# 2.0 ALTERNATIVES

## 2.1 INTRODUCTION

This chapter includes information on how various routes and alternatives for Segments 8 and 9 were developed. It describes the routes that are evaluated in both the 2013 FEIS and in this SEIS, details system components common to all routes/alternatives, compares the key features and effects of the routes studied, and the routes that were not carried forward for detailed evaluation. It also describes conformance with BLM land use plans and identifies the BLM Co-Preferred Alternatives. The BLM conducted detailed analysis, consistent with NEPA, on the initial proposed Project and various routes for Segments 8 and 9 in the 2013 FEIS.

Appendix A (Gateway West Transmission Line Project Maps) contains the figures referenced herein. The Proponents' August 2013 POD, which is Appendix B to the 2013 ROD (BLM 2013b), details the components common to all routes, including construction and operations.

## 2.2 OVERALL PROJECT

The BLM analyzed Project Segments 1 through 7 and Segment 10 in the 2013 FEIS and authorized these segments in the 2013 ROD. The 2013 ROD deferred the decision to grant ROWs on federal lands for Segments 8 and 9 for the following reasons:

> *…for some portions of the Project the authorizing entities have not been able to agree on an acceptable route. One of these areas involves Segments 8 and 9 and siting in or around the Morley Nelson Snake River Birds of Prey NCA. The EIS analyzes routes located in the NCA and routes that generally avoid the NCA. The principal siting issue involves a requirement in the enabling legislation (Public Law 103-64) that the NCA be managed "to provide for the conservation, protection and enhancement of raptor populations and habitats and the natural and environmental resources and values associated therewith, and of the scientific, cultural, and educational resources and values of the public lands in the conservation area" (Public Law 103-64, Section 3(2)). This requirement differs from state and local government objectives to avoid private lands and site the Project on public land in the NCA.*
>
> *The Proponents' proposal, including environmental protection measures, and BLM standard requirements for surface-disturbing activities for routes in the NCA would conserve and protect NCA resources. However, enhancement components were lacking for routes in the NCA that were analyzed in the Final EIS. As part of their Final EIS comments, the Proponents submitted an "Enhancement Portfolio" for routes located in the NCA. While the Portfolio has merit and the potential to meet the enhancement requirement in the enabling legislation, the BLM needs more time to evaluate and refine it to ensure that it is sufficient.*

As noted in the SRBOP RMP (BLM 2008a):

> *The SRBOP was established in 1993 by P.L. 103-64 and is located in southwestern Idaho, within a 30-minute drive of Boise and almost half of Idaho's population. It encompasses approximately 483,700 public land acres, extending 81 miles along the Snake River. Within the SRBOP boundary are approximately 41,200 State acres, 4,800 privately owned acres,*

*1,600 military acres, and 9,300 acres covered by water. Since 1979, over 300,000 acres of upland shrub habitat has been lost to fire.*

*The SRBOP contains the greatest concentration of nesting raptors in North America. About 700 raptor pairs, representing 16 species, nest in the SRBOP each spring, including golden eagles, burrowing owls, and the greatest density of prairie falcons in the world. Eight other raptor species use the area during various seasons.*

*…Prior to authorizing uses, the BLM determines the compatibility of those uses with the purposes for which the SRBOP was established. Public activities and uses that existed when the SRBOP legislation was enacted are allowed to continue to the extent that they are compatible with the purposes for which the SRBOP was established.*

Segment 8 follows a more northerly route toward the Hemingway Substation from the Midpoint Substation, while Segment 9 follows a more southerly route from the Cedar Hill Substation to the Hemingway Substation (Appendix A, Figures A-2 and A-3). The Proponents have proposed this split because of the need to serve customers along each route and to increase system reliability.

### 2.2.1 Transmission Line and Substation Facilities

The proposed transmission line segments would cross federal, state, and private lands. Table 2.2-1 summarizes miles crossed by ownership for the various routes considered in the SEIS. The ROW width requested for the transmission line is 250 feet for both single-circuit 500-kV segments and double-circuit 500/138-kV segments.

**Table 2.2-1.** Summary of Miles and Percent Crossed by Project Route

| Segment | Length in Miles | | | | | Percent of Total[1/,2/] | | | |
|---|---|---|---|---|---|---|---|---|---|
| | **Total[3/]** | **BLM[4/]** | **State** | **Private** | **Other[5/]** | **BLM[3/]** | **State** | **Private** | **Other** |
| Segment 8 Revised Proposed Route | **129.7** | 78.4 [17.6] | 11.1 [2.0] | 35.8 [3.0] | 3.9 2.5] | 60.5% [13.5%] | 8.5% [1.5%] | 27.6% [2.3] | 3.4% [2.0%] |
| Route 8G | **146.9** | 114.5 [8.8] | 13.5 [1.1] | 18.9 | 0.1 | 77.9% [6.0%] | 9.2% [0.8%] | 12.9% | – |
| Route 8H | **137.5** | 103.0 [52.4] | 14.3 [5.2] | 19.7 [3.0] | 0.5 [0.2] | 74.9% [38.1%] | 10.4% [3.8%] | 14.3% [2.2%] | 0.4% [0.2%] |
| Segment 9 Revised Proposed Route | **165.3** | 142.6 [52.4] | 7.5 [5.2] | 14.7 [3.0] | 0.4 [0.2] | 86.3% [31.7%] | 4.5% [3.2%] | 8.9% [1.8%] | 0.2% [0.1%] |
| FEIS Proposed 9 | **162.2** | 129.4 [11.1] | 4.6 [1.1] | 28.3 [1.3] | – | 79.8% [6.9%] | 2.8% [0.7%] | 17.4% [0.8%] | – |
| Route 9K | **174.6** | 156.2 [8.7] | 4.6 [1.1] | 13.8 | – | 89.5% [5.0%] | 2.6% | 7.9% | – |
| Segment 9 Revised Proposed Route – Comparison portion for Toana Road Variations 1/1-A | **8.7** | 8.7 | – | – | – | 100.0% | – | – | – |
| Toana Road Variation 1 | **8.5** | 8.2 | 0.3 | – | – | 96.5% | 3.5% | – | – |
| Toana Road Variation 1-A | **8.9** | 7.8 | 1.0 | – | – | 87.6% | 11.2% | – | – |

Note that values in "[ ]" indicates miles inside the SRBOP (regardless of landownership).

1/ Percentages provided in other chapters of the SEIS may vary slightly due to differences in the Analysis Area used for various resources.

2/ Totals may not equal 100 percent due to rounding.

3/ Mileages are rounded to tenths of a mile throughout table; therefore, rows may not sum exactly.

4/ BLM – Bureau of Land Management

5/ "Other" includes Bureau of Reclamation, U.S. Fish and Wildlife Service, etc.

Project facilities include the following:

- Two transmission line segments, their associated access roads, multipurpose and helicopter fly yards, and other temporary construction ground disturbances;
- Proposed substation and expansions or modifications at two existing substations and at one substation approved under the 2013 ROD; removal of one small existing substation;
- Other associated facilities including communication systems and optical fiber regeneration stations; and
- Access roads and distribution supply lines where needed for proposed substations and optical fiber regeneration stations.

Project substations, structure design alternatives including a summary and comparison of tower types and structure finish and surface treatment alternatives, and components common to all action alternatives are described in Chapter 2 of the 2013 FEIS.

Details of construction and operation modifications and the August 2014 Draft MEP submitted by the Proponents as part of their POD Supplement are included in Appendix C of this Draft SEIS. Environmental protection plans are included as appendices to the August 2013 POD. All of these plans are considered part of the Project description for the proposed Project. Table 2.2-2 summarizes the proposed facilities.

**Table 2.2-2.** Summary of Project Facilities

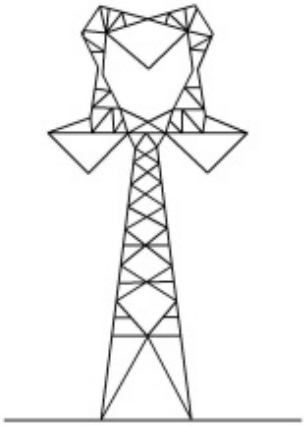
| Project Facility | Description |
|---|---|
| **Transmission Line Segments** | |
| Transmission Line Features Common to 500-kV Segments 8 and 9<br>  | • Three-phase 500-kilovolt (kV) construction for all tower designs, conductor spacing and clearances.[1/]<br>• Conductors: Bundled 1949.6 kcmil 42/7 aluminum conductor steel reinforced (ACSR)/TWD “Athabaska/TW,” with three sub-conductors per phase. Non-specular (dull) finish rather than a shiny finish.<br>• Estimated sub-conductor diameter: 1.504 inches.<br>• Bundle spacing: Distance between sub-conductors is 18 inches and 25 inches.<br>• Non-reflective, non-refractive insulators.<br>• One optical ground wire (OPGW) containing 48 fibers and with diameter of 0.637 inch on one side of tower.<br>• One extra high strength (EHS) steel overhead ground wire.<br>• Steel overhead ground wire diameter: approximately 0.495 inch.<br>• Minimum ground clearance: 35 feet.<br>• Structure types: lattice steel single-circuit structures. Dulled galvanized steel finish.<br>• Structure heights: Single-circuit structure varies between 145 and 180 feet. Average height of 156 feet.<br>• Approximate distance between structures: 1,200 to 1,300 feet.<br>• Right-of-way (ROW) width for one single-circuit: 250 feet.<br>• The exact quantity, distance between, and placement of the structures would depend on the final detailed design of the transmission line, which is influenced by the terrain, land use, environmental constraints, and economics. Alignment options may also slightly increase or decrease the quantity, location, and height of structures. |

**Table 2.2-2.** Summary of Project Facilities (continued)

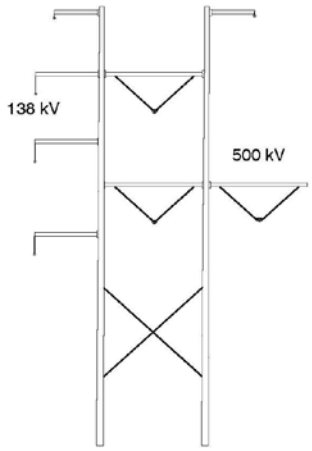
| Project Facility | Description |
|---|---|
| Double-Circuit 500/138-kV portions of Segment 9 in the Morley Nelson Snake River Birds of Prey National Conservation Area (SRBOP)<br>  <br> | • Three-phase 138-kV construction for all structure designs, conductor spacing and clearances.<br>• 500-kV Conductor: Bundled 1949.6 kcmil 42/7 ACSR/TWD "Athabaska/TW," with three sub-conductors per phase. Non-specular (dull) finish rather than a shiny finish.<br>o Estimated sub-conductor diameter: 1.51 inches.<br>o 500-kV Bundle spacing: Distance between sub-conductors is 18 inches and 25inches.<br>• 138-kV Conductor: Single 715 kcmil 26/7 aluminum conductor steel reinforced<br>• ACSR "Starling". Non-specular (dull) finish rather than a shiny finish.<br>o Estimated conductor diameter: 1.05 inches<br>• Non-reflective, non-refractive insulators.<br>• One OPGW containing 48 fibers with diameter of 0.64 inch.<br>• One EHS steel overhead ground wire with diameter of 0.50 inch.<br>• Minimum ground clearance:<br>o 138-kV: 24 feet<br>o 500-kV: 35 feet<br>• Structure types: double-circuit steel H-frame structures, dull galvanized or self-weathering steel.<br>• Aboveground structure height: varies between 125 and 200 feet.<br>• Approximate distance between structures: 900 to 1,200 feet.<br>• ROW width: 250 feet<br>• The exact quantity, distance between, and placement of the structures would depend on the final detailed design of the transmission line, which is influenced by the terrain, land use, environmental constraints, and economics. Alignment options may also slightly increase or decrease the quantity, location, and height of structures. |
| **Substation Facilities** | |
| Midpoint Substation – Segment 8 | • Expansion of existing substation (located on private lands).<br>• Developed acreage: increase the fenced area by approximately 40 acres.<br>• Existing access roads are paved and would not need extension.<br>• 500-kV circuit breakers and related switching equipment, bus and support structures, 500-kV shunt reactor banks, 500-kV series capacitor bank, 500-kV shunt capacitor banks, potential and current transformers.<br>• 500-kV line termination structures approximately 135 feet in height.<br>• Control, protection, and communications equipment added to existing control building.<br>• See Figure A-23 in FEIS Appendix A. |

**Table 2.2-2.** Summary of Project Facilities (continued)

| Project Facility | Description |
|---|---|
| Cedar Hill Substation – Segment 9 | • Proposed substation associated with Segments 7 and 10 (located on private lands).<br>• Developed acreage: approx. 54 acres fenced with access road.<br>• Adjacent existing road is gravel and would not need extension.<br>• 500-kV circuit breakers and related switching equipment, bus and support structures, 500-kV shunt reactor banks, 500-kV shunt capacitor banks, potential and current transformers.<br>• 500-kV line termination structures approx. 135 feet in height.<br>• Control, protection, and communications equipment.<br>• Addition of new control building within the substation fenced area.<br>• Up to 5 single circuit 500-kV structure relocations required on existing line from Borah Substation.<br>• See Figure A-15 in FEIS Appendix A. |
| Hemingway Substation – Segments 8 and 9 | • Expansion of existing substation (located on private lands).<br>• Expansion of existing station to add a 500-kV line bay for termination of the Hemingway – Midpoint and the Hemingway – Cedar Hill transmission lines.<br>• All construction would be inside the existing fence line. No additional area is required.<br>• Existing access is adequate.<br>• 500-kV circuit breakers and related switching equipment, bus and support structures, 500-kV shunt reactor banks, 500-kV series capacitor bank, 500-kV shunt capacitor banks, potential and current transformers.<br>• 500-kV line termination structures approximately 135 feet in height.<br>• Control, protection, and communications equipment added to the existing control building. |
| **Ancillary Facilities** | |
| Communications and Control Facilities – Optical Signal Regeneration Sites | • Regeneration sites are required to amplify the system control and monitoring signals carried over the fiber optic cable attached to the transmission structures.<br>• A total of up to 13 regeneration sites would be needed for the Project. Segments requiring regeneration sites are noted in the transmission line section of this summary table. The locations for the regeneration sites are determined after the preferred route is identified and detailed design engineering is completed.<br>• Regeneration sites would be located either within a substation or at another location along the route.<br>• Regeneration sites are located within a 75- X 75-foot fenced area.<br>• Typical building dimensions within the fenced area are 12 feet wide X 32 feet long X 9 feet tall.<br>• The fiber within the OPGW cable supported on the transmission structures is routed in and out of the regeneration site building from the nearest transmission structure either underground or overhead along two independent diverse paths. |

**Table 2.2-2.** Summary of Project Facilities (continued)

| Project Facility | Description |
|---|---|
| | • Electronic equipment, required to support the fiber optic cable installation, is located inside the building.<br>• At sites not within a substation, a liquid propane fueled emergency generator would be installed to provide backup power during an outage of the local electric distribution system supply.<br>• Maximum regeneration site spacing is 55 miles or less depending on access and proximity to local electric distribution lines.<br>• The primary siting criteria for a regeneration site are: adjacent to the Gateway West transmission line ROW, proximity to existing low-voltage electric distribution lines to provide power to the facility, and the ability to easily access the site by vehicle. |

1/ Project design follows the Avian Power Line Interaction Committee recommendations. Details for tower construction and components such as conductor spacing are provided in the August 2013 POD (Appendix B of the 2013 ROD) and Appendix B of this Draft SEIS.

Preconstruction activities for Segments 8 and 9 would involve ground disturbance at laydown yards, at a minimum. The Proponents' 2013 POD assumed that ground disturbing activities would begin in 2017, and that construction would be completed by the Proponents' estimated in-service date of 2020.

### 2.2.2 Structure Lighting

Runway Turnoff (RTO) infrared obstruction lights that incorporate both red and infrared light-emitting diodes (LEDs) in a single unit would be installed on every other transmission structure of the Segment 8 Revised Proposed Route along the northern boundary of the Idaho Army National Guard (IDANG) Orchard Combat Training Center (OCTC) and the Orchard Military Operations Area from MP 91.4 to MP 108.3. The areas on the Segment 9 Revised Proposed Route that would have structure lighting on every other transmission structure include the east side of the Jarbidge Military Operations Area between MP 46.5 through MP 54.4 and along the southwest side of the OCTC and the Orchard Military Operations Area from MP 136.9 to 138.1. Structure lighting would be on every transmission structure between MP 91.2 and MP 95.7 in the Saylor Creek Air Force Range along the Segment 9 Revised Proposed Route. Structure lighting is used to ensure visibility for aircraft pilots, both during normal flight and when aided by night vision systems. Night vision goggles (NVG) and Aviator's Night Vision Imaging System (ANVIS) often employ Class A, B, and C filters. These filters can reduce LED sources that emit light in the visible spectrum. The RTO lights overcome this obstacle by combining visible red LEDs and infrared LEDs in a single unit. This obstruction light system utilizes a unique optical, electrical, and mechanical design. The RTO is a universal, compact, and efficient obstruction light that has been Electrical Testing Laboratories (ETL) certified to Federal Aviation Administration (FAA) requirements. In order to ensure that the intensity of lighting is not so bright as to render the NVGs ineffective, the Proponents propose to use equipment with peak lighting intensities of 860 nanometers for the infrared lights and 30 to 50 candelas for red lighting.

## 2.3 ALTERNATIVE DEVELOPMENT

The Proponents submitted a Revised Proposed Action in August of 2014 (Appendix B). The Proponents' Revised Proposed Routes for Segments 8 and 9 are based on the routes recommended by the Boise RAC (refer to Section 1.1). Both of the Revised Proposed Routes cross substantial portions of the SRBOP. In addition, the BLM identified alternatives to the Revised Proposed Routes for full analysis in this SEIS, including the Proposed Route for Segment 9 considered in the 2013 FEIS.

### 2.3.1 Routes Developed by the Proponents

#### 2.3.1.1 FEIS Proposed Routes for Segments 8 and 9

**FEIS Proposed Route for Segment 8**

The 131.5-mile-long FEIS Proposed Route for Segment 8 proceeds west-northwest, parallel to an existing 230-kV line, passing just north of the juncture of the Jerome, Lincoln, and Gooding County lines near MP 9. This route continues in the same direction, passing between Gooding and Wendell before crossing the Malad River (MP 19.3) and U.S. Highway (US) 26 (MP 23.9) approximately 4.5 miles east of the community of Bliss. Southwest of Pioneer Reservoir, the route angles northwest away from the existing 230-kV corridor at the Gooding County/Elmore County line for approximately 7 miles to avoid impacts to a residence in the Clover Creek area. At MP 42.0 the route rejoins the existing 230-kV corridor about 2.8 miles northeast of King Hill. Between MP 45.8 to MP 48.1 and MP 50.2 to MP 51.1, the FEIS Proposed Route for Segment 8 crosses VRM Class I in an area of multiple transmission lines, and enters the WWE corridor at MP 52.0, deviating up to 2 miles from the 230-kV corridor on private land to avoid wetland impacts in the Bennett Creek area. At MP 58, the route parallels south and west of the existing PacifiCorp 500-kV Summer Lake – Midpoint transmission line offset 1,500 feet for reliability reasons. The route crosses US 20 at MP 68.5 approximately 3.8 miles northeast of Mountain Home. At MP 86.2, the Proposed Route turns west, crossing I-84 at MP 90.2 and the Elmore County/Ada County line at MP 90.9. Continuing west, the FEIS Proposed Route for Segment 8 would be parallel to and approximately 1,500 feet south of the existing Summer Lake – Midpoint 500-kV transmission line for 24.5 miles through the SRBOP.

The route enters the SRBOP at MP 98.8 and continues to the west, then southwest through Ada County. West of Pleasant Valley Road (MP 104.1), the route crosses the Alpha Maneuver Sector for the IDANG OCTC, which is located within the SRBOP, for 4.7 miles (the route would be within the OCTC low-level flight operations area between approximately MP 92 and MP 108). The IDANG recommends that, if this route is selected, the transmission structures be equipped with special lights to prevent military aircraft from colliding with the structures during training (see Section 2.2.2 of the FEIS).

At MP 116, the route turns more to the south, away from the existing 500-kV line, crossing the Snake River, the Halverson and Wees Bar Non-Motorized Areas, and a National Register Historic District between MP 117 and MP 120. The Snake River in this area forms the Ada County/Owyhee County line. The route continues southwest another mile and then west around Guffey Butte before intercepting a WWE corridor at MP 124.2 and turning northwest approximately 3.5 miles north of Murphy. The route

leaves the SRBOP at MP 126.7 before entering the existing Hemingway Substation. Of its 131.5-mile length, approximately 33 miles are Greenfield and 98.5 miles parallel existing transmission lines.

**FEIS Proposed Route for Segment 9**

The 162.2-mile-long FEIS Proposed Route for Segment 9 (hereafter referred to as FEIS Proposed 9) proceeds generally west through public and private rangeland along the WWE corridor or projected WWE corridor from the Cedar Hill Substation. Near MP 8, the route deviates slightly north, and then west again, to minimize impacts to an existing concentrated animal feeding operation (CAFO) about one mile south of the Twin Falls Military Reservation. The route crosses US 93 at MP 17.7 and then continues west, turning northwest at MP 27.9, parallel to the east side of Salmon Falls Creek and adjacent to an existing 138-kV transmission line for about 5 miles. At MP 33, the FEIS Proposed Route crosses the Salmon Falls Creek at Lilly Grade adjacent to an existing single-phase 34.5-kV distribution line just north of the Salmon Falls Creek wilderness study area (WSA) and a VRM Class I designated viewshed approximately 6 miles south of the community of Castleford. The area crossed is part of an Area of Critical Environmental Concern (ACEC), a Recreation portion of an eligible Wild and Scenic River (WSR). The route was revised between the Draft and Final EIS to cross below the Wild portion of the eligible WSR. Several raptor nest buffers are crossed as the route continues northwest through the Bruneau Desert. At MP 46.6, the route enters Owyhee County and turns to the north between areas of irrigated agriculture along the Twin Falls County/Owyhee County line for about 10 miles before turning northwest at MP 56.5, then into Elmore County (MP 63.4). Between MPs 46.6 and 63.4, the Proposed Route would be just inside the east boundary of the general Jarbidge Military Operations Area. Within the Military Operations Area, structures normally cannot extend more than 100 feet above ground level. Consultation between Twin Falls County and the U.S. Air Force has determined that this height restriction would not apply to the Gateway West Project and this minor encroachment is acceptable (Postema 2010). However, the Air Force recommends that the transmission structures be equipped with special lights to prevent collisions during training exercises (see Section 2.2.2).

At MP 79.0, the FEIS Proposed Route joins the designated WWE corridor northwest of Deadman Flat, and would enter the SRBOP at MP 88.0. The FEIS Proposed Route parallels the northern boundary of the Saylor Creek Air Force Range for approximately 11.5 miles, passing through the restricted area in the northwest corner of the range between MPs 91.2 and 95.6, less than 0.25 mile south of Bruneau Dunes State Park. Consultation between representatives of the BLM, U.S. Air Force, Idaho Department of Parks and Recreation, and the Proponents has determined that the location of the FEIS Proposed Route within the restricted Military Operations Area and just to the south of Bruneau Dunes State Park is acceptable with micro-siting and mitigation. As with the Jarbidge Military Operations Area, the Air Force recommends that the transmission structures be equipped with special lights to prevent collisions during training exercises (see Section 2.2.2). The route crosses the Ducks Unlimited Bruneau wetlands conservation area between MPs 99.0 and 99.5. From this point, the FEIS Proposed Route continues generally southwest, leaving the WWE corridor and the projected

WWE corridor between MPs 97.8 and 102.3 to cross wetlands and agricultural areas along the Bruneau River and the Bruneau Valley. These include an IP Wetland Conservation Area and the Ducks Unlimited Wetlands Conservation Area.

On the west side of the Bruneau Valley, the route turns northwest, crosses State Route (SR) 51 at MP 104.1, and then continues northwesterly on the southwest side of the Bruneau River, C.J. Strike Reservoir, and SR 78. Between MP 102.3 and the Hemingway Substation, the FEIS Proposed Route follows the WWE corridor on BLM-managed land but frequently changes direction on private segments to minimize impacts to rural residences, the small communities of Murphy and Oreana, and, as much as possible, cultivated lands. The route re-enters the SRBOP between MPs 142.4 and 146.2 and again between MPs 151.5 and 152.6, mainly within the WWE corridor on BLM-managed land, and then continues north and west into the Hemingway Substation.

The FEIS Proposed Route would not be in conformance with the management direction provided in the SRBOP RMP or the Twin Falls and Bruneau MFPs. The SRBOP RMP would need amendments to allow the Project outside identified utility corridors and to permit surface-disturbing activity within 0.5 mile of sensitive plant habitat. The Twin Falls MFP would need amendments to allow the ROW outside of existing corridors and to allow the Project to cross the Salmon Falls ACEC, changing the VRM to Class III, consistent with the new Jarbidge RMP. The Bruneau MFP would require an amendment to reclassify a VRM Class II area to VRM Class III near Castle Creek. Table 2.3-1 describes the management direction and the associated amendments. Appendix F discusses the associated amendments, and Appendix G provides the analysis and rationale for visual resources amendments.

#### 2.3.1.2 Revised Proposed Routes for Segments 8 and 9

In developing the Revised Proposed Routes for Segments 8 and 9, the Proponents reported that they considered the then ongoing cooperative work with the Boise RAC. The Proponents' revised ROW application and POD reference the RAC's reports on route locations and on mitigation and enhancement in the SRBOP. The RAC reports are located in Appendix H. Based on their review of the RAC work, the Proponents revised the Proposed Route, updated the MEP (August 2014), and revised the standard operating procedures. For each of these Segments, the first approximately 90 to 100 miles are unchanged from the routes shown in the 2013 FEIS (see Figures A-10 and A-11 in Appendix A to the FEIS). Table 2.2-2 above gives a summary of the Project facilities and features of Segment 8 and 9 Revised Proposed Routes.

**<u>Segment 8 Revised Proposed Route</u>**

***General Description and Issues***

One single-circuit 500-kV transmission line is proposed between the existing Midpoint Substation and the existing Hemingway Substation, located approximately 30 miles southwest of Boise, Idaho. The line would be constructed using steel lattice towers between 145 and 180 feet tall (Appendix B of this SEIS). Appendix A, Figure A-3 in this SEIS shows the Segment 8 Revised Proposed Route. The Revised Proposed Route is 129.7 miles long and therefore two optical signal regeneration sites would be needed

along the route. Final locations for regeneration stations would be determined after detailed design engineering is completed. This route is similar to the original proposed route in the 2013 FEIS except that the line would be 250 feet north of the existing 500-kV line rather than 1,500 feet south of the line from the eastern boundary of the SRBOP (MP 99.7) to the Hemingway Substation. It would also cross the Snake River north of Guffey Butte, instead of south as in the 2013 FEIS. The first 91.4 miles of the route is unchanged from the 2013 FEIS Proposed Route.

Based on changes in the WECC reliability criteria (see Section 2.3.1.4 for more details), the RAC Subcommittee recommended a separation reduction across the SRBOP, and the Proponents incorporated that change into a 28.7-mile portion of the Segment 8 Revised Proposed Route, making the 250-foot separation a design feature. Figure 2.3-1 shows the reduced line separation ROW design and location of reduced separation to the existing Midpoint to Hemingway line.

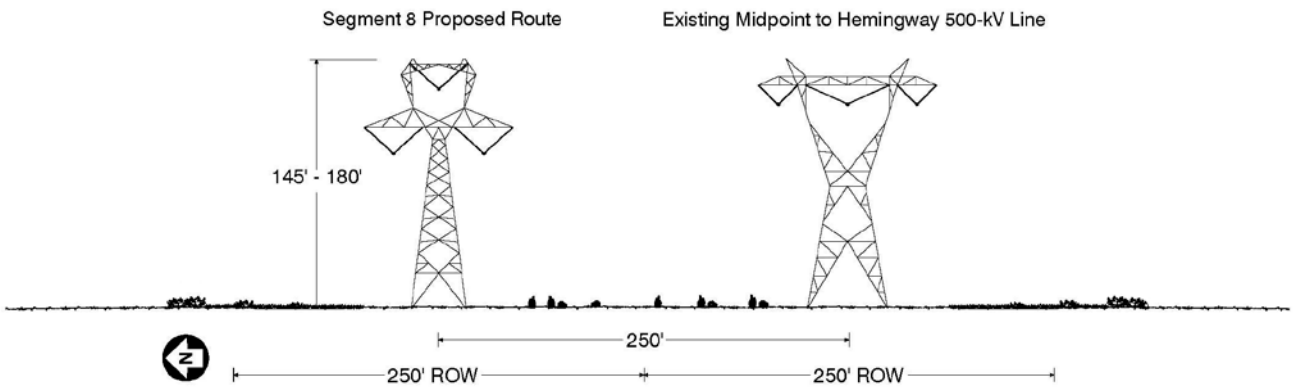



**Figure 2.3-1.** Proposed Reduced Line Separation ROW Design

The Proponents plan to use existing roads near and beneath the existing 500-kV transmission line to minimize the overall disturbance footprint of the new line. Rather than constructing a completely new access road network for the Segment 8 Revised Proposed Route, they would use short spur roads from existing roads to provide access to new towers.

Key factors considered in routing this segment included using the WWE corridor where possible, conflicts with agricultural lands, residential development, visual resources, the SRBOP, slickspot peppergrass, the Halverson Bar and Wees Bar Non-motorized areas, a National Register Historic District, and the IDANG OCTC. Key factors considered since the 2013 FEIS included impacts to communities, agriculture, and private property in the Kuna and Melba areas of Ada, Canyon, and Owyhee Counties; critical habitat for slickspot peppergrass; and the OCTC Alpha Sector. The 129.7-mile-long Revised Proposed Route is within the WWE corridor for 33.8 miles and adjacent to existing transmission corridors for 117.1 miles.

### *Revised Proposed Route 8 Description*

The 129.7-mile-long Revised Proposed Route proceeds west-northwest from the Midpoint Substation, parallel to an existing 230-kV line, passing just north of the

juncture of the Jerome, Lincoln, and Gooding County lines near MP 9. The route continues in the same direction still adjacent to the existing 230-kV line, passing between the communities of Gooding and Wendell across irrigated agriculture, before crossing the Malad River (MP 19.3) and US 26 (MP 23.9) approximately 4.5 miles east of the community of Bliss. Southwest of Pioneer Reservoir, the route angles northwest away from the existing 230-kV corridor at the Gooding County/Elmore County line for approximately 7 miles to avoid impacts to a residence in the Clover Creek area. At MP 42.0, the route rejoins the existing 230-kV corridor about 2.8 miles northeast of King Hill. Between MP 45.8 to MP 48.1 and MP 50.2 to MP 51.1, the Revised Proposed Route crosses Visual Resource Management (VRM) Class I in an area of multiple transmission lines, and enters the WWE corridor at MP 52, deviating up to 2 miles from the 230-kV corridor on private land to avoid wetland impacts in the Bennett Creek area. At MP 58, the route parallels south and west of the existing PacifiCorp 500-kV transmission line offset 1,500 feet. The route crosses US 20 at MP 68.5 approximately 3.8 miles northeast of Mountain Home. At MP 86.2, the Proposed Route turns west away from the existing 500-kV corridor to avoid a subdivision in the Mayfield area, before crossing Interstate (I) 84 at MP 90.2 and the Elmore County/Ada County line at MP 90.9.

Continuing west at MP 91.4, the Revised Proposed Route for Segment 8 again parallels approximately 1,500 feet south of the existing 500-kV transmission line, before turning northward at MP 97 and crossing the existing 500-kV line at MP 97.7. Beginning at MP 97.7, the Revised Proposed Route parallels 250 feet north of the existing 500-kV line the remaining 32 miles across the SRBOP and into the Hemingway substation. At MP 99.7, the alignment crosses into the SRBOP, and follows the existing 500-kV transmission line for approximately 8 miles, north of the boundary to the IDANG OCTC. At MP 104.2, the alignment crosses Pleasant Valley Road, and continues west for another 3.5 miles. To avoid new agricultural impacts on private property, and to minimize impacts to the OCTC's tank maneuver "Alpha Sector," at MP 107.6 the alignment shifts south 250 feet and assumes the existing ROW of the 500-kV transmission line. A 1.1-mile section of the existing 500-kV line would be decommissioned and rebuilt 250 feet to the south. This rebuilt portion would be 250 feet inside of the OCTC Alpha Sector, crossing 0.5 mile. At MP 108.2, the two routes resume their previous alignments, with the Proposed Route 250 feet north of the existing 500-kV line. The route crosses Swan Falls Road at MP 113.7 and the existing Bowmont to Canyon Creek 138-kV transmission line at MP 114.4. At MP 118.4, the alignment turns west (still parallel to the existing line), leaving the SRBOP at MP 118.7, and crosses 2 miles of irrigated agriculture and in close proximity to several CAFOs along the Canyon and Ada County lines. The Revised Proposed Route re-enters the SRBOP at MP 120.7, north of Celebration County Park, before crossing the Snake River still adjacent to the existing 500-kV line between MP 122.4 and 122.8 at the southern end of Noble Island. The alignment then turns northwest leaving the SRBOP at MP 123.7, and parallels the existing line for approximately 5 miles (crossing Hemingway Butte near MP 126.6), before turning north through the existing China Gulch subdivision on land owned by Idaho Power and into the Hemingway Substation.

Several plan amendments would be needed to make the Revised Proposed Route conform to BLM land use plans in effect in the area: the Kuna MFP, SRBOP RMP, 1987 Jarbidge RMP, and the Bennett Hills/Timmerman Hills MFP. The Kuna MFP would need an amendment to allow the transmission line outside of existing corridors. The SRBOP RMP would need amendments to permit surface-disturbing activity within 0.5 mile of sensitive plant habitat, and to allow a new utility corridor across the northern portion of the SRBOP between MP 99 and MP 124.5, as well as between MPs 65.7 and 67.7. While there is a corridor adjacent to the Revised Proposed Route between MPs 65.7 and 67.7, it is a narrower 1,000 feet in the SRBOP, as opposed to the 3,000 feet on either side; it therefore does not include the alignment for the Revised Proposed Route and an amendment would be needed. In addition, the Revised Proposed Route would not be in conformance with the management direction provided in the Bennett Hills/Timmerman MFP, and an amendment would be needed to allow the route near archeological sites and to change VRM classes. The route would not be in conformance with the 1987 Jarbidge and would need amendments to change the VRM Classes, cross the Oregon Trail, and change a utility avoidance/restricted area designation. Table 2.3-1 provides a summary of existing management and proposed amendments for this route. Appendix F provides the associated amendments and documentation, and Appendix G provides the analysis and rationale for visual resources amendments.

## Segment 9 Revised Proposed Route

### *General Description and Issues*

One single-circuit 500-kV transmission line is proposed between the proposed Cedar Hill and the existing Hemingway Substations. The line would be constructed using 500-kV single-circuit lattice steel structures between 145 and 180 feet tall and H-frame 500/138-kV structures in the areas to be double-circuited (Appendix B to this Draft SEIS). Appendix A, Figure A-4 of this SEIS provides details on the transmission line route between the Cedar Hill and Hemingway Substations. The Segment 9 Revised Proposed Route is 165.3 miles long and therefore would require two optical signal regeneration sites along its route. Final locations for regeneration stations would be determined after detailed design engineering is completed. The Revised Proposed Route follows the same alignment as the 2013 FEIS Proposed Route for 95.6 miles, and then follows an alignment similar to the 2013 FEIS Route 9D/G from MP 95.6 and 154.7, except that two portions of the route (totaling 25.7 miles) would be double-circuited with existing 138-kV lines within the SRBOP: the first, near C.J. Strike Reservoir and the Bruneau Arm (MP 106.2 to 109.3 and 109.9 to 112.1), and the other along Baja Road (MP 121 to 141.2). Several rebuilds totaling approximately 0.6 mile are also required to tie the existing 138-kV lines into the new double-circuit alignments. Except for minor variations, the route is unchanged from the 2013 FEIS Route 9D/G between MP 141.2 to 154.7. The Revised Proposed Route crosses the Snake River south of Sinker Butte, whereas the 2013 FEIS Proposed Route did not cross the Snake River. From MP 154.7 to the Hemingway Substation, the route is the same as the 2013 FEIS Proposed Route.

As part of their evaluation, the RAC Subcommittee asked the Proponents about the feasibility of co-locating (which in this case refers to double-circuiting) 5.4 miles of the

existing C.J. Strike – Bruneau Bridge and 20.2 miles of the Bowmont – Canyon Creek 138-kV transmission lines and on the same structures with the Segment 9 Revised Proposed Route's single-circuit 500-kV line. The Proponents reported that double circuiting would be feasible and have incorporated this change into the proposed Project, making double circuiting a design feature. The Bowmont – Canyon Creek 138-kV line is under the authority of the FERC; therefore, the Proponents would need to obtain FERC approval for reconstructing the line.

Table 2.2-2 above describes facility features portion of the Segment 9 Revised Proposed Route in the SRBOP that would be double circuited. Figure 2.3-2 shows a sketch of the proposed double-circuit 500/138- kV structure, while Figure 2.3-3 shows the ROW design configuration for the double-circuit 500/138-kV structure compared to the existing 138-kV structure for the portion of the Segment 9 Revised Proposed Route within the SRBOP.

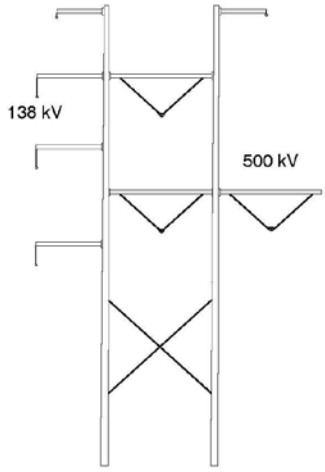



**Figure 2.3-2.** Proposed Double-Circuit 500/138-kV Structure

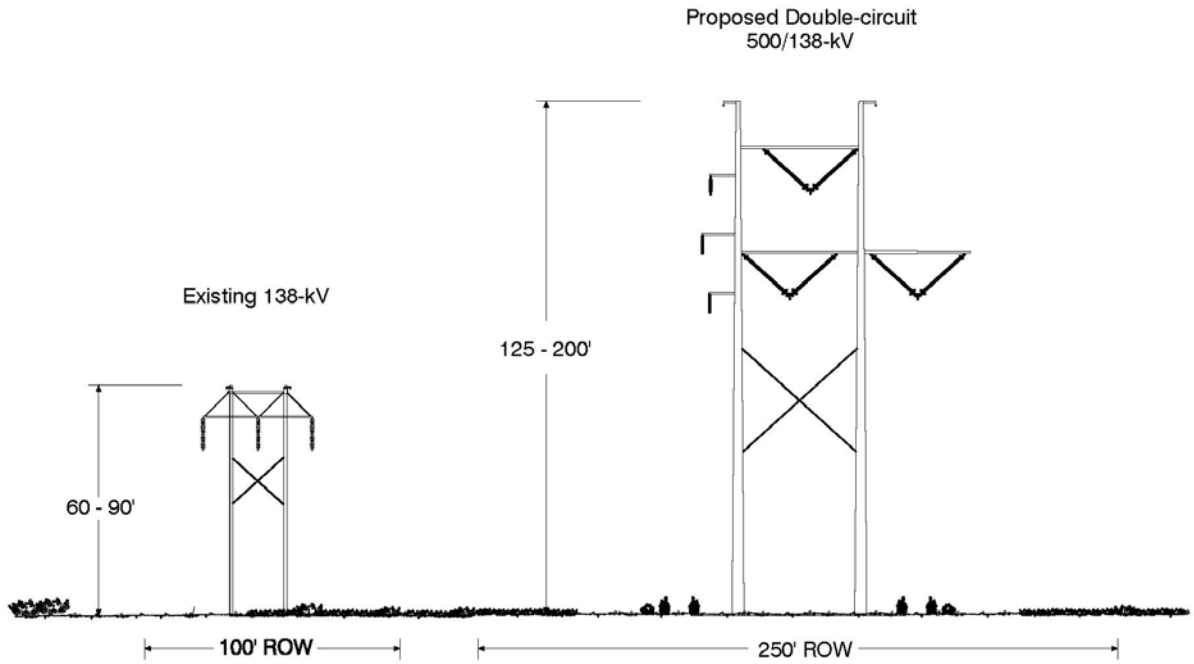



**Figure 2.3-3.** Proposed ROW Design Configuration for Double-Circuit 500/138-kV Structure Compared to Existing 138-kV Structure

Key factors considered in routing this segment were agricultural and residential development in Owyhee County, visual resources, the Jarbidge Military Operations Areas, Saylor Creek Air Force Range, Mountain Home Air Force Base (AFB), Balanced Rock County Park, Bruneau Dunes State Park, the Cove Non-Motorized Area, greater sage-grouse leks and priority habitat, and the Salmon Falls Creek WSR, as described in the 2013 FEIS. Key factors considered since the 2013 FEIS included the amount of new road that would be constructed and maintained within the SRBOP and in unroaded areas in Owyhee County, and minimizing the construction of transmission towers and roads near sage-grouse leks, and within sage-grouse habitat.

### *Revised Proposed Route 9 Description*

The 165.3-mile-long Revised Proposed Route was proposed as a modification of the action proposed and analyzed in the FEIS as Route 9D/9G.

This option would double circuit the new 500-kV line with existing 138-kV lines for most of the distance through the SRBOP. The new line would incorporate and replace existing FERC 138-kV lines near C.J. Strike Reservoir in Owyhee County and along Baja Road on public land in Ada and Elmore counties. The line would cross the Snake River in two locations: below C.J. Strike Dam (MP 113 to 113.3), and again above Swan Falls, near Sinker Butte (MP 143 to 143.5), where an existing 138-kV transmission line already crosses the Snake River. The new 500-kV line would traverse public land on Murphy Flat, avoiding historic Oregon Trail ruts. It would cross Highway 78 north of the Rabbit Creek Trailhead at MP 153.4, and continue north to the Hemingway Substation, outside of preliminary priority sage-grouse habitat.

The Revised Proposed Route for Segment 9 proceeds generally west through public and private rangeland along the WWE corridor or projected WWE corridor from the Cedar Hill Substation. Near MP 8, the route deviates slightly north, and then west again, to minimize impacts to an existing CAFO about 1 mile south of the Twin Falls Military Reservation. The route crosses US 93 at MP 17.7 and then continues west, turning northwest at MP 27.9, parallel to the east side of Salmon Falls Creek and adjacent to an existing 138-kV transmission line for about 5 miles. At MP 33, the Proposed Route crosses the Salmon Falls Creek at Lilly Grade adjacent to an existing single-phase 34.5-kV distribution line just north of the Salmon Falls Creek WSA and a VRM Class I designated viewshed approximately 6 miles south of the community of Castleford. The area crossed is part of an ACEC, which is a Recreation portion of an eligible WSR. The route was revised between the Draft and Final EIS to cross below the Wild portion of the eligible WSR. Several raptor nest buffers are crossed as the route continues northwest through the Bruneau Desert. At MP 46.6, the route enters Owyhee County and turns to the north between areas of irrigated agriculture along the Twin Falls County/Owyhee County line for about 10 miles before turning northwest at MP 56.5, then into Elmore County (MP 63.4). Between MP 46.6 and MP 63.4, the Revised Proposed Route would be just inside the east boundary of the general Jarbidge Military Operations Area. Within the Military Operations Area, structures normally cannot extend more than 100 feet above ground level. Consultation between Twin Falls County and the U.S. Air Force has determined that this height restriction would not apply to the Gateway West Project and this minor encroachment is acceptable (Postema 2010). However, the Air Force recommends that the transmission structures be equipped with special lights to prevent collisions during training exercises (see Section 2.2.2).

At MP 79.0, the Revised Proposed Route joins the designated WWE corridor northwest of Deadman Flat, and would enter the SRBOP at MP 88.0. The alignment parallels the northern boundary of the Saylor Creek Air Force Range for approximately 11.5 miles, passing through the restricted area in the northwest corner of the range between MP 91.2 and MP 95.6, less than 0.25 mile south of Bruneau Dunes State Park.

Beginning south of Bruneau Dunes State Park, within the SRBOP, the route leaves the established utility corridor in a northwesterly direction, crossing SR 51 at MP 100.1, and leaving the SRBOP at MP 102.3. At MP 105.1, the route re-enters the SRBOP, double-circuiting with the existing C.J. Strike – Bruneau Bridge 138-kV transmission line in the current ROW at MP 106.2 for approximately 3.1 miles (the existing 138-kV structures would be removed). At MP 109.4, the two circuits separate to permit a more feasible crossing of the Narrows between C.J. Strike Reservoir and the Bruneau Arm. On the west side of the Bruneau River, the two lines again become a double circuit at MP 110 across the Cove non-motorized and recreation areas, and continue west approximately 2 miles to the C.J. Strike Dam, where the lines again separate at MP 112 and the existing 138-kV line enters a substation at the dam. The Revised Proposed Route parallels approximately 200 feet west of an existing double-circuit 138-kV line to the north for 3.5 miles, crossing the Snake River below the C.J. Strike Dam between MP 113 and 113.3. At MP 116.5, the alignment shifts west, and then north again, to avoid encroachment in the Mountain Home AFB controlled airspace, and to avoid new

impacts to private agricultural lands. At MP 120.4, the alignment crosses the Grand View Highway (SR 167), and then joins the existing Bowmont to Canyon Creek 138-kV transmission line in a new double-circuit alignment along the south side of the Big Baja Road at MP 121. The new double-circuit alignment proceeds northwest, generally parallel to Big Baja Road for 18.5 miles and adjacent to the southern boundary of the OCTC between MP 127 and 138.1, for approximately 21 miles to a location southeast of Swan Falls and north of Tick Basin. The corresponding 21 miles of existing 138-kV line would be decommissioned and existing structures removed (existing structures with raptor nests and/or nest boxes may be left). At the location south of Swan Falls, the two circuits separate before crossing the Snake River canyon between MP 143 and 143.5 near the existing Sinker Creek to Tap 138-kV transmission line crossing south of Sinker Butte. On the west side of the canyon, the route turns briefly south, parallel to the existing 138-kV line, and then turns west adjacent to the existing Sinker Creek substation access road across Murphy Flat. At MP146.5, the route turns northwest along the east and west faces of several low hills to minimize impacts to irrigated agriculture and to the Oregon NHT. Near MP 151.6, the route descends off of Murphy Flat at the Murphy Rim and crosses the Con Shea Road north of Murphy. After crossing SR 78 at MP 153.4 north of the Rabbit Creek trailhead, the alignment continues in a northwesterly direction for approximately 9.5 miles, entering into the Hemingway Substation along the western edge of the China Ditch subdivision and adjacent to Reynolds Creek. Approximately 0.6 mile of the existing 500-kV line would be rebuilt in order to allow both the Gateway West and the existing 500-kV lines to enter the Hemingway Substation.

The Revised Proposed Route would not be in conformance with the management direction provided in the 1987 Jarbidge and SRBOP RMPs, nor the Twin Falls MFP. The 1987 Jarbidge RMP would need an amendment for visual resources, changing VRM Class II to VRM Class III. The SRBOP RMP would need amendments to allow the project in the Cove non-motorized area, to change VRM Class II areas to VRM Class III and allow a crossing of the Oregon Trail, to permit surface-disturbing activity within 0.5 mile of sensitive plant habitat, to cross outside of existing utility corridors within the SRBOP, and to allow the Project within the C.J Strike and Snake River SRMAs. The Twin Falls MFP would need amendments to allow the ROW outside of existing corridors and to allow the Project to cross the Salmon Falls ACEC, changing the VRM to VRM Class III, consistent with the new Jarbidge RMP. Table 2.3-1 describes the management direction and the associated amendments. Appendix F provides the associated amendments, and Appendix G provides the analysis and rationale for the visual resource amendments.

#### 2.3.1.3 Proponent-Proposed Mitigation and Enhancement Portfolio

To authorize a ROW under FLPMA through any portion of the SRBOP, the BLM must demonstrate that: 1) the use is compatible with the enabling statute of the SRBOP; 2) impacts to the SRBOP have been avoided or minimized to the greatest extent possible; and 3) enhancement will result in a net benefit to the SRBOP for the duration of the ROW permit (BLM 2008a).

The Proponents have developed a draft MEP (August 2014) aimed at offsetting impacts to resources and values and enhancing the resources and values found in the SRBOP

(see Appendix C). The Proponents' Draft MEP includes both compensatory mitigation and enhancement components that collectively are design features of their proposal. The compensatory mitigation addresses the remaining impacts that persist after all other design features have been implemented. Remaining impacts are defined in Section 3.0. Specifically, the MEP includes:

- Avoidance and minimization through routing and environmental protection measures (EPMs);
- Mitigation that requires so-called "enhancement ratios" designed to rectify direct impacts beyond standard mitigation;
- Restoration efforts consistent with SRBOP required mitigation goals and objectives;
- Visitor enhancement activities;
- Reclamation and project-wide compensatory mitigation;
- Removal of existing power lines and substation within the SRBOP.
- Purchase of high-priority private inholdings in the SRBOP; and
- Improved funding of law enforcement.

#### 2.3.1.4 Modification to WECC Criteria

At the time the routes were being developed for the original Gateway West EIS in 2008, the WECC recommended that high-voltage transmission lines be separated by at least "the longest span length of the two transmission circuits at the point of separation or 500 feet, whichever is greater, between the transmission circuits" (WECC 2008). For Gateway West, the longest span length was assumed to be 1,500 feet, thereby dictating the minimum distance between existing and proposed transmission lines serving the same load.

The regional transmission planning criteria and guidelines were derived from planning standards developed by the NERC and were designed to reduce the risk of the following:

- A tower falling into an adjacent line;
- A snagged shield wire dragged into adjacent line;
- An aircraft flying into more than one circuit;
- Fire, smoke, or dust shorting more than one circuit; or
- Lightning strikes affecting more than one line.

In December 2011, the WECC and the WECC Board of Directors relaxed the regional transmission planning criterion to a minimum of 250 feet from an existing line. This change became effective in April 2012. The separation of transmission lines within a common corridor or lines serving the same load is measured between the centerlines of the transmission lines.

All utilities participating in the WECC are still responsible for preventing outages and must use the best available planning and engineering to estimate the risk of outages regardless of separation. Under certain limited circumstances, the Proponents have considered reducing the separation between high-voltage lines for limited distances and under restricted circumstances. Restricted circumstances could include, but would not be limited to, steep topography, geologic hazards, avoiding cultural sites or existing developments, crossing other transmission lines, or when approaching a substation.

### 2.3.2 Other Routes Considered in the SEIS

#### 2.3.2.1 Segment 8 Routes

**Route 8G**

Route 8G is being considered by the BLM to avoid crossing the northern portion of the SRBOP. The route follows an alignment similar to the ones analyzed for Routes 8A and 9B in the FEIS for approximately 44 miles, although it parallels 250 feet north of the existing 500-kV transmission line rather than 1,500 feet to the south in order to avoid the Hagerman Fossil Beds National Monument and development near Hagerman. The route then parallels 250 feet north of the Segment 9 Revised Proposed Route and Route 9K for most of the remaining distance into the Hemingway Substation. The route is 146.9 miles long (including a 1.9-mile rebuild of the existing 500-kV line), compared to the 129.7-mile-long Revised Proposed Route.

From the Midpoint Substation, Route 8G proceeds due west parallel to and 250 feet north of the existing 500-kV transmission line. The route passes approximately 4 miles north of Wendell, 7.3 miles south of Gooding, and 1 mile north of Hagerman through residential and agricultural development. The route crosses I-84 (MP 20) approximately 4 miles east of Hagerman. At the Gooding/Twin Falls County line (MP 26.6), the route crosses the Snake River north of the existing 500-kV line, Lower Salmon Falls Dam, and multiple lower voltage transmission lines, approximately 1.0 to 1.25 miles north of Hagerman Fossil Beds National Monument. From there it continues west, remaining 250 feet north of and parallel to the existing 500-kV line, within the WWE corridor on public land, across areas of extensive wind energy development to the Twin Falls/Elmore County line (MP 31.2). At MP 26.6, approximately 1.9 miles of the existing 500-kV transmission line would be rebuilt 250 feet to the south to avoid existing agricultural and windfarm infrastructure on private land, and Route 8G would follow the current alignment for the existing 500-kV line.

At MP 31.8, the route leaves the existing 500-kV line and continues west for 4 miles, still within the WWE corridor. At MP 44, Route 8G turns northwest and parallels 250 feet north of Segment 9 Revised Proposed Route for approximately 22.5 miles, still within the WWE corridor on public land. At MP 67.1, the route proceeds due south and parallels 250 feet north of Route 9K through Owyhee County for 73 miles. At MP 105, the route turns north for approximately 7 miles, crossing Birch Creek near MP 107, before turning west and crossing areas of irrigated agricultural and residential development along Castle Creek between MP 112.2 to 114. At MP 115.4, the route turns north again, crossing additional areas of irrigated agricultural and residential development along Catherine Creek near MP 115.7. At MP 116.9, the route proceeds

northwest, parallel to Highway 78 north of Oreana where it rejoins the WWE corridor at MP 119.5. At MP 122.3, the route leaves the WWE corridor and continues northwest to avoid crossing the SRBOP. Between MP 125 to 126, the route crosses Sinker Creek before continuing north along the western edge of the SRBOP. From MP 131.3 to 140, the route continues northwest approximately 2 miles west of Murphy where it rejoins and follows 250 feet north of the Segment 9 Revised Proposed Route for 3 miles. The route then turns north for 2 miles to the Hemingway Substation.

Plan amendments would be needed for the SRBOP RMP and the Bruneau MFP to make Route 8G conform with BLM land use plans in effect. The route would require an amendment to cross outside of existing utility corridors within the SRBOP, and to permit surface-disturbing activity within 0.5 mile of sensitive plant habitat. An amendment would be needed to change a VRM Class II area near Castle Creek to VRM Class III in the Bruneau MFP planning area. Table 2.3-1 describes the management direction and the associated amendments. Appendix F provides the associated amendments and documentation, and Appendix G provides the analysis and rationale for the visual resource amendments.

**Route 8H**

Route 8H is being considered by the BLM to avoid crossing the northern portion of the SRBOP. The route follows a combination of portions of the alignments analyzed for 8G and the Revised Proposed Route for Segment 9. The route is 137.5 miles long (including a 1.9-mile rebuild of the existing 500-kV line and a 25.7-mile removal and rebuild of a 138-kV line), compared to the 129.7-mile-long Segment 8 Revised Proposed Route. Approximately 44 miles of the route follow the 8G alignment; the remainder of 8H follows the alignment of the Segment 9 Revised Proposed Route.

From the Midpoint Substation, 8H proceeds due west parallel to, and 250 feet north of, the existing 500-kV transmission line. The route passes approximately 4 miles north of Wendell, 7.3 miles south of Gooding, and 1 mile north of Hagerman through residential and agricultural areas. The route crosses I-84 (MP 20) approximately 4 miles east of Hagerman. At the Gooding/Twin Falls County line (MP 26.6), the route crosses the Snake River north of the existing 500-kV line, Lower Salmon Falls Dam, and multiple lower voltage transmission lines, approximately 1.0 to 1.25 miles north of Hagerman Fossil Beds National Monument. Also, beginning at MP 26.6, approximately 1.9 miles of the existing 500-kV transmission line would be rebuilt 250 feet to the south to avoid existing agricultural and windfarm infrastructure on private land, and 8H would follow the current alignment for the existing 500-kV line. The route continues west, remaining 250 feet north of and parallel to the existing 500-kV line, within the WWE corridor on public land, across areas of extensive wind energy development to the Twin Falls/Elmore County line (MP 31.2).

At MP 31.8, the route leaves the existing 500-kV line and continues west for 4 miles, still within the WWE corridor. At MP 44, 8H turns northwest and follows the Segment 9 Revised Proposed Route alignment for approximately 22.5 miles, still within the WWE corridor on public land. At MP 67.0, the route proceeds northwest along the Segment 9 Revised Proposed Route through Owyhee County to the Hemingway Substation. Beginning south of Bruneau Dunes State Park, within the SRBOP, the route leaves the

established utility corridor in a northwesterly direction, crossing SR 51 at MP 72.4 and leaving the SRBOP at MP 73.6. At MP 76.4, the route re-enters the SRBOP, double circuiting with the existing C.J. Strike – Bruneau Bridge 138-kV transmission line in the current ROW at MP 77.5 for approximately 3.1 miles (the existing 138-kV structures would be removed). At MP 80.6, the two circuits separate to permit a more feasible crossing of the Narrows between C.J. Strike Reservoir and the Bruneau Arm. On the west side of the Bruneau River, the two lines again become a double circuit at MP 81.6 across the Cove non-motorized and recreation areas, and continue west approximately 2 miles to the C.J. Strike Dam, where the lines again separate at MP 83.6 and the existing 138-kV line enters a substation at the dam. Route 8H parallels approximately 200 feet west of an existing double-circuit 138-kV line to the north for 3.5 miles, crossing the Snake River below the C.J. Strike Dam between MPs 84.6 and 85. At MP 87.8, the alignment shifts west, and then north again, to avoid encroachment in the Mountain Home AFB–controlled airspace, and to avoid new impacts to private agricultural lands. At MP 91.7, the alignment crosses the Grand View Highway (SR 167), and then joins the existing Bowmont to Canyon Creek 138-kV transmission line in a new double-circuit alignment along the south side of the Big Baja Road at MP 92.7. The new double-circuit alignment proceeds northwest, generally parallel to Big Baja Road for 18.5 miles and adjacent to the southern boundary of the OCTC between MP 98.2 and 109.3, for approximately 21 miles to a location southeast of Swan Falls and north of Tick Basin. The corresponding 21 miles of existing 138-kV line would be decommissioned and existing structures removed (existing structures with raptor nests and/or nest boxes may be left). At the location south of Swan Falls, the two circuits separate before crossing the Snake River canyon between MPs 114.3 and 114.8 near the existing Sinker Creek – Tap 138-kV transmission line crossing south of Sinker Butte. On the west side of the canyon, the route turns briefly south, parallel to the existing 138-kV line, and then turns west adjacent to the existing Sinker Creek Substation access road across Murphy Flat. At MP 117.7, the route turns northwest along the east and west faces of several low hills to minimize impacts to irrigated agriculture and to the Oregon NHT. Near MP 123, the route descends off of Murphy Flat at the Murphy Rim and crosses the Con Shea Road north of Murphy. After crossing SR 78 at MP 124.6 north of the Rabbit Creek trailhead, the alignment continues in a northwesterly direction for approximately 9.5 miles, entering into the Hemingway Substation along the western edge of the China Ditch subdivision and adjacent to Reynolds Creek. Approximately 0.6 mile of the existing 500-kV line would be rebuilt in order to allow both the Gateway West and the existing 500-kV lines to enter the Hemingway Substation.

Route 8H would not be in conformance with the management direction provided in the 1987 Jarbidge RMP and the SRBOP RMP, and therefore amendments would be needed to each plan. Within the 1987 Jarbidge RMP planning area, an amendment would be needed to change the VRM classification from VRM Class II to VRM Class III. The route would require amendments to the SRBOP RMP to allow the Project in the Cove non-motorized area, to change VRM Class II areas to VRM Class III and allow a crossing of the Oregon Trail, to permit surface-disturbing activity within 0.5 mile of sensitive plant habitat, to cross outside of existing utility corridors within the SRBOP, and to allow the Project within the C.J Strike and Snake River SRMAs. Table 2.3-1 describes the management direction and the associated amendments. Appendix F

provides the associated amendments and documentation, and Appendix G provides the analysis and rationale for the visual resource amendments.

#### 2.3.2.2 Segment 9 Routes

**FEIS Proposed 9**

FEIS Proposed 9 is the essentially the same as the route analyzed in the 2013 Gateway West FEIS. It is described above in Section 2.3.1.1. The 162.2-mile-long route in Segment 9 was designed to follow existing utility corridors and avoid the SRBOP where feasible. Approximately 54 miles of the route is within or adjacent to a utility corridor. FEIS Proposed 9 is approximately 3.1 miles shorter than the Revised Proposed Route but it crosses 13.6 miles of the SRBOP compared to 54.2 miles for the Revised Proposed Route. Like the Revised Proposed Route, FEIS Proposed 9 crosses the Salmon Falls Creek at Lilly Grade adjacent to an existing single-phase 34.5-kV distribution line just north of the Salmon Falls Creek WSA.

FEIS Proposed 9 would not be in conformance with the management direction provided in the SRBOP RMP or the Twin Falls and Bruneau MFPs. The SRBOP RMP would need amendments to allow the Project outside identified utility corridors and to permit surface-disturbing activity within 0.5 mile of sensitive plant habitat. The Twin Falls MFP would need amendments to allow the ROW outside of existing corridors and to allow the Project to cross the Salmon Falls ACEC, changing the VRM to Class III, consistent with the new Jarbidge RMP. The Bruneau MFP would require an amendment to reclassify a VRM Class II area to VRM Class III near Castle Creek. Tables 2.3-1 describes the management direction and the associated amendments. Appendix F discusses the associated amendments, and Appendix G provides the analysis and rationale for visual resources amendments.

**Route 9K**

Route 9K is being considered by the BLM as a modified version of FEIS Route 9E (the FEIS Preferred Route) to avoid crossing the northwestern portion of the SRBOP and to minimize direct and indirect impacts to priority sage-grouse habitat that would have occurred under 9E. The route is approximately 174.6 miles long, compared to the 165.3-mile-long Segment 9 Revised Proposed Route.

From the proposed Cedar Hill Substation, Route 9K follows the Segment 9 Revised Proposed Route for 95.6 miles. At MP 72.7, the route begins to parallel 250 feet south of Route 8G, and continues to parallel it for approximately 98.9 miles to the Hemingway Substation. At MP 95.6, the route turns south and generally follows the alignment for FEIS Route 9E for 24.4 miles. At MP 133.8, the route turns north for approximately 7 miles, crossing Birch Creek near MP 135.7, before turning west and crossing areas of irrigated agricultural and residential development along Castle Creek between MP 141 to 143. At MP 144.1, the route turns north again, crossing additional areas of irrigated agricultural and residential development along Catherine Creek near MP 144.5. At MP 145.6, the route proceeds northwest, parallel to Highway 78 north of Oreana where it rejoins the WWE corridor at MP 148.1. At MP 150.9, the route leaves the WWE corridor and continues northwest to avoid crossing the SRBOP. Between MPs 153.7 and 154.7, the route crosses Sinker Creek before continuing north along the western edge of the

SRBOP. At MP 160.1, the route rejoins FEIS Route 9E for the remaining 14 miles into the Hemingway Substation.

Plan amendments would be needed for the SRBOP RMP, and Twin Falls and Bruneau MFPs to make Route 9K conform with BLM land use plans in effect. Route 9K would require an amendment of the SRBOP RMP to cross outside of existing utility corridors within the SRBOP to permit surface-disturbing activity within 0.5 mile of sensitive plant habitat. The Twin Falls MFP would need amendments to allow the ROW outside of existing corridors and to allow the Project to cross the Salmon Falls ACEC, changing the VRM to VRM Class III, consistent with the new Jarbidge RMP. An amendment would be needed to change a VRM Class II area near Castle Creek to VRM Class III in the Bruneau MFP planning area. Table 2.3-1 describes the management direction and the associated amendments. Appendix F provides the associated amendments and documentation, and Appendix G provides the analysis and rationale for the visual resource amendments.

**Toana Road Variation 1 to the Segment 9 Revised Proposed Route**

Toana Road Variation 1 to the Segment 9 Revised Proposed Route was recommended by the BLM Jarbidge Field Office to avoid paralleling the Toana Freight Wagon Road, a National Register historic site. After the 2013 FEIS, BLM archaeologists determined that the Proposed Route paralleled within 0.25 mile of the Toana Road for between MP 38.2 and 40.6, and paralleled within 1 mile of the road through Blue Gulch between MP 40.6 and 43.5. Variation 1 is approximately 8.5 miles long. It deviates from the Proposed Route at MP 38.2 (9d), crossing the Toana Freight Wagon Road at MP 0.3, and continuing in a westerly direction an additional 1.7 miles. The variation then turns north along the base of Castleford Butte and continues an additional 7 miles before rejoining the Proposed Route at MP 46.8 (9e), near Balanced Rock Road. Approximately 0.3 mile of the route crosses state land; the remainder of the route is on land managed by the BLM.

**Toana Road Variation 1-A to the Segment 9 Revised Proposed Route**

The Toana Road Variation 1-A to the Segment 9 Revised Proposed Route was also recommended by the BLM to minimize visual impacts to the Toana Freight Wagon Road, but also to utilize existing roads and to minimize new road construction in the area. Variation 1-A also deviates from the Proposed Route at MP 38.2 and follows the same alignment as Variation 1 for the first 2 miles before turning north (9d1). At MP 3.6, the variation crosses, and then closely parallels, Kinyon Road an additional 3.4 miles. At MP 7, the alignment turns to the northwest for 1.8 miles, rejoining the Proposed Route at MP 46.8 (9e), near Balanced Rock Road. Variation 1-A is approximately 8.9 miles long. Approximately 1 mile of the route crosses state land; the remainder is on land managed by the BLM.

### 2.3.3 Action Alternatives Considered in the SEIS

The BLM has developed seven action alternatives that each consist of a different combination of route options along Segments 8 and 9. This SEIS assesses each individual route option along Segments 8 and 9 independently, as well as when these routes are combined within these seven BLM action alternatives. The SEIS' assessment of individual route options considers these various routes as a separate

project segment, and all aspects of the Project that would be connected to that segment are disclosed by route, such as access roads and temporary staging areas. However, there would be some overlap between Project components when considering routes for both Segments 8 and 9 together within the seven action alternatives. For example, some access roads may be used for both Segments 8 and 9 in some places, depending on the specific route considered. As a result, minor changes to some of the Project roads or temporary work areas may be needed. For example, 8G and 9K would follow the same alignment for the majority of the route under Alternative 5 (described below).

The seven BLM action alternatives are displayed in Figures 2.3-4a through 2.3-4g. Each of the seven action alternatives are analyzed with and without the Toana Road Variation 1 and Toana Road Variation 1-A.

### 2.3.3.1 Alternative 1 – Proposed Action (the Revised Proposed Routes for Segments 8 and 9)

Alternative 1 is the Proposed Action, and consists of the Project as designed and developed by the Proponents (see Figure 2.3-4a). It includes the Proponents' revised

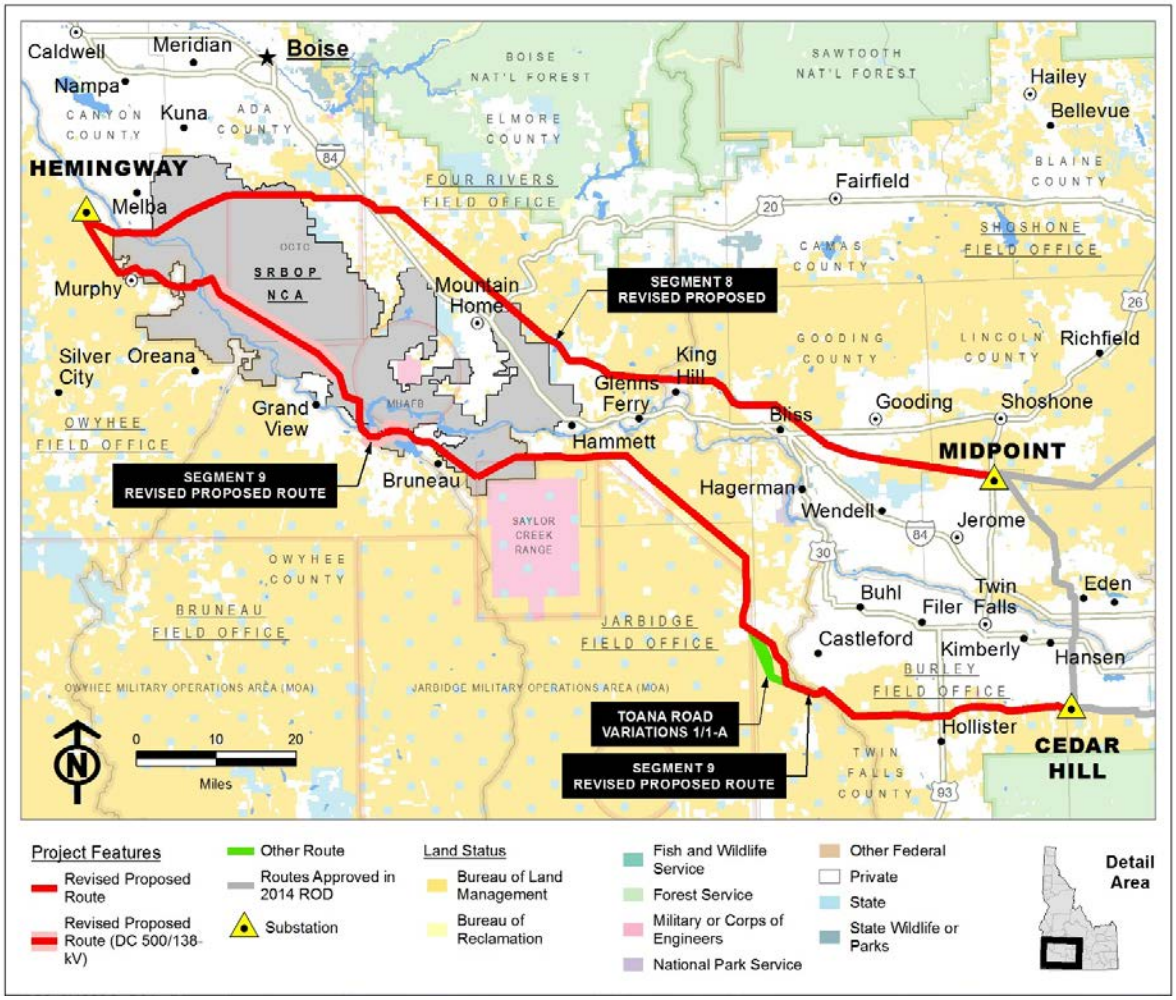



**Figure 2.3-4a.** Alternative 1 – Proposed Action (Revised Proposed Routes for Segments 8 and 9)

route for Segments 8 and 9, as described in Section 2.3.1. Alternative 1 has a combined length of 295 miles. It would require removal of existing transmission line along a total of 26.8 miles. Approximately 83.3 miles of this alternative would be within the SRBOP.

#### 2.3.3.2 Alternative 2 – Revised Proposed 8 and FEIS Proposed 9

Alternative 2 consists of the Segment 8 Revised Proposed Route and the Segment 9 FEIS Proposed Route (see Section 2.3.1 for a detailed description of these routes). Alternative 2 has a combined length of 291.9 miles, which is the shortest length among the seven alternatives. It would require removal of existing transmission line along 1.1 miles of the route. Approximately 35.1 miles of this alternative would be within the SRBOP.

This alternative minimizes impacts to the SRBOP (compared to Alternative 1) by incorporating into the alternative FEIS Proposed 9 (which avoids crossing the northwestern portion of the SRBOP) instead of using the Revised Proposed Route for Segment 9 (which crossed though a substantial portion of the SRBOP along its northwestern end; see Figure 2.3-4b).

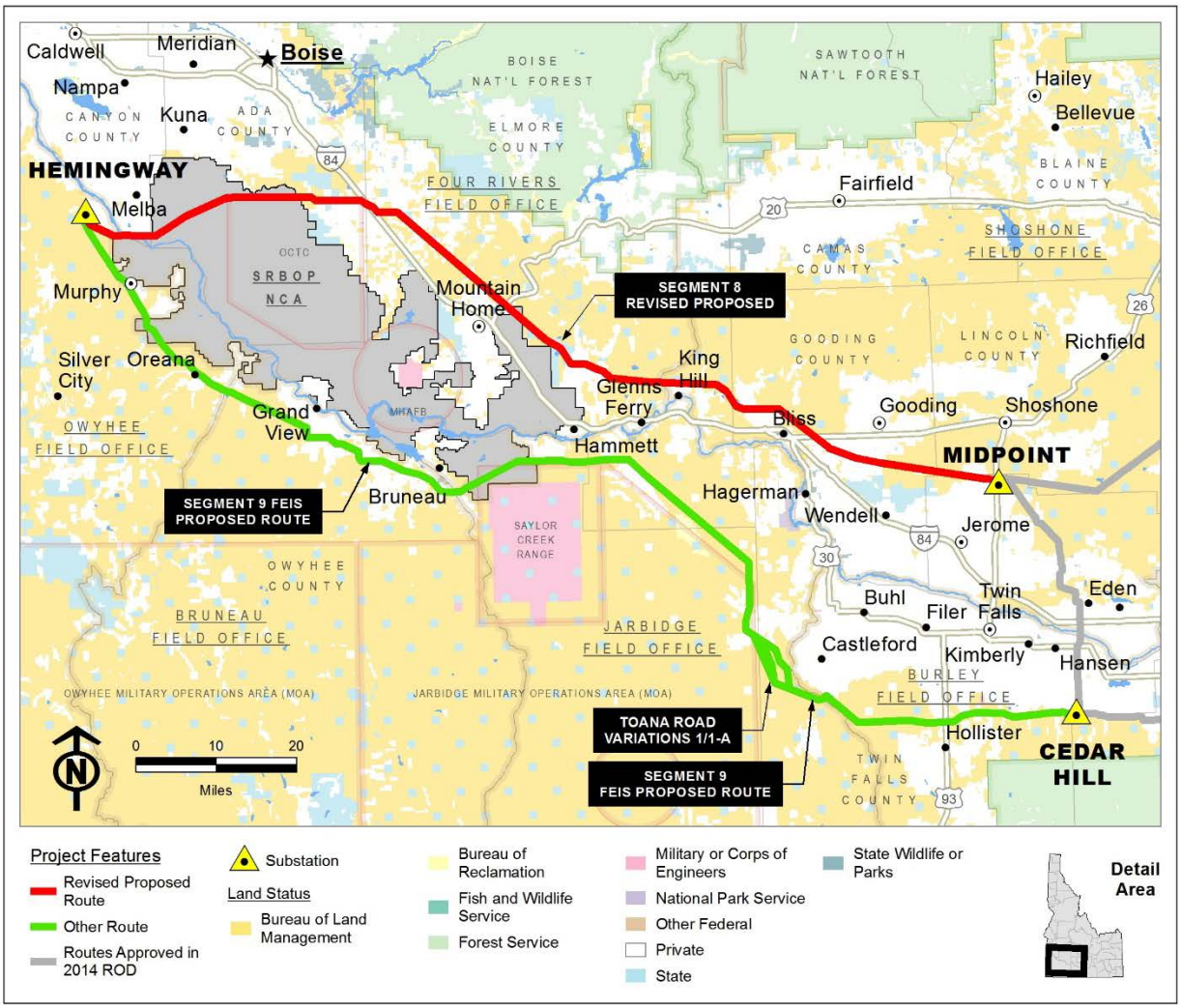



**Figure 2.3-4b.** Alternative 2 (Segment 8 Revised Proposed Route and FEIS Proposed 9)

### 2.3.3.3 Alternative 3 – Revised Proposed 8 and the 9K Route

Alternative 3 consists of the Segment 8 Revised Proposed Route and Route 9K (see Sections 2.3.1 and 2.3.2 for a detailed description of these routes). Alternative 3 has a combined length of 304.3 miles and would require removal of existing transmission line along 1.1 mile of the route. Approximately 31.3 miles of this alternative would be within the SRBOP.

This alternative minimizes impacts to the SRBOP (compared to Alternative 1), by incorporating Route 9K into the alternative (which avoids crossing the northwestern portion of the SRBOP) instead of using the Revised Proposed Route for Segment 9 (which crossed though a substantial portion of the SRBOP along its northwestern end; see Figure 2.3-4c).

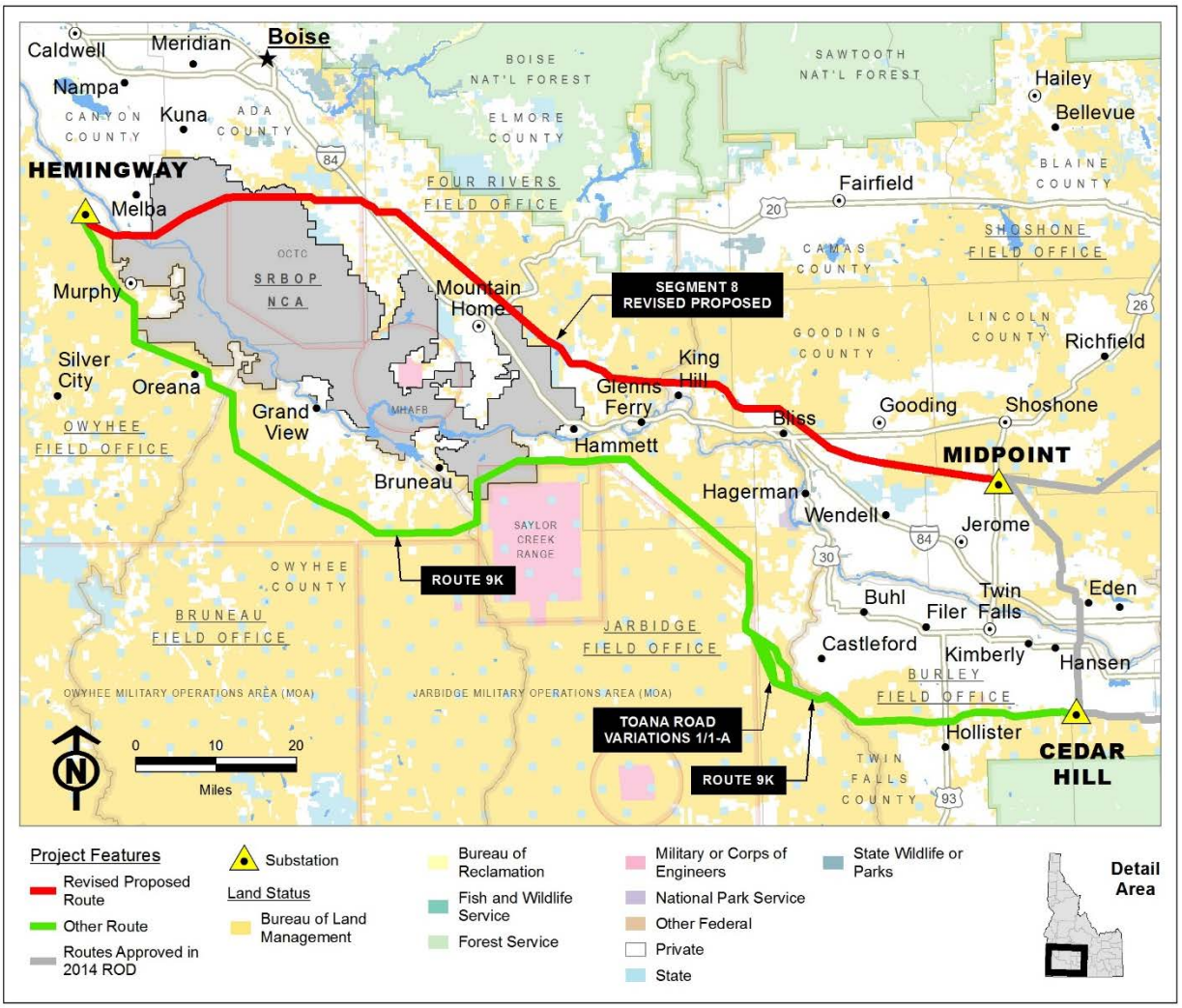



**Figure 2.3-4c.** Alternative 3 (Segment 8 Revised Proposed Route and Route 9K)

### 2.3.3.4 Alternative 4 – The 8G Route and FEIS Proposed 9

Alternative 4 consists of Route 8G and the Segment 9 FEIS Proposed Route (see Sections 2.3.1 and 2.3.2 for a detailed description of these routes). Alternative 4 has a

combined length of 309.1 miles. It would require removal of existing transmission line along 1.9 miles of the route. Approximately 23.5 miles of this alternative would be within the SRBOP.

This alternative incorporates route options that would result in Segments 8 and 9 paralleling each other for portions of their lengths. Under this alternative, Segments 8 and 9 would parallel each other along the southern and northwestern end of the SRBOP, only deviating from each other near the SRBOP at Route 8G's MPs 96 and 131, where Route 8G would be located south of FEIS Proposed 9 (see Figure 2.3-4d). Route 8G and FEIS Proposed 9 would begin to parallel each other around Route 8G's MP 44.

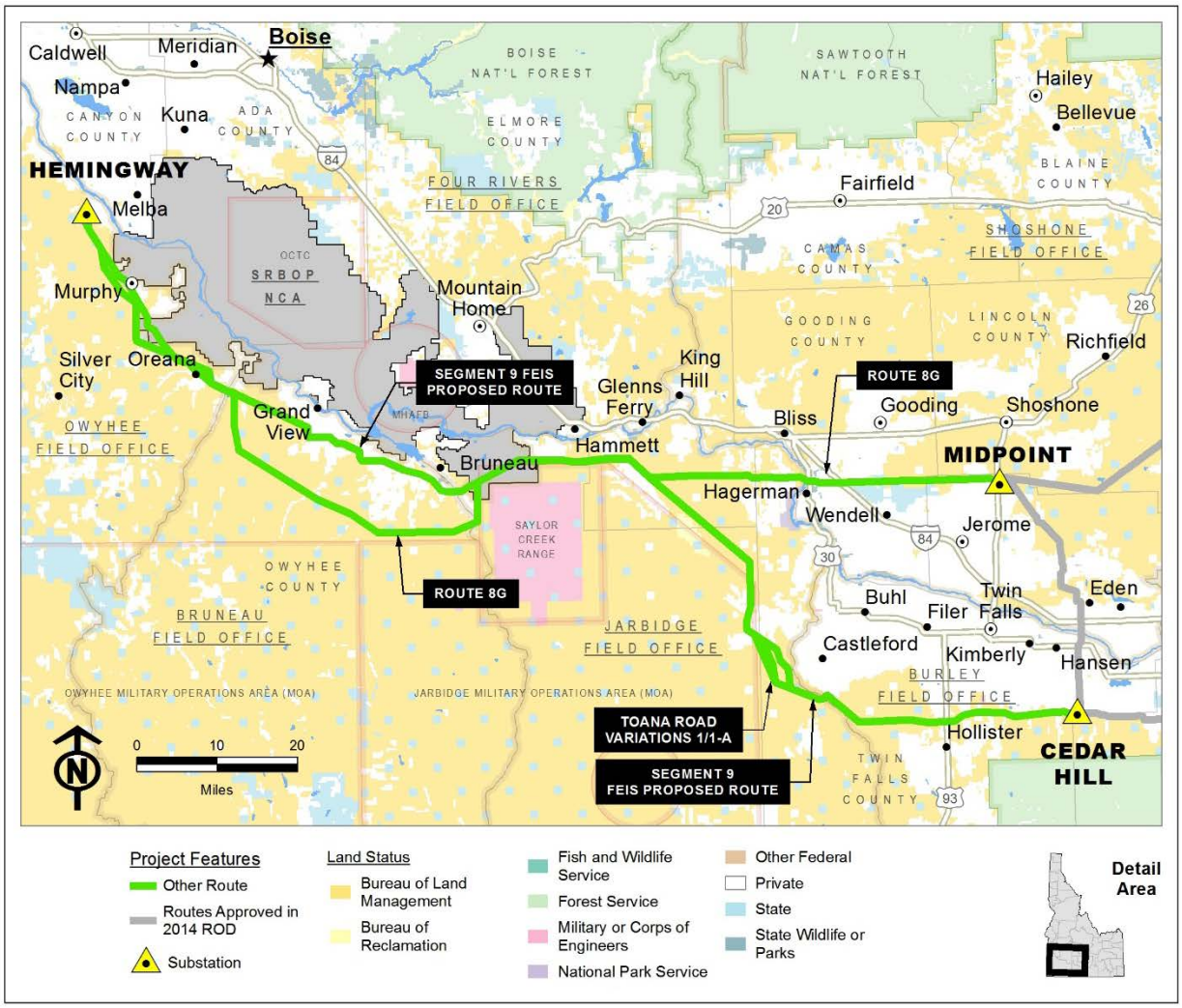



**Figure 2.3-4d.** Alternative 4 (Route 8G and FEIS Proposed 9)

### 2.3.3.5 Alternative 5 – The 8G and 9K Routes

Alternative 5 consists of Route 8G and Route 9K (see Section 2.3.2 for a detailed description of these routes). Alternative 5 has a combined length of 321.5 miles, which is the highest total length among the seven alternatives. It would require removal of

existing transmission line along 1.9 miles of the route. The two routes would follow the same alignment, 250 feet apart, for approximately 9.9 miles within the SRBOP.

This alternative incorporates route options that would result in Segments 8 and 9 paralleling each other for portions of their lengths. Under this alternative, Segments 8 and 9 would begin to parallel each other around Route 8G's MP 44, and then continue to follow a parallel path into Hemingway Substation (see Figure 2.3-4e).

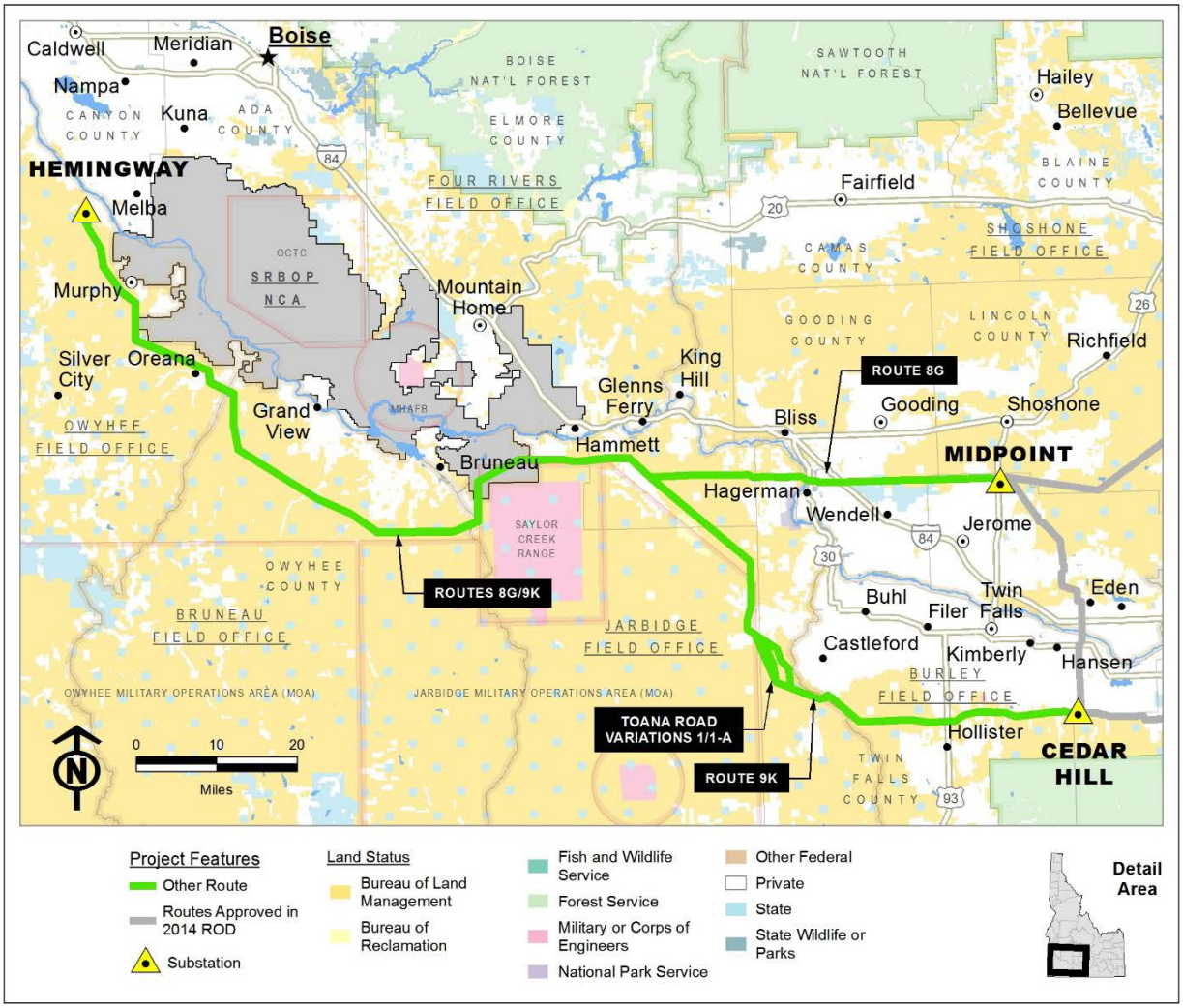



**Figure 2.3-4e.** Alternative 5 (Routes 8G and 9K)

### 2.3.3.6 Alternative 6 – The 8H Route and FEIS Proposed 9

Alternative 6 consists of Route 8H and FEIS Proposed 9 (see Sections 2.3.1 and 2.3.2 for a detailed description of these routes). Alternative 6 has a combined length of 299.7 miles, and would require removal of an existing 138-kV transmission line along 25.7 miles of the route as well as a 1.9-mile rebuild of an existing 500-kV line. Approximately 74.7 miles of this alternative would be within the SRBOP.

This alternative incorporates route options that would result in Segments 8 and 9 paralleling each other for portions of their lengths. Under this alternative, Segments 8

and 9 would begin to parallel each other around Route 8H's MP 44, and then deviate from each other around MP 95, where Route 8H would cross north into the SRBOP before rejoining FEIS Proposed 9 near Route 8H's MP 125 (see Figure 2.3-4f).

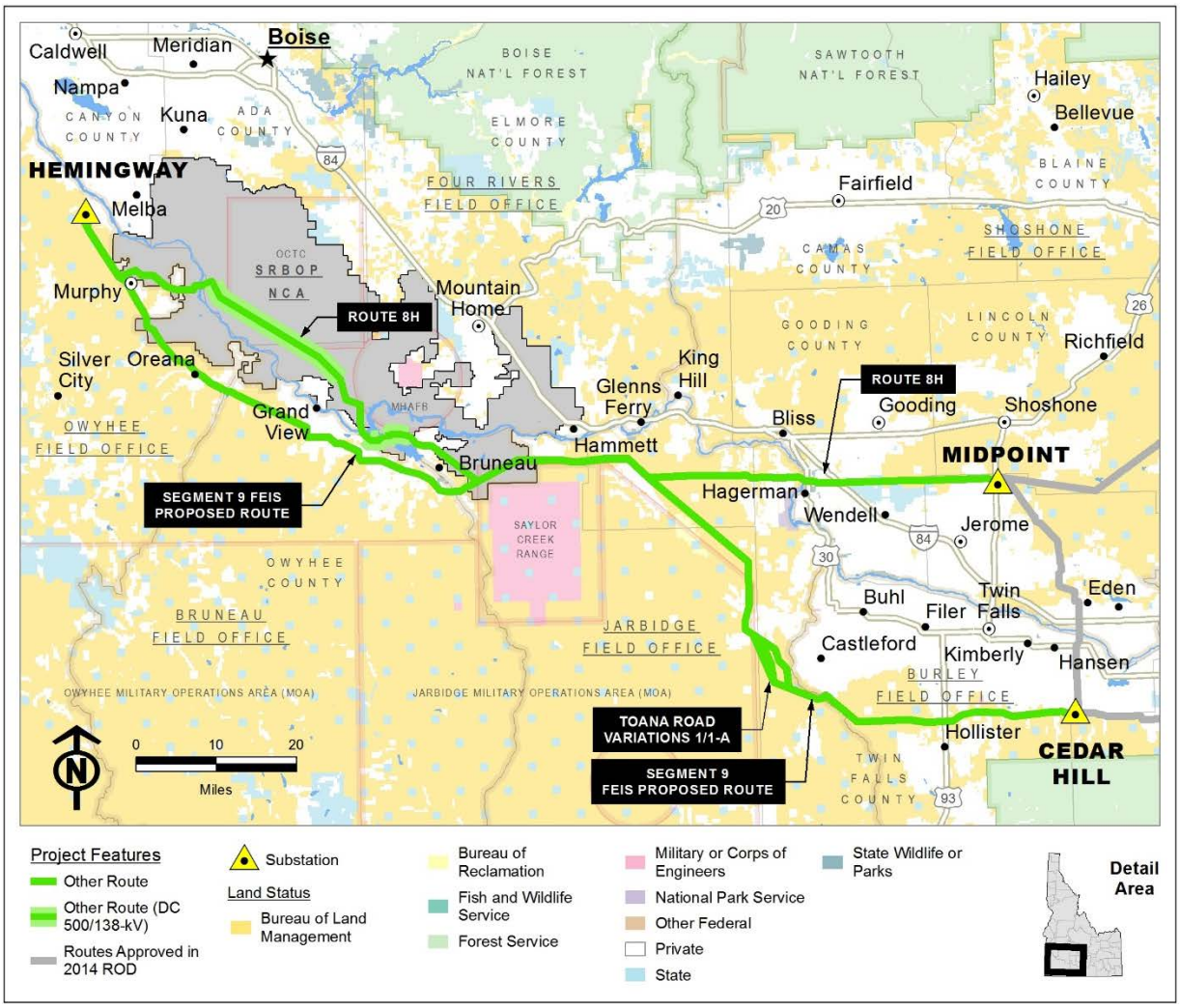



**Figure 2.3-4f.** Alternative 6 (Route 8H and FEIS Proposed 9)

### 2.3.3.7 Alternative 7 – The 8H and 9K Routes

Alternative 7 consists of Route 8H and Route 9K (see Section 2.3.2 for a detailed description of these routes). Alternative 7 has a combined length of 312.1 miles. It would require removal of an existing 138-kV transmission line along 25.7 miles of the route as well as a 1.9-mile rebuild of an existing 500-kV line. Approximately 70.9 miles of this alternative would be within the SRBOP.

This alternative incorporates route options that would result in Segments 8 and 9 paralleling each other for portions of their lengths. Under this alternative, Segments 8 and 9 would begin to parallel each other around Route 8H's MP 44, and then deviate from each other around MP 95, where Route 8H would cross north into the SRBOP

while 9K would turn south. The two routes would rejoin (i.e., begin to parallel each other) again around Route 8H's MP 130 (see Figure 2.3-4g).

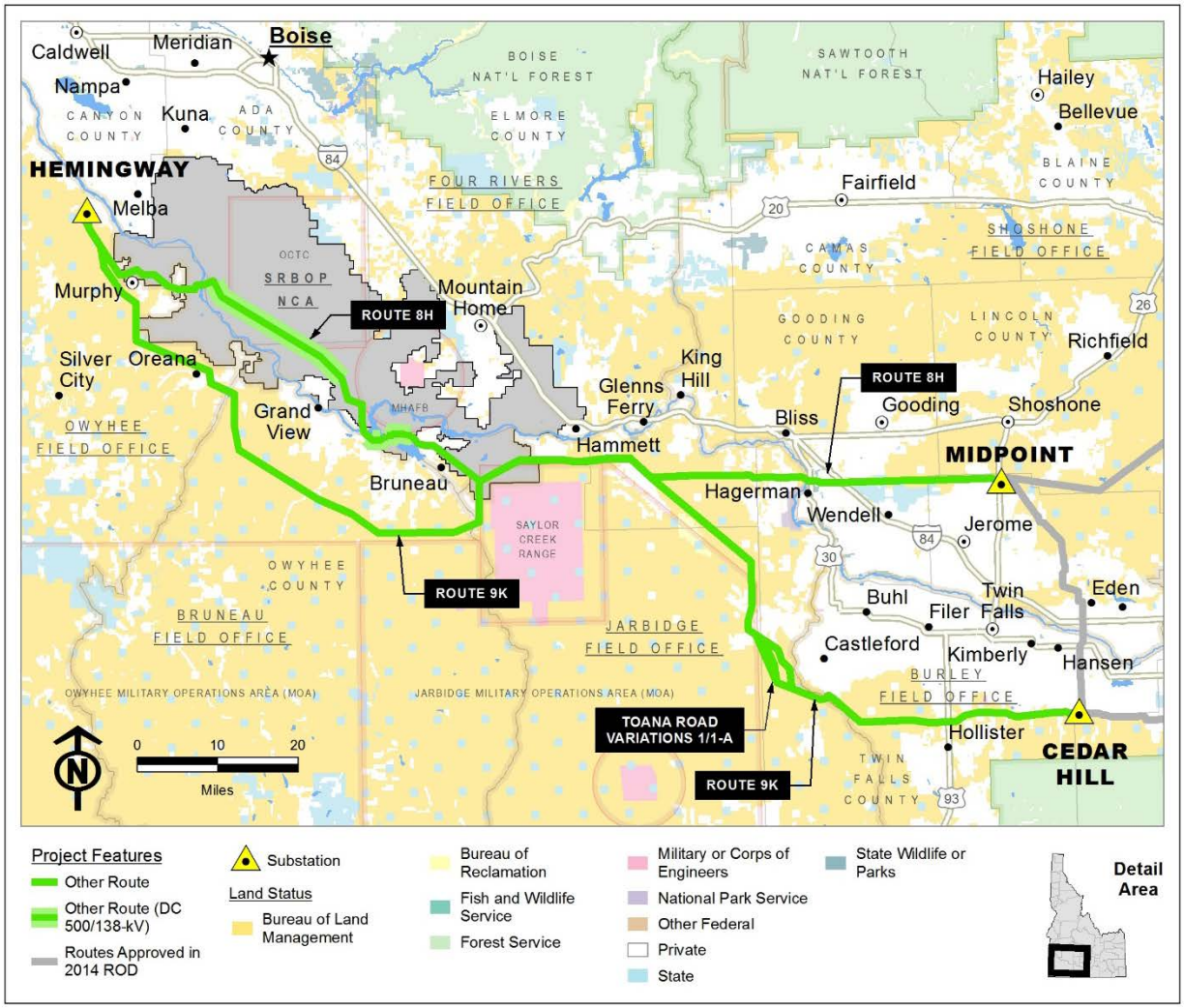



**Figure 2.3-4g.** Alternative 7 (Routes 8H and 9K)

### 2.3.4 BLM Preferred Alternatives

In accordance with DOI regulations (43 CFR 46.425), the BLM identifies Alternatives 2 and 5 with inclusion of the Toana Road Variation 1 as the Co-Preferred Alternatives for Segments 8 and 9.

Siting preference on public versus private lands is an important issue for Segments 8 and 9. The BLM coordinated with federal, state, and local government cooperating agencies to identify reasonable routes that would result in complementary siting decisions by all authorizing entities. The BLM will only make a decision on siting of the transmission line on federal lands that it manages. The BLM has no authority to either permit or prohibit construction of the Project on non-federal land. While the BLM's decision may affect private lands adjacent to or between federal areas, decisions on

siting and construction requirements on non-federal lands are under the authority of state and local governments.

In Idaho, the IPUC regulates the siting of major transmission lines through a Certificate of Public Convenience and Necessity. Individual counties and local governments are responsible for authorizing the Project on private land. The Idaho Department of Lands (IDL) is responsible for authorizing the Project on state lands. Table 1.5-1 provides a summary of the major permits that would be required, while Section 3.17.1.3 of the FEIS provides a description of the regulatory requirements that pertain to land use.

A final POD, and any POD supplements, submitted by the Proponents is incorporated into the "Terms and Conditions" of BLM ROW grants and becomes a binding requirement that the Proponents must comply with. PODs contain typical construction diagrams, identify access roads and facility locations, and describe construction and reclamation practices as well as other environmental mitigation measures. In large and complex linear projects, final detail is seldom available when the ROW grant is issued. The BLM may issue a ROW grant but withhold use of the granted area until final design and other environmental requirements are met. A Notice to Proceed is issued when all requirements are met (43 CFR 2805.10 (a)(2)).

The POD Supplement for the Project is presented in Appendix B of this SEIS. The appendices to the August 2013 POD contain the framework, or outline, for each of the project-related topics. Details on facility layout and location are currently being finalized and are not available at this time.

#### 2.3.4.1 Co-Preferred Alternative 2 – Revised Proposed 8 and FEIS Proposed 9 with the Toana Road Variation 1

The BLM has identified Alternative 2, with the inclusion of the Toana Road Variation 1 as a modification, as a Co-Preferred Alternative. The alignment of Segment 8 under this alternative allows separation from populated areas and existing transmission infrastructure outside the SRBOP to the north while minimizing the disturbance footprint for the segment in the SRBOP by paralleling an existing 500-kV line. The alignment for Segment 9 in this pairing is the shortest analyzed in the Draft SEIS for this segment and follows the WWE corridor south of the SRBOP.

#### 2.3.4.2 Co-Preferred Alternative 5 – The 8G and 9K Routes with the Toana Road Variation 1

The BLM has identified Alternative 5, with the inclusion of the Toana Road Variation 1 as a modification, as a Co-Preferred Alternative. Route 8G is aligned to avoid crossing the northern portion of the SRBOP, the Hagerman Fossil Beds National Monument and development near the town of Hagerman, Idaho. Route 9K is aligned to substantially avoid crossing the SRBOP by routing to the south, especially where it is paired with 8G, and to minimize direct and indirect impacts to priority greater sage-grouse habitat. This alternative makes most use of the reduced mandatory minimum separation distance for transmission lines adopted by the WECC in 2011 and would involve the shortest crossing of the SRBOP.

### 2.3.5 Land Use Plan Amendments

The following amendments listed in Table 2.3-1 are associated with the alternatives being considered in this Draft SEIS. Some of these amendments were considered in the 2013 FEIS; the rest are unique to the alternatives in the SEIS. Refer to Appendices F and G of this document for a detailed discussion of these amendments. Note that there are no plan amendments required for the Toana Road Variations.

**Table 2.3-1.** BLM Land Use Plan Amendments by Alternative

| Management Plan | Management Direction | Amendment Description (Number) | Alternative | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Twin Falls | L-4.1 Allow future major power transmission lines (line of at least 46-138 kV which originate and terminate outside of the MFP area) to be constructed within the recommended corridors. Also allow construction of transmission lines between the corridors. Do not permit power lines to the west or the east of the two corridors. Exempt service lines from restriction. | Allow a 500-kV transmission line ROW outside of existing corridors. (SEIS-1) | x | x | x | x | x | x | x |
| | VRM I – VRM 1.1 Manage Salmon Falls Canyon between the Salmon Falls Dam and Lilly Grade for natural ecological change in accordance with a VRM Class I designation. This designation would include only the area from rim to rim. Manage the canyon from Lilly Grade to Balanced Rock under a VRM Class II designation.<br>2. The ACEC is subject to the following resource restrictions….(2) avoid utility rights-of-way….management of the Salmon Falls ACEC in the Twin Falls Resource Area will be the same as in the Jarbidge Resource Area. | The Class I and II areas adjacent to the Roseworth Corridor (established by the 2015 Jarbidge RMP) will be reclassified to match the VRM classes in the Jarbidge RMP. Allow a 500-kV transmission line to cross Salmon Falls Canyon through the ACEC, consistent with the corridor established in the Jarbidge 2015 RMP. (SEIS-2) | x | x | x | x | x | x | x |
| 1987 Jarbidge RMP | MUA-3 Utility avoidance/restricted area – three paleontological areas (Sugar Bowl, Glenn's Ferry, & McGinnis Ranch) and Oregon Trail ruts (7,200 acres/22.5 miles) to overhead and surface disturbance and underground utilities. | The current Lands decision is amended to reclassify the area identified as restricted in Section 35, T. 04 S., R. 09 E. to allow the overhead lines of a 500-kV powerline right of way while protecting the Oregon Trail ruts. (SEIS-3) | x | x | x | | | | |

**Table 2.3-1.** BLM Land Use Plan Amendments by Alternative (continued)

| Management Plan | Management Direction | Amendment Description (Number) | Alternative | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1987 Jarbidge RMP (cont'd) | Cultural Resources – 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. | 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 of ruts except where visual impacts are already compromised. Protect existing trail ruts from surface disturbance. (SEIS-4) | x | x | x | | | | |
| | Visual Resource Management – The visual or scenic values of the public lands will be considered whenever any physical actions are proposed on BLM lands. The degree of alterations to the natural landscape will be guided by the criteria established for the four Visual Resource Management Classes as outlined in BLM 8400. VRM Classes will be managed as shown on Map 9. | The VRM decisions and Map 9 are amended to accommodate a major powerline R/W. These VRM boundaries are modified according to the new manual to reclassify the VRM Class I area associated with Oregon Trail and the Proposed 500-kV line as VRM Class IV. (SEIS-5) | x | x | x | | | | |
| | | The VRM decisions and Map 9 are amended to accommodate a major powerline R/W. The VRM Classification is amended to change the VRM Class to VRM Class III, adjacent to the proposed line, where the towers would be visible and dominate the landscape. (SEIS-14) | x | | | | | x | x |
| SRBOP RMP | Utility and Communication Corridors – Restrict major utility developments to the two utility corridors identified (Lands Map 3). | Restrict major utility developments to the two utility corridors identified and allow an additional major powerline ROW as applicable with laws and values for which the SRBOP NCA was designated. Designate an additional corridor to include the existing Sun Lake 500-kV line and one additional 500-kV line. (SEIS-6) | x | x | x | | | | |
| | | Restrict major utility developments to the two utility corridors identified (Lands Map 3) and allow an additional major powerline ROW as applicable with laws and values for which the SRBOP NCA was designated. Designate an additional corridor to include one additional 500-kV line. (SEIS-7) | | x | | x | | x | |

**Table 2.3-1.** BLM Land Use Plan Amendments by Alternative (continued)

| Management Plan | Management Direction | Amendment Description (Number) | Alternative | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| SRBOP RMP (cont'd) | Utility and Communication Corridors – Restrict major utility developments to the two utility corridors identified (Lands Map 3). (cont'd) | Restrict major utility developments to the two utility corridors identified (Lands Map 3) and allow an additional major powerline ROW as applicable with laws and values for which the SRBOP NCA was designated. Designate an additional corridor to include two 500 kV lines. (SEIS-13) | | | | | x | | |
| | | Restrict major utility developments to the two utility corridors identified (Lands Map 3) and allow an additional major powerline ROW, as applicable with laws and values for which the SRBOP NCA was designated. Designate an additional corridor to include portions of the existing 138-kV line and one additional 500-kV line. (SEIS-20) | x | | | | | x | x |
| | | Restrict major utility developments to the two utility corridors identified (Lands Map 3) and allow an additional major powerline ROW as applicable with laws and values for which the SRBOP NCA was designated. Designate an additional corridor to include a 500 kV line. (SEIS-21) | | | x | | | | x |
| | | Restrict major utility developments to the two utility corridors identified (Lands Map 3) and allow an additional major powerline ROW as applicable with laws and values for which the SRBOP NCA was designated. Designate an additional corridor to include a 500 kV line. (SEIS-22) | | | | x | | | |
| | Sensitive Plant Habitat Include in all BLM authorizations permitting surface disturbing activities (non-grazing), requirements that (1) affected areas be reseeded with a perennial vegetative cover, and (2) surface disturbing activities be located at least 1/2 mile from occupied sensitive plant habitat. | Gateway West will be allowed within 0.5 mile of occupied, sensitive plant habitat, with appropriate mitigation to protect sensitive plants, including slickspot peppergrass. (SEIS-8) | x | x | x | x | x | x | x |

**Table 2.3-1.** BLM Land Use Plan Amendments by Alternative (continued)

| Management Plan | Management Direction | Amendment Description (Number) | Alternative | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| SRBOP RMP (cont'd) | VRM II Protect the Oregon Trail and management areas along the Snake River Canyon as a Visual Resource Management (VRM) Class II area, the Army National Guard Orchard Training Area (OTA) as Class IV and remaining areas as Class III. [Visual Resource Management (VRM Map)] | A corridor 250 feet from the centerline of the proposed powerline would be established with a VRM of Class III. This corridor would maintain a distance of at least 0.5 mile from the NHT, except where it crosses the trail. (SEIS-15) | x | | | | | x | x |
| | | VRM Class II areas associated with the Oregon Trail and Snake River that are in view of the 500-kV transmission line that would not meet VRM Class II objectives of the C. J. Strike SRMA would be reclassified to VRM Class III. (SEIS-18) | x | | | | | x | x |
| | This SRMA consists of 22,300 acres in the Snake River Canyon downstream from Grandview, Idaho that is managed for the protection of cultural and scenic values. (2.14 Recreation 2-20). | This SRMA consists of 22,300 acres in the Snake River Canyon downstream from Grandview, Idaho that is managed for the protection of cultural and scenic values. Allow a 500-kV transmission line to cross the SRMA while protecting cultural resources from surface disturbance. (SEIS-16) | x | | | | | x | x |
| | C.J. Strike SRMA: This SRMA consists of 20,000 acres surrounding C.J. Strike Reservoir along the Snake River. The purpose of the SRMA is to provide enhanced recreation management associated with the reservoir, and protection of the Oregon Trail adjacent to the reservoir (2.14 Recreation 2-20). | C.J. Strike SRMA: This SRMA consists of 20,000 acres surrounding C.J. Strike Reservoir along the Snake River. The purpose of the SRMA is to provide enhanced recreation management associated with the reservoir, and protection of the Oregon Trail adjacent to the reservoir. Allow a 500-kV transmission line to cross the SRMA while protecting the Oregon Trail from surface disturbance. (SEIS-17) | | | | | | | |
| | 2.16 Transportation – Close the following areas to motorized vehicles: … Cove – 1,600 acres (Transportation Map A-145). | The area is closed to motorized vehicle use, subject to authorized use. (SEIS-19) | x | | | | | x | x |
| Bennett Hills/ Timmerman Hills MFP | REC 4.1 – No management activity should be allowed to cause any evident changes in the form, line, color, or texture that is characteristic of the landscape within this Class II area. | 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). (SEIS-9) | x | x | x | | | | |

**Table 2.3-1.** BLM Land Use Plan Amendments by Alternative (continued)

| Management Plan | Management Direction | Amendment Description (Number) | Alternative | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Bennett Hills/ Timmerman Hills MFP (cont'd) | REC 14.6 – Prohibit all land disturbing developments and uses on archeological sites. | Manage all cultural resources with applicable laws and policies. (SEIS-10) | x | x | x | | | | |
| Kuna MFP | 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. | 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. (SEIS-11) | x | x | x | | | | |
| Bruneau MFP | VRM-1.2: Designate 136,000 acres as VRM Class II where activities are designed and located to blend into the natural landscape and not visually apparent to the casual visitor | The area designated as VRM Class II adjacent to Castle Creek will be reclassified to VRM Class III. (SEIS-12) | | x | x | x | x | x | x |

ACEC: Area of Critical Environmental Concern; kV: kilovolt; MFP: Management Framework Plan; NHT: National Historic Trail; R/W or ROW: right-of-way; R: Range; RMP: Resource Management Plan; SRBOP: Morley Nelson Snake River Birds of Prey National Conservation Area; SRMA: Special Recreation Management Area; T: Township; VRM: Visual Resource Management

## 2.4 NO ACTION ALTERNATIVE

The action triggering this environmental review is described in the Proponents' applications to the BLM for a ROW grant for the portion of the Project on federal lands. The agency may deny the respective applications or approve the Project with or without conditions. Therefore, the No Action Alternative analyzed in the 2013 FEIS is the predicted result of the denial of the applications. Under the No Action Alternative, Gateway West Segments 8 and 9 would not be constructed (i.e., there would be no construction of the new substations, substation expansion, or the transmission line). No RMPs or MFPs would need to be amended if the No Action Alternative is selected. The objectives of the Project (which include providing increased transmission capacity and a more reliable transmission line system for transport of energy, including wind energy, to meet existing and future needs, as described in Section 1.4, Proponents' Objectives for the Project) would not be met. The cumulative effects of the No Action Alternative are discussed in Chapter 4.

## 2.5 OTHER ROUTES CONSIDERED

### 2.5.1 Routes Considered in the FEIS for Segments 8 and 9

The 2013 FEIS considered five additional routes to the original FEIS Proposed Route for Segment 8, and eight additional routes for Segment 9. These routes represent the result of public comments as well as discussions with multiple BLM Field Offices and resultant route deviations to avoid identified resources. Table 2.5-1 summarizes the routes considered in the 2013 FEIS for Segments 8 and 9.

**Table 2.5-1.** Routes Considered in Detail in the 2013 FEIS

| Figure | Route Segment | Map Reference Points Used in the FEIS |
|---|---|---|
| **Segment 8 – Midpoint to Hemingway** | | |
| Figure A-10 in the FEIS | Segment 8 – Proposed | 8, 8a, 8b, 8c, 8d, 8e, 8f, 8g, 8h, 8i, 11 |
| | Route 8A | 8, 8j, 8c |
| | Route 8B | 8d, 8e, 8k, 11 |
| | Route 8C | 8d, 8k |
| | Route 8D | 8f, 8l, 8g |
| | Route 8E | 8h, 9q, 9r, 8i |
| **Segment 9 – Cedar Hill to Hemingway** | | |
| Figure A-11 in the FEIS | Segment 9 – Proposed | 9, 9a, 9b, 9c, 9d, 9e, 9f, 9g, 9h, 9i, 9j, 9k, 9l, 11 |
| | Route 9A | 9a, 9c |
| | Route 9B | 9d, 9m, 9f |
| | Route 9C | 9d, 9m, 9e |
| | Route 9D | 9g, 9s, 9i, 9j, 9t, 9l |
| | Route 9E (revised between DEIS and FEIS) | 9g, 9h, 9o, 9p, 9q, 9r, 9k |
| | Route 9F | 9g, 9n, 9o, 9p, 9k |
| | Route 9G | 9g, 9h, 9o, 9p, 9k |
| | Route 9H | 9l, 9l.1, 9m |

The naming convention and map labeling style used in the 2013 FEIS is represented in Table 2.5-1. The reason for proposing each route version considered in detail within the FEIS is explained in each route's description found in the FEIS (see Section 2.4 of the FEIS). These various routes could replace portions of the segments they are named

after in the Proposed Route (e.g., Route 9A could replace a portion of the FEIS Proposed Route along Segment 9 if this route is selected). In the FEIS analysis, these routes are compared with the FEIS Proposed Route based on the same beginning and ending points. The portion of the FEIS Proposed Route segment they could replace is identified by reference point, so all the routes can be compared equally. These routes were fully analyzed in the 2013 FEIS and are therefore not addressed further in this SEIS.

### 2.5.2 Routes Considered by the Resource Advisory Council but Eliminated from Detailed Study

#### 2.5.2.1 RAC Subcommittee Routes for Segment 8

The following route options for Segment 8 were considered during the RAC Subcommittee process and eliminated from further consideration because, upon closer examination, it became clear that they did not differ greatly from routes analyzed in the 2013 FEIS; they provided no environmental benefit over the Proposed Action; they were not feasible for environmental, physical, or economic reasons; and/or they did not meet the objectives of the Proponents. Figure 2.5-1 shows the routes considered by the RAC Subcommittee.

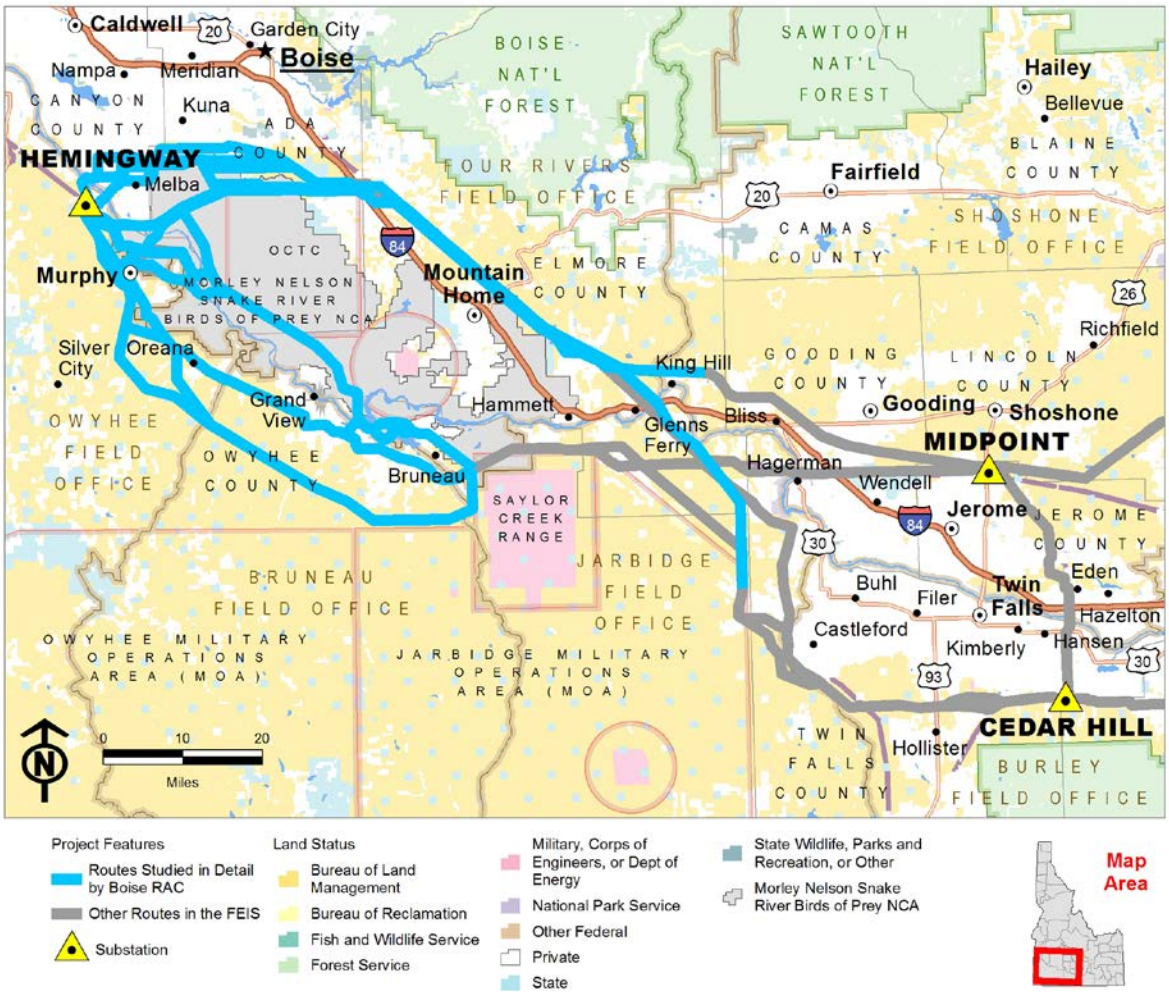



**Figure 2.5-1.** Routes Studied by the Boise RAC Subcommittee

**Bowmont North**

The Bowmont North route option was developed by the RAC Subcommittee and is similar to Route 8B in the 2013 FEIS. Route 8B was analyzed in detail in the 2013 FEIS.

The Bowmont North route option follows the same alignment as the 2013 FEIS Route 8B route for the first 10.7 miles before turning west (north of the community of Owyhee). The route then crosses the northern part of the SRBOP, mainly on private in-holdings for approximately 8.5 miles. It crosses 2.4 miles of the southern portion of Kuna's municipal impact area. This route option would double circuit with the existing Bowmont – Mora 138-kV transmission line along Kuna Cave Road for 4 miles. The Bowmont North route option crosses extensive irrigated agriculture (including pivot irrigation), and is within close proximity to several dozen private residences and a dairy in Canyon County north of Melba. The route generally parallels 200 feet south and east of the existing Hemingway to Bowmont 230-kV line west for approximately 9 miles from Powers Butte along Big Foot Road, and then south along Rim Road, before crossing the Snake River. The route continues to parallel the existing Bowmont – Mora 138-kV line south adjacent to State Highway 78 for approximately 3.5 miles to the Hemingway Substation.

The RAC Subcommittee concluded that this route option would have unacceptable impacts on private property, including a large dairy, irrigated agriculture, and private residences. Also, this route option would cross more than 9 miles of slickspot peppergrass habitat, including 1.5 miles of critical habitat.

The BLM considered the information gathered by the RAC Subcommittee in the study for the Bowmont North route option, but eliminated this option from further consideration in the SEIS because it is similar to Route 8B. Route 8B was analyzed in detail in the 2013 FEIS and continues to be a route for consideration. The effects from constructing a double-circuit line are analyzed as part of the Proposed Action for Segment 9. No other new information has been identified that would require additional analysis.

**Bowmont South**

The Bowmont South route option was developed by the RAC Subcommittee and is similar to Route 8D in the 2013 FEIS. Route 8D was analyzed in detail in the 2013 FEIS.

The Bowmont South route option follows existing infrastructure across parts of the SRBOP and much of Canyon County. This option parallels the existing PacifiCorp 500-kV line, before turning north to parallel or double circuit with the existing Idaho Power Company Bowmont – Mora 138-kV line, and the Hemingway – Bowmont 230-kV line. The route would cross the Snake River at the existing Bowmont 230-kV crossing.

The Bowmont South Route Option initially follows the same alignment as the Summer Lake Option 1 route for approximately 17 miles, crossing the SRBOP adjacent to the existing 500-kV transmission for 9 miles. However, instead of turning southwest to continue to parallel the existing 500-kV transmission line, the route turns generally north for 4 miles across the SRBOP to join the alignment for the Bowmont North route (see above). The Bowmont South route then follows the same alignment as the Bowmont

North route along Kuna Cave Road, Big Foot Road, and Rim Road, for the remaining 22 miles into the Hemingway Substation.

The RAC Subcommittee concluded that this route option would have unacceptable impacts on private property, including large feedlots/dairies, irrigated agriculture, and private residences. Also, this route option would cross into the OCTC and cross 12 miles of slickspot peppergrass habitat.

The BLM considered the information gathered by the RAC Subcommittee in the study for the Bowmont South route option, but eliminated this option from further consideration in the SEIS because it is similar to Route 8D. Route 8D which was analyzed in detail in the 2013 FEIS and continues to be a route for consideration. The effects from constructing a double-circuit line are analyzed as part of the Proposed Action for Segment 9. No other new information has been identified that would require additional analysis.

**King Hill-Mayfield Variation**

The King Hill-Mayfield variation was developed by the RAC Subcommittee as a potential single-corridor option for Segments 8 and 9, located north of the SRBOP. The route option runs from the King Hill area to Mayfield, southeast of Boise, where it would join the other route options described for Segment 8.

The King Hill-Mayfield route option was incorporated into the Common Corridor/Double Circuit discussed in this chapter.

**Kuna-Melba**

The Kuna-Melba route option was reviewed by the RAC Subcommittee and was analyzed in detail in the 2013 FEIS as Route 8B. No new information has been identified that would require additional analysis.

**Melmont Option 1**

Melmont Option 1 was developed by the RAC Subcommittee as a variation of the Bowmont options described above and is similar to Route 8D in the 2013 FEIS. Route 8D was analyzed in detail in the 2013 FEIS. This route option was developed to avoid potential land use conflicts associated with paralleling or double-circuiting existing infrastructure. Part of this route would parallel the existing Hemingway to Bowmont 230-kV line and would adversely affect private property, including impacts to large feedlots/dairies and residences.

The Melmont Option 1 follows the same alignment as the Kuna-Melba route for the first 9 miles, before turning west. The route enters the SRBOP for approximately 4.5 miles, then turns northwest for approximately 1 mile, continues west for 1 mile, and southwest for 1 mile, to avoid an existing subdivision on a private in-holding within the SRBOP south of Kuna. The route crosses Swan Falls Road before turning west approximately 0.5 mile south of Kuna Cave Road to minimize impacts to existing pivot irrigation, feedlots/dairies, and residences. The route option continues west for 7.8 miles, leaving the SRBOP adjacent to Melmont Road in Canyon County. The route option turns south adjacent to State Highway 45 for 1.5 miles. The route option turns west along the southern face of Hat Butte to minimize impacts to existing pivot irrigation. It then follows

the same alignment as the Bowmont routes the remaining 5.5 miles into the Hemingway Substation.

The RAC Subcommittee concluded that this route option would have unacceptable impacts on private property, including large feedlots/dairies, irrigated agriculture, and private residences.

The BLM considered the information gathered by the RAC Subcommittee in the study for the Melmont Option 1, but eliminated this option from further consideration in the SEIS because it is similar to Route 8D. Route 8D was analyzed in detail in the 2013 FEIS and continues to be a route for consideration. The effects from constructing a double-circuit line are analyzed as part of the Proposed Action for Segment 9. No other new information has been identified that would require additional analysis.

**Melmont Option 2**

Melmont Option 2 was developed by the RAC Subcommittee as a variation of the Bowmont options described above and is similar to Route 8D in the 2013 FEIS. Route 8D was analyzed in detail in the 2013 FEIS. This route option was developed to avoid potential land use conflicts associated with paralleling or double-circuiting existing infrastructure. Part of this route would parallel the existing Hemingway to Bowmont 230-kV line and would adversely affect private property, including impacts to large feedlots/dairies and residences.

Melmont Option 2 generally follows the same alignment as the Melmont Option 1 route described above; however, the route shifts 0.25 mile south and east of Melmont Road and State Highway 45 to minimize impacts to residential development along the arterials.

The RAC Subcommittee concluded that this route option would have unacceptable impacts on private property, including large feedlots/dairies, irrigated agriculture, and private residences.

The BLM considered the information gathered by the RAC Subcommittee in the study for the Melmont Option 2 route option, but eliminated this option from further consideration in the SEIS because it is similar to Route 8D. Route 8D was analyzed in detail in the 2013 FEIS and continues to be a route for consideration. No new information has been identified that would require additional analysis.

**OCTC Alpha Sector Variation**

The OCTC Alpha Sector Variation was developed by the RAC Subcommittee and is similar to Route 8D in the FEIS. Route 8D was analyzed in detail in the 2013 FEIS.

This route option avoids crossing the OCTC Alpha Sector. The RAC Subcommittee concluded that this route option would have unacceptable impacts on private property.

The OCTC Alpha Sector Variation was eliminated from further consideration in the SEIS because it is similar to Route 8D, which was analyzed in detail in the 2013 FEIS. No new information has been identified that would require additional analysis.

**Sinker Butte**

The Sinker Butte route option was developed by the RAC Subcommittee and is similar to Route 8E in the 2013 FEIS. Route 8E was analyzed in detail in the 2013 FEIS.

The Sinker Butte route option follows the same alignment as the Summer Lake Option 1 (see below) for 22.9 miles. After crossing Swan Falls Road, the route turns south in a new double-circuit alignment with the existing Bowmont to Canyon Creek 138-kV transmission line, offset from the current ROW approximately 125 feet to the east. This double-circuit alignment continues south approximately 8.5 miles, crossing or adjacent to Swan Falls Road, and past the Dedication Point Overlook, and the turn-off to Swan Falls Dam. Southeast of Swan Falls Dam the two circuits separate before crossing the Snake River canyon near the existing Sinker Creek to Tap 138-kV transmission line crossing south of Sinker Butte. On the west side of the canyon, the route turns northwest for approximately 3 miles along the western face of Sinker Butte, before turning west. The route descends the Murphy Rim and crosses the upper part of the Con Shea Basin south of Guffey Butte. The route passes between several existing subdivisions before turning northwest, generally following the WWE corridor on BLM-managed land for the remaining 7.5 miles into the Hemingway substation. This route would shares a common alignment with the Segment 9 Baja Road-Summer Lake route (see below); however, they cannot be used in conjunction.

The RAC Subcommittee concluded that this route option would be unacceptable due to three line crossings of Snake River at same location. The RAC Subcommittee prefers this crossing for a Segment 9 route option; however, it concluded that three line crossings are unacceptable because they may increase the potential for avian collisions with the lines. While this route follows existing infrastructure on the northeast side of the Snake River, there is no infrastructure to co-locate with on the northwest side of the SRBOP.

The BLM considered the information gathered by the RAC Subcommittee in the study for the Sinker Butte route option, but eliminated this option from further consideration in the SEIS because it is similar to Route 8E. Route 8E was analyzed in detail in the 2013 FEIS and continues to be a route for consideration. The effects from constructing a double-circuit line are analyzed as part of the Proposed Action for Segment 9. No other new information has been identified that would require additional analysis.

**Summer Lake Option 2**

The Summer Lake Option 2 route was developed by the RAC Subcommittee and is similar to the Proposed Route. However, east of Swan Falls Road, it shifts an additional 250 feet north of the existing 500-kV line in order to accommodate the Segment 9 Summer Lake route option in a single-corridor. This option is only viable in conjunction with the Segment 9 Summer Lake route option. This single-corridor option does not meet the Proponents' reliability objectives for the Project; therefore, it was eliminated from further consideration in the SEIS.

The Draft MEP route for Segment 8 was developed by the Proponents to be used as a baseline for estimating the total Draft MEP value for each route option. This route option would follow the 2013 FEIS Proposed Route across the SRBOP, as modified by Routes 8D and 8E. The route is generally the same as the Sinker Butte route option,

except that it is located 1,500 feet south of the existing 500-kV transmission line, incorporates the OCTC Alpha Sector Bypass, and does not include an option to double-circuit with the existing Bowmont to Canyon Creek 138-kV transmission line. This route option was analyzed in detail in the 2013 FEIS as the Proponents' Proposed Route, Route 8D, and Route 8E.

The RAC Subcommittee concluded that this route option would be unacceptable due to three line crossings of Snake River at same location. The RAC Subcommittee prefers this crossing for a Segment 9 route option; however, it concluded that having three line crossings is unacceptable because it may increase the potential for avian collisions with the lines. While this route follows existing infrastructure on the northeast side of the Snake River, there is no infrastructure to co-locate with on the northwest side of the SRBOP.

The BLM considered the information gathered by the RAC Subcommittee in the study for the Draft MEP Proposed Route option, but eliminated this option from further consideration in the SEIS because it is similar to the Proponents' Proposed Route, Route 8D, and Route 8E. The Proponents' Proposed Route, Route 8D, and Route 8E were analyzed in detail in the 2013 FEIS and continue to be routes for consideration. No new information has been identified that would require additional analysis.

#### 2.5.2.2 RAC Subcommittee Routes for Segment 9

The following route options for Segment 9 were considered during the RAC Subcommittee process and eliminated from further consideration because, upon closer examination, it became clear that they did not differ greatly from routes analyzed in the 2013 FEIS; they provided no environmental benefit over the Proposed Action; they were not feasible for environmental, physical, or economic reasons; and/or they did not meet the objectives of the Proponents. Figure 2.5-1 above shows the routes considered by the RAC Subcommittee.

**Baja Road – Murphy Flat North Option 1**

The Baja Road – Murphy Flat North Option 1 was developed by the RAC Subcommittee and is similar to Route 9D in the 2013 FEIS, except that it would involve double circuiting with the existing 138 kV line rather than being placed 250 feet from that line. Route 9D was analyzed in detail in the 2013 FEIS.

This route option would double-circuit Segment 9 with an existing 138-kV transmission line for most of the distance through the SRBOP, adjacent to the OCTC, and across the northern part of the Cove Recreation Site and non-motorized area. Segment 9 would separate from the double-circuit configuration on the north side of the Snake River, crossing at Sinker Butte. The route was modified to reduce impacts to homes, historic sites, and an airstrip in the Murphy area.

This route option follows the same alignment as the Baja Road-Murphy Flat South route for 47 miles. After crossing the Snake River, the route turns northwest and then follows the same alignment as the Segment 8 Sinker Creek route option for the remaining 20 miles to the Hemingway Substation.

This route option would use an existing 138-kV corridor in the SRBOP in new double-circuit configuration for 56 percent of its length in SRBOP. It is the RAC

Subcommittee's preferred crossing of the Snake River at Sinker Butte for Segment 9. While this route follows existing infrastructure on the northeast side of Snake River, there is no infrastructure to co-locate with on the northwest side of the SRBOP. This route option has minimal private property impacts.

The BLM considered the information gathered by the RAC Subcommittee in the study for the Baja Road – Murphy Flat North Option 1, but eliminated this option from further consideration in the SEIS because it is similar to Route 9D. Route 9D has been analyzed in detail in the 2013 FEIS and continues to be a route for consideration. The Revised Proposed Route (Baja Road-Murphy Flat South) was preferred by the RAC Subcommittee over this route because there would be fewer miles of transmission line crossing private property, there would be fewer private residences within 0.25 mile, it would be out of the viewshed of private residences in Owyhee County, and it would avoid historic Oregon Trail ruts on Murphy Flat. The effects from constructing a double circuit line will be analyzed as part of the Proposed Action for Segment 9; however, no further information has been identified that would require additional analysis.

**Baja Road – Murphy Flat North Option 2**

The Baja Road – Murphy Flat North Option 2 route was developed by the RAC Subcommittee and is similar to Route 9D in the 2013 FEIS. Route 9D was analyzed in detail in the 2013 FEIS.

This route option follows the same alignment as the Baja Road-Murphy Flat North Option 1 route (see above) for approximately 56.8 miles. After crossing the upper part of the Con Shea Basin, the route turns southwest for approximately 2.5 miles following the northwest face of a low rise north of Con Shea Road, and the town of Murphy. The route crosses State Highway 78 north of the Rabbit Creek trailhead, before turning west and then northwest, where it joins the alignment for the Segment 9 Applicant Proposed Route (see above) the remaining 10 miles into the Hemingway Substation.

This route option would use an existing 138-kV corridor established in the SRBOP in new double-circuit configuration (56 percent of length in SRBOP). It is the RAC Subcommittee's preferred crossing of Snake River at Sinker Butte for Segment 9. While this route follows existing infrastructure on the northeast side of Snake River, there is no infrastructure to co-locate with on the northwest side of the SRBOP. This route option has minimal private property impacts.

The BLM considered the information gathered by the RAC Subcommittee in the study for the Baja Road – Murphy Flat North Option 2, but eliminated this option from further consideration in the SEIS because it is similar to Route 9D. Route 9D was analyzed in detail in the 2013 FEIS and continues to be a route for consideration. The Revised Proposed Route (Baja Road-Murphy Flat South) was preferred by the RAC Subcommittee over this route because there would be fewer miles of transmission line crossing private property, there would be fewer private residences within 0.25 mile, it would be out of the viewshed of private residences in Owyhee County, and it would avoid historic Oregon Trail ruts on Murphy Flat. The effects from constructing a double-circuit line will be analyzed as part of the Proposed Action for Segment 9; however, no further information has been identified that would require additional analysis.

**Baja Road – Murphy Flat North Option 3**

The Baja Road – Murphy Flat North Option 3 route was developed by the RAC Subcommittee and is similar to Route 9D in the 2013 FEIS. Route 9D was analyzed in detail in the 2013 FEIS.

This route option generally follows the same alignment as the Baja Road – Murphy Flat North Option 1 route (see above). The primary difference is that the route shifts an additional 250 feet south and west of the Segment 8 Sinker Butte route (see above) in a single corridor with the Segment 8 line for the remaining 19.5 miles to the Hemingway Substation. The single-corridor option does not meet the Proponents' reliability objectives because both lines would occupy the same ROW; therefore, it was eliminated from further consideration in the SEIS.

**Baja Road – Sinker Creek**

The Baja Road – Sinker Creek route option was developed by the RAC Subcommittee and is similar to Route 9G in the 2013 FEIS. Route 9G was analyzed in detail in the 2013 FEIS.

This route option generally follows the same alignment as the Baja Road – Murphy Flat South route. It deviates briefly to the west to allow the siting of the Segment 8 Sinker Butte route at the existing Sinker Creek to Tap 138-kV transmission line crossing of the Snake River south of Sinker Butte, instead crossing near the confluence with Sinker Creek. Along the west side of the Snake River, the route continues northwest an additional 2 miles where it rejoins the alignment for the Baja Road – Murphy Flat South route (see above) the remaining 18.5 miles into the Hemingway Substation.

This route crosses both the Snake River and Sinker Creek. The RAC Subcommittee concluded that this route option would have unacceptable ecological and visual impacts at these two river crossings.

The BLM considered the information gathered by the RAC Subcommittee in the study for the Baja Road – Sinker Creek route option, but eliminated this option from further consideration in the SEIS because it is similar to Route 9G. Route 9G was analyzed in detail in the 2013 FEIS and continues to be a route for consideration. This option was also eliminated from further consideration because of the adverse environmental and scenery impacts.

**Baja Road – Summer Lake**

The Baja Road – Summer Lake route option is similar to the Murphy Flat North and South options described above. It was developed by the RAC Subcommittee and is similar to Route 9D in the 2013 FEIS. Route 9D was analyzed in detail in the 2013 FEIS.

Instead of crossing the Snake River at Sinker Butte, this route option would continue north before crossing the river. It would then parallel the existing 500-kV line. This route option may not meet the Proponents' reliability objectives unless Segment 8 was to use one of the northern route options.

This route option shares the same alignment as the Baja Road – Murphy Flat North and South route options for approximately 46 miles. Instead of turning west in the area

located south of Swan Falls to cross the Snake River near the existing Sinker Creek to Tap 138-kV transmission line, the route continues north (still in a double-circuit configuration with the existing Bowmont – Canyon Creek 138-kV transmission line) an additional 8.5 miles. The route crosses to the north side of the existing 500-kV transmission line, and then turns west, paralleling 250 feet north of the existing 500-kV transmission line in the same alignment as the Segment 8 Summer Lake Option 1 route the remaining 14.2 miles into the Hemingway Substation. This route shares a common alignment with the Segment 8 Sinker Butte route and the Segment 8 Summer Lake Option 1 route; however, they cannot be used in conjunction. The route may also result in a single-corridor alignment with the existing 500-kV transmission line, and the Segment 8 Summer Lake Option 2 route.

The RAC Subcommittee concluded that this route option would have a crossing at the Snake River that the Subcommittee would prefer to use for a Segment 8 crossing. The single-corridor option does not meet the Proponents' reliability objectives.

The BLM considered the information gathered by the RAC Subcommittee in the study for the Baja Road – Summer Lake route option, but eliminated this option from further consideration in the SEIS because it is similar to Route 9D. Route 9D was analyzed in detail in the 2013 FEIS and continues to be a route for consideration. A reduced separation distance (from 1,500 feet to 250 feet) where needed was analyzed in the 2013 FEIS. The effects from constructing a double-circuit line are analyzed as part of the Proposed Action in the SEIS; however, no further information has been identified that would require additional analysis.

**Bruneau South Variation**

The Bruneau South Variation route was developed by the RAC Subcommittee and is similar to Route 9F/H in the 2013 FEIS. Route 9F/H was analyzed in detail in the 2013 FEIS.

This short variation would avoid the Cove recreation site and non-motorized area but would result in impacts to private property impacts potential impacts to historic trails.

This variation to the Baja Road route options described above is a portion of Route 9F/H analyzed in detail in the 2013 FEIS. The route follows the Segment 9 Proponent Proposed Route along the fragmented WWE corridor through the Bruneau and Grand View areas for 18.3 miles, before turning north for approximately 3 miles to rejoin the Baja Road routes near C.J. Strike Dam. The route avoids crossing the Cove non-motorized area and recreation area.

The RAC Subcommittee concluded that this route option would have extensive, unacceptable private property impacts.

The BLM considered the information gathered by the RAC Subcommittee in the study for the Bruneau South Variation route, and eliminated this variation from further consideration in the SEIS because it is similar to Route 9F/H. Route 9F/H was analyzed in detail in the 2013 FEIS and continues to be a route for consideration. No new information has been identified that would require additional analysis.

**Cove Variation**

The Cove Variation route was developed by the RAC Subcommittee and is similar to Route 9D in the 2013 FEIS. Route 9D was analyzed in detail in the 2013 FEIS.

This short route variation crosses the southern part of the Cove recreation site and non-motorized area. The route crosses the southern end of the Narrows between the C.J. Strike Reservoir and the Bruneau Arm, and crosses the Cove non-motorized area and recreation area.

The RAC Subcommittee concluded that this route option would have unacceptable impacts to historic trails.

The BLM considered the information gathered by the RAC Subcommittee in the study for the Cove Variation route, and eliminated this variation from further consideration in the SEIS because it is similar to Route 9D. Route 9D was analyzed in detail in the 2013 FEIS and continues to be an alternative for consideration. No new information has been identified that would require additional analysis.

**Glenns Ferry – Mayfield**

The Glenns Ferry – Mayfield variation was developed by the RAC Subcommittee as a potential single-corridor option for siting both Segments 8 and 9 (see the Common Corridor/Double Circuit Alternative discussed in Section 2.4.5) north of the SRBOP.

The route variation runs from the Glenns Ferry area to Mayfield, southeast of Boise, where it would join the other route options described for Segment 8. The route generally parallels 250 feet south of the existing 500-kV transmission line for much of its length in a single-corridor with the Segment 8 King Hill – Mayfield route. Although this variation would eliminate the need for a southern route and associated impacts, the single-corridor option does not meet the Proponents' objectives of having two separate lines to enhance system reliability.

The BLM considered the information gathered by the RAC Subcommittee in the study for the Glenns Ferry – Mayfield route variation, and eliminated this variation from further consideration in the SEIS because it does not meet the Proponents' reliability objectives.

**Owyhee Uplands (DEIS Route 9E)**

The Owyhee Uplands (DEIS Route 9E) route option was developed by the RAC Subcommittee and is similar to Route 9E in the DEIS. Route 9E was analyzed in detail in the DEIS.

This route option leaves the WWE corridor and turns south for approximately 5 miles west of the Bruneau River along the northwest boundary of the Saylor Creek Air Force Range. The route crosses the Bruneau River south of Hot Springs, and north of Indian Bathtub at the northern end of the Bruneau Canyon. The route then proceeds west for approximately 13 miles along the northern boundary of the Air Force military operations area. The route turns northwest along the foothills to the Owyhee Range, primarily on public land, the remaining 60 miles to the Hemingway Substation, crossing Shoofly Creek and the Mud Flat scenic by-way, Castle Creek, Hart and Pickett Creeks, and Sinker Creek. The route passes close to Murphy and then continues 11 miles to the

Hemingway Substation. The route crosses sage-grouse preliminary priority habitat and comes within 0.7 mile of several sage-grouse leks. The route was modified between the DEIS and the 2013 FEIS to avoid these sage-grouse impacts.

The RAC Subcommittee concluded that this route option would have unacceptable impacts to undeveloped foothills of the Owyhee Range, sage-grouse preliminary priority habitat, and private property.

The BLM considered the information gathered by the RAC Subcommittee in the study for the Owyhee Uplands (DEIS Route 9D) route option, but eliminated this option from further consideration in the SEIS because it is the same as Route 9E in the DEIS. Route 9E was eliminated from further consideration between the DEIS and FEIS due to its adverse impacts. No new information has been identified that would require additional analysis.

**Owyhee Uplands (FEIS Route 9E)**

The Owyhee Uplands route was developed by the RAC Subcommittee and is similar to Route 9E in the 2013 FEIS. Route 9E was analyzed in detail in the 2013 FEIS.

This route option is the modified version of Route 9E that was analyzed in detail in the FEIS. This route follows the same alignment as the Owyhee Uplands (DEIS Route 9E) route for the first 42 miles. The route then deviates in a more northerly direction to avoid crossing sage-grouse preliminary priority habitat. As it continues north, the route crosses private property in close proximity to several residences at Hart Creek, and Bates Creek near Oreana. The route rejoins the WWE corridor for 8.2 miles and then deviates to the northwest to avoid Murphy and several existing subdivisions, before continuing north 5 miles into the Hemingway Substation.

The RAC Subcommittee concluded that this route option would have unacceptable impacts to private property, scenery along undeveloped areas in the Owyhee Range foothills, and sage-grouse habitat.

The BLM considered the information gathered by the RAC Subcommittee in the study for the Owyhee Uplands route option, but eliminated this option from further consideration in the SEIS because it is the same as Route 9E in the 2013 FEIS. Route 9E was analyzed in detail in the 2013 FEIS and continues to be a route for consideration. No new information has been identified that would require additional analysis.

**Sinker Creek Variation**

The Sinker Creek route variation was developed by the RAC Subcommittee and is similar to the Segment 9 Proposed Route in the FEIS. The Proposed Alternative was analyzed in detail in the 2013 FEIS.

This variation to the Segment 9 Proposed Route (see above) was suggested to avoid crossing a 3.5-mile section of the SRBOP. The variation turns west for 5 miles outside of the WWE corridor before turning north again for 8 miles where it rejoins the Segment 9 Applicant Proposed Alternative west of Murphy. This variation avoids land within the SRBOP. The variation crosses 6 miles of sage-grouse preliminary priority habitat, comes within 0.7 mile of two sage-grouse leks, and crosses Sinker Creek in a historically significant area.

The RAC Subcommittee concluded that this route option would have unacceptable impacts to scenery along undeveloped areas in the Owyhee Range foothills and to sage-grouse preliminary priority habitat.

The BLM considered the information gathered by the RAC Subcommittee in the study for the Sinker Creek route variation, and eliminated this variation from further consideration in the SEIS because it is similar to the Proposed Alternative in the 2013 FEIS. The Proposed Alternative was analyzed in detail in the 2013 FEIS and continues to be an alternative for consideration. No new information has been identified that would require additional analysis.

### 2.5.3 Other Routes/Alternatives Eliminated from Detailed Study

#### 2.5.3.1 2013 FEIS Routes for Segment 8 Eliminated from Detailed Study

The following routes were considered during the routing process but eliminated from detailed analysis in the FEIS. Each was explored because it followed existing transmission lines, existing corridors, or the WWE corridor, but each presents more environmental impacts than the Proposed Route or Route Alternative evaluated in detail; therefore, the BLM decided not to carry these routes forward for detailed analysis. Figure 2.5-2 shows the routes considered but eliminated from detailed study in the 2013 FEIS.

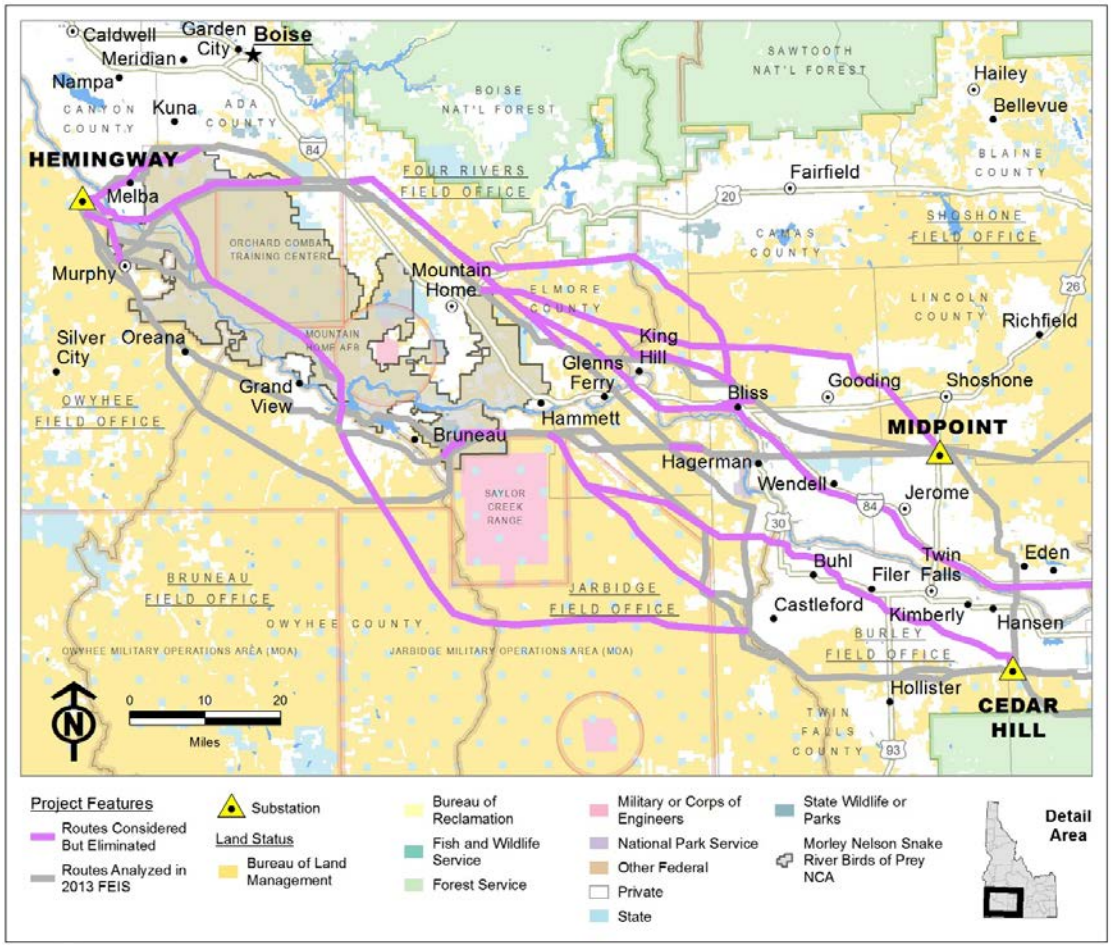



**Figure 2.5-2.** Routes Considered but Eliminated in the 2013 FEIS

**Summer Lake – Midpoint Route**

The Summer Lake – Midpoint Route was initially considered to parallel the north side of the existing Summer Lake – Midpoint 500-kV transmission length from where the Project would first encounter this line, all the way east to a termination at the Hemingway Substation (see Appendix O of the FEIS).

This route was eliminated from detailed study because as of the date it was originally proposed, it:

- Is parallel to an existing transmission line on the north side for its length; however, the western end of the alternative (in Canyon and Owyhee Counties) would encounter residences and cropland that would make paralleling the existing line infeasible; and
- The concept of paralleling the Project with existing transmission lines was incorporated into the Proposed Route and Alternative 8D, which also avoid residential and agricultural areas that would be impacted by this alternative.

**I-84 North Route**

The intent of this route is to follow the I-84 corridor to the extent possible. This route diverges from the feasible route at MP 20 and heads northwest, paralleling the south side of I-84 and the north side of the Snake River. It passes just south of Bliss and then turns west, still paralleling I-84 and the river. In Elmore County, this route crosses the Snake River twice and then meets the Proposed Route approximately 4 miles northwest of King Hill (see Appendix O of the FEIS). No attempt was made to follow I-84 from this point because the WWE corridor and existing transmission lines presented better siting options.

This route was eliminated from detailed study because, as of the date it was originally proposed, it:

- Parallels the Snake River in relatively close proximity, and crosses the Snake River twice;
- Is 2.2 miles longer than the Proposed Route;
- Is parallel to existing transmission lines for less of its length than the Proposed Route (24.3 miles less);
- Impacts 7.1 miles more areas within the scenic US 30 buffer; and
- Is in close proximity to developed land uses (agricultural, residential, commercial, and recreational) to a much greater extent than the Proposed Route.

**I-84 North Variation Route**

This route is a slight variation of the I-84 North Alternative. This option diverges from the Proposed Route northeast of Bliss and travels generally west for 3 miles north of I-84 and the town of Bliss, crosses I-84, and then continues 3 miles west of Bliss, where it joins the I-84 Route discussed above (see Appendix O of the FEIS). The environmental advantages and disadvantages of this route are the same as those presented for the previously discussed alternative, with the exceptions that it impacts more VRM Class III and less VRM Class II.

This route was eliminated from detailed study because, as of the date it was originally proposed, it:

- Results in more environmental effects than the Proposed Route (as discussed for the I-84 North Alternative).

**WWE Corridor Route**

This alternative was considered in the WWE Corridor PEIS (DOE and BLM 2008); however, changes were made to the WWE corridor during the analysis process, and the final designated WWE corridor is actually located farther to the west than this route had anticipated it would be. This route diverges from the Proposed Route at the point where Route 8A rejoins the Proposed Route. The WWE Corridor Alternative proceeds northwest, parallel to the Proposed Route and an existing transmission line, and follows the WWE corridor. It rejoins the feasible route just east of reference point 8k, on Route 8C, at a location a few miles east of Indian Creek Reservoir (see Appendix O of the FEIS).

This route was eliminated from detailed study because, as of the date it was originally proposed, it:

- Is 1.0 mile longer than the Proposed Route;
- Is only within the designated WWE corridor for 0.7 mile, although it would be within or paralleling an alternative WWE corridor for 36.7 miles;
- Parallels an existing transmission line for 0.9 mile less than the Proposed Route;
- Crosses 3.1 miles of VRM Class I, whereas the Proposed Route would cross none; and
- Crosses 0.3 mile more irrigated agriculture than the Proposed Route.

**Blair Trail Route**

The Blair Trail Route was initially considered because it parallels the north side of an existing transmission line corridor containing 138-kV, 230-kV, and 500-kV lines. This route diverges from the Proposed Route at point 8c just south of Blair Trail Reservoir. It travels just northeast of the previously discussed route for approximately 11 miles (see Appendix O of the FEIS).

This route was eliminated from detailed study because, as of the date it was originally proposed, it:

- Is 4.1 miles longer than the Proposed Route;
- Impacts three sage-grouse leks, including both the 0.65-mile and 0.25-mile buffers;
- Crosses 5.1 miles of VRM Class I, whereas the Proposed Route crosses none in this area;
- Crosses 0.9 mile more irrigated agriculture than the Proposed Route;
- Crosses 0.4 mile more steep slopes than the Proposed Route; and
- Impacts 2.4 miles more historic trail buffers than the Proposed Route.

**Gooding North Route**

Residents of Elmore County have commented that the final route should be located farther north and along an existing transmission line from the point where it leaves Midpoint Substation and heads northwest. In response to these comments, the Gooding North Route was sited to follow an existing 230-kV transmission line north of the Proposed Route. This 68.5-mile alternative would cross only 10.2 miles of private property. The route would start at Midpoint Substation and proceed to the northwest for approximately 18 miles, before turning to the west-northwest for about 50 miles and rejoining the Proposed Route about 2 miles east of Mountain Home, Idaho (see Appendix O of the FEIS).

This route was eliminated from detailed study because, as of the date it was originally proposed, it:

- Crosses 1.8 miles more VRM Class I and II land than the Proposed Route;
- Crosses 33.6 miles more elk and mule deer winter range than the Proposed Route;
- Does not follow the WWE corridor;
- Crosses 7.8 miles of pygmy rabbit habitat, whereas the Proposed Route avoids pygmy rabbit habitat;
- Crosses the King Hill Creek ACEC, whereas the Proposed Route avoids it; and
- Crosses 2.4 miles of sage-grouse lek 0.65-mile buffers whereas the Proposed Route avoids sage-grouse buffers.

**King Hill Route**

The King Hill Route was routed to reduce impacts to historic trails and sage-grouse leks, the King Hill WSA, the King Hill Creek ACEC, and topography near King Hill and King Hill Creek (steep drainages and wide canyons), as well as an attempt to follow an existing utility corridor where possible. This route diverges from the Proposed Route near MP 30 and extends in a northwest direction, generally paralleling the north side of the Proposed Route. It passes north of Pioneer Reservoir, across the Gooding/Elmore County line, and north of Blair Trail Reservoir. It then continues along the very southern foot of the Mount Bennett Hills, and rejoins the draft WWE Corridor Alternative (see Appendix O of the FEIS).

This route was eliminated from detailed study because, as of the date it was originally proposed, it:

- Parallels an existing transmission line for 20.6 miles less than the Proposed Route; and
- Crosses 6.2 miles more steep slope areas than the Proposed Route.

**Bennett Hills Route**

The Bennett Hills Route was designed to minimize impacts to historic trails. This route diverges from the Proposed Route near MP 30 and extends northwest and then west, extending much farther north than the other routes in order to avoid constraints such as

the King Hill WSA. The majority of this route traverses the Bennett Hills. It then rejoins another route where the WWE corridor is designated (see Appendix O of the FEIS).

A variation of the Bennett Hills Route was also considered in which the route began at Midpoint Substation and extended northwest between Shoshone and Gooding along an existing 230-kV transmission line and joining the alternative in the vicinity of Blair Trail reservoir.

These routes were eliminated from detailed study because, as of the date they were originally proposed, they:

- Are 5.0 miles longer than the Proposed Route;
- Cross 0.8 mile more VRM Class I area than the Proposed Route;
- Parallel existing transmission lines for 37.8 miles less than the Proposed Route;
- Are Greenfield routes through the Bennett Hills, presenting construction difficulty due to topography and lack of existing access; and
- Cross 32.4 miles more of steep slope areas than the Proposed Route.

**McElroy Butte Route**

The key issue for this portion of the route was determining the approach to siting a new corridor in an environment of active agricultural use, increasing residential development, and additional planned infrastructure projects. The segments comprising this route were an attempt to cross this area with a more direct route.

The first segment of this route would require relocating and/or rebuilding a portion of an existing 138-kV transmission line to 230-kV (planned for another project) in addition to the 500-kV Gateway West line on double-circuit 230-/500-kV structures. This route diverges from Route 8B approximately 3.5 miles east of Kuna Butte. It would extend southwest for 3 miles, then due west for 3.5 more miles, passing just south of Kuna Butte before crossing Route 8B and continuing southwest. Land in this area is a mix of privately owned and SRBOP-managed lands. This alignment would avoid placing a new transmission line through an area annexed by the City of Kuna. The route between the first two intersections with Route 8B is 1.2 miles shorter than the 4.3-mile equivalent portion of Route 8B, but it cuts diagonally across farmlands instead of following the boundary of public and private lands in the hills. The next segment between intersections with Route 8B is 0.2 mile shorter than the 4.7-mile equivalent portion of Route 8B but it also would cut diagonally across farmlands instead of following county roads. The southern segment between the final intersection and the substation is 0.8 mile shorter than the 3.3-mile equivalent portion of Route 8B but also cuts diagonally across farmlands.

This route was eliminated from detailed study because, as of the date it was originally proposed, it: resulted in diagonal crossings of farms and parcels rather than following public/private boundaries and county roads. This would create greater impacts to agricultural and residential properties compared to the Proposed Route.

#### 2.5.3.2 2013 FEIS Routes for Segment 8 Eliminated from Detailed Study

The following routes were considered during the routing process but eliminated from detailed analysis in the FEIS. Each was explored because it followed existing

transmission lines, existing corridors, or the WWE corridor, but each presents more environmental impacts than the Proposed Route or other routes evaluated in detail; therefore, the BLM IDT decided not to carry these routes forward for detailed analysis. Figure 2.5-2 above shows the routes considered but eliminated from detailed study in the 2013 FEIS.

**Magic Valley Route**

The Magic Valley Route was designed to create a more direct route compared to the Proposed Route; however, this alternative passes through more irrigated agricultural land (primarily center pivot irrigation), and is near more rural residential development. This route exits the Cedar Hill Substation in a northwesterly direction, generally parallel to and south of the Snake River. It passes through Pleasant Valley, crosses Rock Creek, passes about 3 miles south of Twin Falls, continues through the Melon Valley, and crosses Salmon Falls Creek. From this point it continues northwest through the remainder of Twin Falls County, through northern Owyhee County, and into southern Elmore County, where it meets the Proposed Route where Alternative 9B rejoins the Proposed Route (see Appendix O of the FEIS).

This route was eliminated from detailed study because, as of the date it was originally proposed, it:

- Is within or parallel to the WWE corridor for less than 1 mile, compared to 15.0 miles for the Proposed Route;
- Is mostly on private land and does not parallel existing lines, whereas the Proposed Route follows existing lines and WWE corridor routes for portions of its alignment;
- Passes through 29.3 more miles of irrigated agricultural lands (primarily center pivot irrigation);
- Is in proximity to rural residential development;
- Encroaches upon an airport buffer zone; and
- Impacts 15.8 miles of a designated scenic highway (i.e., Highway 30).

**Saylor Creek Route**

The Saylor Creek Route was an initial design for the constriction point between Bruneau Dunes State Park and the Saylor Creek Air Force Range, which was based on a larger required buffer from the Air Force Range. It deviates from the Proposed Route, beginning just east of Browns Gulch and heading due west, then due south, then southwest to avoid conflicts with the Bombing Range.

This route was eliminated from detailed study because, as of the date it was originally proposed, it:

- Is 1.5 miles longer than the Proposed Route;
- Passes through Bruneau Dunes State Park for 0.3 mile, and would have a greater impact on the view from the park;
- Crosses VRM Class II land, which the Proposed Route would not;

- The Proposed Route was agreed upon through agency consultation as a means to avoid conflicts with the Air Force Range and the State Park, whereas this alternative would not; and
- The final WWE corridor was moved to follow the Proposed Route alignment in this area, by agreement with all adjacent and affected land-managing agencies.

**Magic Valley-Saylor Creek Route**

The Magic Valley-Saylor Creek Route was designed to avoid both the Saylor Creek Air Force Range and the Bruneau Dunes State Park, and would be located primarily on BLM-managed lands by extending farther south than the other routes considered. This route proceeds due west to a crossing of Salmon Falls Creek and then extends westward for approximately 33 miles through the Bruneau Desert, and crosses the East Fork of the Bruneau River, proceeds about 5 miles through the Inside Desert, crosses Bruneau Canyon/Bruneau River, and proceeds 5 miles through the Blackstone Desert. At this point it turns northwest and travels approximately 25 miles, between Big Hill and Bruneau Canyon/Bruneau River. This route then terminates at a location approximately 6 miles west of C.J. Strike Reservoir, where it joins the Proposed Route.

This route was eliminated from detailed study because as of the date it was originally proposed, it:

- Crosses 3.6 miles of the Bruneau-Jarbidge Rivers Wilderness Area associated with the Bruneau River in Bruneau Canyon, which would require Congressional approval;
- Crosses 2.0 miles of an ACEC associated with the Bruneau River in Bruneau Canyon. This area is designated as an ACEC because of bighorn sheep and cultural resources in the area;
- Crosses 3.5 miles of VRM Class I on BLM-managed land associated with Bruneau Canyon;
- Is entirely a Greenfield route, resulting in more disturbance;
- Is not within the WWE corridor;
- Crosses 0.6 mile of historic trail buffer;
- Would be within a Military Operating Area for most of its length, which limits; obstructions to under 100 feet; and
- Crosses more sage-grouse habitat than the Proposed Route (approximately 47 miles compared to approximately 24 miles for the Proposed Route).

**Blue Ridge Route**

The Blue Ridge Route was part of the original Proposed Route. It was originally proposed by the Proponents because it was the most direct route between the Cedar Hill Substation and Hemingway Substation; however, it is no longer being considered because it would have passed through the Jarbidge Military Operating Area, an area that prohibits structures greater than 100 feet in height. Instead, the Proposed Action was moved several miles to the north, to the east edge of the Military Operating Area. This new location (i.e., the location of the new Proposed Route) is favored by the military over the Blue Ridge Route.

**State Route 78 Route**

The SR-78 Route was part of the original Proposed Route near the Hemingway Substation. In this location, Segments 8 and 9 converge as the routes approach the substation. Impacts to subdivisions along Segment 8 caused a portion of Segment 8 to be pushed to the south near the western edge of the route. Therefore, the current Proposed Route along Segment 9 has also been moved further south, and the I-78 Route was dropped from further evaluation.

**Central Birds of Prey National Conservation Area Route**

The Proponents identified the Central Birds of Prey National Conservation Area (NCA) Route during initial scoping as a means of following existing 138-kV and 500-kV transmission lines on the north side of the Snake River. Most of this route's length would parallel an existing 138-kV transmission line in a northwesterly direction, until it meets an existing 500-kV line (approximately 15 miles of the far western portion of this route). This route would then follow this existing 500-kV line to Hemingway.

This route was eliminated from detailed study because, as of the date it was originally proposed:

- Placing the line north of the 500-kV line resulted in impacts to irrigated agricultural land and placing it on the south side of the 500-kV line within the Snake River canyon (in the SRBOP) was deemed infeasible. In addition, it created conflicts with private land uses and subdivisions near Melba.

Route 9D (as disclosed and assessed in the FEIS) was developed to address conflicts with private land uses and subdivisions that would result from the Central Birds of Prey NCA Route. Much of Route 9D follows the Central Birds of Prey NCA Route, except in three places. In the area south of C.J. Strike Reservoir, the original route was moved out of private land. To the northwest of C.J. Strike Reservoir, Route 9D was also moved west of the original route (onto BLM-managed lands) to avoid private lands. Lastly, instead of extending north up the 138-kV line to the 500-kV line, Route 9D turns to the west near Sinker Butte.

### 2.5.4 Common Corridor/Double-Circuit Alternative

A route was suggested during the RAC process (see the King Hill – Mayfield and Glenns Ferry – Mayfield variations discussion above) and further developed during scoping for the SEIS that would double circuit Segments 8 and 9 across the SRBOP. This would occur by bringing Segment 9 north from Indian Ridge in Owyhee County along the western edge of Tuana Gulch. From there it would join the 2013 FEIS Route 9B alignment and "jump" over to the 2013 FEIS Route 8A alignment. Near King Hill, this route would follow the current alignment for the Segment 8 Revised Proposed Route, and the Segment 8 Revised Proposed Route would shift 250 feet to the north, which would be approximately 1,300 feet south of the existing 500-kV line. This route and the Segment 8 Revised Proposed Route would maintain a 250-foot separation just northwest of the Mayfield/Orchard areas. The two routes would then join together in a 500-kV double-circuit alignment before crossing the existing 500-kV line. Once on the north side, the DC alignment would parallel the existing 500-kV line with approximately 275 feet of separation. Approaching the Hemingway Substation, the 500-kV double-

circuit alignment would separate near Hemingway Butte. Segment 8 would follow the current Segment 8 Revised Proposed Route into Hemingway Substation. Segment 9 would cross the existing 500-kV line and continue west 0.8 mile before rejoining the current Proposed 9 Route into Hemingway Substation.

Many constraints were identified with this route, including a new wind farm near Tuana Gulch, multiple crossings of NHTs, wetlands, and proximity to Hagerman Fossil Beds National Monument. Taller and wider transmission towers would be required for the double-circuit portion of the line, which would require a wider ROW. Taller structures could adversely affect OCTC operations. Also, a single corridor for two segments does not meet the Proponents' reliability objectives for the Project.

The BLM considered the information gathered by the RAC Subcommittee and during scoping for the Common Corridor/Double-Circuit Alternative, but eliminated this option from further consideration in the SEIS because it does not meet the Proponents' reliability objectives.

### 2.5.5 Use of the West-Wide Energy Corridor, or Designated and Existing Corridors

During the original route development for the Project, the BLM evaluated the use of existing transmission and designated utility corridors (see Table 2.4-1 in Chapter 2 of the FEIS). Table 2.5-2 below presents the Revised Proposed Route, as well as the various routes and variations considered within this SEIS, in relation to their length within the proposed WWE corridor, within the projected WWE corridor (private land segments between WWE corridor segments), adjacent to the WWE corridor, and adjacent to existing transmission corridors.

**Table 2.5-2.** Length and Percentage of Revised Proposed Routes and Route Variations That Align with West-wide Energy Corridors and Existing Corridors

| Segment | Route | Total Segment Length[1/] | Within WWE Corridor (All Ownership Types) [1/] | | Within WWE Corridor (Federal Land ONLY) [1/] | | Adjacent to WWE Corridor (All Ownership Types) [1/] | | Within or Adjacent to Existing Transmission Corridor [2/] | | Within or Adjacent to Existing Transmission or WWE Corridor [2/] | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Miles | % Total | Miles | % Total | Miles | % Total | Miles | % Total | Miles | % Total |
| 8 | Revised Proposed Route | 129.7 | 33.8 | 26.1 | 15.6 | 11.9 | 5.6 | 4.3 | 117.1 | 90.3 | 121.3 | 93.5 |
| | Route 8G | 146.9 | 49.8 | 33.9 | 32.8 | 22.3 | 15.0 | 10.2 | 38.9 | 26.5 | 76.1 | 51.8 |
| | Route 8H | 137.5 | 46.2 | 33.6 | 29.8 | 21.7 | 9.9 | 7.2 | 71.9 | 52.3 | 102.3 | 74.4 |
| 9 | Revised Proposed Route | 165.3 | 27.4 | 16.6 | 21.7 | 13.1 | 4.4 | 2.7 | 55.1 | 33.4 | 77.3 | 46.8 |
| | FEIS Proposed Route | 162.2 | 67.8 | 41.8 | 53.9 | 33.2 | 10.6 | 6.5 | 8.2 | 5.0 | 84.4 | 52.3 |
| | Route 9K | 174.6 | 30.8 | 17.6 | 24.5 | – | 9.3 | – | 18.2 | 10.4 | 48.7 | 27.9 |
| | Revised Proposed – Toana Road Comparison Portion | 8.7 | – | – | – | – | – | – | – | – | – | – |
| | Toana Road Variation 1 | 8.5 | – | – | – | – | – | – | – | – | – | – |
| | Toana Road Variation 1-A | 8.9 | – | – | – | – | – | – | – | – | – | – |

1/ Mileages are rounded to tenths of a mile throughout table; therefore, rows may not sum exactly.

2/ Within 3,000 feet of existing transmission lines greater than 138 kV.

WWE: West-wide Energy

## 2.6 DESIGN FEATURES, INCLUDING PROPOSED MEP AND EPMs

In general, the impact analysis and mitigation approach for the Project is a four-step iterative process: 1) analyze what has been proposed by the Proponents, including project design features; 2) determine what impacts or "debits" to the existing environment remain after the design features of the proposed action are implemented; 3) address the impacts or debits identified previously by using the mitigation hierarchy (avoid, minimize, rectify, reduce, compensate) to provide "credits" to offset these remaining impacts; and 4) disclose any impacts that are not fully addressed in the previous three steps.

The following definitions are used by the BLM when assessing mitigation (as defined in the BLM [2008c] 1790 NEPA Handbook and the BLM (2013c) Regional Mitigation Manual)[1]:

- **"design features"**— measures or procedures incorporated into the proposed action or an alternative, including measures or procedures which could reduce or avoid adverse impacts. Because these features are built into the proposed action or an alternative, design features are not considered mitigation.
- **"mitigation"**— measures or procedures which could reduce or avoid adverse impacts and have not been incorporated into the proposed action or an alternative. Mitigation can be applied to reduce or avoid adverse effects to biological, physical, or socioeconomic resources.
- **"residual effects"**— those effects remaining after mitigation has been applied to the proposed action or an alternative.
- **"enhancement"**— the heightening, intensifying, or improving of one or more resources or values.

### 2.6.1 Design Features

As part of their Proposed Action, the Proponents have included design features, which include EPMs, to reduce or avoid environmental impacts. The EPMs cover the following topics:

- Construction, operations, and maintenance;
- Visual resources;
- Cultural and paleontological resources;
- Plant and wildlife resources, including threatened, endangered, and sensitive (TES) species;
- Geologic hazards and soil resources;
- Water resources;
- Safety measures;
- Reclamation of construction activities;
- Land use and agriculture;
- Traffic and transportation management;

[1] For additional information, see the definitions in 600 DM 6 (DOI 2015).

- Air quality;
- Electrical environment;
- Public safety; and
- Noise.

The Proponents' EPMs are presented in Appendix Z to the August 2013 POD. Many of the EPMs were developed in cooperation with the BLM and cooperating agencies. As a part of the Proposed Action, EPMs would be followed on all routes, as site-specific circumstances dictate and as identified in the POD. Table 2.7-1 in the FEIS presents a summary of the Proponents' proposed EPMs. This table also identifies where each measure would apply (federal, state, and/or private land).

The Project includes the following four Proponent-proposed plans that would compensate for remaining impacts not otherwise avoided or minimized by the EPMs:

1. Proponents' Mitigation and Enhancement Portfolio (MEP)
2. Off-Site Compensatory Mitigation to Offset Project Impacts to Greater Sage-Grouse
3. Final Migratory Bird Habitat Conservation Plan
4. Draft Framework for Compensatory Mitigation for and Monitoring of Unavoidable Impacts to Waters of the U.S.

Table 2.6-1 below summarizes the measures offered within each plan as they apply to Segments 8 and 9.

**Table 2.6-1.** Summary of Mitigation Proposals Applicable to Segments 8 and 9 Revised Proposed Routes

| Mitigation Plan | Route Targeted in Plan | Impact Type | Proposed Mitigation Projects |
|---|---|---|---|
| MEP | 2013 FEIS Proposed Route | Impacts to the SRBOP | Habitat Restoration |
| | | | Property Purchase |
| | | | Law Enforcement |
| | | | Visitor Enhancement |
| | | | Line and Substation Removal |
| Off-Site Compensatory Mitigation to Offset Project Impacts to Greater Sage-Grouse | Draft EIS Proposed Route | Known Effects | Conservation Easements |
| | | | Sagebrush Restoration |
| | | | Juniper Removal |
| | | | Bunchgrass Seeding |
| | | Unknown Effects | Undetermined |
| | | N/A | Administrative Costs |
| Final Migratory Bird Habitat Conservation Plan | 2013 FEIS Proposed Route | 1 acre of juniper woodland impacts | Undetermined |
| | SEIS Revised Proposed Route | 3 acres of juniper woodland impacts | Undetermined |
| Draft Framework for Compensatory Mitigation for and Monitoring of Unavoidable Impacts to Waters of the U.S. | 2013 FEIS Proposed Route | 15 acres of wetland and riparian impacts | Undetermined |
| | SEIS Revised Proposed Route | 15 acres of wetland and riparian impacts | Undetermined |

The effects analysis, found in Chapter 3 of this SEIS, was conducted based on the Project description, including the Proponents' design features.

### 2.6.2 Additional BLM Mitigation Categories

The Proponents' Off-Site Compensatory Mitigation to Offset Project Impacts to Greater Sage-Grouse (sage-grouse plan), as currently proposed, compensates for direct impacts to sage-grouse; however, it does not address indirect impacts to this species. Therefore, the BLM will require that the Proponents develop a mitigation proposal that fully compensates for all potential indirect impacts to sage-grouse (see Section 3.11 – Special Status Wildlife and Fish Species for more details). In addition, the BLM will continue to work with applicable stakeholders to identify any remaining impacts that would exist after implementation of the design features discussed above. The BLM is considering the following eight mitigation categories to address any remaining impacts to resources:

- Implement habitat/vegetation restoration efforts;
- Evaluate, maintain, enhance, or expand fuels management/fuel breaks;
- Increase wildfire preparedness and suppression;
- Increase applied research and monitoring to inform adaptive management;
- Increase funding for recreation and visitor management;
- Acquire private lands as deemed appropriate by the Authorizing Officer;
- Increase funding to law enforcement; and
- Increase cultural resource interpretation and preservation measures.

The mitigation for cultural resources will be covered by a Historic Properties Treatment Plan (HPTP) and site-specific Segment Plans being developed through the Programmatic Agreement for compliance with Section 106 of the NHPA. Mitigation under NEPA will encompass those resources that are not "historic properties" as defined in the NHPA. While specific mitigation plans will not be drawn up until all of the cultural inventory is complete, some conceptual compensatory mitigation includes a stewardship program to monitor condition of the sites, preparing resource management plans, interpretive expansion to BLM recreation areas with cultural site themes, and establishing a funding pool with partners for cultural resource preservation/enhancement (e.g., multiple projects affecting trails could contribute). Additional detail is found in Section 3.3 – Cultural Resources.

The Proponents' MEP intends to offer mitigation and enhancement for the resources and values in the NCA, which is its focus; however, the MEP proposes to implement the two separately for habitat restoration. The MEP proposes that:

> *Mitigation would be conducted at a 1:1 ratio for every acre of the Project's "long-term occupancy," regardless of the condition of the habitat prior to disturbance. Enhancement would be conducted at various ratios depending on the condition of the site as well as its location in relation to designated utility corridors. For areas within designated corridors, enhancement would be conducted at a 1:1 ratio for "presently undisturbed ecological sites" and at a 0.5:1 for "presently disturbed ecological sites." For areas outside of designated corridors, enhancement would*

> *be conducted at a 2:1 ratio for "presently undisturbed ecological sites" and at a 1:1 for "presently disturbed ecological sites."*

The MEP also states that disturbed vegetation consist of "sagebrush and grassland habitat invaded by cheatgrass." These MEP descriptions are too broad to clearly delineate which NCA areas the various mitigation ratios would apply to

The lack of details or specifics in the MEP makes it unclear how the proposal's goals would be achieved. Most importantly, the MEP does not contain a methodology and a reliable, consistent, and repeatable accounting system to determine the expected impacts of actions and the measures necessary to compensate for those impacts based on a common "currency" (i.e., raptor habitat value per acre). Therefore, it is not adequate in the form submitted as part of the Revised POD for the Project.

To address this deficiency, the BLM has developed Appendix K as the conceptual model of determining the required compensatory mitigation for impacts to raptor populations and habitats in SRBOP. This model would be used for any alternative selected for the Project that impacts raptor populations and habitats in SRBOP. The BLM will conduct the appropriate analyses for this model between the Draft and Final SEIS, and include the appropriate calculations in the Final SEIS. The model is structured to ensure that raptor populations and habitats will be enhanced above baseline conditions, and therefore meet the enhancement requirements in P.L. 103-64.

The BLM will also develop, between the Draft and Final SEIS, compensatory mitigation requirements for other protected resources in the SRBOP that are impacted by the Project, including scientific and educational resources, which are not already covered in other compensatory mitigation packages (e.g., cultural resources are addressed in the HPTP).

As the Project is potentially renewable after its 50-year life, additional or continued compensatory mitigation may be required during that renewal process.

## 2.7 SUMMARY: COMPARISON OF EFFECTS OF ALTERNATIVES

Tables 2.7-1 and 2.7-2 provide a summary by segment of the environmental effects of the Segment 8 and 9 routes based on the evaluation criteria identified within each resource analysis section. Table 2.7-3 provides similar information, but for the seven BLM action alternatives. Information regarding the impacts that would occur on BLM-managed lands within the SRBOP (i.e., values in "[ ]") are only provided in these tables for resources that have been identified as one of the environmental resources and values for which the SRBOP was established to manage and protect.

In some cases, the impact assessment is based on assessment methodologies that provide adequate disclosure for NEPA analysis but will require more detailed analysis to meet the requests of other laws such as Section 106 of the NHPA or Section 404 of the CWA. A full explanation of the evaluation criteria and the environmental consequences of choosing each route, as well as the alternatives—which are composed of groupings of two route options—is found by resource in Chapter 3. All impact analyses were conducted based on a Project description that includes the Proponents' EPMs contained in Appendix Z to the August 2013 POD (which is in Appendix B to the 2013 ROD). EPMs would apply to all routes/alternatives as identified in Section 2.6.

Additional mitigation measures identified by the Agencies (such as mitigation for indirect impacts to greater sage-grouse, mitigation required by the USACE, and mitigation required under the PA) would also apply. The BLM is also planning to identify additional mitigation; however, this would only apply to federal land.

**Table 2.7-1.** Comparison of Effects for Segment 8 Routes[1/]

| Comparison Features | Unit | SEIS Revised Proposed Route Segment 8 [2/] | SEIS Route 8G | SEIS Route 8H |
|---|---|---|---|---|
| **General** | | | | |
| Total Length | miles[3/] | 129.7 | 146.9 | 137.5 |
| Construction Disturbance Area | acres[4/] | 2,271 [298] | 2,752 [180] | 2,525 [1,006] |
| Operations Disturbance Area | acres | 243 [28] | 332 [28] | 256 [88] |
| **Land Ownership and Use** | | | | |
| BLM | miles | 78.4 [17.6] | 114.5 [8.8] | 103.0 [52.4] |
| Other Federal | miles | 3.9 | 0.1 | 0.5 |
| State | miles | 11.1 | 13.5 | 14.3 |
| Private | miles | 35.8 | 18.9 | 19.7 |
| Indian Reservation | miles | – | – | – |
| WWE Corridor[5/] | miles | 33.8 [2.3] | 49.8 [6.7] | 46.2 [7.8] |
| Within or Adjacent to Existing Transmission Corridor | miles | 117.1 [17.6] | 38.9 | 71.9 [25.7] |
| **Resource Summaries** | | | | |
| ***National Historic Properties*** | | | | |
| Adverse impact | number | 7 | 3 | 11 |
| ***Visual*** | | | | |
| VRM I or II crossed | miles | 9.7 | 0.3 | 15.4 |
| ***Cultural*** | | | | |
| Potentially affected pre-historic cultural resources | number | 117 | 91 | 110 |
| Potentially affected historic cultural resources | number | 151 | 100 | 130 |
| ***Wildlife*** | | | | |
| Designated big game winter range affected (construction) | acres | 1,237 | 733 [9] | 388 [38] |
| Raptor nests within 1 mile | number | 489 [144] | 228 [12] | 908 [584] |
| Sage-grouse PPH Habitat affected (construction) | acres | 129 | 103 [5] | – |
| ***Vegetation*** | | | | |
| Total Natural vegetation removed (construction) | acres | 666 [13] | 1,049 [27] | 343 [152] |
| Juniper Woodland vegetation removed (construction) | acres | – | 26 | 2 [2] |
| Wetland/Riparian disturbance (construction) | acres | 7.6 | 2.5 [0.3] | 2.7 [0.7] |
| ***Water/Fish*** | | | | |
| Waterbodies crossed | number | 204 | 149 | 115 |
| Temperature- or Sediment-impaired stream crossings | number | 18 | 31 | 21 |
| ***Soils/Minerals*** | | | | |
| High K factor impacted (i.e., highly erodible soils) (construction) | acres | 1,621 [276] | 1,141 [10] | 1,296 [620] |
| Low T factor impacted (i.e., sensitive soils) (construction) | acres | 1,809 [205] | 1,612 [30] | 941 [352] |
| ***Land Use/Recreation*** | | | | |
| BLM Plan Amendment would be required | Yes/No | Yes | Yes | Yes |
| Residences within 300 feet of centerline | number | 5 | 1 | 4 |

## Table 2.7-1. Comparison of Effects for Segment 8 Routes[1/] (continued)

| Comparison Features | Unit | SEIS Revised Proposed Route Segment 8 [2/] | SEIS Route 8G | SEIS Route 8H |
|---|---|---|---|---|
| Residences within 1,000 feet of centerline | number | 37 | 40 | 37 |
| ***Agriculture*** | | | | |
| Prime Farmland (operations) | acres | 50 [8] | 86 [61] | 116 [72] |
| Dryland farming impacted (operations) | acres | – | – | <1 |
| Irrigated agriculture impacted (operations) | acres | 15 | 12 | 14 |

Note: The numbers in square brackets "[ ]" correspond to values/impacts that occur on BLM-managed lands within the SRBOP. This information is only presented for resources that have been identified as environmental resources and values for which the SRBOP was established to manage and protect.

1/ Disturbance from the MEP is not included because it would be scaleable to whichever route is selected.

2/ Mileage and acreage do not include disturbance from proposed line removal because much would be within the same footprint.

3/ Mileages rounded to the nearest tenth of a mile; rows may not sum exactly.

4/ Acreages rounded to the nearest acre; rows may not sum exactly.

5/ WWE = West-wide Energy

## Table 2.7-2. Comparison of Effects for Segment 9 Routes[1/]

| Comparison Features | Unit[3/4/] | SEIS Revised Proposed Route Segment 9 [2/] | FEIS Proposed 9 | SEIS Route 9K | SEIS Toana Variation 1 | SEIS Toana Variation 1-A |
|---|---|---|---|---|---|---|
| **General** | | | | | | |
| Total Length | miles | 165.3 | 162.2 | 174.6 | 8.5 | 8.9 |
| Construction Disturbance Area | acres | 3,149 [996] | 3,294 [269] | 3,383 [172] | 168 | 163 |
| Operations Disturbance Area | acres | 350 [87] | 360 [28] | 425 [27] | 16 | 11 |
| **Land Ownership and Use** | | | | | | |
| BLM | miles | 142.6 [52.4] | 129.4 [11.1] | 156.2 [8.7] | 8.2 | 7.8 |
| Other Federal | miles | 0.4 | – | – | – | – |
| State | miles | 7.5 | 4.6 | 4.6 | 0.3 | 1 |
| Private | miles | 14.7 | 28.3 | 13.8 | – | – |
| Indian Reservation | miles | – | – | – | – | – |
| WWE Corridor[5/] | miles | 27.4 | 67.8 [9.5] | 30.8 | – | – |
| Within or Adjacent to Existing Transmission Corridor | miles | 55.1 | 8.2 | 18.2 | – | – |
| **Resource Summaries** | | | | | | |
| ***National Historic Properties*** | | | | | | |
| Adverse impact | number | 12 | 0 | 0 | – | – |
| ***Visual*** | | | | | | |
| VRM I or II crossed | miles | 15.5 | 0.3 | 0.5 | – | – |
| ***Cultural*** | | | | | | |
| Potentially affected pre-historic cultural resources | number | 146 | 149 | 148 | 46 | 46 |
| Potentially affected historic cultural resources | number | 111 | 113 | 96 | 36 | 36 |
| ***Wildlife*** | | | | | | |
| Designated big game winter range affected (construction) | acres | 657 [38] | 571 [61] | 657 [8] | – | – |
| Raptor nests within 1 mile | number | 963 [584] | 306 [14] | 284 [12] | 10 | 10 |
| Sage-Grouse PPH Habitat affected (construction) | acres | 282 | 292 | 386 [4] | 126 | 129 |

**Table 2.7-2.** Comparison of Effects for Segment 9 Routes[1/] (continued)

| Comparison Features | Unit[3/4/] | SEIS Revised Proposed Route Segment 9 [2/] | FEIS Proposed 9 | SEIS Route 9K | SEIS Toana Variation 1 | SEIS Toana Variation 1-A |
|---|---|---|---|---|---|---|
| ***Vegetation*** | | | | | | |
| Total Natural vegetation removed (construction) | acres | 643 [145] | 1,084 [88] | 1,339 [25] | 54 | 57 |
| Juniper Woodland vegetation removed (construction) | acres | 3 [2] | 1 | 26 | – | – |
| Wetland/Riparian disturbance (construction) | acres | 3.2 [0.9] | 6.0 [0.7] | 3.5 [0.3] | – | – |
| ***Water/Fish*** | | | | | | |
| Waterbody crossings | number | 172 | 319 | 237 | 15 | 10 |
| Temperature- or sediment-impaired stream crossings | number | 25 | 14 | 52 | – | – |
| ***Soils/Minerals*** | | | | | | |
| High K factor impacted (i.e., highly erodible soils) (construction) | acres | 1,924 [621] | 1,510 [85] | 1,767 [8] | 165 | 161 |
| Low T factor impacted (i.e., sensitive soils) (construction) | acres | 1,592 [353] | 2,131 [108] | 2,260 [29] | 168 | 163 |
| ***Land Use/Recreation*** | | | | | | |
| BLM Plan Amendment would be required | Yes/ No | Yes | Yes | Yes | No | No |
| Residences within 300 feet of the centerline | number | 2 | 8 | 2 | – | – |
| Residences within 1,000 feet of centerline | number | 10 | 28 | 11 | – | – |
| ***Agriculture*** | | | | | | |
| Prime Farmland (operations) | acres | 140 [111] | 999 [21] | 110 [61] | – | – |
| Dryland farming impacted (operations) | acres | <1 | <1 | – | – | – |
| Irrigated agriculture impacted (operations) | acres | 9 | 34 | 8 | – | – |

Note: The numbers in square brackets "[ ]" correspond to impacts that would occur on BLM-administered lands within the SRBOP. This information is only presented for resources that have been identified as environmental resources and values for which the SRBOP was established to manage and protect.

1/ Disturbance from the MEP is not included because it would be scaleable to whichever route is selected.

2/ Mileage and acreage do not include disturbance from proposed line removal because much would be within the same footprint.

3/ Mileages rounded to the nearest tenth of a mile; rows may not sum exactly.

4/ Acreages rounded to the nearest acre; rows may not sum exactly.

5/ WWE = West-wide Energy

**Table 2.7-3.** Comparison of Effects for the Seven BLM Action Alternatives[1/]

| Comparison Features | Unit [3/ 4/] | Alternative | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| **General** | | | | | | | | |
| Total Length | miles | 294.9 | 291.9 | 304.3 | 309.1 | 321.5 | 299.7 | 312.1 |
| Construction Disturbance Area | acres | 5,420 [1,294] | 5,565 [567] | 5,654 [470] | 6,046 [449] | 6,135 [352] | 5,819 [1,275] | 5,908 [1,178] |
| Operations Disturbance Area | acres | 593 [115] | 603 [56] | 668 [55] | 692 [56] | 757 [55] | 616 [116] | 681 [115] |
| **Land Ownership and Use** | | | | | | | | |
| BLM | miles | 221.0 [70.0] | 207.8 [28.7] | 234.6 [26.3] | 243.9 [19.9] | 270.7 [17.5] | 232.4 [63.5] | 259.2 [61.1] |
| Other Federal | miles | 4.3 | 3.9 | 3.9 | 0.1 | 0.1 | 0.5 | 0.5 |
| State | miles | 18.6 | 15.7 | 15.7 | 18.1 | 18.1 | 18.9 | 18.9 |
| Private | miles | 50.5 | 64.1 | 49.6 | 47.2 | 32.7 | 48.0 | 33.5 |
| Indian Reservation | miles | – | – | – | – | – | – | – |
| WWE Corridor[5/] | miles | 61.2 | 101.6 | 64.6 | 117.6 | 80.6 | 114.0 | 77.0 |
| Within or Adjacent to Existing Transmission Corridor | miles | 172.2 | 125.3 | 135.3 | 47.1 | 57.1 | 80.1 | 90.1 |
| **Resource Summaries** | | | | | | | | |
| ***National Historic Trails*** | | | | | | | | |
| Adverse impacts | number | 17 | 7 | 7 | 3 | 3 | 11 | 11 |
| ***Visual*** | | | | | | | | |
| VRM I or II crossed | miles | 25.2 | 10.0 | 10.2 | 0.6 | 0.8 | 15.7 | 15.9 |
| ***Cultural*** | | | | | | | | |
| Potentially affected pre-historic cultural resources | number | 263 | 266 | 265 | 240 | 239 | 259 | 258 |
| Potentially affected historic cultural resources | number | 262 | 264 | 247 | 213 | 196 | 243 | 226 |
| ***Wildlife*** | | | | | | | | |
| Designated big game winter range affected (construction) | acres | 1,894 [38] | 1,808 [61] | 1,894 [8] | 1,304 [70] | 1,390 [17] | 959 [99] | 1,045 [46] |
| Raptor nests within 1 mile | number | 1,447 [728] | 790 [158] | 1,768 [156] | 390 [14] | 334 [12] | 1,073 [587] | 1,054 [586]] |
| Sage-Grouse PPH Habitat affected (construction) | acres | 411 | 421 | 515 [4] | 395 [5] | 489 [9] | 292 | 386 [4] |
| ***Vegetation*** | | | | | | | | |
| Total Natural vegetation removed (construction) | acres | 1,309 [158] | 1,750 [101] | 2,005 [38] | 2,133 [115] | 2,388 [52] | 1,427 [240] | 1,682 [177] |
| Juniper Woodland vegetation removed (construction) | acres | 3 [2] | 1 | 26 | 27 | 52 | 3 [2] | 28 [2] |
| Wetland/Riparian disturbance (construction) | acres | 10.8 [0.9] | 13.6 [0.7] | 11.1 [0.3] | 8.5 [1.0] | 6.0 [0.6] | 8.7 [1.4] | 6.2 [1.0] |
| ***Water/Fish*** | | | | | | | | |
| Waterbody crossings | number | 376 | 523 | 441 | 468 | 386 | 434 | 352 |
| Temperature- or sediment-impaired stream crossings | number | 43 | 32 | 70 | 45 | 83 | 35 | 73 |

**Table 2.7-3.** Comparison of Effects for the Seven BLM Action Alternatives[1/] (continued)

| Comparison Features | Unit | Alternative | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| ***Soils/Minerals*** | | | | | | | | |
| Highly erodible soils impacted (High K factor, construction) | acres | 3,545 [897] | 3,131 [361] | 3,388 [284] | 2,651 [95] | 2,908 [18] | 2,806 [705] | 3,063 [628] |
| Mineral area (construction) | acres | 3,401 [558] | 3,940 [313] | 4,069 [234] | 3,743 [138] | 3,872 [59] | 3,072 [460] | 3,201 [381] |
| ***Land Use/Recreation*** | | | | | | | | |
| BLM Plan Amendment would be required | Yes/ No | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Residences within 300 feet of the centerline | number | 7 | 13 | 7 | 9 | 3 | 12 | 6 |
| Residences within 1,000 feet of centerline | number | 47 | 65 | 48 | 68 | 51 | 65 | 48 |
| ***Agriculture*** | | | | | | | | |
| Prime Farmland (operations) | acres | 190 [119] | 1,049 [29] | 160 [69] | 1,085 [82] | 196 [122] | 1,115 [93] | 226 [133] |
| Dryland farming impacted (operations) | acres | <1 | <1 | – | <1 | – | <1 | <1 |
| Irrigated agriculture impacted (operations) | acres | 24 | 49 | 23 | 46 | 20 | 48 | 22 |

Note: The numbers in square brackets "[ ]" correspond to impacts that would occur on BLM-managed lands within the SRBOP. This information is only presented for resources that have been identified as environmental resources and values for which the SRBOP was established to manage and protect.

1/ Disturbance from the MEP is not included because it would be scaleable to whichever route is selected.

2/ Mileage and acreage do not include disturbance from proposed line removal because much would be within the same footprint.

3/ Mileages rounded to the nearest tenth of a mile; rows may not sum exactly.

4/ Acreages rounded to the nearest acre; rows may not sum exactly.

5/ WWE = West-wide Energy

## 2.8 UNAVOIDABLE ADVERSE IMPACTS, IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

In accordance with NEPA Section 102.C (42 U.S.C. § 4332), this section addresses irreversible and irretrievable commitments of resources and unavoidable adverse impacts that would result from the implementation of the Proposed Action. The relationship between local short-term uses of the environment within the region of influence and the maintenance and enhancement of long-term productivity is discussed in detail for each resource in Chapter 3.

All action alternatives would result in unavoidable adverse impacts to certain resources. While the Project includes design features and mitigation to reduce impacts to scenery, effects cannot be completely avoided under any of the action alternatives. Likewise, some adverse impacts to NHTs, cultural resources, wetlands – riparian areas, land use, soil, vegetation, and wildlife habitat would occur regardless of the alternative selected.

All action alternatives cross some portion of the SRBOP. No feasible route was identified that would completely avoid the SRBOP. Any route south of the SRBOP in Idaho would have to cross designated wilderness and/or the Saylor Creek Air Force

Range. Any route north and east of the SRBOP would cross several high-voltage transmission lines and/or the cities of Kuna or Boise. The Preferred Route for Segment 8 analyzed in the 2013 FEIS avoids nearly all of the SRBOP; however, it crosses approximately 6 miles in the city of Kuna. See Section 3.4.2.3 in the 2013 FEIS for further discussion.

Both material and nonmaterial resources would be committed to the proposed Project. Irreversible commitment of resources for the purposes of this section has been interpreted to mean that those resources, once committed to the proposed Project, would continue to be committed throughout the 50-year life of the Project. Irretrievable commitment of resources has been interpreted to mean that those resources used, consumed, destroyed, or degraded during construction, operation, maintenance, and abandonment of the proposed Project could not be retrieved or replaced for the life of the Project or beyond.

Implementation of the proposed Project would require the consumption of nonrenewable fuel (e.g., diesel and gasoline) resources for construction vehicles, construction equipment, construction operation vehicles, and helicopter use. Construction of the Project would result in the consumption of saleable minerals, including fill material for grade changes, sand and gravel for concrete production, gravel for road beds, and similar uses resulting in an irretrievable commitment of natural resources. Construction would also require the manufacture of new materials, some of which would not be recyclable at the end of the proposed Project's lifetime, and energy for the production of these materials, which would also result in an irretrievable commitment of natural resources.

Table 2.8-1 details the irreversible and irretrievable commitments by resource and indicates in which section of Chapter 3 the resource is discussed.

**Table 2.8-1.** Irreversible and Irretrievable Commitments of Resources

| Section | Resource | Irreversible Impacts | Irretrievable Impacts | Explanation |
|---|---|---|---|---|
| 3.1 | NHTs | No | Yes | Effect to NHTs and to their setting would last throughout the life of the Project. This loss of setting while the structures are in place would be an irretrievable loss. However, the setting could be restored following project decommissioning. |
| 3.2 | Visual Resources | No | Yes | Impacts to viewers during the life of the Project would be irretrievable. Visual impacts would cease with the end of the Project and would not be irreversible. Recovery would be rapid in shrub and grass lands. |
| 3.3 | Cultural Resources | Yes | Yes | Removal or disturbance of previously unidentified cultural resources and any known sites mitigated by excavation would result in irretrievable and irreversible loss of data. Visual impacts at the site would end with the decommissioning of the Project, but the visual setting would be compromised in some cases for the duration of the Project. |

**Table 2.8-1.** Irreversible and Irretrievable Commitments of Resources (continued)

| Section | Resource | Irreversible Impacts | Irretrievable Impacts | Explanation |
|---|---|---|---|---|
| 3.4 | Socioeconomic | No | No | Worker availability during construction would be short-term and may extend to worker populations in other areas. |
| 3.5 | Environmental Justice | No | No | No impacts from the Project would occur. |
| 3.6 | Vegetation | Yes | Yes | Removal or disturbance of vegetation, such as conversion of shrubland would result in a short-term irretrievable loss. |
| 3.7 | Rare Plants | Yes | Yes | Removal or disturbance of habitat could create irreversible and irretrievable impacts. |
| 3.8 | Invasive Plant Species | No | Yes | Invasive plant species could be introduced by the Project, resulting in an irretrievable loss of native vegetation. |
| 3.9 | Wetlands | Yes | Yes | Removal or disturbance of wetlands could create irreversible and irretrievable impacts; however, all permanent impacts to wetlands would be compensated for as part of the Army Corps permitting process under the authority of the Clean Water Act. |
| 3.10 | Wildlife and Fish | Yes | Yes | Removal or disturbance of wildlife habitats (including aquatic habitats) could create irreversible and irretrievable impacts. Loss of individual wildlife due to mortality events would also create irreversible and irretrievable impacts. |
| 3.11 | TES Wildlife and Fish | Yes | Yes | Removal or disturbance of wildlife habitats (including aquatic habitats) could create irreversible and irretrievable impacts. Loss of individual wildlife due to mortality events (as well as “take” as defined by ESA) could also create irreversible and irretrievable impacts. |
| 3.12 | Minerals | No | Yes | Construction would result in the consumption of saleable minerals, including fill materials for grade changes, sand and gravel for concrete production, and gravel for road beds. |
| 3.13 | Paleontology | Yes | Yes | Some loss of fossil resources may occur during construction of the Project resulting in irretrievable and irreversible loss of data. |
| 3.14 | Geologic Hazards | No | No | No irretrievable or irreversible losses would occur due to geologic hazards. |
| 3.15 | Soils | Yes | Yes | Soil lost to increased erosion would be irretrievable. There would be an irreversible commitment of soil resources on land associated with roads and aboveground facilities. |

**Table 2.8-1.** Irreversible and Irretrievable Commitments of Resources (continued)

| Section | Resource | Irreversible Impacts | Irretrievable Impacts | Explanation |
|---|---|---|---|---|
| 3.16 | Water Resources | No | Yes | Water quality degradation from increased sedimentation would be irretrievable. Water removed from streams for construction would be irretrievable. There would be no irreversible commitment of water resources. |
| 3.17 | Land Use | No | Yes | Land use required for the operation of the transmission line would be irretrievably altered for the life of the Project. |
| 3.18 | Agriculture | No | Yes | Irretrievable impacts would include the loss of agricultural crop production for the season during construction in impacted areas. Yearly crop and forage production would decrease due to towers, structures, access roads, etc., on cropland. There would be an irretrievable loss of crop and forage production due to tower presence for the life of the Project. |
| 3.19 | Transportation | No | No | Project impacts would occur only during construction and would be fully mitigated. |
| 3.20 | Air | No | No | Project emissions would not exceed federal or state air quality standards. Air quality would return to existing conditions after completion of the Project. |
| 3.21 | Electrical Environment | No | No | Project electrical and magnetic fields would not exceed federal or state standards. Effects would end with termination of the Project. |
| 3.22 | Public Safety | No | No | Temporary impacts to public safety during construction are fully mitigated. No irretrievable or irreversible impacts are expected. |
| 3.23 | Noise | No | No | Construction noise effects would be short-term. Project operational noise would not exceed federal or state standards. Effects would cease with the end of the Project. |