

ENVIRONMENTAL ASSESSMENT for the Gateway West Geotechnical Drilling Project (WYW174598-01)

BLM

Wyoming High Plains District – Casper Field Office

BLM/WY/PL-09/028+1430

WY-060-EA09-88

July 2010



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United States Department of the Interior
BUREAU OF LAND MANAGEMENT
Wyoming State Office
5353 Yellowstone Ave
Cheyenne, Wyoming 82009

July 2010

ENVIRONMENTAL ASSESSMENT

for the

Gateway West Geotechnical Drilling Project (WYW174598-01)

EA No. WY-060-EA09-88

The Bureau of Land Management is responsible for the balanced management of the public lands and resources and their various values so that they are considered in a combination that will best serve the needs of the American people. Management is based upon the principles of multiple use and sustained yield; a combination of uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources. These resources include recreation, range, timber, minerals, watershed, fish and wildlife, wilderness, and natural, scenic, scientific, and cultural values.

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ERRATA
for the Environmental Assessment
For the
Gateway West Geotechnical Drilling Project (WYW174598-01)
EA NO. WY-060-EA09-88

The environmental assessment (EA) was distributed to the public for review on July 12, 2009. Comments were received from 25 people and agencies. Some corrections were made, as were changes based on consultation with US Fish and Wildlife Service. The following are changes made to the project since the public distribution of the EA.

Section 1.5, the list of TES species analyzed includes the addition of Canada lynx and Laramie columbine.

In section 2.1.1 the number of boreholes on BLM administered lands was revised from 279 to 278, and on other ownerships from 635 to 634, for a total of 912 boreholes. The miles of overland travel evaluated on other ownerships was corrected to 11.34 miles, as was the total miles corrected to 25.12. The description was updated to include backfilling with bentonite if groundwater is encountered. The investigation would now occur in 2010 and 2011 instead of 2009 as indicated in the EA.

An environmental protection measure to require notification of the coroner should human remains be discovered was added to section 2.1.3.1, as was the description of cultural inventory completed since the EA was written.

A measure directing the contractors to avoid driving, drilling or parking in weedy areas was added to section 2.1.3.6.

The measure in section 2.1.3.8 to allow smoking only in vehicles has been revised to prohibit smoking.

Biological protection measures in section 2.1.3.11 have been updated as follows:

- Exceptions to seasonal restrictions will follow the BLM field office protocols, not specifically the Rawlins Field office.
- Surveys for slickspot peppergrass have been completed.
- The slickspot peppergrass conservation agreement has been updated to 2009 from 2006.
- A measure to prohibit the storing of drilling soils or spreading of soils onto slickspots has been added.
- Appendix A and B were replaced with Tables 2-3 through 2-6, and were updated to include additional surveys and eliminate surveys for prairie dogs (prairie dog towns will be avoided instead).

The summary of effects in section 2.3 was updated to indicate that the effect on sensitive species is No Effect for the No Action Alternative. The effect for Paleontological Resources was also changed to No Effect for the No Action Alternative.

The Class III cultural survey was completed in 2009 (cultural resources text starts on page 9 of the EA). The results of the cultural survey were documented in reports submitted to BLM and the respective

Idaho and Wyoming State Historic Preservation Offices. The EA is updated to show that this work has been completed.

Section 3.3.1, Page 24, Mountain Plover – a statement has been added “The mountain plover has been proposed for listing again and the USFWS has re-opened the comment period.”

The determination for Colorado River Fish and critical habitat was changed to “No Effect” in Table 3-2 in section 3.3.2.1.

Table 3-3 was corrected due to a math error.

Table 3-3 Proposed Action Water Depletion by River Basin						
Ownership	North Platte Boreholes	Gallons	Acre-Feet	Upper Colorado Boreholes	Gallons	Acre-Feet
BLM	50	2,500	0.008	47	2,350	0.007
BOR	0	0	0.000	2	100	0.000
Private	142	7,100	0.022	110	5,500	0.017
State	28	1,400	0.004	1	50	0.000
USFS	3	150	0.000	0	0	0.000
Total	223	11,150	0.035	160	8,000	0.025

The status of slickspot peppergrass was changed from candidate to threatened due to its recent listing. The determination of effects was changed to “not likely to adversely affect”.

The Plan Date for the Kemmerer RMP was updated to 2010.

CHAPTER 1

INTRODUCTION

Idaho Power Company and Rocky Mountain Power (referred to as the Companies) have requested a short term right-of-way (SF-299 serial number WYW174598-01) to conduct geotechnical surveys on federal lands managed by the Bureau of Land Management (BLM) in Wyoming and Idaho. This drilling project is in association with the proposed route of the Gateway West electric transmission line in order to collect geotechnical soil property information for the design of foundations and support structures. An environmental impact statement on the transmission line is currently being developed.

The hydrogeologic and geotechnical information is important in design of foundations and support structures for the transmission line structures, substations, and other associated building and structure foundations. Since the transmission line would primarily use four-legged lattice steel towers, the geotechnical data would be used to determine the appropriate depth and diameter requirements for the drilled pier foundations at each leg. It is necessary to test the soil and subsoil conditions averaging every 2 miles along the entire proposed route and route alternatives to determine general subsurface conditions so the transmission line could be safely constructed. On land administered by BLM, 278 borings would be completed across Wyoming and Idaho. In total, 912 boreholes are planned on federal, state, Indian reservation, and private lands.

This Environmental Assessment (EA) has been prepared to evaluate the proposed project in compliance with the National Environmental Policy Act (NEPA) and other relevant federal and state laws and regulations. The EA is tiered to the Bureau of Land Management (BLM) Resource Management Plans (RMPs). Prior to authorizing the proposed geotechnical exploration on BLM-administered lands, the environmental and social effects of those actions must be evaluated. This EA discloses the direct, indirect, and cumulative effects of the alternatives for geotechnical surveying. This EA would be used for evaluation of the alternatives and to make a determination of the need to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI). The responsible BLM line officer will make decisions based on consideration of the purpose and need for the project, the significance of the effects of alternatives, and public concerns. If impacts are not significant as defined in 40 Code of Federal Regulations (CFR) 1508.27, then a Decision Record and FONSI will be prepared.

For this project, the BLM Wyoming State Office is the lead BLM office for this joint EA which crosses portions of the Casper, Rawlins, Rock Springs, Kemmerer, Pocatello, Shoshone, Burley, Jarbidge, Bruneau, and Owyhee Field Offices. The responsible official is:

BLM Wyoming State Director – Don Simpson

Address - 5353 Yellowstone Ave, Cheyenne, Wyoming 82009

The Gateway West Geotechnical Drilling Project EA number is WY-060-EA09-88.

1.1 Need for Proposed Action

The Companies' purpose for the proposed action was initiated in January 2009, when the Companies submitted an Application for Transportation and Utility Systems and Facilities on Federal Lands (SF-299 form) to conduct geotechnical sampling along the proposed route of the Gateway West transmission line project (including alternatives) from the new Windstar substation north of the existing Dave Johnston Power Plant at Glenrock, Wyoming to the new Hemingway substation southwest of Boise, Idaho (**Figure 1**). The total length of the transmission line is approximately 1,149 miles on private, state, and federal lands and alternatives add approximately 873 miles of alternative routes that need a geotechnical investigation. The need for the proposed action is to collect hydrogeologic and geotechnical soil properties for the engineering design of the proposed transmission line.

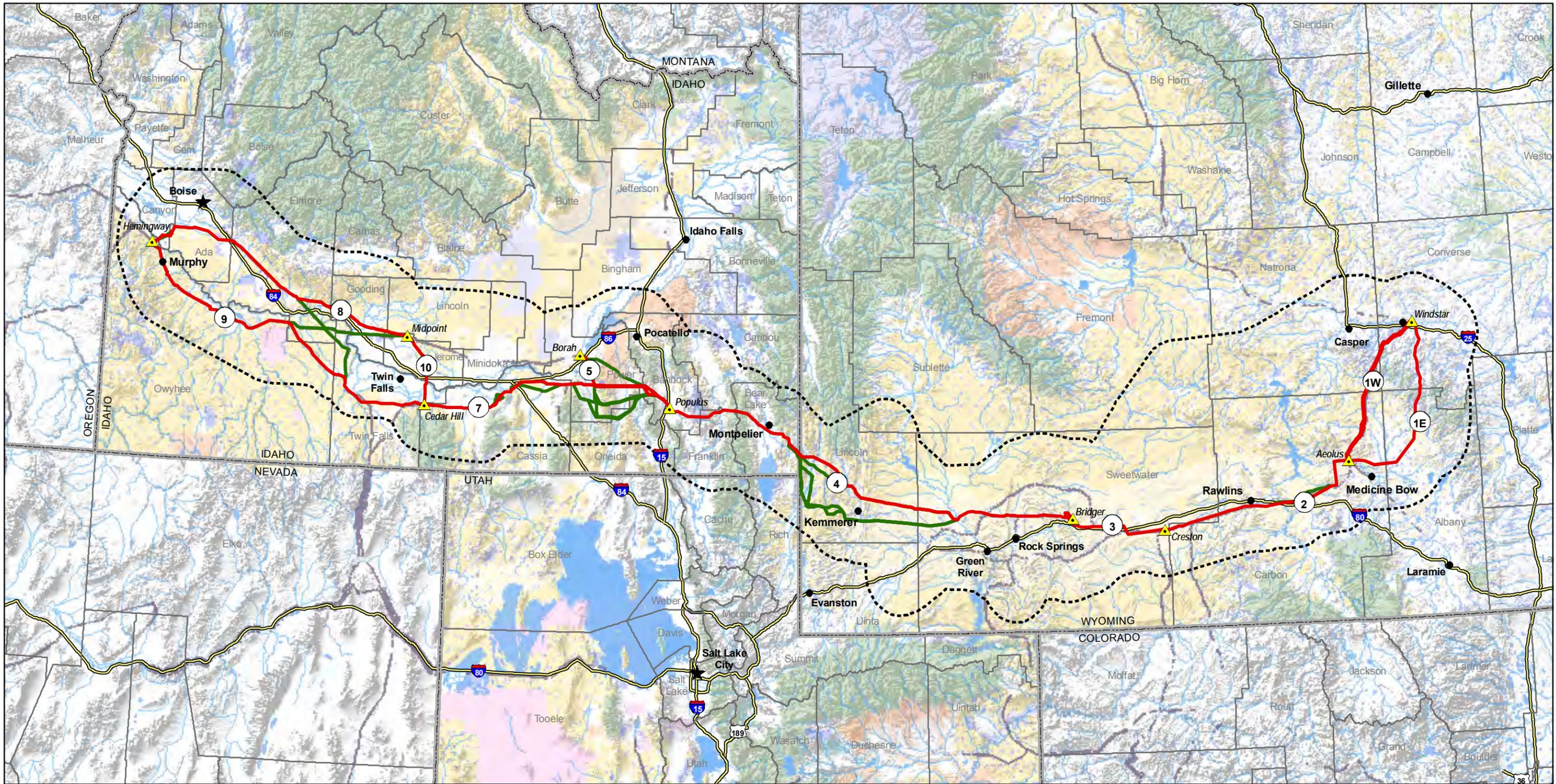
BLM’s purpose and need stems from the overarching policy and direction in the Federal Land Policy and Management Act of 1976, as amended (FLPMA) and its mission, multiple use management of the National System of Public Lands. BLM’s purpose and need is further guided by the National Energy Policy Act of 2005, which recognizes the need to improve domestic energy production, develop renewable energy resources, and to enhance the infrastructure for collection and distribution of energy resources across this nation. To this end, BLM is charged with analyzing applications for utility and transportation systems on federal lands.

BLM’s action in this regard is to analyze the application, define the proposed action and a reasonable range of alternatives, consider the environmental consequences of the proposed action and alternatives, and render a decision on the application. The decision to be made by BLM is to allow the proposed action as proposed, allow the proposed action with modification, allow one of the alternatives including necessary modifications, or to deny the application.

1.2 Conformance with Land Use Plans

This proposed action is subject to the RMPs listed in **Table 1-1**. These plans have been reviewed to determine if the proposed action conforms with the land use plan terms and conditions as required by 43 CFR 1610.5. The project is in compliance with all the current and pending plans because the proposed action does not include activities that are: excluded, occurring during a period where it is prohibited, or produce effects that exceed an established standard.

Field Office	Plan Name	Plan Date
Casper	Casper RMP	2007
Rawlins	Rawlins RMP	2008
Rock Springs	Green River RMP	1997
Kemmerer	Kemmerer RMP	2010
Pocatello	Pocatello RMP	1988
Shoshone	Monument RMP	1986
Bruneau	Bruneau MFP	1983
Burley	Cassia RMP	1985
Burley	Twin Falls MFP	1987
Four Rivers	Kuna Management Framework Plan (MFP)	1983
Four Rivers	Snake River Birds of Prey National Conservation Area (NCA) RMP	2008
Four Rivers	Cascade RMP	1987
Jarbidge	Jarbidge RMP	1987
Owyhee	Owyhee RMP	1999



Project Features

- Approximate Substation Location
- Segment Designation
- Proposed Route
- Feasible Alternative Route
- Study Area Boundary
- Draft West-Wide Energy Corridor

Administrative

- City
- County Boundary
- State Boundary

Transportation

- Limited Access Highway

Land Status

- Bureau of Land Management
- Bureau of Reclamation
- Department of Energy
- Indian Reservation
- Department of Defense
- US Fish and Wildlife
- State Lands
- US Forest Service
- National Park Service
- Private

**Gateway West
Transmission Line Project
Idaho, Wyoming**
Project Overview
FIGURE 1-1

1.3 Relationship to Statutes, Regulations, or Other Plans

This EA is prepared pursuant to NEPA and subsequent regulations adopted by the Council on Environmental Quality (40 CFR 1500). Additionally, the project must be reviewed to determine whether it complies with the Endangered Species Act, the Federal Land Policy and Management Act, the Clean Water Act, the Clean Air Act, the National Historic Preservation Act and Executive Orders (EO) covering Environmental Justice (EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations), Noxious Weeds (EO 13112, Invasive Species), and Wetlands (EO 11990, Protection of Wetlands).

1.4 Tribes, Individuals, Organizations, or Agencies Consulted

Boreholes would occur on the Fort Hall Indian Reservation and the Tribe has been contacted about the geotechnical drilling. Other interested tribes have been contacted about the Gateway West project. They did not raise any issues other than requiring the consultants doing surveys to obtain a tribal business license and a trespass permit. Private, state, and federal landowners were contacted to obtain permission to access their lands for the testing. Some private land owners denied access and those boreholes have been removed from the project (approximately 50 locations). All agencies and individuals with boreholes on their lands have been sent a notification of the availability of the EA.

1.5 Issues

The interdisciplinary team reviewed the proposed geotechnical sampling and a GIS analysis was used to identify what resources might be affected by the proposed project. The GIS analysis was completed using GIS data that was provided by BLM or developed as part of the Gateway West Transmission Line EIS analysis (currently underway) and included consultation currently underway with both the US Fish and Wildlife Service and the Idaho and Wyoming State Historic Preservation Offices. The GIS analysis included the proposed drilling locations and overland access from the nearest road. After reviewing the location of activities and the environmental protection measures (see Section 2.1.3), the interdisciplinary team determined no issues required development of alternatives, some of the resources would need a detailed analysis (even if that resulted in determining there would be no effects), and others would not be affected or would have negligible effects and no detailed analysis would be needed. Following are the resources that were analyzed in detail.

- Cultural Resources;
- Fish and Wildlife;
- Some Threatened, Endangered, and Sensitive Plant and Animal Species (Canada lynx, black-footed ferret, gray wolf, North Platte and Colorado River fish, black-tailed prairie dog, burrowing owl, Columbian sharp-tailed grouse, sage grouse, pygmy rabbit, white-tailed prairie dog, Wyoming pocket gopher, mountain plover, Laramie columbine, and slickspot peppergrass);
- Biological Soil Crust;
- Vegetation;
- Noxious Weeds
- Paleontological Resources;
- Land Uses; and
- Environmental Justice.

The determination of what would be affected included a review of the environmental protection measures (Section 2.1.3) that would be employed to eliminate or minimize potential impacts. Based on the location of the activities, the description of the project, and the environmental protection measures, it was determined that

there would be negligible or no effect on the following resources and therefore they are not analyzed in detail in the environmental assessment.

- Transportation;
- Water;
- Wetlands;
- Visual Quality;
- Geology and Minerals;
- Social and Economic Conditions;
- Grazing;
- Special Designations;
- Soils (other than soil crust);
- Air Quality;
- Native American Religious Concerns;
- Health and Safety;
- Noise;
- Areas of Critical Environmental Concern;
- Waste (Solid/Hazardous);
- Fish (other than threatened and endangered);
- Migratory Birds and Raptors;
- General Wildlife
- Big Game
- Threatened, Endangered, and Sensitive Plant and Animal Species except those listed above;
- Wilderness;
- Farmland, Prime/Unique;
- Forests;
- Wild Horses and Burros
- Floodplains;
- Fire; and
- Wild and Scenic Rivers.

CHAPTER 2

PROPOSED ACTION AND ALTERNATIVES

This chapter describes the alternatives that are being analyzed as part of the Gateway West Geotechnical Drilling project (i.e., the Proposed Action and No Action Alternative).

2.1 Proposed Action

The proposed action is for the BLM to issue a short term right-of-way grant for drilling on BLM-managed federal lands and access across federal lands for drilling on other federal, private, and state lands. The activities that would result from granting the right-of-way are limited to conducting short-term engineering studies for the proposed Gateway West Transmission Line route and alternatives to collect hydrogeologic and geotechnical soil properties. This EA discloses the environmental impacts of geotechnical activities on federal, state, and private lands. The requirements for drilling and overland travel are different on BLM-administered lands than on the other ownerships, so the proposed action is described in two parts, activities on BLM and activities on other ownership.

2.1.1 Drilling

An air rotary drill rig is proposed to excavate a total of 278 soil borings on BLM administered lands (**Table 2-1**) and 634 soil borings on other federal, state, and private lands (**Table 2-2**) to evaluate the bearing capacity of site soils for proper structure foundation analyses. The drilling program consists of drilling deep borings from which soil and/or bedrock samples would be taken for laboratory testing and analysis. The boreholes would be 6 to 8 inches in diameter and the borings would typically be 40 feet deep or deeper where soils with weaker strength properties are encountered. Similarly, depths could be less where bedrock is encountered. Soil or rock samples would be collected at regular intervals for analysis of engineering characteristics. Drilling would be completed by Idaho and Wyoming-licensed drillers. Following drilling, the holes would be backfilled with the drill cuttings. If groundwater is encountered, the boreholes will be backfilled with bentonite.

The drilling equipment needed to perform the sampling activities would be transported using three to four vehicles including one drill rig, one water truck, one 4-wheel drive support vehicle including an air compressor, and another 4-wheel drive vehicle for the field engineer. The average estimated drilling time per boring is one-half day. The type of rig used would depend on accessibility of boring locations. Types of drilling equipment are listed below:

- Conventional two-ton or larger truck with a drill rig mounted on the chassis (Figure 2, Figure 4, and Figure 3).
- A 30,000 pound gross vehicle weight 6-wheeled truck, about 30 feet long, with or without 4-wheel drive capabilities.
- All-terrain vehicle consisting of a similar drilling rig mounted on a lighter framed, shorter vehicle equipped with oversized low-pressure tires. Track-mounted drilling rigs place varying sizes of drilling machinery on a tracked vehicle with low ground pressure (about 10 pounds per square inch) (**Figure 2**).

Table 2-1 Boreholes and Miles of Overland Travel on BLM-Administered Lands by Field Office		
BLM Field Office	Number of Boreholes	Miles of Overland Travel
Wyoming		
Casper	8	0.22
Rawlins	48	3.04
Rock Springs	13	0.07
Kemmerer	53	2.36
Idaho		
Pocatello	20	1.68
Shoshone	22	0.00
Burley	28	0.76
Jarbidge	41	1.49
Four Rivers	26	3.63
Bruneau	10	0.00
Owyhee	9	0.10
Total BLM	278	13.35



Figure 2. Example of Track-Mounted Drill Rig



Figure 4. Example of Drill Rig in Operation



Figure 3. Rubber-Tire Mounted Drill Rig

Table 2-2 Boreholes and Miles of Overland Travel on Other Ownership Lands		
Landowner	Number of Boreholes	Miles of Overland Travel
Wyoming		
Bureau of Reclamation	2	0.0
Private	284	9.86
State	35	1.48
National Forest	3	0
Total Wyoming	324	11.34
Idaho		
Indian Reservation	7	0.05
Military	0	0.15
Private	284	11.80
State	13	1.78
National Forest	6	0
Total Idaho	310	13.78
Total Other Owners	634	25.12

Samples would be collected by driving a sampling device into the undisturbed soils just below the augers. Where bedrock is encountered, rock core samples would be taken using a rock coring barrel. Upon completion and before leaving each site, the soil boring would be backfilled with the drill cuttings. No open holes would be left unattended, and all holes would be fully backfilled before moving.

In addition to the drilling rig, typically there would be an auxiliary 4-wheel drive pickup truck to haul water if needed for drilling and/or rock coring, haul extra drilling supplies, and to transport personnel. A third 4-wheel drive vehicle may be used by the geotechnical engineer overseeing the drilling program and logging the borings.

Borings would be located at every turn in the alignment and approximately every 1.5 miles between turns.

At the drill location, the actual boring is 6 to 8 inches in diameter. However, at each boring location a work area of approximately 40 feet by 40 feet (1,600 square feet, 0.037 acres each) would be established. Within the work area, surface disturbance may occur, due to parked vehicles including the drill truck and support vehicles. Extra foot traffic would occur at the back of the drill rig as the drill crew moves between the drill

and support vehicles during drilling. During rotary drilling and rock coring, water is used during the drilling process. Some excess drill water may exit the hole. A small ditch (less than 6 inches deep and 12 inches wide and less than 10 feet long, 0.0002 acres each) may be necessary beginning at the borehole and extending to a downhill location to drain the excess drill water away from the work area. This ditch would be backfilled when the work is complete. Although excavated soil is proposed to be returned to the boring following drilling, some excess is typically generated. A shovel would be used to spread excess soil behind the drill truck in a layer several inches thick. The area of thin soil spreading is typically less than 10 feet by 10 feet (0.0023 acres) and less than 6 inches thick.

As the drilling is critical to design of project structures, the drilling would occur in 2010 and 2011.

Permission to access Federal, state, Indian Reservation, and private property has been requested from the landowners and management agencies where boreholes and overland travel would occur, although responses have not been received from many of them. It is likely that access will be denied to some boreholes or overland travel routes, and therefore the number of boreholes could be reduced. Their inclusion in the EA does not indicate that there is an assumption that access will be granted.

2.1.2 Access

To minimize disturbance, drill rig access would be from the nearest existing road to the actual drill site. Roads would not be constructed. To be considered “drilling from existing roads,” most drill sites would be located to allow road traffic to pass without being impeded by drilling equipment and provide a safe working environment for drilling site workers, but no more than 100 feet off the road surface. Where drilling can not be done from existing roads (112 of the boreholes, about 11 percent), overland travel would be required. Vehicles would avoid concentrations of thick vegetation, drainage bottoms, surface water, wetlands, steep slopes, and other sensitive areas to minimize environmental impacts. Access routes would be delineated in consultation with an archaeologist (see Section 2.1.3.1). **Figure 5** and **Figure 6** indicate the locations of the proposed routes where the soil borings and proposed access routes would occur. Maps at a 1:100,000 scale are located on this BLM website at http://www.wy.blm.gov/nepa/cfodocs/gateway_west/documents.php showing locations of individual boreholes and overland travel routes.

Access to each of the drill sites was considered in selecting the drill locations. The longest overland travel distance over BLM managed lands is 0.74 miles.

2.1.3 Environmental Protection

The Companies and their contractors will use the following procedures to protect resources.

2.1.3.1 Cultural and Paleontological Resources Protection Measures

Identification and Avoidance of Historic Properties

The drilling locations would be reviewed and compared with information collected during the records review (Henderson, et al. 2009 and Nilsson, et al. 2009) of the proposed transmission alignment, the Phase I Class III inventory completed in 2008 (McNutt, et al. 2009 and Bevill, et al. 2009), and any portions of the Phase II, Class III inventory completed in 2009 prior to drilling. Any drill locations found to be sited on known resources, including historic trail and road segments, would be relocated at a distance determined to be appropriate by the BLM cultural resource specialist.

All drill holes and proposed overland travel (where needed) on both public and private land (where permission has been granted) would be subject to a cultural resources inventory. The Area of Potential Effect (APE) is defined as a 5-acre area around each borehole and a 100-foot wide corridor (50 feet on either side) on the centerline of overland travel. The center line of the surveyed overland travel corridor was flagged and marked for relocation by the drilling companies to ensure use of the same routes inventoried by cultural resource crews. No inventory was conducted on existing access roads because the geotechnical vehicular use

of those roads is a “like use” to public use and does not require inventory, subject to a case-by-case review by BLM’s field cultural resource specialists. A full Class-III level, 100 percent inventory was conducted to BLM standards at each drill site’s APE on public lands and where permitted on private lands.

Cultural resources encountered within the APE of the drill site resulted in the drill location, and the overland travel route that provides access being relocated or eliminated from the project. All identified cultural resources were fully recorded and appropriate site records completed and submitted in the consultant’s cultural resource inventory report.

Sites were recorded and reports prepared in accordance with BLM and SHPO *Cultural Resources Class II and Class III Report Standards* and the terms and conditions of BLM-issued cultural resource use permits. The inventory report described and displayed on maps (7.5’ USGS maps standard) (1) all areas that were inventoried by cultural resource crews; and (2) all recorded sites and isolates including sites located in proposed drilling locations and overland travel routes that were modified due to the discovery of historic properties in the APE. The results of the files searches of the APE shall discuss and display (in text and maps) (a) all areas that have been previously surveyed; (b) all documented and recorded sites; and (c) all project modifications.

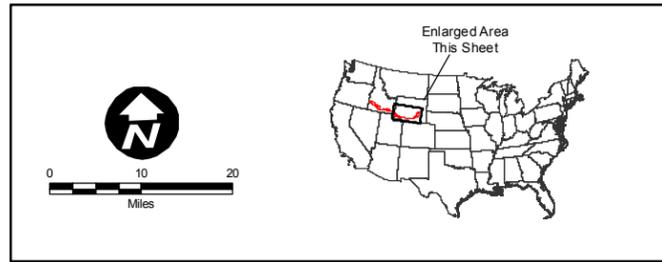
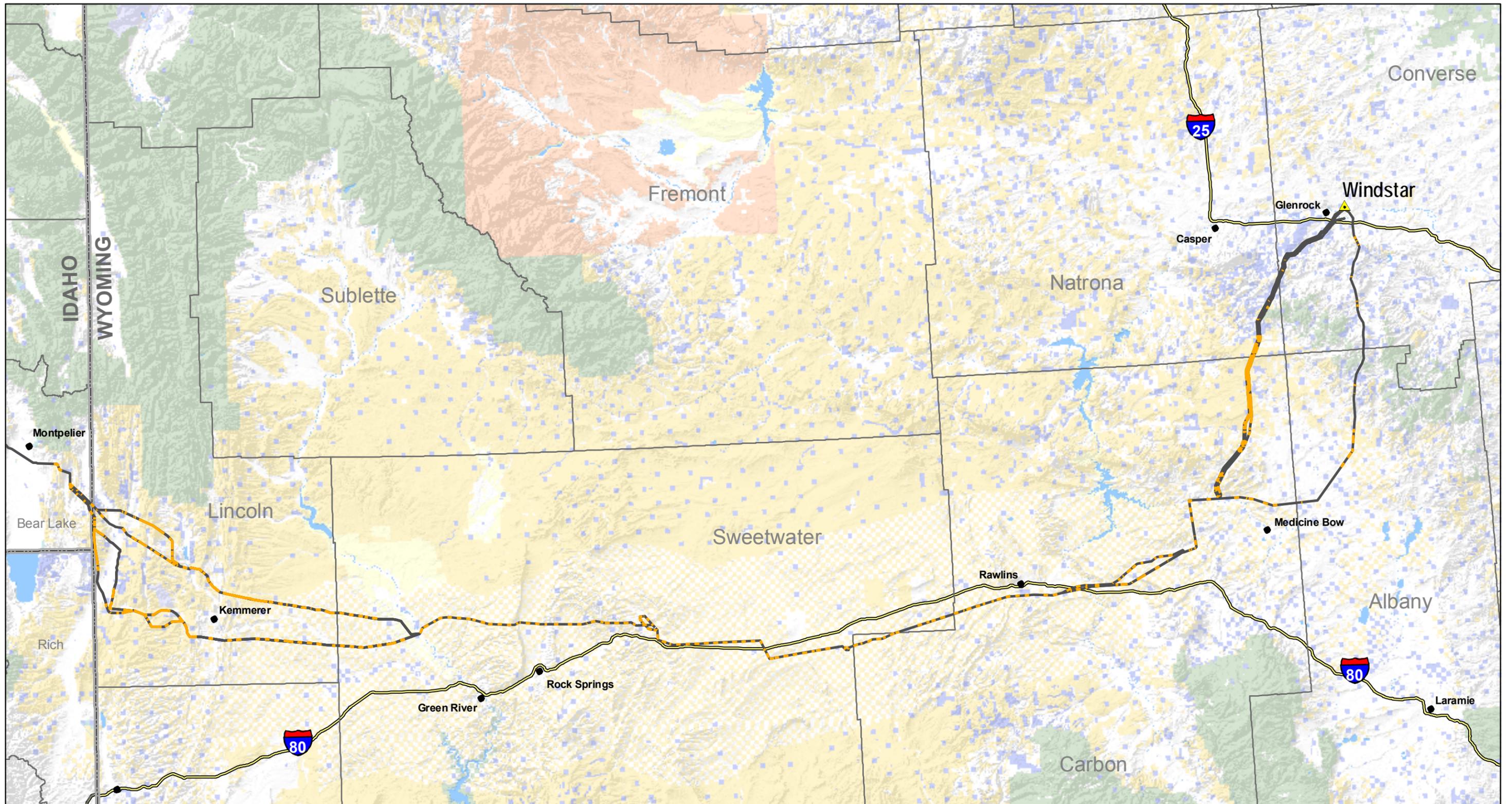
Inadvertent Discovery of Cultural Resources

All personnel involved in the geotechnical investigations would be instructed on site avoidance and protection measures, including information on the statutes protecting cultural resources. This training would be conducted for all personnel prior to initial site mobilization and would be provided to new geotechnical personnel on their first day of work.

In the event that previously unidentified cultural resources are discovered during the geotechnical investigations, the drill crews would immediately cease operations and notify the contract archaeologist and the BLM in accordance with BLM’s standard stipulation¹ for cultural resources. The drilling operations would be redirected to the next area that has been cleared for cultural resources. The contract archaeologist would record, evaluate, and determine the effects on the resource due to the drilling operation. A qualified archaeologist would complete a letter report to assess and document a discovery each time the drilling operations are redirected for such a discovery.

Human remains and associated artifacts may be discovered during inventory or drilling operations. If human remains are discovered under any circumstances, all activities would immediately cease, and the remains would be secured and protected until appropriate disposition has been determined, in accordance with applicable local, state, and Federal statutes. It may be necessary to provide 24-hour on-site security for Native American Graves Protection and Repatriation Act (Public Law 101-601; 25 U.S.C. 3001 et seq.) associated discoveries and for other discoveries as determined by the BLM.

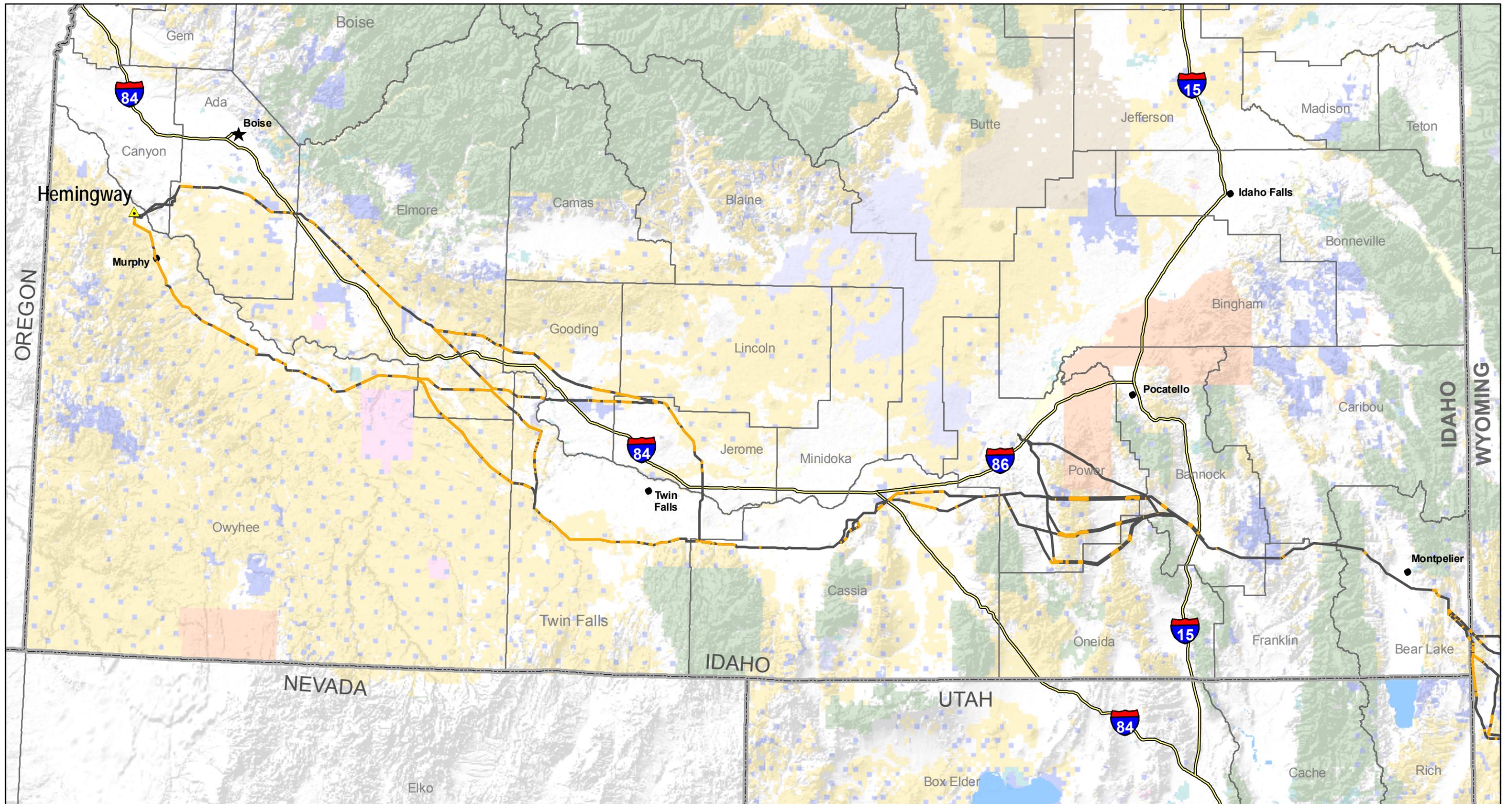
¹ Any cultural or paleontological resource (historic or prehistoric site or object or fossil) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures shall be made by the authorized officer after consulting with the holder.



Project Features	Administrative	Land Status
Approximate Substation Location	City	Bureau of Land Management
Proposed Action – Locations of drilling on BLM	County Boundary	Bureau of Reclamation
Connected Action – Location of drilling Non-BLM	State Boundary	Department of Energy
<p>* Boring and overland travel will occur every 1 to 2 miles along the indicated Proposed Action and Connected Action routes</p>	Interstate Highway	Indian Reservation
		Department of Defense
		US Fish and Wildlife
		State Lands
		US Forest Service
		National Park Service
		Private

**Gateway West
Geotechnical Drilling Project**
**Proposed Action
Wyoming**

Figure 5



Project Features

- Approximate Substation Location
- Proposed Action – Locations of drilling on BLM
- Connected Action – Location of drilling Non-BLM

* Boring and overland travel will occur every 1 to 2 miles along the indicated Proposed Action and Connected Action routes

Administrative

- City
- County Boundary
- State Boundary

Transportation

- Interstate Highway

Land Status

Bureau of Land Management	US Fish and Wildlife
Bureau of Reclamation	State Lands
Department of Energy	US Forest Service
Indian Reservation	National Park Service
Department of Defense	Private

**Gateway West
Geotechnical Drilling Project
Proposed Action
Idaho**

Figure 6
Page 13

The BLM, along with the appropriate law enforcement representative and county coroner would be immediately notified by phone by the Companies' representative or their consultant. This would be followed by written notification to the BLM, of any discoveries of human remains, associated and unassociated funerary objects, sacred objects, or objects of cultural patrimony. The BLM would be responsible for compliance with the Native American Graves Protection and Repatriation Act and its implementing regulations (43 CFR 10) for all related inadvertent discoveries and discovery situations.

2.1.3.2 Water

Approximately 50 gallons of water would be needed for drilling each borehole.

Water from the North Platte River and Colorado River basins would not be used for drilling in other watersheds in order to minimize water usage from these two basins. Water tanks would be filled from gas stations and other public water supplies with permission.

2.1.3.3 Noise

All vehicles and construction equipment would use working mufflers to minimize equipment-related noise.

2.1.3.4 Erosion and Sedimentation Control

Truck traffic would not occur when wet conditions would result in wheel rutting greater than 2 inches in depth.

Vehicles with low ground pressure, such as rubber tracked equipment or balloon tires would be used in areas or conditions where rutting, soils displacement, or compaction could occur.

The Spill Prevention, Containment, and Countermeasures Plan would outline spill prevention practices and requirements for refueling and equipment operation near water bodies, procedures for emergency response and incident reporting, and training requirements.

- Construction spills would be promptly cleaned up and contaminated materials hauled to a disposal site that meets local jurisdictional requirements.
- If an upland spill occurs, berms would be constructed with available equipment to physically contain the spill. Absorbent materials would be applied to the spill area. Contaminated materials would be excavated and temporarily placed on and covered by plastic sheeting in a containment area a minimum of 100 feet away from any wetland or waterbody, until proper disposal is arranged (EPA 2006).
- If a spill occurred beyond the scope of on-site equipment and personnel, an Emergency Response Contractor would be identified and available to further contain and clean up the spill.
- For spills in standing water, floating booms, skimmer pumps, and holding tanks would be used as appropriate to recover and contain released materials on the surface of the water.
- If pre-existing contamination is encountered during drilling, work would be suspended in the area of the suspected contamination until the type and extent of the contamination is determined. The type and extent of contamination; the responsible party; and local, state, and federal regulations would determine the appropriate cleanup method(s) for these areas.
- Materials such as fuels, other petroleum products, chemicals, and hazardous materials including wastes would be located in upland areas at least 500 feet away from streams and/or 200 feet from private wells (400 feet from public wells).

2.1.3.5 Air Quality

Drillers would comply with EPA and DEQ standards for drill rig engines.

2.1.3.6 Noxious Weeds

To reduce the spread/introduction of noxious and invasive weed species, drill rigs and transport vehicles would be power washed weekly or when moving from one BLM weed management area to another. An air compressor would accompany the drill rig and be used daily to remove weed parts and seed from all vehicles.

Contractors will avoid driving, drilling, or parking in weedy areas.

2.1.3.7 Wetlands

No access or drilling would occur through or in wetlands.

2.1.3.8 Fire Protection

All vehicles would be equipped with a working fire extinguisher and a shovel. Drill rigs would be equipped with a filled water tank during periods of high, very high, or extreme fire danger.

All smoking would be prohibited.

Campfires or uncontained fires of any kind would be prohibited.

The crew contingency plan would include a fire communications protocol for contacting fire-fighting personnel.

2.1.3.9 Lands

Utility clearances would be conducted on every borehole before entry to the site. Clearances would be conducted by a certified utility locator. It would be up to the discretion of the utility locators as to whether a site visit is necessary for any borehole.

Any fences that need to be cut for access would be repaired to their original conditions before the drilling crew leaves the area, or immediately if livestock are present.

2.1.3.10 Public and Crew Safety

Drillers would develop a Health and Safety Plan which includes the following information (at a minimum):

- Identification of responsible parties;
- Identification of potential physical, chemical, or environmental hazards and relevant health and safety precautions;
- Required personal protective equipment;
- Emergency evacuation procedures;
- Location and content of warning signs to be posted;
- Local emergency telephone numbers would be posted at drilling locations.

2.1.3.11 Biological Protection Measures

All seasonal restrictions associated with BLM RMPs would be followed on BLM administered lands. If the Companies desire to operate within areas of seasonal restrictions, the process for requesting and granting exceptions will be followed, as to protocol established by governing BLM field offices.

To comply with the 6840 manual direction, and the USDI Conservation Agreement (2006) concerning slickspot peppergrass, the following measures would be employed for boreholes and overland travel routes listed in **Table 2-3, Table 2-4, Table 2-5 and Table 2-6**

- a. A BLM Botanist or approved knowledgeable contract botanist would accompany the drilling crews to identify the access and coordinate the actual drilling location. The list of qualified botanists in Idaho includes Tetra Tech, Boise; URS Corporation, Boise; Mancuso Botanical

Services, Boise; Dr. James Smith, Boise; Dr. Don Mansfield, Caldwell; and Alderspring Ecological Consulting, Tendoy, Idaho.

- b. Full field clearances (inventory) would be conducted in the vicinity of the drilling locations prior to access and drilling to identify avoidance areas. A field survey for slickspot peppergrass was conducted in 2009 to support the biological assessment.
- c. Boring in or overland crossing of any slickspot peppergrass plants or habitat would be avoided as determined by the 2006 Candidate Conservation Agreement for slickspot peppergrass, the August 22, 2006 Agreement between the BLM and the USFWS for slickspot peppergrass (as updated on August 27, 2009), and clearance surveys.
- d. During drilling, soil will not be stored on slickspots, and following drilling, excess soil will not be spread on slickspots.
- e. Disturbed soils would be seeded with appropriate certified weed free native seed (broadcast, raked-in, species such as Sandberg bluegrass (*Poa secunda*)).

In addition to the species specific requirements for surveys listed in **Table 2-3** and **Table 2-4**, surveys are required prior to drilling or overland travel for all BLM special status plants.

Boring ID	Field Office	Surveys Needed
08-481	Four Rivers	LEPA Potential Habitat
08-485	Four Rivers	LEPA Potential Habitat
08-495	Four Rivers	LEPA Potential Habitat
08-498	Four Rivers	LEPA Potential Habitat
08-502	Four Rivers	LEPA Potential Habitat
08-509	Four Rivers	LEPA Potential Habitat
08-512	Four Rivers	LEPA Potential Habitat

Boring ID	Field Office	Surveys Needed
08-514	Four Rivers	LEPA Potential Habitat
08-519	Four Rivers	LEPA Potential Habitat
08-895	Four Rivers	LEPA Potential Habitat
04-205	Kemmerer	Year-round restrictions
04-206	Kemmerer	Year-round restrictions
04-208	Kemmerer	Year-round restrictions
02-147	Rawlins	Mountain Plover

In addition to surveys for all BLM special status plants, **Table 2-4** indicates where surveys are required prior to drilling or overland travel for black-footed ferret, burrowing owl, mountain plover, and Ute ladies'-tresses.

Field Office	Overland ID	Miles	T&E Surveys Needed
Four Rivers	724	0.083	Slickspot Peppergrass
Four Rivers	724	0.031	Slickspot Peppergrass
Four Rivers	724	0.042	Slickspot Peppergrass
Four Rivers	769	0.046	Slickspot Peppergrass
Four Rivers	769	0.108	Slickspot Peppergrass
Four Rivers	769	0.021	Slickspot Peppergrass
Four Rivers	769	0.027	Slickspot Peppergrass
Four Rivers	769	0.417	Slickspot Peppergrass
Four Rivers	771	0.012	Slickspot Peppergrass

The boreholes listed in **Table 2-5** are in areas where surveys for federally listed Threatened and Endangered species may occur on other ownership. Surveys would be performed before drilling occurs, and if the species

is located, the borehole would be moved to avoid impacts on the listed species. Most boreholes are not in areas where threatened and endangered species could occur and are not listed in the table.

Table 2-5 Other Ownership Boreholes Where Surveys Are Required		
Borehole	Owner	Survey Needed
02-1	Private	blowout penstemon, Ute ladies' -tresses
02-587	Private	blowout penstemon
02-588	Private	blowout penstemon
08-484	Private	slickspot peppergrass
08-487	Private	slickspot peppergrass
08-491	Private	slickspot peppergrass
08-494	State	slickspot peppergrass
08-496	State	slickspot peppergrass
08-497	Private	slickspot peppergrass

Table 2-5 Other Ownership Boreholes Where Surveys Are Required		
Borehole	Owner	Survey Needed
08-499	Private	slickspot peppergrass
08-502	Private	slickspot peppergrass
08-503	Private	slickspot peppergrass
08-504	Private	slickspot peppergrass
08-505	Private	slickspot peppergrass
08-506	Private	slickspot peppergrass
08-507	Private	slickspot peppergrass
08-508	Private	slickspot peppergrass
08-515	State	slickspot peppergrass
08-520	State	slickspot peppergrass

Table 2-6 indicates which overland travel routes on other ownership that need surveys for Federally Listed Threatened and Endangered species may occur. Surveys would be performed before drilling occurs, and if the species is located, the area would be flagged so that overland travel would avoid impacts on the listed species. Most overland travel would not occur in areas where threatened and endangered species could occur and routes are not listed in the table.

Table 2-6 Other Ownership Overland Travel Requiring Survey			
Route	Owner	Survey Needed	Miles
5	Private	blowout penstemon	0.115
6	Private	blowout penstemon	0.035
1523	Private	blowout penstemon	0.007
2355	Private	slickspot peppergrass	0.112
2394	Private	slickspot peppergrass	0.040
2402	Private	slickspot peppergrass	0.265
2404	Private	slickspot peppergrass	0.187
2405	State	slickspot peppergrass	0.554
2408	Private	slickspot peppergrass	0.139
2408	Private	slickspot peppergrass	0.444
2409	State	slickspot peppergrass	0.032
2409	State	slickspot peppergrass	1.621
2410	Private	slickspot peppergrass	0.013
2411	State	slickspot peppergrass	0.873
2416	Private	slickspot peppergrass	1.650
2423	Private	slickspot peppergrass	0.903
2441	Private	slickspot peppergrass	0.061

Table 2-6 Other Ownership Overland Travel Requiring Survey			
Route	Owner	Survey Needed	Miles
2462	Private	slickspot peppergrass	0.260
2464	Private	slickspot peppergrass	0.530
2582	Private	slickspot peppergrass	0.126
2584	Private	slickspot peppergrass	0.417
2590	Private	slickspot peppergrass	0.049
2673	State	slickspot peppergrass	0.437
2677	Private	slickspot peppergrass	0.042
2698	Private	slickspot peppergrass	0.070
3360	Private	slickspot peppergrass	0.169
3360	Private	slickspot peppergrass	0.364
3361	State	slickspot peppergrass	0.004
3361	State	slickspot peppergrass	0.780
3481	Private	slickspot peppergrass	0.003
3481	Private	slickspot peppergrass	0.422
3487	Private	slickspot peppergrass	0.087
3505	Private	slickspot peppergrass	0.046
3509	State	slickspot peppergrass	0.920

To avoid or minimize effects on BLM Special Status plants, all BLM special status plants encountered would be avoided on BLM lands. Surveys would be conducted on BLM lands by a qualified botanist prior to overland travel or borings, discovered plants would be flagged and overland travel rerouted and boreholes relocated if necessary to avoid the plant by a minimum of 164 feet.

Drilling vehicles traveling overland routes would off-set their travel so as not to create a two-track road.

On BLM lands, vehicles would avoid disturbing areas of large sagebrush to protect pygmy rabbit habitat.

To avoid effects on black-footed ferrets everywhere and mountain plover, and burrowing owls on BLM lands, surveys for prairie dog towns would be conducted before drilling. Prairie dog towns identified during surveying would be flagged and avoided by at least 50 feet. **Table 2-5** and **Table 2-6** indicate which boreholes on BLM administered lands need to be surveyed for prairie dog towns.

Many areas with seasonal restrictions limit the implementation of the drilling program to several months in the late summer and early fall. Drilling activities would abide by seasonal restrictions, stipulations, or avoidance areas. After consultation between BLM and Companies' staff prior to any field activities, exceptions to the seasonal restrictions may be requested by the Companies and granted by BLM.

In any locations where surveys would be required, the Companies would conduct these clearances using qualified professional biologists and botanists, in communication with Field Office BLM biologists and botanists, and using BLM-approved survey protocol or procedures.

2.2 No Action Alternative

Selection of the no action alternative would be the BLM denying the right-of-way application. No geotechnical survey would occur on the National System of Public Lands related to the Gateway West project. The Companies could, depending on approval by other agencies and landowners, conduct a geotechnical survey on other lands. Denial of the right-of-way to conduct the geotechnical survey would not result in a denial of implementation of the Gateway West transmission line project, should it be approved later. The activities that would occur under the no action alternative are those described for "Other Ownership" (**Table 2-2**) in the proposed action, including the drilling, overland travel, and environmental protection measures. Environmental protection measures that would not apply to the no action alternative are the biological survey and avoidance requirements for BLM special status species and BLM RMP required seasonal restrictions. Cultural resource inventory, consultation, avoidance, and reporting would apply.

2.3 Comparison of Alternatives

Table 2-7 contains a comparison of the effects of the proposed action and no action alternative on the resources analyzed.

Resource/Issue	Proposed Action	No Action
Cultural and Historical Resources	No Effect	No Effect
Sensitive Species	May Impact Individuals, But, Does Not Contribute To The Need To List The Species Under ESA.	No Effect
Threatened and Endangered, and (except Canada lynx)	No Effect	No Effect
Canada lynx	Not Likely To Adversely Affect	No Effect
Slickspot peppergrass	Not Likely To Adversely Affect	No Effect

**Table 2-7
Comparison of Effects**

Resource/Issue	Proposed Action	No Action
Colorado River Fish	No Effect	No Effect
Soil Crust	Negligible Effect	Negligible Effect
Vegetation	Negligible Effect	Negligible Effect
Noxious Weeds	Negligible Effect	Negligible Effect
Paleontological Resources	No Effects	No Effects
Land Uses	Negligible Effect	Negligible Effect
Environmental Justice	No Effect	No Effect

CHAPTER 3

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This chapter describes the current conditions of the resources that might be affected and the likely consequences of the proposed action and no action alternative. Scoping was completed to evaluate the resources that needed to be analyzed based on the potential that they could be affected. Due to the nature of the project, including the short time frame and small area of effect, the proposed action is unlikely to have a substantial effect on most resources.

3.1 Cultural and Historical Resources

3.1.1 Affected Environment

The history and prehistory of human use of the project area has been recently summarized in BLM Class I survey reports (Henderson, et al. 2009 and Nilsson, et al. 2009) for both Idaho and Wyoming. Additionally, BLM Phase I Class III surveys have been completed for over 190 miles (in one-mile survey blocks) along the proposed transmission line alignment, and documented in McNutt, et al. 2009 and Bevill, et al. 2009. These reports have documented a wide range of sites representing over 12,000 years of human activity. Of special interest in the project area are the National Historic Trails, including the Emigrant and Oregon trails. For trails, both the physical integrity and the integrity of the setting are important. Numerous trail segments across Wyoming and Idaho have been identified and assessed for physical integrity and integrity of setting.

3.1.2 Direct and Indirect Effects

3.1.2.1 Proposed Action

Implementation of the survey, reporting, and approval plan described in Section 2.1.3.1 would ensure that any previously known or newly recorded cultural resources would be avoided by access and drilling activities. There would be no direct impact (disturbance) on any National Historic Trails, as all drilling activities would be located a minimum of 100 feet from trail segments. No vegetation removal, road blading, or pad clearing would occur.

3.1.2.2 No Action

Protection of cultural resources in the no action would be the same as described for the proposed action; therefore, effects would be the same.

3.1.3 Cumulative Effects

As there would be no direct or indirect effects, there would be no cumulative effects.

3.2 Fish and Wildlife

3.2.1 Affected Environment

Many wildlife species occur throughout the project area. Most would not be affected, or effects would be negligible, such as raptors, migratory birds, and small mammals due to the short term nature of the project and minimal disturbance. These groups will not be discussed further. Other species specific discussions occur in Section 3.3 - Threatened, Endangered, and Sensitive Species. Because big game have additional regulatory considerations, they are discussed below.

Of the big game species present, pronghorn, elk, and mule deer are the most common, while bighorn sheep, moose, and white-tailed deer are less common. The project area provides wintering habitat for these species. This habitat is important for the health of the populations of large ungulates because the winters, particularly on the Wyoming steppe and in the Idaho foothills, can be very harsh. Similarly, the project would cross through important calving/fawning areas.

3.2.2 Direct and Indirect Effects

3.2.2.1 Proposed Action

The project area includes big game winter and calving/fawning areas, however, there would be no temporary or permanent loss of habitat. The drilling and overland travel would not occur during calving/fawning periods in those areas important to big game. With the environmental protection measures in place, there would be no effect on big game due to the limited extent of each drilling and time frame of disturbance in each area, and seasonal restrictions on BLM lands. While seasonal restrictions would not apply to other ownership lands, the winter conditions that would make the winter range most important for these species would also likely result in delaying any drilling for crew safety, operational conditions, and sampling integrity. Therefore, there would be no effect on big game from drilling and overland travel on other ownerships as well.

3.2.2.2 No Action

The no action would have the same effects as the proposed action.

3.2.3 Cumulative Effects

There would be a negligible contribution of cumulative effects on wildlife, and no contribution of effects on big game.

3.3 Threatened, Endangered, and Special Status Species

3.3.1 Affected Environment

Threatened and Endangered Species

Wildlife

Black-Footed Ferret (Endangered)

Approximately 2,204,851 acres of suitable habitat have been mapped for the black-footed ferret within Wyoming (non-block-cleared areas). No suitable habitat occurs in Idaho. Black-footed ferret habitat occurs within the Rawlins, Rock Springs, and Kemmerer Field Offices. If it is discovered that a borehole or overland access occurs where suitable habitat for the black-footed ferret is, the borehole will not be drilled.

Gray Wolf (Experimental, Non-essential Population - Wyoming)

As the gray wolf is considered a habitat generalist, and does not require a specific habitat type for survival, gray wolves could potentially be present along any portion of the project regardless of habitat type with the exception of heavily used agricultural land. The closest they have been documented to the project is near Cokeville, Wyoming in 2003. No critical habitat has been designated within Wyoming (USFWS 1978). Gray wolves will not be affected and will not be discussed further.

North Platte and Colorado River Species (Endangered/Threatened)

Part of the project area drains into the Colorado River and the Platte River. The Colorado pikeminnow (*Ptychocheilus lucius*), razorback sucker (*Xyrauchen texanus*), bonytail (*Gila elegans*), humpback chub (*Gila cypha*) are all listed as endangered. The Colorado River also includes designated critical habitat for these species. Platte River species include the pallid sturgeon (*Scaphirhynchus albus*), also listed as endangered, as

are interior populations of the least tern (*Sterna antillarum*), whooping crane (*Grus americana*); the piping plover (*Charadrius melodus*) is also a Platte River species and is listed as threatened. Portions of the Platte River are designated as critical habitat for the whooping crane.

Canada Lynx (Lynx Canadensis)(Threatened)

Lynx habitat is found generally at mid to upper elevations. Lynx tend to have very large home ranges, varying from about 15,000 to 30,000 acres or 10 to 20 square miles. No suitable lynx habitat is present in the project area; however, two boreholes would occur in the Dempsey Ridge Lynx Analysis Unit (LAU), south of Caribou National Forest. The BLM and U.S. Forest Service have delineated LAUs which contain both suitable and unsuitable habitats. There is no suitable lynx habitat present within the portion of the LAU where drilling activities and access would occur.

Plants

Endangered and threatened plant species that may occur in the counties crossed are shown in **Table 3-1**. Several species are listed but have no potential to occur within the analysis area, including Goose Creek milkvetch, Christ’s paintbrush, blowout penstemon, Colorado butterfly plant, and desert yellowhead.

Table 3-1 Federally Listed Threatened, Endangered, and Proposed Plant Species					
Species	Status	Habitat	Range	Potential for Occurrence	
				Idaho	Wyoming
Western prairie fringed orchid <i>Platanthera praeclara</i>	T	Moist prairies and sedge meadows downstream of Wyoming	Does not occur in analysis area, but projects in North Platte River watershed in Wyoming that involve water depletions could affect this species.	None –no proposed or alternate facilities are in Platte River watershed	Eastern portions of the project are in the Platte River watershed.
Ute ladies’-tresses orchid <i>Spiranthes diluvialis</i>	T	Moist stream banks, wet meadows, and abandoned stream channels; 5100-5200 ft	Occurs in eight states, including ID and WY. May occur in all counties in analysis area in WY. In ID, occurs in Jefferson, Madison, Bonneville, and Fremont counties.	Unlikely – analysis area is outside known range in Idaho	May occur in analysis area wherever suitable habitat is present in Wyoming.
Slickspot peppergrass <i>Lepidium pappilium</i>	T	Slickspot microsites in sagebrush steppe	Reported from Ada, Canyon, Gem, Elmore, Payette, and Owyhee Counties, ID	Occurs in the Jarbidge and Four River Field Offices.	None – does not occur in Wyoming

Status: E = endangered, T = threatened

BLM Sensitive and Other Special Status Species

Bald eagle, northern leopard frog, and Preble’s meadow jumping mouse, would not be affected by the activities due to the timing, duration of activity, and extremely limited disturbance area. These species would not be discussed further.

Black-Tailed Prairie Dog

Current estimates indicate that there are only 229,607 acres of suitable prairie dog habitat within Wyoming (USFWS 2008). The suspected locations of black-tailed prairie dog colonies/complexes were mapped with the use of aerial photography (Tetra Tech, 2009). The project would cross through suspected black-tailed prairie dog colonies and complexes, on its very eastern portion.

Burrowing Owl

In Idaho, burrowing owls are distributed in patches throughout the southern half of the state. In Wyoming, they occur and breed throughout most of the state with highest concentrations in the south and east. Suitable habitat for the burrowing owl was mapped where the species range overlaps the project area. Habitat for the burrowing owl exists along the entire route.

Columbian Sharp-Tailed Grouse

Suitable habitat for the Columbian sharp-tailed grouse was mapped where the species range overlaps the project area. The project area occurs within 2 miles of 44 leks which have been active within the last 5 years.

Gray Wolf

Gray wolf was removed from the endangered species list in Idaho on May 4, 2009 and is therefore considered a special status species by BLM. As the gray wolf is considered a habitat generalist, and does not require a specific habitat type for survival, gray wolves could be present regardless of habitat type with the exception of heavily used agricultural land. Gray wolves in Idaho would not be affected and will not be discussed further.

Greater Sage Grouse

Greater sage grouse are widely distributed throughout sagebrush-dominated habitats in southern Idaho and throughout Wyoming. The state of Wyoming has established areas designated as core habitat and the state of Idaho has established key areas designated as crucial habitat for the greater sage grouse. These areas were delineated around high concentrations of leks and other suitable habitat features frequented by this species. The project area occurs within both Wyoming's core and Idaho's key habitat. Forty-six boreholes would occur within 2 miles of a lek which have been active within the last 5 years.

Pygmy Rabbit

Habitat for the pygmy rabbit exists within all portions of the project. The geotechnical drilling and overland travel would cross suitable habitat. In addition, the BLM has mapped areas where the pygmy rabbit could occur on BLM.

White-Tailed Prairie Dog

The white-tailed prairie dog does not occur in Idaho. In Wyoming, it inhabits primarily the western two-thirds of the state. Suitable habitat was mapped where the species' range overlaps the project area.

Wyoming Pocket Gopher

The known distribution of the Wyoming pocket gopher is restricted to the south-central portion of Wyoming, as it is known to inhabit an area along the Carbon and Sweetwater county lines. The closest historical record of a Wyoming pocket gopher near the project area was from 1976, and was located approximately 0.5 mile north of the project (WYNDD 2008) and probably occurs in other areas.

Mountain Plover

The mountain plover does not occur in Idaho. In Wyoming, it occurs and breeds throughout most of the state. Suitable habitat for the mountain plover was mapped where the species' range occurs within the project area. The mountain plover has been proposed for listing again and the USFWS has re-opened the comment period.

Sensitive Plants

Sensitive plants that may occur within the project area and where habitat may be affected include 7 species in Wyoming and 35 species in Idaho. Sensitive plants may be found in all vegetation types listed in Table 3-7, although it is unlikely any would occur in the agriculture/disturbed vegetation type. For the effects analysis, it is assumed that sensitive plants are located at all boreholes and overland travel within suitable habitat for the particular plant species in its geographic range.

3.3.2 Direct and Indirect Effects

3.3.2.1 Proposed Action

Threatened and Endangered Species

Wildlife

All federally listed species except the Canada lynx had a “No Effect” determination. **Table 3-2** gives justifications for these determinations.

Common Name	ESA Listing Category	Rationale
Black-Footed Ferret	Endangered	No effect – survey and avoid would eliminate drilling in colonies.
Canada Lynx	Threatened	Not likely to adversely affect – species is wide-ranging. While not expected to occur in the project area individuals could possibly pass through. No temporary or permanent loss of suitable habitat would occur as a result of the action. Short-term habitat disruption due to drilling in non-suitable habitats within a Lynx Analysis Unit..
Columbia Spotted Frog	Candidate	No effect – no drilling in or access through riparian habitats would occur.
Gray wolf - Wyoming	Experimental, non-essential	No effect – the species is unlikely to occur within the project area. There would be no loss of habitat function from the proposed action.
Yellow-Billed Cuckoo	Candidate	No effect – no drilling in or access through riparian habitats would occur.
Platte River Fish	Endangered	No effect – water depletion less than <i>de minimus</i> threshold.
Colorado River Fish and critical habitat for Colorado River fish	Endangered	No effect – water depletion less than <i>de minimus</i> threshold.
Interior least tern	Endangered	No effect – water depletion less than <i>de minimus</i> threshold
Piping plover	Threatened	No effect – water depletion less than <i>de minimus</i> threshold.
Whooping crane and critical habitat for whooping crane	Endangered	No effect – water depletion less than <i>de minimus</i> threshold.

North Platte and Colorado River Species

Endangered fish species, interior populations of the least tern, piping plover, whooping crane, and critical habitat for whooping crane are affected by activities that deplete or degrade the flow of waters in the Upper Colorado and North Platte River Basins. Both the North Platte and Upper Colorado basins would be used as a water source for drilling (**Table 3-3**). Consumptive water depletions would occur. Water needed for drilling would be less than 50 gallons per borehole. The water depletion was calculated using 50 gallons per hole, considering all the boreholes.

In addition to the boreholes on BLM lands, boreholes would occur within the North Platte and Upper Colorado River basins on lands owned by others. The water usage in each basin was calculated using 50 gallons per borehole. Together, the proposed action boreholes would result in a total depletion in the North Platte of 0.035 acre-feet and in the Upper Colorado of 0.025 acre-feet. For both basins, the total depletion is below the *de minimus* threshold of 0.1 acre-foot, therefore, no effects would occur.

**Table 3-3
Proposed Action Water Depletion by River Basin**

Ownership	North Platte Boreholes	Gallons	Acre-Feet	Upper Colorado Boreholes	Gallons	Acre-Feet
BLM	50	2,500	0.008	47	2,350	0.007
BOR	0	0	0.000	2	100	0.000
Private	142	7,100	0.022	110	5,500	0.017
State	28	1,400	0.004	1	50	0.000
USFS	3	150	0.000	0	0	0.000
Total	223	11,150	0.035	160	8,000	0.025

Canada Lynx

There is no suitable lynx habitat present within the portion of the Dempsey Ridge LAU where drilling activities would occur. Drilling and access to drill sites through the LAU would be limited to areas that do not require any removal of trees and no potential denning or foraging habitat would be otherwise disturbed or affected. Therefore, the proposed action is not likely to adversely affect lynx.

Plants

Environmental protection measures requiring that surveys be conducted for threatened or endangered plants and avoiding overland travel and drilling where they are found would protect the species and individual plants from effects. Water depletions in the Platte River would have no effect on the Western prairie fringed orchid because they would be minimal (see **Table 3-3**). There would be no effect on Ute ladies'-tresses because suitable habitat would be surveyed and avoided.

Surveys were conducted for slickspot peppergrass consistent with established protocols. All project activities will adhere to the applicable 2009 Conservation Agreement and 2009 Candidate Conservation Agreement (as amended) "conservation measures." Overland travel and all drilling activities would be avoided in slickspot microsites. While the species will not be subjected to direct impact due to avoidance, including the avoidance of spreading soil on slickspots following drilling, the risk of indirect impacts due to establishment of noxious/invasive species is elevated if reseeded activities in non-slickspots are unsuccessful in establishing native perennial cover. Surveys and applied conservation measures will ensure that the proposed action is not likely to adversely affect the plant or its habitat. **Table 3-4** summarizes the determinations and rationale.

**Table 3-4
Justifications for Effects Determinations of Federally Listed Plants**

Common Name	ESA Listing Category	Rationale
Western prairie fringed orchid	Threatened	No effect– water depletion below <i>de minimus</i> threshold
Ute ladies'-tresses orchid	Threatened	No effect – suitable habitat to be surveyed and avoided.
Slickspot peppergrass	Threatened	Not likely to adversely affect – direct impacts will be avoided; potential indirect impacts include the potential introduction or spread of invasive nonnative plants due to ground disturbance if reseeded in non-slickspots is unsuccessful.

BLM Sensitive and Other Special Status Species

The project may impact individual BLM sensitive and other special status species analyzed, but is not likely to impact these species at a population level basis, nor is it likely to result in trends towards Federal listing of

these species. With the exception of sage grouse and Columbian sharp-tailed grouse, all special status species that are likely to be present in the analysis area on BLM managed lands would have surveys conducted and boreholes and overland travel that may affect them would be relocated. Sage grouse and Columbian sharp-tailed grouse are addressed below.

Greater Sage-Grouse and Columbian Sharp-tailed Grouse

Due to the limited extent of the disturbance (0.037 acres per borehole) from trampling and the short-term nature of the activities (one-half day per boring), there is no potential direct and indirect impacts on greater sage-grouse or sharp-tailed grouse from direct habitat loss (leks or sagebrush) and fragmentation. Where the boring and overland travel would occur in greater sage-grouse or Columbian sharp-tailed grouse habitats the drilling and one-time overland travel would not cause surface disturbance or fragmentation of sagebrush habitat. Seasonal restrictions would apply, therefore increased human activity may disturb grouse and make them relocate for half a day, but not during critical periods. Effects on sage grouse and Columbian sharp-tailed grouse would be the temporary disturbance. The geotechnical boring and overland travel may impact individuals, but is not likely to contribute to a trend towards Federal listing or loss of viability for the greater sage-grouse or Columbian sharp-tailed grouse.

BLM Sensitive Plants

As discussed in the vegetation section, a total for the entire project of 2.1 acres would be disturbed to where plants may be affected, and 34 acres would be trampled (see **Table 3-7**). Trampling would likely not cause long-term effects on plants. Environmental Protection Measures would minimize the trampling from overland travel. Due to the minimal amount of disturbance, geotechnical boring and overland travel may impact individuals, but is not likely to contribute to a trend towards Federal listing or loss of viability. Surveys for sensitive plants on BLM managed lands would be conducted at the appropriate time to identify the presence of the species. Boreholes and overland travel locations can easily be moved to avoid impacts on sensitive plants. Should a plant or plant population be located, the borehole or overland travel would be relocated.

3.3.2.2 No Action

This section addresses effects of the No Action alternative on threatened, endangered, and other special status species. As noted above, under the No Action alternative, the geotechnical drilling work could be conducted would not be conducted on BLM lands.

Threatened and Endangered Species

Protection measures for listed species would be the same as described for the proposed action, therefore the effects of the no action would be the same as the proposed action. None of the listed species would be affected, with the exception of the Canada Lynx.

Canada Lynx

While not expected to occur in the project area individuals could possibly pass through the areas where drilling activities occur on non-BLM land ownerships. Therefore, the no action alternative may affect, but is not likely to adversely affect Canada lynx.

North Platte and Colorado River Species

The water usage in each basin on other ownership lands was calculated using 50 gallons per borehole (**Table 3-3** minus BLM). The total depletion in the North Platte from drilling on other ownership would be 0.026 acre-feet and the Upper Colorado would be 0.017 acre-feet. For both the North Platte and the Colorado River, the total depletions are below the *de minimus* threshold of 0.1 acre-foot, therefore, no effects on Platte River or Colorado River species would occur.

Plants

Protection measures that apply to the proposed action would also apply to the no action. There would be no impact on threatened or endangered plant species with the exception of slickspot peppergrass. This is due to the potential for introduction or spread of invasive nonnative plants due to ground disturbance if reseeding in non-slickspots is unsuccessful. Therefore the no action alternative may affect but is not likely to adversely affect slickspot peppergrass.

3.3.3 Cumulative Effects

Threatened and Endangered Species

Given that the project would have no effect on North Platte River and Colorado River Species, it would make no contribution to cumulative effects associated with current and future withdrawals from these river systems. Likewise, given that the project would have no effect on the black-footed ferret, Columbia spotted frog, gray wolf, yellow-billed cuckoo, western prairie-fringed orchid, and Ute ladies'-tresses, it would make no contribution to direct mortality, habitat loss or degradation, or disturbance associated with current and future development within the project area.

The analysis of cumulative effects for lynx focuses on past, present, and future actions within the Dempsey Ridge LAU. Future projects in this area include two proposed transmission lines, the Zephyr and the Overland Intertie, which would follow the Gateway West alignment, along which the geotechnical drilling would occur, but 1,500 foot offset each. A very small portion of the LAU, south of these segments, is pending authorization for wind energy development. Such development could result in the removal of forested habitat or could result in disturbance to individual lynx; however, because this project is expected to have a small likelihood of disturbing transient lynx, but is not expected to result in direct mortality, habitat loss, or create a travel barrier it would make a negligible contribution to the effects of other projects.

Ground disturbing activities have the potential to impact special status plant species, either directly or indirectly, by disturbing potential habitat or resulting in invasive/noxious plant invasion. Planned projects involving ground disturbance in the vicinity where slickspot peppergrass is known to occur include power generation facility development, three transmission lines, and on-going non-renewable resource extraction. Projects federal lands and on non-federal lands requiring federal permits would be required to conduct pre-construction surveys to identify and avoid the locations of sensitive plant populations. However, projects not requiring federal permits probably would not conduct surveys and might not avoid habitat or populations entirely. It is anticipated that revegetation/reseeding efforts would be conducted in disturbed areas following construction on all land ownerships when federal or state permits are required. Current and future use of insecticides and herbicides on non-federal lands could also affect slickspot peppergrass directly through plant mortality, or indirectly through effects on pollinators. As the proposed action would have a minor, indirect effect on slickspot peppergrass, the project would make a negligible contribution to cumulative impact on this species resulting from potential future habitat loss, expansion of noxious/invasive plant species within current habitat, or direct mortality from future projects.

BLM and Other Special Status Species

Sage grouse and sharp-tailed grouse habitat in the vicinity of the geotechnical drilling sites has been altered by existing transmission lines, pipelines, non-renewable resource extraction activities, and roads. Future projects located within sage grouse and sharp-tailed grouse habitat in the vicinity of the Gateway West corridor within which geotechnical drilling would take place include several transmission lines, wind energy leases, and resource extraction which could result in further habitat loss and disturbance (temporary during construction and permanent during operation) to these species. It is assumed that future projects would implement timing restrictions and setback distances to avoid impacts to these species. Given that important greater sage grouse and sharp-tailed grouse habitat was mapped and avoided in laying out the location of the

drill holes, and overland travel and timing restrictions would apply, the project would make a negligible, temporary contribution to disturbance associated with past and present activities.

Cumulative impacts to BLM sensitive plants would be similar to those described above for slickspot peppergrass. Future development in the project area could result in trampling or habitat loss; however, given the protection measures that will be implemented, the project will make a negligible contribution to these effects.

3.4 Soil Crust

Biological soil crusts refer to the algae, moss, liverwort, fungi, bacteria, and lichens that grow on soils between vegetation. They are important for maintaining soil moisture and prohibiting invasive plants. Crusts are important for enriching soils, reducing erosion, and affecting fire spread.

3.4.1 Affected Environment

The analysis area has not been uniformly surveyed for soil crusts, however, because of the ecosystems involved, it can be assumed that crusts occur on all of the BLM managed lands within the analysis area. Vegetation types of prairie, perennial grasslands, and sagebrush steppe have biological soil crust cover consisting of mosses, lichens, and green algae. Biological soil crusts are not common in heavily forested areas.

3.4.2 Direct and Indirect Effects

3.4.2.1 Proposed Action

Soil crusts would be directly affected by the drilling and associated overland travel. Both activities would crush, bury, or displace biological crust. There is a risk that overland travel would interfere with the water supply to biological crust if rutting were to occur (USDI 2001). As environmental protection measures are in place to avoid rutting, the risk of indirect effects would be minimal. Given that both the direct and indirect effects would occur on limited areas, effects on the scale of the travel path could be severe; however, landscape level effects would most likely be “light”. While crusts that are disturbed may take hundreds of years to recover from single trips by two or three vehicles to and from the borehole would disturb very little of the crust on a landscape scale. The boreholes themselves would result in comparatively small areas of bare soils. Based on the vegetation types (grasses or shrub cover), **Table 3-5** indicates the number of boreholes in the proposed action that could have biological crusts near their locations.

Table 3-5 Boreholes Potentially Near Biological Crust in the Proposed Action		
Number of Boreholes	Miles of Overland Travel	Acres Potentially Affected¹
722	5.1	37.2

Source: Based on Vegetation Mapping conducted for the Gateway West Transmission Line EIS, Tetra Tech 2009.

3.4.2.2 No Action

Based on the vegetation types (grasses or shrub cover), **Table 3-6** indicates the number of boreholes by landowner that could have biological crusts near their locations. The effects on soil crust from the no action would be the same as described for the proposed action. There would be fewer miles of overland travel and boreholes, the effects would be minor due to the minimal disturbance.

Table 3-6 Boreholes Potentially Near Biological Crust in the No Action		
Number of Boreholes	Miles of Overland Travel	Acres Potentially Affected¹
433	17.53	20.2

¹ Acres of trampling includes 1600 square feet of work area per borehole plus 0.06 acres per mile of overland travel

3.4.3 Cumulative Effects

Due to the limited extent of the effects and the scale, the project would contribute only minor negative effects to the soil crust due to the minimal amount of disturbance that would occur. Local effects, on the scale of the travel path, may be detectable for some time in the most sensitive locations but would be less noticeable in areas of greater vegetative diversity. Some damage to soil crusts may have already occurred as a result of previous recreational, grazing, road construction, and other ground disturbing activities in the past throughout the project area. In such cases, the disturbance created by the proposed actions would add to the total disturbance to the extent that the proposed and existing disturbances do not overlap.

3.5 Vegetation

3.5.1 Affected Environment

Vegetation types where the drilling and overland access would occur include agriculture (farmed areas), conifer forest, deciduous forest, greasewood, sagebrush, juniper, native grass, other shrub, sagebrush, saltbush, semi-natural grass, and wetland. Some of the greasewood and sagebrush types have been disturbed from their natural state. In a few areas, no data are available because the boreholes and overland travel routes were determined after the vegetation mapping occurred and fell outside those mapped areas. In these locations, vegetation types represented are assumed to be along the same percentages as the known sites.

3.5.2 Direct and Indirect Effects

3.5.2.1 Proposed Action

Overland travel to access the drilling sites would occur for approximately 38.5 miles. **Table 3-7** indicates how many miles of overland travel would occur in each vegetation type along with the disturbed acres and trampled acres. As the drill rig would avoid large plants, the effects would be crushing of small forbs and shrubs. Because access would be prohibited when soil conditions are wet, these plants would recover quickly.

Vegetation Type	Boreholes	Acres Disturbed ¹	Miles of Overland Travel	Acres Trampled ²
Agricultural/Disturbed	188	0.4	7.59	7.4
Conifer forest	22	0.1	0.0	0.8
Deciduous forest	15	0.0	0.0	0.6
Juniper	3	0.0	2.70	0.3
Miscellaneous	4	0.0	0.0	0.1
Native grass	224	0.5	28.18	9.9
Other shrub	82	0.2	0.0	3.0
Rabbit brush	2	0.0	0.0	0.0
Sagebrush	354	0.8	0.0	13.0
Saltbush	20	0.0	0.0	0.7
Total	915	2.1	38.47	35.9

¹ Acres disturbed includes soil dispersed from drilling, maximum per borehole of 10 feet by 10 feet (0.0023 acres per borehole).

² Acres of trampling includes 1600 square feet of work area per borehole plus 0.06 acres per mile of overland travel.

Disturbance caused by the drilling would disturb vegetation in a very small area (100 square feet per hole maximum, 0.0023 acres) by burying some of it in up to 6 inches of soil (total of 2.1 acres distributed along

the project routes). However, the actual drilling location would avoid vegetation. The 40 foot by 40 foot work area would trample 1,600 square feet (0.037 acres per drill hole). Only the actual boring (50 square inches per borehole) and the immediate area of boring spoils (100 square feet) would disturb vegetation enough to have an effect (dig up and kill plants or change the soil structure so that some vegetation does not return for a few years). Given this small amount of disturbance, the overall effect on vegetation would be negligible.

3.5.2.2 No Action

Approximately 25.1 miles of overland travel would occur as a result of the activities on other ownership lands. **Table 3-8** shows the mapped vegetation types where boreholes and overland travel would occur. Although there would be fewer boreholes occurring in the no action, the effects on vegetation would be the same as the proposed action.

3.5.3 Cumulative Effects

There would be negligible direct effects on vegetation; therefore the project would contribute negligible cumulative effects to the condition of the vegetation in the analysis area.

3.6 Noxious Weeds and Invasive Species

Noxious weed is a legal term, meaning any plant officially designated by a federal, state, or local agency as injurious to public health, agriculture, recreation, wildlife, or property (Shelley and Petroff 1999). Invasive species are those whose introduction cause or is likely to cause economic or environmental harm or harm to human health.

Vegetation Type	Boreholes	Acres Disturbed ¹	Miles of Overland Travel	Acres Trampled ²
Agricultural/Disturbed	170	0.4	7.59	2.2
Conifer forest	18	0.0	0.0	0.7
Deciduous forest	11	0.0	0.0	0.4
Juniper	3	0.0	2.12	0.5
Miscellaneous	3	0.0	0.0	0.1
Native grass	131	0.3	15.41	4.0
Other shrub	62	0.1	0.0	2.3
Sagebrush	232	0.5	0.0	8.6
Saltbush	5	0.0	0.0	0.2
Total	636	2.1	25.12	19

1 Acres disturbed includes soil dispersed from drilling, maximum per borehole of 10 feet by 10 feet (0.0023 acres per borehole).

2 Acres of trampling includes 1600 square feet of work area per borehole plus 0.06 acres per mile of overland travel

3.6.1 Affected Environment

There are many invasive and noxious weed species that are known or expected to occur in the analysis area. Project-specific information is not consistently available. The BLM uses the Idaho and Wyoming State lists, and the National Invasive Species List for managing weeds on federal lands, and the BLM in Wyoming also manages county declared species.

3.6.2 Direct and Indirect Effects

3.6.2.1 Proposed Action

Overland travel could spread weeds and invasive plants if plant parts are attached to the vehicles when they leave the roadway. This would be of particular concern if the vehicle had left an infested area previously, and then entered an area that was not infested. The requirement to avoid driving, drilling, or parking in weedy areas, and to periodically wash and blow off plant parts from the vehicles would minimize this impact.

The drilling would cause an exceedingly small amount of disturbed area which would be a new place for weeds and invasive species to become established, however, the environmental protection measures would prevent or minimize the spread of weeds. The drilling would slightly increase the risk of weeds.

3.6.2.2 No Action

As in the proposed action, the no action would occur in areas where weeds and invasive plants are known to occur. As the environmental protection measures to prevent the spread of weeds are the same for the no action as the proposed action, the effects would be the nearly the same, although fewer areas would be crossed so there is a slightly lower risk of spreading weeds and invasive plants.

3.6.3 Cumulative Effects

Either alternative would add to the risk of spreading noxious weeds and invasive plants. Impacts would continue as a result of natural conditions and/or existing development in the analysis area.

3.7 Paleontological Resources

3.7.1 Affected Environment

Paleontological resources (fossils) are important scientific and educational resources because of their use in (1) documenting the presence and evolutionary history of particular groups of now extinct organisms, (2) reconstructing the environments in which these organisms lived, and (3) in determining the relative ages of the strata in which they occur. Fossils are also important in determining the geologic events that resulted in the deposition of the sediments in which they were buried.

Paleontological resources are recognized as nonrenewable scientific resources and are afforded protection by Federal statutes and policies including the Antiquities Act of 1906, the Federal Land Policy Management Act of 1976, and the Omnibus Public Land Management Act of 2009 also includes requirements for the management of paleontology on public lands.

The BLM has a system of rating the sensitivity of geologic units known as the Potential Fossil Yield Classification (BLM 2008). The five basic levels are:

Very low – not likely that a geologic unit has recognizable fossil remains.

Low – not likely to contain vertebrate fossils or scientifically significant nonvertebrate fossils

Moderate or unknown - various significance, abundance, and predictable occurrence or unknown fossil potential

High – high occurrence of significant fossils

Very High - highly fossiliferous and predictable or significant fossils that are at risk of adverse impacts or degradation

The project crosses numerous geologic units ranging in age from very old Precambrian granites to late Quaternary sediments. Likewise, the classifications of the units crossed include all five sensitivity levels. For the Wyoming portion, the records of the Geological Museum of the University of Wyoming in Laramie were utilized. Those of the Idaho Museum of Natural History, Pocatello, Idaho were employed for the Idaho portion.

3.7.2 Direct and Indirect Effects

Numerous geologic units of moderate to high paleontological sensitivity occur within the proposed segment alignments and alternative routes of the project that would be subjected to drilling activities. Direct impacts to potentially important fossil remains would be minimal, consisting of drilling into sensitive formations. Disturbance due to drilling activities affords the opportunity to recover specimens and associated scientific information. The drilling program would also furnish information regarding the amount of soil overlying sensitive formations, helping to determine the need for additional monitoring during construction of the transmission line should it be approved.

3.7.2.1 Proposed Action

Drilling has the potential for minor direct impacts to sensitive geologic units. Because the individual drill holes are so small and the number of holes is low compared with the extent of the geologic units, impacts would be insignificant. Offsetting these impacts is the opportunity to better define soil coverage and location of sensitive formations along the proposed alignment.

3.7.2.2 No Action

The no action drilling would occur under the same condition as the proposed action and therefore the effects on paleontological resources would be the same as described under the proposed action.

3.7.3 Cumulative Effects

Because the impacts of the proposed drilling are minor, any contribution to a regional destruction of sensitive fossil remains would be insignificant. Collection of samples from sensitive geologic units could add minor contributions to the knowledge of the fossil record.

3.8 Land Uses

3.8.1 Affected Environment

Land uses on BLM managed lands include grazing, farming, rights-of-way, and roads. Vegetation mapping was used to identify which land uses exist where boreholes or overland travel would occur. Agriculture was a vegetation type that was identified. It was assumed that all vegetation types except forest, wetlands, and developed areas on BLM-administered lands had grazing occurring on them, although it is likely that not all of them would be. The location of the boreholes and access roads compared to the mapped land uses indicate that rights-of-way and roads would not be directly affected by the project.

3.8.2 Direct and Indirect Effects

3.8.2.1 Proposed Action

Overland travel would not affect farming or grazing. There would be 41 locations where overland travel would occur on BLM-managed lands assumed to be used for grazing. It is likely that some of these locations would require crossing a fence, although the extent is unknown. As the drillers would be required by the Environmental Protection Measures to repair any damages to their original condition before they leave the area, there would be no effect on grazing from overland travel.

Drilling would affect up to 0.037 acres per hole. In agricultural land uses on BLM-administered lands, this amounts to one-tenth of an acre total of the farmed area and 9.7 acres in grazing. These acres would be distributed along the 1,150 miles of the project. The vegetation within the drilling working area would be trampled. The minor extent of the impact and the short-term nature of one time impact means there would be no impact on grazing or farming.

All drilling locations would have a utility clearance completed before access to the sites would be permitted. This would ensure that current rights-of-way or easements would not be affected by the project.

Areas of agriculture and grazing would be distributed along the 1,150 miles of the project (**Table 3-9**). The vegetation within the drilling working area would be trampled. The minor extent of the impact and the short-term nature of one time impact means there would be no impact on grazing. Drilling actively farmed fields would not occur without the landowner’s permission.

Table 3-9 Boreholes and Overland Travel by Land Use in the Proposed Action				
Land Use Based on Vegetation Mapping	Number of Boreholes	Acres Disturbed¹	Miles of Overland Travel	Acres Trampled²
Agriculture (farming)	188	0.4	7.6	8.8
Grazing	665	1.0	30.9	26.5

1 Acres disturbed includes soil dispersed from drilling, maximum per borehole of 10 feet by 10 feet (0.0023 acres per borehole).

2 Acres of trampling includes 1600 square feet of work area per borehole plus 0.06 acres per mile of overland travel

Boreholes would not have any effects on land uses that occur on BLM-administered lands because immediately following completion of the sampling, the boreholes would be filled.

All drilling locations would have a utility clearance completed before access to the sites would be permitted. This would ensure that current rights-of-way would not be affected by the project.

3.8.2.2 No Action

In agricultural land uses, acres affected would amount to 5 acres total of the farmed area and 25 acres in grazing. These acres would be distributed along the 1,150 miles of the project. The vegetation within the drilling working area would be trampled. The minor extent of the impact and the short-term nature of one time impact means there would be no impact on grazing. Drilling actively farmed fields would not occur without the landowner’s permission.

All drilling locations would have a utility clearance completed before access to the sites would be permitted. This would ensure that current rights-of-way or easements would not be affected by the project.

Boreholes would not have any effects on land uses because immediately following completion of the sampling, the boreholes would be filled.

Table 3-10 Boreholes and Overland Travel by Land Use in the No Action				
Land Use Based on Vegetation Mapping	Number of Boreholes	Acres Disturbed¹	Miles of Overland Travel	Acres Trampled²
Agriculture (farming)	170	0.4	7.6	8.1
Grazing	433	1.0	20.3	20.3

1 Acres disturbed includes soil dispersed from drilling, maximum per borehole of 10 feet by 10 feet (0.0023 acres per borehole).

2 Acres of trampling includes 1600 square feet of work area per borehole plus 0.06 acres per mile of overland travel

3.8.3 Cumulative Effects

There would be no cumulative effects on land uses, because there would be no direct or indirect effects.

3.9 Environmental Justice

3.9.1 Affected Environment

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires each Federal agency to make the achievement of environmental justice part of its mission by identifying and addressing disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low income populations. The Order further stipulates that the agencies conduct their programs and activities in a manner that does not have the effect of excluding persons from participation in, denying persons the benefits of, or subjecting persons to discrimination because of their race, color, or national origin.

Guidelines provided by the Council on Environmental Quality (CEQ) (1997) and U.S. Environmental Protection Agency (US EPA) (1998) indicate that a minority community may be defined as either: 1) where the minority population comprises more than 50 percent of the total population, or 2) where the minority population of the affected area is meaningfully greater than the minority population in the general population of an appropriate benchmark region used for comparison. Minority communities may consist of a group of individuals living in geographic proximity to one another, or a geographically dispersed set of individuals who experience common conditions of environmental effect. Further, a minority population exists if there is “more than one minority group present and the minority percentage, as calculated by aggregating all minority persons, meets one of the above-stated thresholds” (CEQ 1997, p. 26).

Race and Ethnicity

The populations of Wyoming and Idaho are predominantly white, comprising 84 percent and 86 percent of the estimated populations in these states in 2007, compared to 66 percent in the United States as a whole. Hispanic or Latinos are the largest minority group ranging from 27 percent of the population in Power County to 3 percent of the population in Bear Lake and Oneida counties.

None of the potentially affected counties had minority populations in 2000 that exceeded 50 percent of the total population. The percent of the population identifying as White alone in the 2000 Census exceeded 50 percent in all cases, with shares ranging from 67 percent to 99 percent. As a result, none of these areas met the definition of a “minority community” based on the criteria that the minority population comprises more than 50 percent of the total population.

To determine whether a “minority population in the general population of an appropriate benchmark region used for comparison” occurs in the analysis area, the demographics of census block groups was evaluated in comparison to the county demographics. The most recent year that census race and ethnicity data are available at the census block group level is 2000. The percent of population in each census block group was also compared with its respective county percentage in 2000. This comparison identified five census block groups where the share of the population comprised of persons of Hispanic or Latino origin was more than 10 percent higher than the county average (U.S. Census Bureau 2000a).

Income and Poverty

The percent of the population below the poverty level in Wyoming in 2007 was lower than the national average (9.5 percent versus 13.0 percent) while the percent of the population below the poverty level in Idaho in 2007 was also lower than the national average (12.1 percent versus 13.0 percent).

The most recent year that income and poverty data are available at the census block group level is 1999. One of the affected census block groups had more than 20 percent of its population below the poverty level in

1999. Four others had between 19.5 percent and 20 percent of their population below the poverty level. The U.S. Census Bureau defines a poverty area as a census tract or other area where at least 20 percent of residents are below the poverty level (U.S. Census Bureau 2008a).

3.9.2 Direct and Indirect Effects

3.9.2.1 Proposed Action

While there are minority and low income communities in the vicinity of the proposed action, the proposed action would not generate disproportionately high and adverse human health or environmental effects on nearby communities, because there would be no impacts on human health and the negligible environmental effects would not occur near the low income or minority populations more than other places.

3.9.2.2 No Action

The no action would occur in the same counties as the proposed action and the effects of the no action are the same as described under the proposed action.

3.9.3 Cumulative Effects

As there would be no direct or indirect effects from the proposed action or no action alternative, neither would have cumulative effects on environmental justice populations.

Chapter 4 RESPONSE TO COMMENTS

Gateway West Geotechnical EA Public Comments as of 9/13/09

Name	Organization	Comment	Response
Dennis Crane, Paul Christensen, Clay Handy	Cassia County Commissioners	<p>“...the proposed route in Cassia County is not acceptable as a working alternative, and so any surveying would be useless.”</p> <p>“ Sampling in areas where the line will not be allowed provides no useful data, and therefore imposes significant and unwarranted environmental impact.”</p> <p>BLM has failed in its lawful duty to become apprised of local plans, consider local plans in developing this matter, and has not provided “meaningful public involvement” in this land use decision for public lands. This flaw, we respectfully submit, is fatal, and should alone require that this matter go back to the drawing board.</p>	<p>Some work must proceed concurrently. The Proponents take risks in route collecting data but it would be more costly if they waited until all routes were finalized.</p> <p>The proposed geotechnical survey does not conflict with any local plans, nor does it make any land use decision that would affect other owners.</p>
Wendy Green Lowe	East Idaho Uplands Sage- grouse Local Working Group	<p>...the group is concerned that reseeded of the disturbed areas and monitoring for noxious weeds and invasive species may be inadequate.</p> <p>should be supplemented by requirements for permittee to monitor the disturbed sites over the next few years to insure that the disturbed areas have successfully re-vegetated with desirable plant species. Plant species used for reseeded should match existing native plant species for that site as much as possible and should include multiple species (Sandberg bluegrass is a very poor competitor with noxious weeds and invasive species). Also, the mineral soils from the borehole that are spread on the surface may need to be treated with additives to provide a suitable medium for seedlings to establish and grow.</p> <p>...the permittee should be required to monitor the disturbed sites for a minimum of three years to 1) insure the disturbed areas have re-vegetated with desirable species and 2) implement control measures to address noxious weeds and/or invasive species that have become established on the disturbed sites.</p> <p>If noxious weeds and/or invasive species are not controlled on each disturbed site the environmental impact of the proposed action across southwestern Wyoming and southern Idaho may be very extensive and significant.</p>	<p>BLM can direct the activities that occur on public lands and, given the very small extent of disturbance caused by drilling on public land, does not believe there is a need to require monitoring of noxious weeds in these areas.</p> <p>Private land owners may require such activities in negotiating access to their lands.</p> <p>Given the limited extent of the disturbance, the effect would not be extensive or significant.</p>
Don Schramm	Rock Springs Grazing Association	<p>RSGA supports this project to all aspects. It is disturbing to note a delay has been created to demand an EA prior to geotechnical drilling, especially using BLM authority to control work on private land. This phase could have been completed</p>	<p>Comment noted.</p>

Name	Organization	Comment	Response
		by now and final locations of centerline determined. This information is paramount to determine the centerline in order to go on with other analysis. To demand an EA for incidental access and disturbance is not responsible decision on the part of BLM, and appears to be a delay tactic. There is more damage to public and private land due to recreational ATV use in one weekend than this entire project would damage all summer, yet no EA's or management controls are required for ATV recreational use.	
Ernie Breuer and Robyn Thompson		We have been reassured by Idaho Power and BLM that our proposals are being seriously and equally considered. As tax payers and rate payers we request the short term right of way to conduct geotechnical surveys on Federal Lands managed by the BLM be denied until a route has officially been established.	Some work must proceed concurrently. The Proponents take risks in route collecting data but it would be more costly if they waited until all routes were finalized.
John Sullivan		Landowners should be paid damages for the bore holes. Holes by springs should be abandoned.	Drilling on private land is not in the decision authority of the BLM and BLM can not require compensation. The proponents are contacting landowners individually and requesting permission to conduct testing on their lands. The conditions of granting permission on private lands are between the landowner and the proponents.
Paul Kjellander	Office of Energy Resources	...the department would like clarification on how future alternative routes will be addressed for geotechnical exploration.	<p>The Geotechnical EA was prompted by Idaho Power Company's and Rocky Mountain Power's submission of a ROW application.</p> <p>Any alternative routes identified that require geotechnical survey on BLM managed lands will be included in a ROW amendment application. When the amendment is submitted, BLM will determine the level of analysis need for an amended ROW grant.</p>

Name	Organization	Comment	Response
		<p>The State of Idaho recommends that the Companies confer with the Department prior to activities on big game winter range between Nov. 15 and April 30 and hope that similar consultation would also occur with Wyoming Game and Fish Department.</p> <p>It would be helpful to provide a definition of “areas of large sagebrush”...we recommend surveys of overland travel routes by a qualified wildlife biologist to determine if pygmy rabbit sign (burrows and/or pellets) is present. If sign is found, we recommend re-routing around those areas containing sign.</p> <p>It is unclear how “areas important to big game” will be determined? Consultation with the Department to determine these areas is recommended.</p> <p>...there is contemporary need to address activity on these winter ranges with time limiting stipulations, particularly where there may not have been such consideration when the plans [RMPs] were originally developed.</p> <p>The conclusion that there will be no effect on big game needs reinforcement and the rationale for drawing the conclusion needs further explanation. We are unclear about the correlation between animal use and drilling delays unless the implication is that drilling is likely to occur once big game has left winter range because of the weather/land constructs to overland travel?</p> <p>...many of the RMPs in Idaho are over 20 years old and may not contain protective restrictions for sage-grouse or sharp-tailed grouse or even identify critical periods. We recommend that the Companies consult with the Department prior to activities within 3 miles of sage-grouse leks between March 15 and June 15.</p>	<p>BLM does not have the authority to require consultation on lands other than public lands. BLM is also responsible for determining the effects of activities on the public lands and ensuring that impacts are minimized.</p> <p>The analysis is that use of winter range by big game during critical periods would preclude the drilling due to weather and soil conditions.</p> <p>BLM does not have the authority to require consultation on lands other than public lands. BLM is also responsible for determining the effects of activities on the public lands and ensuring that impacts are minimized.</p>
Sara Cohn	Idaho Conservation League	<p>We are concerned that geotechnical survey activities may result in impacts to sensitive plants and wildlife that exist within the footprint of the project area. We encourage the Bureau of Land Management (BLM) to avoid any such impacts, limit impacts where unavoidable, and mitigate for unavoidable impacts both on and offsite.</p> <p>We incorporate by reference all concerns and comments raised in Idaho Conservation League</p>	<p>Sensitive plants and wildlife will be avoided as described in the environmental protection measures in the EA.</p> <p>Environmental protection measures are included to address sage grouse, pygmy</p>

Name	Organization	Comment	Response
		<p>Gateway West Scoping Comments (dated July 1, 2008). Additionally, we encourage the BLM to avoid, minimize, and/or mitigate potential impacts from geotechnical survey activities, related to:</p> <ul style="list-style-type: none"> • Wildlife habitat, including impacts to sage-grouse and pygmy rabbit. • Invasion of noxious weeds due to project activities; • Increase in fire danger; • Increase in Off-Road Vehicle accessibility to sensitive areas; • And, cultural resources or historic lands. <p>Finally, we encourage the BLM to analyze the cumulative effects of the project when taken with all other related past, present and reasonably foreseeable future actions in the project area. The BLM should also explore alternatives to the proposed action that would include, but not be limited to, a no action alternative, an energy conservation alternative and options for mitigation.</p>	<p>rabbits, noxious weeds, fire, OHV and cultural resources.</p> <p>The no action alternative is included. Mitigation and environmental protection is included in the proposed action. An energy conservation alternative is not necessary because energy usage was not identified as an issue.</p>
Don and Betty Hamilton		Support whatever measures are needed to accomplish and complete the EA	No response needed
Michael Pepper	South Magic Valley Sage-Grouse Local Working Group	<p>... is concerned about any activity that occurs in or near known sage grouse habitat or sage grouse populations</p> <p>...consider all available data relating to sage grouse and sage grouse habitat in the determination of this issue; including that information provided by the BLM and IDFG.</p>	Available data on sage grouse habitat and populations was considered in the analysis and environmental protection measures designed to avoid or minimize impacts.
Todd Adams, Pam Anderson	Idaho Power and Rocky Mountain Power	Please confirm that this is correct and how amendments to the EA will be processed. If this is not correct, please describe the procedure that will be necessary to add additional bore locations.	<p>The Geotechnical EA was prompted by Idaho Power Company's and Rocky Mountain Power's submission of a ROW application.</p> <p>Any alternative routes identified that require geotechnical survey on BLM managed lands will be included in a ROW amendment application. When the revision is submitted, BLM will determine the level of NEPA analysis need for an amended ROW grant.</p>

Name	Organization	Comment	Response
		<p>Page 5, section 1.4, fifth sentence. The sentence should be changed to “Some private landowners denied access and in those cases the Companies may a) relocate the boreholes to another location, or b) initiate legal action to obtain access as necessary for the geotechnical program.”</p> <p>Page 9, section 2.1.3.1. The EA has defined the Area of Potential Effect (APE) for cultural resources as a 5-acre area around a bore hole that will have a maximum 8-inch diameter and a disturbance area of 40-feet by 40 feet. Nowhere in the document is there justification for such a large APE. The bore holes will be a temporary disturbance, will not result in any long term or permanent disturbance to the viewshed or context of any cultural resources, and will not directly impact any cultural resources as the location will be moved if cultural resources are found. The 5-acre APE will result in a significant expense to the Companies that does not seem to be warranted given the nature of the proposed work.</p>	<p>For the EA, these boreholes were removed from the project. If the Companies decide to relocate a borehole onto BLM managed lands, the procedures described above will be followed. The Companies deciding to initiate legal action for the Geotech program is outside the scope of the EA and BLM’s decision authority. BLM’s cultural resources personnel use their professional judgment to determine the analysis area necessary for consideration of effects on cultural resources. A 5-acre APE covers an area approximately 263 feet (radius) from the location, which BLM considers reasonable based in the visibility of trampled vegetation and disturbed area and the possibility that a location may need to be moved slightly to avoid sensitive plants or wildlife habitat.</p>
		<p>Page 10, section 2.1.3.1. The EA states that if private land access is denied for the purposes of a cultural resource inventory, then the location will be excluded from BLM’s right-of-way (ROW) grant until Section 106 obligations have been fulfilled. It is not clear how the BLM can exclude a location on private property (that does not require travel over federally-managed lands for access) from the ROW grant when private property would not be subject to a BLM grant.</p> <p>Page 15, section 2.1.3.4. The requirement that truck traffic only occur when rutting would be 2 inches or less is unrealistic. We suggest the following language be added to the second sentence in this section. “Alternatively, drilling would be delayed until the ground dries, ruts would be restored to pre-site conditions immediately following boring, or the borehole would be relocated in collaboration with the federal agency. Concerns regarding rutting on private lands will be addressed with the landowner.”</p>	<p>This sentence has been stricken.</p> <p>Done</p>

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		<p>Page 17, section 2.1.3.11, item c. Please define “slickspot peppergrass consideration zone”. It is not clear if this corresponds to a habitat boundary, slickspot peppergrass management areas as defined in the candidate conservation agreement, or some other area.</p> <p>Page 17, section 2.1.3.11, item d. The requirement that disturbed soil be reseeded with certified weed free native seed may be inappropriate in all cases. The need for reseeded should be based on the degree of disturbance and the seed mix should be consistent with the surrounding plant community. There will be little to no benefit of having a small area with native plants surrounded by nonnative species.</p>	<p>This is the area where slickspot peppergrass must be considered, in this case, surveys conducted to determine the presence of slickspots.</p> <p>This wording was required by the biologists and will remain as is in order reduce the potential impacts as much as possible.</p>
		<p>EDITORIAL OR CLARIFYING COMMENTS</p> <p>Throughout the document, the numbers of borings and length of the proposed project is not consistent between and within tables and text.</p> <p>Page 1, second paragraph, first sentence. “...and other associated building foundations.” should be changed to “...and other associated building <u>and structure</u> foundations.”</p> <p>Page 1, second paragraph, second sentence. “...determine the appropriate depth requirements ...” should be changed to “...determine the appropriate depth <u>and diameter</u> requirements ...”.</p> <p>Page 1, second paragraph, fourth sentence. This sentence is not clear. If the sentence read ““Not every structure location must withstand the greatest stresses.” it would be accurate. The statement in parenthesis basically negates the first part because angles and deadends will receive the highest stresses, so <u>Every</u> structure location will not.</p> <p>Page 1, third paragraph, fourth sentence. “...alternatives for geological surveying.” should be changed to “...alternatives for geotechnical surveying.”</p> <p>Page 7, section 2.1, second sentence. “...Gateway West Transmission Line route to collect...” should be changed to “...Gateway West Transmission Line route <u>and alternatives</u> to collect...”</p> <p>Page 7, section 2.1.1, second paragraph, first sentence. “...and possibly a 4-wheel drive...” should be changed to “...and possibly a 4-wheel drive...”</p> <p>Page 7, section 2.1.1, first paragraph, last sentence. In most cases, bore holes will be backfilled with drill cuttings. However, the Idaho Department of Water Resources requires bentonite backfill anytime a boring hits groundwater. The EA should include</p>	<p>Editorial corrections have been made.</p> <p>Done</p> <p>Done</p> <p>The sentence has been stricken.</p> <p>Done</p> <p>Done</p> <p>Done</p> <p>Done</p>

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		<p>this as a possibility.</p> <p>Page 9, section 2.1.1, second paragraph. Drilling will extend into 2010 and will not be completed by the end of fall 2009.</p> <p>Page 10, section 2.1.3.1, sixth paragraph, second sentence. "...all activities would immediately..." should be changed to "...all activities <u>at that location</u> would immediately..."</p> <p>Page 16, section 2.1.3.8, second paragraph. We suggest that this paragraph be deleted and replaced with "All smoking will be prohibited."</p> <p>Page 22, section 3.3.2.1, first sentence. "... listed species except of Colorado fish..." needs to be clarified.</p>	<p>Portion of the sentence stricken.</p> <p>Done</p> <p>Done</p>
Dennis and Dawn Ferdinand	Ferdinand Farms	Support whatever measures are needed to accomplish and complete the EA	Comment noted.
Willard McMillen	Land Owner	<p>I disagree with your assessment of some items being not affected or minimally affected. Such as transportation. The roads will have to be improved to get trucks in, causing more traffic. Better roads will facilitate poaching in remote areas affecting game.</p> <p>Also Wild horses are present about 5 or 10 miles to the east of the proposed line on the Pragger Ranch, and neighboring ranches. Surely they are also on the 20 mile area (Bell Ranch) of the Line. Being very territorial any activity could affect them. This area is some of the worlds best Elk and calving grounds any state is lucky enough to have.</p>	<p>For the geotechnical survey, no road improvements will occur, therefore, these effects will not occur.</p> <p>The short term disturbance caused by geotechnical drilling would not affect wild horses.</p> <p>Elk and calving grounds would be avoided during critical periods.</p>
Archie and Angie Roybal		Understand the need for the project, opposed to geotechnical work near Ft. Steele residences, historical site and state rest area because they object to the transmission line in that location..	Comment noted.
Karen Steenhof		The Geotechnical Drilling Project should not begin until the Gateway West transmission line route is finalized. Several alternatives to the proposed route are now being seriously considered by BLM and Idaho Power. The soils and geology along the alternative routes are likely to be far different than those on the proposed route. Beginning assessment work in an area where the transmission line may not be built will be a waste of taxpayer and ratepayer money and will needlessly affect resources on public and private lands.	Some work must proceed concurrently. The Proponents take risks in route collecting data but it would be more costly if they waited until all routes were finalized.
Gregg R. Dawson	Idaho State Dept. of Agriculture	My cursory review of the draft EA shows that the only mitigation measure to address noxious weeds is the washing of vehicles. Certainly much more needs to be done, since washing will not assure that all weed seed has been removed, and ground	The very small area of disturbance (.0037 acres per borehole) does not warrant requiring the proponents to monitor weeds for the

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		<p>disturbance will cause weeds to be more easily established (whether or not they come by way of vehicles).</p> <p>The BLM should require subsequent site checks and weed treatment when necessary. This could be done by the project company themselves, or the company could provide mitigation funding to the BLM for checks and treatment to be done.</p>	geotechnical survey.
Mayor Richard Kinder	Town of Hanna	<p>I am writing with comments regarding the above mentioned application. It is apparent that the Town of Hanna is within the impact boundaries of this project, with the receipt of this application. Upon review of this application, questions were raised because of the vague nature of the enclosed maps.</p> <p>The Town of Hanna has its Water Treatment Plant and water transmission lines outside of Town limits. With the vagueness of the maps enclosed, it is difficult to ascertain if any impact will be encountered with this drilling project on that facility or the water transmission lines. The Town has attempted to contact the preparer of this application, TetraTech, by both telephone and email, however, the applicant has failed to respond to all messages left regarding this issue.</p> <p>Until such time as our questions regarding the safety of our Water Treatment Plant and water transmission lines have been adequately answered to our satisfaction, the Town of Hanna is withholding consent to the proposed drilling project.</p>	<p>As stated in the EA, utility clearances will be conducted for all boreholes before drilling occurs, which would ensure that water transmission lines would not be affected.</p> <p>Locations of the boreholes have been reviewed on aerial photos and the closest borehole to the water treatment plant is more than one mile away.</p>
Susan Starcevich	Western Area Power Administration	<p>Hey, Randy. I spent some time today going through the subject EA and reviewing the maps for the subject project. As you may recall, there are Western Area Power Administration t-lines and support facilities on BLM National System of Public Lands located near the town of Hanna, WY, and the Gateway West Project, of which this geotechnical drilling is one aspect, may include new transmission lines that will need to cross over Western facilities. Based on that premise, I reviewed the access and land uses portions of the drilling EA and am satisfied with the language as written.</p> <p>For Access, at paragraph 2.1.2, on page 9, drill sites will "be located to allow road traffic to pass without being impeded by drilling equipment". . . Western only requires continuous, uninterrupted access to its facilities for routine and/or emergency maintenance and operation activities. The language in this</p>	<p>Comment noted</p> <p>Comment noted</p>

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		<p>paragraph indicates that Western would be able to get to and from its facilities without interfering with the drilling operations, and the drill rigs would not be sited such that they would interfere with normal vehicular traffic. Western would appropriately contact the BLM Field Office at Rawlins if a conflict were to occur.</p> <p>For Land Uses, in section 3.8, at paragraph 3.8.2.1, on page 31, "[A]ll drilling locations would have a utility clearance completed before access to the sites would be permitted. This would ensure that current rights-of way or easements would not be affected by the project." From Western's perspective, this means where drilling would occur within or adjacent to our authorized right-of-way grant, the proponent would contact Western to ensure that the necessary clearances were obtained as needed to provide for worker and public safety as well as ensure the integrity and reliability of the overhead transmission lines.</p>	Comment noted
Darlene Conrad	Northern Arapaho Tribal Historic Preservation Office	<p>The Northern Arapaho THPO office is commenting on the Right-of-way application WYW174598-01 (short term ROW to conduct geotechnical surveys on BLM federal lands. Review of the draft FONSI with the following comments:</p> <p>page 8. National Historic Register "all cultural resources avoided as part of the proposed action". The THPO agrees with this action. If there should be subsurface archaeological features or sites encountered during the bore hole drilling. BLM archaeologists should be called in, the site recorded. If there should be human burials encountered during the test drilling, the Northern Arapaho Tribe wants to be notified.</p> <p>page 9. May affect likely to adverse effect to threatened or endangered species (Colorado River Fish). The comment is to try and lessen the effects on the native fish of Wyoming as well as the water resources.</p> <p>page 9. Negligible or no effect on the following resources and not analyzed in detail are the "Native American Religious Concerns". Although, it may seem that there may not be significant Native American religious sites or concerns with the proposed plan, there may be encounters with archaeological sites below the surface (especially with the bore holed being 40 plus feet in depth). This issue should be addressed with all the Native</p>	<p>Comment noted</p> <p>FWS has changed the analysis methods for Colorado River species. Because the amount of water that would be used is below <i>de minimus</i>, the determination is now "no effect".</p> <p>BLM will conduct government to government consultation on an ongoing basis.</p>

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		American tribes in the project areas on a government to government basis.	
Ryan Domsalla		...a needs assessment should be conducted and verified independently prior to giving further consideration to the proposed project, including the further collection of environmental data (i.e. geotechnical testing).	The purpose and need for the geotechnical project is different than the purpose and need for the proposed transmission line. Please see response to Cassia County Commissioners above.
Ryan Domsalla		As reported by the "Douglas Budget" Newspaper during a public forum held on July 9th, 2009 by Rocky Mountain Power President Richard Walje, segment #1E and #1Ea are "probably not viable" and "We've been for a while now looking at what other options we have for IE routes". Since Mr. Walije obviously speaks on behalf of a Co-applicant (Rocky Mountain Power), I contend that the SF-299 should be revised and these ill-conceived routes (#1E and #1Ea) should be removed from further consideration. Furthermore, the proposed action of both the geotechnical EA and the associated Powerline EIS should be modified with no further analysis or consideration given toward proposed segments #1 E and #1 Ea.	The EA evaluates the application as submitted to BLM for the geotechnical drilling. Should it be determined that the proposed segment 1E is indeed "not viable", the proponents would not proceed with the geotechnical survey.
Ryan Domsalla		Adverse effects to scenic integrity to be address include: clearing associated with drilling rig mobilization, clearing associated storage and laydown areas, limbing and removal of vegetation (including merchantable sized timber) associated with drilling and overland access and the construction of temporary roads. ...I must contest the conclusion that "there would be negligible or no effect to visual quality"	The activities described in this comment would not occur under the Geotechnical Drilling Project.
Ryan Domsalla		a complete transportation analysis with field verification of all routes analyzed is reasonable, prior to completing the draft analysis and issuance of a final document with associated decision.	Transportation analysis is specific to the Forest Service and does not apply to BLM actions.
Ryan Domsalla		status, capacity, and weight restrictions for individual roads, road segments, overland routes, and their associated structures (culverts, fords, creek crossings, dams, and/ or bridges).	Environmental protection measures are described to avoid effects on roads and feasible equipment would be used as described in Chapter 2 of the EA.
Ryan Domsalla		Other elements to be considered and documented as part of the transportation analysis include proximity to permanent and ephemeral and water bodies (lakes, reservoirs, streams, wetlands, etc.),	Vehicles traveling on existing roads for the geotechnical drilling project would not affect lakes, reservoirs, streams, wetlands, etc.
Ryan Domsalla		amount of vegetative clearing and/or ground disturbance required for individual overland routes	Vegetation and soil disturbance is calculated

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		& drill locations	and evaluated in the EA.
Ryan Domsalla		proximity of individual routes to critical wildlife ranges, nesting areas, and/or winter ranges, etc.,	Vehicles traveling on existing roads for the geotechnical drilling project would not affect nesting areas. The effects on wildlife ranges and winter ranges are described in the EA.
Ryan Domsalla		proximity to sensitive soils	Environmental protection measures would be in place to protect sensitive soils.
Ryan Domsalla		proximity to unusual or natural beauty	Vehicles traveling on existing roads for the geotechnical drilling project would not affect unusual or natural beauty.
Ryan Domsalla		proximity to historic/ cultural areas	Effects are described in the EA
Ryan Domsalla		proximity to other buried utilities, proximity to subsurface resources (including domestic/livestock/ industrial water wells, pipelines, septic fields, fiber optic lines, etc.)	An environmental protection measure requires utility clearances for all drilling locations
Ryan Domsalla		Special consideration within the transportation analysis should be given to the true impacts, including soil compaction and disturbance, of this type of operation.	Effects of soil disturbance and compaction are described in the EA.
Ryan Domsalla		no consideration is given to the fact that many of the proposed locations will have to be accessed multiple times with an assortment of equipment that may not have low pressure tires or tracks.	The analysis includes up to 4 vehicles traveling to each borehole, and a description of the vehicles is included in Chapter 2.
Ryan Domsalla		In worst case scenarios, which should be analyzed, drill rigs and support vehicles travel overland from one drill site to the next in a "leap frog" technique that eventually establishes a two-track road. Currently, the Draft EA fails to take these types of impacts and their significance into account. Once two track roads are established, continued use by recreational users, permittees, and administrative personnel assures perpetual use well into the future.	The EA accounts for the impacts of traveling overland to borehole locations. No two track roads will be established.
Ryan Domsalla		the draft EA are grossly under reported with little to no consideration given to the actual environmental factors (including slope, terrain, vegetation, accessibility, lack of identifiable access routes, lack of legal access, etc.) and site conditions, which would be encountered during implementation of the project.	The proponents confirm that existing roads and terrain was used in identifying overland travel routes. The EA states that where access is denied, geotechnical drilling will not occur.
Ryan Domsalla		As a matter of fact, table 2-2 for the draft EA erroneously shows that the anticipated miles of overland travel would be 22.18 miles. By my	The math errors in Table 2-2 have been fixed.

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		calculation using the data provided within that same table (Table 2-2) the anticipated mileage should have been 25.12 miles. Also, the total number of wells in disclosed Table 2-2 is misrepresented.	
Ryan Domsalla		the draft EA fails to incorporate either a table or a map disclosing the location and condition of the access routes (roads, trails, overland, etc.) that were analyzed. Further disclosure (accurate maps and tables) should be made available for site specific public comment prior to issuance of a final EA.	Due to the large number of EAs printed and the number of maps needed to display the locations, the Dear Reader letter identified a website where large scale maps could be viewed.
Ryan Domsalla		Field surveys of all proposed routes (including established routes and overland routes) associated with the analysis should be conducted prior to issuance of a final environmental analysis and associated decision. Furthermore, mitigation specific to each travel route, drill location, and/or staging area should be incorporated into the environmental analysis and associated decision. Likewise, concurrence from the appropriate State Historic Preservation Officer (SHIPO) should be obtained, prior to issuance of a decision.	Cultural surveys of all boreholes and overland travel is currently being completed and concurrence from the Idaho and Wyoming SHPO will be obtained prior to the decision, as required.
Ryan Domsalla		I propose that an analysis be conducted that considers effects to all existing wells (including those for agricultural, livestock, industrial, and/or domestic consumption) located within ~ mile of a proposed drilling location.	And environmental protection measure has been added to require plugging holes where water is encountered to avoid affecting existing wells. Reliable well data for the state of Wyoming is not available.
Ryan Domsalla		I strongly advise that mitigation specific to subsurface water quality, including but not limited to procedures for plugging and abandoning bore holes that encounter water and drilling exclusion zones around existing wells be proposed. Lastly, there appears to be a discrepancy between requirements for hazardous materials handling in proximity to public wells and private wells (page 15 of draft EA). As a matter of opinion, I suggest that all wells, both private and public, be buffered to the greatest extent possible. In this case, I would recommend the buffering be 400'.	An environmental protection measure has been added requiring plugging and abandoning boreholes where water is encountered. The conflict has been resolved and is established at 400 feet.
Ryan Domsalla		I am confused if the intent is that drafting from surface water sources would be allowed? If so, further analysis and disclosure is warranted.	Drafting from surface water would not occur for this project.
Ryan Domsalla		Although an analysis was conducted with	Please see the response to

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		<p>regard to noxious weeds, further consideration should be given to the washing of heavy equipment using a high pressure washer with a fully self contained catchment system that allows for the effluent to be transported from the wash site and disposed of in compliance with State regulations.</p> <p>In an effort to further combat the introduction of invasive botanical species, I recommend that mitigation require the application of seeding mixes for disturbed areas be done with native species (preferably those harvested from areas that are in close geographic proximity to the proposed power line right of way).</p>	<p>the Idaho Department of Agriculture.</p>
Ryan Domsalla		<p>On the ground surveys of this nature will be required as part of the analysis but have yet to be conducted. Since these surveys have yet to be conducted, additional public and inter-agency (e.g. Game and Fish, USFWS, etc.) scoping/consultation should be solicited when these surveys are completed.</p> <p>Since these surveys have yet to be conducted and data compiled, it is impractical at this point in time to provide substantive comments. As such, I request an additional opportunity to comment when this information becomes available.</p>	<p>A biological assessment has been prepared discussing the effects on federally listed and candidate species. A decision will not be issued until concurrence with FWS is complete.</p> <p>Environmental protection measures would eliminate effects on sensitive species.</p>
Ryan Domsalla		<p>Since a valid monitoring plan is a key component of the environmental analysis and associated compliance with the decision to be issued, I request a chance to comment when it becomes available.</p>	<p>Monitoring is not required and is not needed to determine whether the decision has been implemented as issued, therefore a plan will not be prepared.</p>

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