is a rebuild of an existing line. No feasible alternatives were identified for Segments 3 and 10. Segment 3 generally follows Interstate 80 and existing transmission lines and Segment 10 follows a WWE corridor for all but 2.3 miles of its 34.4-mile length. Segments with feasible alternatives are discussed below.

Preferred Alternatives

Figures ES-2 and ES-3 show the BLM's Preferred Routes for the Project and Table ES-3 lists the Preferred Route for each segment. Where applicable, the table also shows the preferred route identified by another federal agency or a county or state government. The BLM Preferred Routes only apply to federal lands. While the BLM's Preferred Routes could affect private lands adjacent to or between federal areas, decisions on siting and construction requirements for non-federal lands are under the authority of state and local governments (see Table 1.4-1 for permits that would be required and Section 3.17.1.3 for a description of the regulatory requirements).

Table ES-3. BLM Preferred Routes by Segment

Segment	Preferred Route	Agency
Segment 1W[1/]	Proposed 1W(a) and 1W(c) Routes (Figure A-2)	BLM and State of Wyoming
Segment 2	Proposed Route (Figure A-3)	BLM and State of Wyoming
Segment 3	Proposed Route, including 3A (Figure A-4)	BLM and State of Wyoming
Segment 4	Proposed Route (Figures A-5 and A-6) except within the Caribou-Targhee National Forest (NF) (see below)	BLM, State of Wyoming, and Lincoln County
	Proposed Route within the NF incorporating Alternative 4G (Figure A-6)	Forest Service
Segment 5	Proposed Route incorporating Alternatives 5B and 5E[1/] (Figure A-7)	BLM
	Proposed Route incorporating Alternatives 5C and 5E (Figure A-7)	Power County
Segment 6	The proposal to upgrade the line voltage from 345 kV to 500 kV (Figure A-8)	BLM

Table ES-3. BLM Preferred Routes by Segment (continued)

Segment	Preferred Route	Agency
Segment 7	Proposed Route incorporating Alternatives 7B, 7C, 7D, and 7G (Figure A-9). The Proposed Route in the East Hills and Alternative 7G will be microsited to avoid Preliminary Priority Sage-grouse Habitat (PPH).	BLM
	Alternative 7K (Figure A-9)	Power and Cassia Counties
Segment 8	Proposed Route incorporating Alternative 8B (Figure A-10)	BLM and Idaho Army National Guard
Segment 9	Revised Proposed Route incorporating Alternative 9E, revised to avoid PPH and Murphy (Figure A-11)	BLM
	Alternative 9D (Figure A-11)	Owyhee County
Segment 10	Proposed Route (Figure A-12)	BLM

1/ The portion of the Segment 1W(a) and 1W(c) Proposed Route on the Medicine Bow-Routt National Forests is the Forest Service's preferred route for Segment 1W.
2/ Assumes that Western Electricity Coordinating Council reliability issues associated with 5E are resolved.

Comparison of Alternatives

Alternative 1W(a)-B Compared to the Preferred/Proposed Route

Segment 1W of the Preferred/Proposed Route was developed to follow an existing utility corridor for most of its length. Among the key factors considered in routing this segment were wildlife resources (sage-grouse, big game winter range, and raptors), cultural resources, historic trails, and wetlands.

Alternative 1W(a)-B was the original Proposed Route. The Proposed Route for 1W(a) was revised based on comments on the Draft EIS from the City of Glenrock and local residents. The original route was retained as an alternative. The revised Proposed Route for this segment parallels an existing transmission line. Alternative 1W(a)-B would not parallel an existing transmission line corridor, and does not cross BLM-managed lands or NFS lands. Alternative 1W(a)-B would be longer than the comparison portion of the Preferred/ Proposed Route (20.9 miles vs. 16.5) and permanently disturb a larger area (44 acres vs. 27 acres) and, therefore, would result in greater overall disturbance, especially to private parcels in and near Glenrock. It would result in up to three transmission lines on some private parcels. Alternative 1W(a)-B would not be consistent with the state's Sage-Grouse Core Area strategy identified in the Wyoming Governor's Executive Order (EO) 2011-5. Alternative 1W(a)-B would permanently impact twice the amount of sage grouse habitat as compared to the Preferred/Proposed Route (22 acres vs. 11). This alternative would impact less than one acre of wetlands whereas the comparison portion of the Proposed Route would cross 4.3 acres. Alternative 1W(a)-B would potentially affect slightly more cultural resource sites (36 vs. 34) than the comparison portion of the Preferred/Proposed Route.

Alternatives 2A and 2B Compared to the Preferred/Proposed Route

Segment 2 of the Preferred/Proposed Route was developed to follow the WWE corridor and existing BLM-designated ROW corridor where feasible. The route was revised to incorporate Alternative 2C (included in the Draft EIS) in order to be consistent with the state's sage-grouse corridor. Among the key factors considered in routing this segment were visual resources visible from the Fort Fred Steele State Historic Site and nearby residences, sage-grouse and big game winter range, mining leases, and Special

Figure ES-2. BLM Preferred Alternative – Wyoming

Figure ES-3. BLM Preferred Alternative – Idaho

Recreation Management Areas (SRMAs). The current Preferred/Proposed Route would have the least impact on the Fort Fred Steele State Historic Site and residences among the Route Alternatives.

Alternative 2A was developed to maximize the use of the WWE corridor and existing BLM-designated ROW corridor. This alternative is similar in length to the comparison portion of the Preferred/Proposed Route; however, visual impacts to visitors to the Fort Fred Steele State Historic Site would be greater compared to the other alternative and the comparison portion. Alternative 2A would disturb more sage-grouse habitat than the comparison portion of the Proposed Route (33 acres vs. 24) and would impact more acres of mineral leases (106 acres vs. 84). Alternative 2A would impact more big game winter range than the comparison portion of the Preferred/Proposed Route (40 acres vs. 8). Alternative 2A would also impact more acres of wetlands than the comparison portion of the Preferred/Proposed Route (17.2 acres vs. 3.7). Both Alternative 2A and the comparison portion of the Preferred/Proposed Route would cross the Continental Divide SRMA; in addition, the comparison portion of the Preferred/Proposed Route would cross the North Platte River SRMA.

Alternative 2B was originally considered by the Proponents as the Preferred/Proposed Route. Due to local landowner concerns and visual impacts to visitors to the Fort Fred Steele State Historic Site located on the North Platte River as well as several eagle nests in the area, the Proponents relocated the Proposed Route several miles to the south and BLM left the original Proposed Route as an alternative to be analyzed in detail. This alternative would affect a similar amount of sage-grouse habitat (17 acres vs. 15) and would affect slightly less big game winter range than the comparison portion of the Preferred/Proposed Route (17 acres vs. 21). Alternative 2B would affect fewer acres of mineral leases (55 acres vs. 82). Alternative 2B would, however, affect more acres of wetland than the comparison portion of the Preferred/Proposed Route (20.8 acres vs. 3.7). Alternative 2B would cross the Continental Divide SRMA, whereas the corresponding portion of the Preferred/Proposed Route would cross both the Continental Divide SRMA and the North Platte River SRMA. Alternative 2B would be less visible from the Fort Fred Steele State Historic Site than the comparison portion of the Preferred/Proposed Route.

Alternatives 4B, 4C, 4D, 4E, and 4F Compared to the BLM Preferred/Proposed Route

Segment 4 of the BLM Preferred/Proposed Route has been revised to parallel the existing east-west 345-kV ROW with three existing lines originating at the Jim Bridger Power Plant and heading west/northwest into southeastern Idaho. The revised route would be consistent with EO 2011-5 and is recommended by the Office of the Governor of Wyoming. Concerns regarding cultural resources, historic trails, and visual resources resulted in the identification of five alternative routes.

Alternatives 4B through 4F would not be consistent with EO 2011-5, whereas the comparison portion of the BLM Preferred/Proposed Route would be consistent and was recommended by the Office of the Governor of Wyoming. Alternative 4F would affect the least sage-grouse habitat (176 acres, slightly less than the 179 acres for the comparison portion of the Proposed Route) and 4B and 4D would affect the most (232 and 234 acres, respectively).The comparison portion of the BLM Preferred/Proposed

Route and all of the alternatives would have similar permanent impacts to designated big game winter range; the alternatives would, however, come within one mile of fewer raptor nests (22 to 32 vs. 41). All of the alternatives would also impact less wetland area than the comparison portion of the Proposed Route (46.9 to 58.8 acres vs. 71.6).

Alternatives 4B through 4F would cross, or be in proximity to, more land uses where visual impacts to recreationally and culturally sensitive areas are possible, such as the Cokeville NWR (Alternatives 4B through 4E), the Bear River Special Management Area (Alternatives 4B through 4E), the Raymond Mountain Special Management Area (Alternative 4F), and Fossil Butte National Monument (Alternatives 4B and 4C); however, except for Alternative 4F, these alternatives would cross less Visual Resource Management (VRM) Class II land than the comparison portion of the Proposed Route. Overall, visual impacts would be least under Alternative 4D. Alternatives 4D, 4E, and 4F would have the fewest historic cultural resource impacts; Alternative 4B would affect the most cultural resources.

Alternative 4G Compared to the Proposed Route

Alternative 4G was identified by the Forest Service following soil surveys in the fall of 2012. The key factors considered for this route were steep slopes and goshawk habitat. Alternative 4G would be 2.6 miles long compared to 2.3 miles for the comparison portion of the Proposed Route. Although Alternative 4G would avoid unstable soils, its route would result in additional impacts to goshawk territories on the Caribou-Targhee National Forest. The Proposed Route would impact foraging areas associated with 6 known nests; however, Alternative 4G would impact foraging areas as well as nesting areas and post-fledging family areas associated with known goshawk nests. Construction of a new access road associated with Alternative 4G would impact 3 acres of coniferous forest and 2 acres of grass/shrubland habitat within the nesting area of nest 309 (this would not met the standard in the Caribou Forest Plan, which requires that no clearing be conducted within goshawk nesting areas). Alternative 4G would also impact post-fledging family areas, and foraging areas associated with known goshawk nests. Alternative 4G would impact fewer acres of sage-grouse habitat than the comparison portion of the Proposed Route (9 acres vs. 12) and a similar amount of wetlands (0.1 acres). Alternative 4G is the Forest Service's Preferred Route.

Alternatives 5A, 5B, 5C, 5D, and 5E Compared to the Preferred Route and Proposed Route

The BLM's Preferred Route in Segment 5 consists of the Proposed Route incorporating Alternatives 5B and 5E. Segment 5 alternatives were identified through scoping and in discussions with various stakeholders. Among the key factors considered in routing this segment were visual resources near the Deep Creek Mountains, agricultural lands in the Arbon and Rockland Valleys, crossing the Fort Hall Indian Reservation, residential developments, the Arbon Elementary School, and the East Fork Rock Creek Recreation Area, as well as potential disturbance to nesting bald eagles along the Snake River.

Alternatives 5A and 5B were developed to reduce visual impacts and limit road construction on forested BLM-managed lands in the Deep Creek Mountains. Unlike the Proposed Route, both alternatives would avoid the recreation area. Alternatives 5A and 5B would come within one mile of three and two raptor nests, respectively, whereas the

comparison portion of the Proposed Route would only cross one raptor nest buffer. Both Alternatives 5A and 5B would impact more sage grouse habitat (38 and 44 acres) as compared to the Proposed Route (26 acres). Alternative 5A would come within 1,000 feet of four residences, compared to five for Alternative 5B and one for the comparison portion of the Proposed Route. The Proposed Route would cross within 1,000 feet of an elementary school, while neither 5A nor 5B would be within 1,000 feet of a school.

Alternative 5C would parallel an existing transmission line through the Fort Hall Indian Reservation, rather than create a new corridor. In doing so, the length and overall impacts would be less under Alternative 5C than the comparison portion of the Proposed Route. However, Alternative 5C would result in additional visual and cultural impacts to the Fort Hall Indian Reservation. Alternative 5C is the preferred route of Power County. Alternative 5C does not cross within 1,000 feet of a residence or school, while the comparison portion of the Proposed Route crosses within 1,000 feet of one residence. Alternative 5C is the preferred route of Power County; however, the Fort Hall Business Council has formally denied this route.

Alternative 5D was the Proponents' original Proposed Route, but issues were raised by local landowners about impacts to agricultural land. The Proponents agreed to move their Proposed Route several miles to the east and keep the original Proposed Route as an alternative to be analyzed in detail (Alternative 5D). Alternative 5D would affect more dryland farming than would be impacted by the comparison portion of the Proposed Route, but slightly less irrigated agricultural land. Additionally, Alternative 5D would be more visible from residences in the Rockland Valley compared to the Proposed Route, which takes better advantage of topography to minimize visual impacts from the valley. However, it would cross within 1,000 feet of an elementary school (the only alternative to do so) and 24 residences, compared to 10 for the comparison portion of the Proposed Route.

Alternative 5E was developed as an alternative approach to the crossing of the Snake River as requested by Power County. However, it would not meet the separation criteria (minimum of 1,500 feet) from existing high-voltage transmission lines the Proponents established as part of the Project's purpose and need. Because it would be adjacent to an existing line, Alternative 5E would have fewer visual effects than the comparison portion of the Proposed Route, would also avoid potential disturbance to nesting raptors, and would affect less agricultural land. It would cross within 1,000 feet of 2 residences compared to 10 for the comparison portion of the Proposed Route.

Alternatives 7A, 7B, 7C, 7D, 7E, 7F, 7G, and 7K Compared to the Preferred Route and Proposed Route

The BLM's Preferred Route in Segment 7 consists of the Proposed Route incorporating Alternatives 7B, 7C, 7D, and 7G. Key factors considered in routing the first third of Segment 7 were similar to those discussed under Segment 5, because the segments parallel one another to the point west of the Deep Creek Mountains where they diverge. Additional factors considered in routing this segment were impacts to agricultural operations, rural residences, a local hang gliding area, visual resources, National Historic Trails (NHTs), cultural resources, big game winter range, sage-grouse key habitat, designated roadless areas, and local planning goals.

Alternatives 7A and 7B would parallel Alternatives 5A and 5B to the point where they exit the Deep Creek Mountains; therefore, their purpose for development and issues were discussed above. Both alternatives would affect less big game winter range than the comparison portion of the Proposed Route (20 and 22 acres, respectively, vs. 32) but more sage-grouse habitat (43 and 50 acres, respectively, vs. 29 acres). Alternative 7B would impact more agricultural land (23 acres vs. 12) than the comparison portion, Alternative 7A approximately the same; both alternatives would cross within 1,000 feet of three residences, compared to one for the comparison portion of the Proposed Route.

Alternative 7C was developed to reduce impacts to sage-grouse (8 acres), whereas the comparison portion of the Proposed Route would impact 14 acres of habitat. Alternative 7C would impact more big game winter range (9 acres vs. 6). It would affect less agricultural land than the comparison portion of the Proposed Route (6 acres vs. 11). This alternative would be farther from the Parting of the Ways location on the NHT system. This alternative would cross within 1,000 feet of two residences, compared to none for the comparison portion of the Proposed Route.

Alternative 7D was developed to avoid BLM-managed lands that have an easement restriction that does not allow both transmission line segments to cross the Oregon and California NHTs. Alternative 7D would impact the same amount of sage-grouse habitat as the comparison portion of the Proposed Route (5 acres) and would impact the same amount of big game winter range (4 acres). Neither Alternative 7D nor the comparison portion of the Proposed Route would cross within 1,000 feet of a residence and both impact a similar amount of agricultural land (2 acres).

Alternative 7E was developed to avoid two sage-grouse leks, sage-grouse habitat in the Water Canyon area, and a local recreational area used as a hang glider launch site. Alternative 7E would impact slightly more sage-grouse habitat than the comparison portion of the Proposed Route (7 acres vs. 4). Alternative 7E would cross within 1,000 feet of three residences, compared to six residences for the comparison portion of the Proposed Route. Both Alternative 7E and the comparison portion of the Proposed Route would impact a trace amount of agricultural land.

Alternative 7F was developed to avoid visual impacts to residential development in the Delco area. This alternative would cross less private land than the comparison portion of the Proposed Route; however, it would cross a scenic byway to the town of Albion. Alternative 7F would impact more big game winter range (22 acres vs. 18) and more sage-grouse habitat (15 acres vs. 13) than the comparison portion of the Proposed Route, although it would not avoid the Water Canyon area. This alternative would impact slightly less agricultural land (5 acres vs. 7) than the comparison portion of the Proposed Route. It would not cross within 1,000 feet of a residence whereas the comparison portion of the Proposed Route would cross within 1,000 feet of six.

Alternative 7G was developed to minimize the extent to which the transmission line would be within a BLM motorized vehicle winter closure area. This vehicle closure area is designated for wintering big game and sage-grouse. Alternative 7G would cross along the northern border of the vehicle closure area, whereas the comparison portion of the Proposed Route would run farther within. Despite this difference, Alternative 7G

would disturb the same amount of big game winter range (4 acres), though less sage-grouse habitat (less than 1 acre vs. 3) as the comparison portion of the Proposed Route. Alternative 7G would also disturb the same amount of agricultural land than the comparison portion of the Proposed Route (2 acres). Both Alternative 7G and the comparison portion of the Proposed Route would cross within 1,000 feet of one residence and affect a planned runway at the Dry Creek Sky Ranch.

Through a lengthy process of collaboration with the landowners; local, state, and federal agencies; and the Proponents, Alternative 7K was developed to avoid proximity to agricultural facilities (e.g., dairies and agricultural land). Alternative 7K would cross less private land than the comparison portion of the Proposed Route; however, it would be longer, impact more sage-grouse habitat, and may impact visitors to the City of Rocks Natural Reserve and sensitive viewing areas such as Granite Pass, Sparks Basin, and the California NHT-South Lake Alternate. Alternative 7K was presented and supported by local landowners over the Proposed Route; however it is not supported by the Proponents due to the higher cost. This alternative would impact more big game winter habitat (129 acres vs. 89) and more sage-grouse habitat (259 acres vs. 112) than the comparison portion of the Proposed Route. It would cross less farmland (35 acres vs. 77) and pass within 1,000 feet of fewer residences (5 vs. 20) than the comparison portion of the Proposed Route.

Alternatives 8A, 8B, 8C, 8D, and 8E Compared to the Preferred Route and Proposed Route

The BLM's Preferred Route in Segment 8 consists of the Proposed Route incorporating Alternative 8B. Key factors considered in routing this segment included using the WWE corridor where possible, conflicts with agricultural lands, residential development, visual resources, the Morley Nelson Snake River Birds of Prey National Conservation Area (SRBOP), a National Register Historic District, and the IDANG Orchard Combat Training Center (OCTC).

Alternative 8A was developed to maximize use of the WWE corridor. This alternative would cross 6.8 miles of VRM Class I or II land whereas the comparison portion of the Proposed Route would cross 9.8 miles. Alternative 8A would be close to the communities of Hagerman and Glenns Ferry, the Hagerman Fossil Beds, and the Billingsley Creek Wildlife Management Area. This alternative would potentially impact more historic cultural resources than its comparison portion of the Proposed Route (117 vs. 48). It would cross within 1,000 feet of 46 residences compared to 13 for the comparison portion of the Proposed Route. It would affect the same amount of agricultural land (14 acres).

Alternative 8B was originally considered for the Proposed Route to avoid the SRBOP and the OCTC. The Proposed Route was revised due to opposition from the cities of Kuna and Melba, Idaho and the original route was retained as an alternative. Alternative 8B is in close proximity to several residential areas, crossing within 1,000 feet of 60 residences compared to 12 for the comparison portion of the Proposed Route, resulting in greater visual effects on these communities. This alternative would cross within the Kuna city boundary and may affect future development patterns. This alternative would cross private land along the northern edge of the SRBOP. Alternative 8B would affect more agricultural land (9 acres vs. less than 1) than the comparison

portion of the Proposed Route. Unlike the Proposed Route, it would not cross the National Historic District.

Alternative 8C was also originally considered as part of the Proposed Route. However, it would have an adverse visual impact on residential areas. Alternative 8C would cross within 1,000 feet of one residence and it would be close to a planned expansion of the planned Mayfield Springs community. The comparison portion of the Proposed Route would not be within 1,000 feet of any residences and would not affect the planned subdivision. Alternative 8C would avoid crossing the SRBOP. Neither Alternative 8C nor the comparison portion of the Proposed Route would permanently impact agricultural land.

Alternative 8D was developed to avoid the Alpha Maneuver Sector of the OCTC (but not the Bravo Sector). The IDANG has commented that it would prefer a route that completely avoids the training area. Other environmental impacts would be similar to the comparison portion of the Proposed Route, except that Alternative 8D would impact more land with highly erodible soils (174 acres vs. 47). Transmission structures near the training area would include special lights to provide for pilot safety. Like the Proposed Route, Alternative 8D would cross the SRBOP, which would not meet the intent of the enabling legislation for the SRBOP.

Alternative 8E was developed to avoid a non-motorized area in a National Register Historic District. This route would cross the SRBOP, which would not meet the intent of the enabling legislation for the NCA. It would cross within a mile of more raptor nests (492 vs. 84) than the comparison portion of the Proposed Route. Neither this alternative nor the comparison portion of the Proposed Route would cross within 1,000 feet of a residence. However, 8E would follow a portion of Alternative 9D. If that route is selected, Alternative 8E could not be used. Conversely, if Alternative 8E is selected, the Alternative 9D route could not be used.

Alternatives 9A, 9B, 9C, 9D, 9E, 9F, 9G and 9H Compared to the Preferred Route and Proposed Route

The BLM's Preferred Route in Segment 9 consists of the Proposed Route incorporating Alternative 9E. Key factors considered in routing this segment were agricultural and residential development in Owyhee County, visual resources, the Jarbidge Military Operations Area, Saylor Creek Air Force Range, Balanced Rock County Park, Bruneau Dunes County Park, the Cove Non-motorized Area, and Salmon Falls Creek Wild and Scenic River (WSR).

Alternative 9A was the Proponents' original Proposed Route. The Proponents worked with local citizens, landowners, and the BLM to move a 7.8-mile portion of the Proposed Route about a mile to the south to avoid impacts to irrigated agriculture and dairies, leaving the original Proposed Route as an alternative to be analyzed in detail. Alternative 9A would cross within 1,000 feet of two residences, whereas the comparison portion of the Proposed Route would not cross within 1,000 feet of a residence. Alternative 9A would permanently impact one acre of agriculture land compared to none for the comparison portion of the Proposed Route.

Alternative 9B was developed to maximize use of the WWE corridor and to parallel existing utility corridors; however, Alternative 9B would have greater visual impacts due

to its proximity to private lands, historic trails, and VRM Class I lands. Alternative 9B would be within 1,000 feet of seven residences, compared to none for the comparison portion of the Proposed Route. It would permanently disturb more agricultural land than the comparison portion of the Proposed Route (12 acres vs. none). Alternative 9B would impact less sage-grouse habitat than the comparison portion of the Proposed Route (38 acres vs. 84). Alternative 9B would avoid crossing both the WSR and the eligible WSR portions of Salmon Falls Creek; the comparison portion of the Proposed Route would cross the eligible Recreation portion of the WSR (adjacent to a smaller distribution line and road) but not the wilderness study area. Both Alternative 9B and the comparison portion of the Proposed Route would avoid crossing Balanced Rock County Park.

Alternative 9C would parallel existing transmission lines in corridors for a greater extent than the comparison portion of the Proposed Route (9.2 miles vs. 0.8) but would have a greater visual impact on Balanced Rock County Park due to its proximity. Alternative 9C would be within 1,000 feet of five residences, compared to none for the comparison portion of the Proposed Route. This alternative would permanently impact more agricultural lands than the comparison portion of the Proposed Route (4 acres vs. 0). Alternative 9C would not cross the eligible WSR portion of Salmon Falls Creek whereas the comparison portion of the Proposed Route would cross the eligible Recreation portion.

Alternatives 9D and 9E were developed as a result of collaboration with citizens, landowners, the BLM, the Owyhee County Task Force, and the Proponents to avoid private lands and maximize the use of public lands in Owyhee County. Both alternatives would deviate from the WWE corridor, which would be followed by the comparison portion of the Proposed Route; however, both alternatives would cross less private land (3.3 vs. 18.2 miles). Alternatives 9D and 9E would not cross within 1,000 feet of a residence, whereas the comparison portion of the Proposed Route would be within 1,000 feet of nine residences. Both alternatives would impact less agricultural lands (2 and 1 acres, respectively, vs. 13 acres). Alternative 9D would cross more BLM-managed VRM Class I or II lands (11.1 miles vs. 0.2) than the comparison portion of the Proposed Route. Alternative 9D would be within the SRBOP for well over half of its length; constructing an additional transmission line across the SRBOP would not meet the intent of the enabling legislation for the SRBOP.

Alternatives 9F and 9G were proposed by the BLM to avoid the non-motorized portion of Swan Falls, avoiding both the Cove Non-motorized Area and the non-motorized portion of a National Register Historic District. Alternative 9F would cross the river twice, once near the C.J. Strike SRMA and again near the Swan Falls Dam. However, the route it would follow to avoid the non-motorized area in the historic district would be the same alignment that Alternative 8E would follow. If 8E were selected, Alternative 9F could not also be selected. Therefore, Alternative 9G was proposed by the BLM. It would avoid the non-motorized portion of the historic district but not the Cove Non-motorized Area. Alternative 9G follows the same route as Alternative 9D through the Cove area, then, where Alternative 9D/9G merge with Alternative 9F/9H, it follows the same route as 9H. It would cross the river approximately 3 miles south of the Alternative 9F crossing point. Alternative 9F would be within 1,000 feet of six

residences, compared to nine residences for the comparison portion of the Proposed Route, whereas Alternative 9G would not be within 1,000 feet of any residences. Impacts to agricultural land from Alternative 9G and 9F would be less than those for the comparison portion of the Proposed Route. Alternatives 9F and 9G would cross the SRBOP, which would not meet the intent of the enabling legislation for the SRBOP.

Alternative 9H is another route developed by the BLM that would avoid the Cove Non-motorized Area and the non-motorized portion of a National Register Historic District. Like Alternative 9G, this route was proposed in the event that Alternative 8E was selected and Alternative 9F could not be used. As with Alternative 9F, Alternative 9H would be within 1,000 feet of six residences, compared to nine for the comparison portion of the Proposed Route. Both Alternatives 9F and 9H would cross within 300 feet of two residences, less than the six residences along the comparison portion. Impacts to agricultural land would be similar to those for Alternative 9F. Alternative 9H would cross the SRBOP, which would not meet the intent of the enabling legislation for the SRBOP.

NO ACTION ALTERNATIVE

Under the No Action Alternative, the Project would not be constructed or operated. No Project-related impacts to physical or biological resources would occur. Impacts to these resources would continue as a result of natural events (such as fire, drought, and severe weather) and existing and future developments in the area. No direct Project-related impacts to socioeconomics would occur. However, as discussed in Chapter 1 of this Final EIS, the Gateway West Project is needed to supplement existing transmission lines and relieve current congestion, capacity, and reliability constraints in the existing electric transmission grid, and allow for the delivery of up to 1,500 MW of additional energy for the Proponents' larger service areas. The purpose and need of the proposed Project would not be met under the No Action Alternative and existing constraints coupled with projected increases in demand in the Proponents' service areas could result in insufficient supply to meet energy demand and an increase in the potential for supply outages. These potential impacts could have detrimental socioeconomic impacts, with negative impacts to existing businesses and economic activities, as well as businesses and economic activities that might otherwise consider locating in the affected service areas. If additional transmission lines are built to meet the need for additional power and/or electricity reliability, similar impacts to those described in Chapters 3 and 4 are likely to occur elsewhere.

EFFECTS

The following section summarizes the effects analysis documented in Chapter 3 of the Final EIS.

VISUAL RESOURCES

BLM-administered lands crossed by the Project were analyzed based on the VRM system. NFS lands crossed by the Project were analyzed based on the Scenery Management System (SMS) or the Visual Management System (VMS), depending on the National Forest crossed by the Project. Generally, the proposed transmission line would be in conformance with the visual classifications VRM III and VRM IV. On NFS

lands, the transmission line would be generally consistent with a Low or Very Low (SMS)/Modification and Maximum Modification (VMS). However, the transmission lines were considered to not be in conformance with VRM Classes I and II, and in one case Class III, on BLM-managed lands and with Very High, High, and Moderate (SMS) and Preservation, Retention, Partial Retention, and (in one case) Modification (VMS) on NFS lands. Management plan amendments would be needed where a proposed or alternative route does not conform with the visual management objectives on federal land. EPMs are proposed that would mitigate effects on visual resources.

CULTURAL RESOURCES

Construction of the transmission line and its ancillary facilities could directly impact existing cultural resources, such as prehistoric or historic archaeological sites, districts, buildings, historic trails, roads, and landscapes. In limited cases, the setting of a historic property could be indirectly impacted by the Project. Construction or other ground-disturbing activities could directly or indirectly impact previously undetected cultural resources, especially buried resources. Such impacts are likely to be adverse. Identification of new or previously recorded cultural resources and increased use of existing and new access roads may encourage unauthorized site access, artifact collection, and vandalism. Construction access roads are temporary features, however, and vegetation along those roads would be allowed to grow back once construction is completed. Over time, these roads would be indistinguishable from other two-track roads in the Analysis Area. The visual impacts of these roads on historic trails/roads are considered to be minimal, because their appearance and purpose are not incompatible with the historic features. Short-term impacts on the setting and feeling for NHTs and Traditional Cultural Properties may be introduced through the addition of structural elements to the landscape.

Proposed EPMs would avoid potential impacts to cultural resources if relocation of Project features is possible. However, if avoidance is not feasible, potential impacts would be mitigated through measures established through consultation under Section 106 of the National Historic Preservation Act.

SOCIOECONOMICS

Construction of the Proposed Action would generate economic activity in the form of Project-related expenditures on materials and supplies. The Project would also employ construction workers who would in turn be expected to spend much of their income within the Analysis Areas and increase output in the sectors that provide consumer goods and services. The proportion of workers likely to come from outside the Analysis Area would vary by Engineering, Procurement, and Construction (EPC) contract and over the construction period because the mix of labor categories or skills will vary. For the purposes of analysis, the Proponents estimate that during peak construction periods 20 percent of the workforce would be local (i.e., normally reside within commuting distance of the job sites), and would likely commute to and from their homes to work each day. The remaining 80 percent of the workforce would either temporarily relocate to the affected regions or commute longer distances from their permanent residences.

Many non-local workers would provide their own housing in the form of recreational vehicles (RVs) or pop-up trailers, with the remaining non-local workers expected to

require rental housing (apartments, houses, mobile homes) and motel or hotel rooms. Construction workers, particularly those working in less populated areas, would be expected to commute longer distances to the job site, with commutes of up to 90 minutes each way possible. Existing housing resources, rental housing, hotels and motels, and RV spaces tend to be concentrated in and around the larger communities in the Analysis Areas. Projected local and non-local employment totals are summarized for average weekly and peak employment by EPC Analysis Area in Table 3.4-25 of the Final EIS. Very few, if any, of the workers employed during the construction phase of the Project would be expected to permanently relocate to the area.

Construction would also increase demand for education, health care, and municipal services, as well as potentially increase demand for police and fire protection services. However, these impacts are also expected to be temporary and would not measurably affect the quality of services currently received by local communities and residents. Local construction expenditures for materials and supplies and spending by workers directly employed by the Project are expected to benefit local economies. Construction would also generate state and local tax revenues. The Project would benefit service industry occupations that are typically relatively low paid, particularly those associated with accommodation and food service. These benefits would result from increased demand and spending by construction workers temporarily relocating to the Project region, and would be short-term.

ENVIRONMENTAL JUSTICE

Data compiled by the U.S. Census at the block group level indicate the presence of minority and low income communities in the vicinity of the Proposed Route and Route Alternatives. Construction of the proposed Project is not, however, expected to have high and adverse human health or environmental effects on nearby communities. Adverse construction-related impacts would likely include increases in local traffic and noise, as well as dust, and could result in temporary delays at some highway crossings. Construction workers temporarily relocating to the Project area would increase demand for local housing resources. These impacts would be temporary and localized, and are not expected to be high. Potential impacts on public safety are discussed in Section 3.22 – Public Safety.

VEGETATION COMMUNITIES

The effects of a transmission line crossing shrub-steppe and other low vegetation would generally be minor, and would consist of the localized impacts from clearing and grading of lands, as well as the use, maintenance, or restoration of the Project components. For impact analysis, all construction sites are assumed to have total loss of existing vegetation, although some construction sites may not need to be graded, which would reduce the loss of vegetation.

In forested areas, clearing for construction of the transmission line would include clearing all vegetation from the construction work area for each transmission structure and cutting trees and tall shrubs out of the ROW to avoid damage or danger to the conductors. Ongoing ROW maintenance would include continuing to cut trees and tall shrubs along the ROW. The area within the ROW would no longer be available for growing and harvesting timber products.

INVASIVE PLANT SPECIES

Vegetation removal and soil disturbance during construction could create optimal conditions for the establishment of noxious weeds and invasive species. Noxious weeds and invasive species produce abundant seed, have few natural competitors, and once established spread quickly and overtake desirable plant communities. Vehicles and construction equipment traveling from weed-infested areas into weed-free areas could disperse noxious weed and invasive species seeds. If weed seeds are transported, this could result in the establishment of weeds in previously weed-free areas or expand the distribution or abundance of existing noxious weeds and invasive species populations. Additionally, activities such as excavation and transportation of borrow materials and topsoil, land clearing, and reclamation may contribute to the spread of noxious weeds and invasive species. Vegetation removal, soil disturbance, and the use of materials from outside sources associated with these activities encourage germination of weed seeds and spread of roots and seeds. Disturbed areas may be seeded by airborne seeds from plants in adjacent habitats, which may include seeds from noxious weeds or invasive species. After construction, noxious weeds and invasive species can persist or become established in disturbed and reclaimed areas and those that are present in the construction areas may spread into adjoining habitats.

EPMs would substantially reduce the potential for the spread of noxious weeds and invasive species that could result from construction of the Project.

WETLANDS

Construction of the Project would impact wetlands and riparian areas in a variety of ways, primarily as a result of the vegetation clearing. Removal of vegetation could alter various functions provided by these areas, including their ability to provide wildlife habitat, and trap sediment and nutrients. Soil disturbances and removal of vegetation within a wetland or riparian area could temporarily alter the area's ability to moderate food flow, control sediments, or facilitate surface water flow. Removal of vegetation could also increase water and soil temperatures, and alter the species composition within these areas.

Increased soil disturbances can lead to invasions by exotic plant species, which can alter the composition and function of wetlands and riparian areas. Blasting within or adjacent to a wetland could fracture the bedrock and alter the hydrology of a perched water table, thereby leading to drier conditions and impairment of revegetation efforts. Withdrawal of water for use during construction may have temporary effects on wetlands adjacent to streams, by reducing water input. Failure to restore disturbed areas to their preconstruction conditions (contours, hydrology, segregation, and restoration of topsoil) could impede the re-establishment of desirable wetland and riparian vegetation during revegetation efforts.

Although some Project-related disturbances would be temporary and confined to the construction phase, other impacts would continue through the operations phase, especially in areas where construction sites are located within forested wetlands or riparian areas. Construction impacts in forested wetlands and forested riparian areas would generally involve a conversion to a different wetland type (i.e., a change to shrub or herbaceous vegetation cover), rather than a loss of wetland acreage. Similar

changes would occur in riparian areas within the ROW. It is likely that recovery would be fairly rapid in herbaceous and shrub wetlands, and construction in these types is not likely to cause a conversion to a different type. Long-term impacts could include soil compaction from heavy equipment, or alteration of surface or subsurface water movement in wetlands and riparian areas from blasting effects.

In general, wetlands and riparian areas were avoided during selection of construction sites; however, some wetlands and riparian areas are intersected by the preliminary Project design. Impacts would be avoided and minimized during final design by rerouting Project components outside of wetlands, and limiting impacts to upland areas to the extent practical; however, there would likely be some locations where this would not be feasible (such as areas within the Bear River floodplain).

WILDLIFE AND FISH

Construction, operations, and decommissioning of the Project could have both direct and indirect impacts to wildlife species, including big game, small mammals, reptiles, amphibians, migratory birds and raptors, as well as fish species. Impacts could include habitat loss or fragmentation, direct mortality/injury, indirect disturbance, or alterations to predator/prey dynamics.

Most of the potential impacts to wildlife species would result from modifications or direct disturbances to their habitats as a result of the Project's construction. Shrublands are the most common habitat type found along the Project; however, grasslands, forest/woodlands, wetland/riparian areas, and waterbodies (e.g., streams and rivers) can also be found in some areas. Grasslands occur along the Project in both Wyoming and Idaho, but are most abundant along Segments 8, 9, and 10 within Idaho. Nearly all of the grasslands crossed by the Project are semi-natural plant communities, dominated by introduced grass species. Forest and woodlands are limited along the Project; the majority of the forest/woodlands crossed by the Project occur near Segments 1, 4, 5, and 7. Wetlands and riparian vegetation are present, but are not common in the general region of the Project; with most of the wetlands occurring along Segment 4 and riparian areas found along waterbodies. Most of the waterbodies along the Project in Wyoming are natural waterways; while in Idaho, waterbodies typically consist of stream diversions used to support an extensive irrigation system that facilitates agriculture in the Bear River and Snake River Valleys. EPMs and additional Agency requirements would be implemented in order to avoid or minimize Project related impacts to these wildlife habitats (see Table 2.7-1). Compensatory mitigation would be required for impacts that could not be avoided or minimized to wetlands (per the Section 404 and 401 permit requirements) and shrublands (in conjunction with greater sage-grouse mitigation).

Construction, operations, and decommissioning of the Project would be conducted in accordance with federal, state, and local requirements such as the Migratory Bird Treaty Act, the Bald and Golden Eagle Protection Act, Snake River Birds of Prey National Conservation Area Act, and agency required seasonal and temporal closure periods. In addition, EPMs would be conducted in order to avoid and minimize the risks of direct wildlife mortality/injury, indirect disturbances, or alterations to predator/prey dynamics.

SPECIAL STATUS SPECIES

Construction, operations, and decommissioning of the Project could result in impacts to special status species, including those listed under the federal Endangered Species Act (ESA), those proposed for federal listing as well as candidates under the ESA, BLM or Forest Service Sensitive species, Forest Service Management Indicator Species, and State Heritage Program plant species of concern. Potential impacts to these species would be similar to those discussed above for general vegetation and wildlife species; however, these special status species may be more sensitive to potential impacts due to their current status (i.e., the reasons for their listing as special status species). EPMs would be implemented in order to avoid or minimize Project-related impacts to these special status species. Additionally, compensatory mitigation has been required for certain species where substantial adverse impacts could not be completely avoided or minimized (e.g., the greater sage-grouse).

The Proponents have committed to purchasing enough water to cover the extent of estimated water withdrawals from the Colorado and Platte River system for which consultation has already occurred; however, because the Proponents cannot yet identify the exact location for sources or precise amount of water per location that they plan to purchase until these water source locations and amounts have been fully identified, current project estimates for water usage lead to a threat determination for this Project of *may affect, likely to adversely affect* for the Colorado and Platte River species, and a *may affect, not likely to adversely affect* determination for their designated critical habitat.

SOILS, GEOLOGIC HAZARDS, AND MINERALS

Project construction activities that would affect soils include clearing, grubbing, and grading along the ROW and at additional temporary workspaces; trenching; backfilling; excavating; and construction of permanent structures, such as transmission line structures, access and service roads, co-generation sites, and substations. The total Project construction disturbance area would comprise approximately 20,000 acres. Ground clearing during construction would increase the potential for erosion, as well as soil compaction. Removal of protective vegetation would expose soil to potential wind and water erosion. The Proposed Route would cross areas with soils that are highly susceptible to wind erosion. Reclamation would be necessary in disturbed soil areas. Appendix B presents the Framework Reclamation Plan that the Proponents would use for Project reclamation.

Landslides could occur in mountainous portions of the Project area. Landslides are often triggered by other natural events, including earthquakes, or precipitation sufficient to cause earth movements. Certain geologic formations such as the Green River Formation are known to be more susceptible to landslides than others. The greatest landslide risks are in Segment 4, where 45 percent of the routes cross areas of medium to high landslide risks. The route crosses areas where earth quakes may occur, especially in Segments 4, 5, and 7. Transmission lines and associated facilities could be negatively affected by geologic hazards, including earthquakes, landslides, subsidence, and blast vibrations in shallow bedrock.

Subsidence is the vertical sinking of earth, typically because of a natural or man-made void in underlying rock formations. There are no large areas of cavernous limestone or natural voids in the area crossed by the Proposed Route and Alternatives. Human-caused subsidence occurs in areas overlying extensive underground mine workings or in areas of aquifer drawdown or removal of other fluids, such as natural gas or crude oil. Because of their large extent, underground trona and coal mines are particularly susceptible to subsidence. Mineral extractions that could result in subsidence occur in Segments 1 through 4; the risk is highest in Segment 4.

PALEONTOLOGY

Direct effects due to construction include the possible damage to paleontological specimens and possible loss of associated data. On the other hand, construction activities can also provide opportunities to recover specimens and associated scientific information that might be otherwise lost. Indirect effects due to construction include the unauthorized collecting or destruction of paleontological specimens due to increased access. The two construction sources of greatest potential impact are the excavation and leveling of pads for the transmission structures and in the grading of access roads. The impacts from grading of access roads would be more amenable to mitigation than would the augering impacts. Monitoring can detect resources as they are uncovered, and grading can be halted or rerouted to permit resource recovery.

WATER RESOURCES

Most of the impacts to water quality would occur due to the crossing of waterbodies by new access roads; as transmission line crossings would only impact small isolated areas of vegetation (due to initial clearing and ongoing tree height maintenance), which would not be expected to result in a substantial increase in stream temperatures, sedimentation, or alterations to stream stability or water quality. Road crossings could result in a potential for localized increases in surface water sedimentation, erosion, and water temperatures, due to the potential for in-water work, and the direct impacts to stream banks and adjacent vegetation. These impacts would be greatest in areas that contain forested riparian vegetation; however, the Project has been routed to avoid these areas to the extent practical. In addition, the Agencies have identified mitigation measures to reduce adverse effects.

It is unlikely that this Project would affect groundwater due to the shallow excavations required for Project foundations. Shallow groundwater of 13 feet or less is present in Segments 4, 5, and 7. Any impacts to groundwater would be short-lived and consist mainly of temporary sedimentation. Excavations for transmission line structures may contact shallow groundwater; however, the groundwater contact would be unlikely to adversely impact this resource, unless an accidental chemical spill occurs near an open excavation. Fuels, other petroleum products, chemicals, and hazardous materials (including wastes) would be located in upland areas at least 500 feet away from streams, 400 feet for public wells, and 200 feet from private wells. Typically, contact with construction equipment would not impact groundwater quality except to increase turbidity temporarily in a limited area. The Project would not be expected to impact water quality in potable water wells.

LAND USE AND AGRICULTURE

Table ES-1 (above) summarizes land ownership by segment. Approximately 49 percent of the land crossed would be federal, 7 percent state, and nearly 44 percent would be privately owned[4]. Federal lands crossed by the Proposed Route are covered by 17 resource management plans. Portions of the route would not conform with one or more components of many of these plans. Therefore, plan amendments would be required.

The Proposed Route would cross several important historic trails, including the Oregon, California, Mormon Pioneer, and Pony Express NHTs. The Proposed Route would also cross the Continental Divide National Scenic Trail.

Disruption of farming activities along the ROW would occur locally during construction. Farmland and range land within the construction zone would be unavailable to agriculture during the construction interval. With the exception of land that would be occupied by transmission structures and access roads for the life of the Project, farmland and range land within the construction zone would be available for agricultural use following the completion of construction. The Proponents do, however, recognize that the Project has the potential to have long-term detrimental impacts on farms and would negotiate damage-related issues, such as reductions in the acreage available for cultivation or for use in forage production, with affected farmers compensated during the easement acquisition process. Potential impacts to agricultural property values would also be addressed during the easement acquisition process.

Potentially affected landowners and farmers have also expressed concern that the presence of a transmission line could have long-term negative impacts on agricultural operations in the immediate vicinity. Concerns raised with respect to operations include interference with Global Positioning Systems used to guide farming operation; the potential for transmission structures placed within a field to interfere with plowing, harvesting and irrigation; the potential for stray voltage to cause electric shocks to farmers and farm workers in the immediate vicinity; and potential impacts to crop spraying in areas that are usually treated by aerial application. Electric and magnetic fields and stray voltage are discussed in Section 3.21 – Electrical Environment. An analysis by an independent agricultural specialist was completed for agricultural lands in Idaho (see Appendix K and Sections 3.4 and 3.18 of the Final EIS).

AIR QUALITY

The construction activities that would generate emissions include land clearing, ground excavation, and cut and fill operations. These construction activities would occur 6 days per week for up to 12 hours per day during the construction periods. The intermittent and short-term emissions generated by these activities would include dust from soil disruption and combustion emissions from the construction equipment. Emissions associated with construction equipment include particulate matter with a diameter of less than 10 microns and 25 microns, nitrogen oxides, carbon monoxide, volatile organic compounds, sulfur oxides, and small amounts of air toxics. These emissions

[4] Percentages provided in other chapters of the EIS may vary slightly due to differences in the analysis area used for various resources.

could result in minor, temporary impacts on air quality in the vicinity of the construction activities.

Emissions from construction of the transmission line, substations, and regeneration facilities are not expected to violate applicable ambient air quality standards because the construction equipment would be operated on an as-needed basis during daylight hours only and the emissions from gasoline and diesel engines would be minimized because the engines must be built to meet the standards for mobile sources established by the U.S. Environmental Protection Agency (USEPA). Most of the construction equipment would be powered by diesel engines that would meet current emissions standards based upon engine size and date of manufacture, and Project-related vehicles and construction equipment would be required to use the new low sulfur diesel fuel as soon as it is commercially available. The Proponents have identified EPMs that would substantially reduce impacts on federal lands and recommend that the Proponents implement them Project-wide.

NOISE

Project construction would produce noise from heavy equipment needed to build the proposed transmission line routes and electrical substations. Short-term use of equipment such as backhoes, cranes, front-end loaders, bulldozers, graders, excavators, compressors, generators, and various trucks would be needed for mobilizing crew, transporting and use of materials, line work, and site clearing and preparation. Use of drill rigs, large augers, and rock drills would be required for the poured-in-place foundations at each transmission structure location. It is not expected that pile driving would be needed during construction. Spur roads and access roads would require use of earthmoving equipment such as bulldozers and graders. Construction noise is usually made up of intermittent peaks and continuous lower levels of noise from equipment cycling through use. Noise levels associated with individual pieces of equipment would generally range between 70 and 90 A-weighted decibels (dBA; USDOT 2006). Maximum instantaneous construction noise levels would range from 80 to 90 dBA at 50 feet from any work site. Additional noise sources may include commuting workers, and trucks and helicopters moving material to and from the work sites.

Noise is expected to vary regularly throughout the construction period, making the calculation of a specific received sound level value at each noise sensitive area (NSA) location difficult. The critical distances corresponding to the USEPA noise guidelines and other criteria developed by the Project to assess construction noise impacts were calculated. Sound generation was modeled according to the grouping of construction equipment provided in Section 23 – Noise, Table 3.23-5. The results of the modeling determined the distance from the construction site where sound levels would attenuate to the criteria levels. These distances included the following:

- A critical distance of 407 feet corresponding to the USEPA 70 dBA $L_{eq\ (24h)}$ guideline, and
- A critical distance of 280 feet corresponding to the USDOT 80 dBA $L_{eq\ (8h)}$ guideline.

Thus, NSAs situated within these critical distances may experience a short-term impact as a result of Project construction noise. While Project construction would generate unavoidable noise impacts at some NSAs, impacts would be temporary and intermittent.

Helicopters would be used in areas where access is limited or where there are environmental constraints to accessing the Project area with standard construction vehicles or equipment. Helicopter uses include delivery of construction laborers, equipment and materials to structure sites, structure placement (except tubular steel poles), hardware installation, and wire stringing operations. When helicopter construction methods are employed, activities would be based at a fly yard, which is a Project-material staging area located within 4 to 8 minutes from the work site. Helicopters generally fly at low altitudes; therefore, potential temporary increases to ambient sound levels would occur in the area where helicopters are operating as well as along their flight path. Typically, helicopters may generate noise levels of 89 to 99 dBA at 50 feet when in flight at 200 feet.

CUMULATIVE EFFECTS

The effects of the proposed Project, when taken together with past, present, and reasonably foreseeable future actions, constitute the cumulative effects of the Project and are fully analyzed in Chapter 4. This analysis assumes the Project would be constructed but examines both the Proponents' Proposed Route and Route Alternatives considered in the EIS for each segment where appropriate. Chapter 4 also discusses the cumulative effects of land use plan amendments needed to allow for the Proposed or Alternative Routes when the amendment would change one or more land classifications. For many resources, the effects of Gateway West, when combined with the effects of other known projects, would not be cumulatively substantial. In other cases, although the effects of Gateway West would be minor, when taken together with effects of other past, present, and proposed future actions, many of which collectively already present a substantial cumulative effect, the cumulative impact may be considerable. Finally, there are some effects of Gateway West that would by themselves be large and, when considered with other effects, also be cumulatively substantial.

Resources for which Gateway West effects would be minor and, even when considered together with other projects, would remain less than cumulatively substantial include socioeconomics, environmental justice, weeds, wetlands, federally listed invertebrate species, lynx, wolf, yellow-billed cuckoo, bald eagle, minerals, paleontological resources, geologic hazards, transportation, air quality, electrical environment, public safety, and noise. Additional details are found in Chapter 4.

Gateway West, by itself, would have minor effects on vegetation, soils, and waterbodies where crossed by access roads and therefore on habitat for most wildlife and fish species, including specifically sagebrush-obligate species (white- and black-tailed prairie dogs, pygmy rabbits, greater sage-grouse, Wyoming pocket gopher, and burrowing owl), riparian-obligate species (Columbia spotted frog, northern leopard frog, and Preble's meadow jumping mouse), and others (e.g., northern goshawk; see Section 3.11 for a comprehensive list). However, even without Gateway West's effects, the loss of habitat and fragmentation from past and present events alone would be considerable.

When the Gateway West effects are taken together with historic and present events and projects as well as with multiple future projects, the level of soil and habitat loss and fragmentation continues to be considerable. The Proponents have offered off-site compensatory mitigation for sage-grouse habitat and for wetlands to offset the contribution that Gateway West may make to that loss. The Agencies have required additional mitigation and are considering further mitigation for habitat losses from the Project as detailed in Chapter 3.

Gateway West would not have a measurable adverse effect on non-special status migratory bird populations or significant bird conservation sites, though it would impact some individuals. It would also have an adverse effect on migratory bird habitats and ecological conditions through vegetation removal, fragmentation of native habitats, and possible increases in predation pressure due to adding perching substrate for avian predators and adding service roads sometimes used by predators. When taken together with the extensive habitat loss caused by past, present, and reasonably foreseeable actions, the cumulative impact on migratory bird habitat and ecological conditions would be substantial. The BLM will continue to discuss mitigation with the Proponents as part of the preparation for the issuance of the Record of Decision.

Gateway West, by itself, would have minor adverse effects to private land uses or to agriculture with the degree of impact varying by alternative. When taken together with many of the factors that constrain and limit agriculture, including availability of irrigation water and development pressure on property values, additional land withdrawals for utility uses can be very important to individual farmers and to agricultural communities. On federal lands, both the Proposed Route and some alternatives would require changes in existing land use plans. In particular, visual resource or scenic management objectives would not be met if some of the proposed or alternative routes were chosen, and existing specifications for allowable levels of visual contrast would have to be altered. Also, several land management plans would require amendments to allow the Project. In some cases, large areas of public lands would be reclassified, possibly allowing for additional projects without additional plan amendments. These impacts to land use planning goals would be considerable, particularly when taken together with other transmission lines requesting similar consideration, which if granted along the same route would create a large utility corridor.

Any new water withdrawals in the watersheds of the Platte and Colorado Rivers (Segments 1 to 4 in Wyoming) would require either participation in the recovery programs for those rivers (provided for in programmatic biological opinions for each) or a separate consultation with the USFWS. Gateway West and all new proposed construction projects in those watersheds in Wyoming would require some water during construction and would be subject to concerns regarding withdrawals. BLM would participate in the USFWS recovery program and would require the Proponents to pay the assigned fee for water uses during construction. Any new withdrawals from either river are considered a significant adverse impact on warm-water fisheries and associated endangered fish species as well as riparian-obligate species of plants. However, participation in the recovery program relieves the Project of a jeopardy decision.

Gateway West, by itself, would have significant adverse effects on some cultural resources, particularly on historic properties for which visual setting is important like

historic trails. When considered together with other past, present, and foreseeable future projects, including additional transmission lines, the cumulative effect is also significant. Similarly, the visual impact of the Gateway West set of lattice towers in some areas would be a substantial negative effect and, when taken together with the several proposed transmission lines and other developments, would form a cumulatively considerable adverse impact.

NO ACTION

Under the No Action Alternative, the BLM would not issue a ROW grant to the Proponents of Gateway West and the Project would not be constructed across federal lands. No land management plans would be amended to allow for the construction of this Project. Other projects would continue, including wind farms, oil and gas extraction, and coal, trona, phosphate mines. The demand for electricity, especially for renewable energy, would continue to grow in the Proponents' service territories. If Gateway West is not permitted, the demand for transmission services identified by the Proponents would not be met through this Project and the area would have to turn to other proposals to meet the transmission demand. According to McBride et al. (2008), the lack of construction of transmission lines could result in substantial adverse impacts on the economic growth, including loss of jobs, in the Pacific Northwest region, which includes Idaho as well as Washington, Oregon, Montana, and several Canadian provinces.

CONFORMANCE WITH FEDERAL MANAGEMENT PLANS

Table ES-4 lists the areas of non-conformance with Resource Management Plans, Management Framework Plans, and Forest Plans.

Table ES-4. Non-conformance with Resource Management Plans, Management Framework Plans, and Forest Plans

Plan	Routes not in Conformance
Medicine Bow National Forest Revised Land and Resource Management Plan (Forest Plan)	Proposed 1W(a), 1W(c)
Green River RMP	Proposed 4
Kemmerer RMP	Proposed 4, Alternatives 4B, 4C, 4D, 4E, 4F
Caribou Revised Forest Plan	Proposed 4, Alternative 4G
Pocatello RMP	Proposed 5, Proposed 7
Sawtooth Forest Plan	Alternatives 7K
Cassia RMP	Proposed 7, Alternatives 7E, 7K
Twin Falls Management Framework Plan (MFP)	Proposed 9, Alternative 9A
Jarbidge RMP	Proposed 8, Alternative 8A; Proposed 9, Alternatives 9B, 9D/9G
Morley Nelson Snake River Birds of Prey National Conservation Area RMP	Proposed 8, Alternatives 8B, 8D, 8E; Proposed 9, Alternatives 9D, 9E, 9F, 9G, 9H
Bennett Hills/Timmerman Hills RMP	Proposed 8
Bruneau MFP	Proposed 9
Kuna MFP	Proposed 8, Alternative 8C[1/]

1/ Additional alternatives would cross the Kuna MFP Management Area; however, these alternatives are addressed under the SRBOP RMP, which replaces the Kuna MFP in these areas.