

Rocky Mountain Power
Exhibit RMP___(RAV-16)
Docket No. 20000-___-EA-17
Witness: Rick A. Vail

BEFORE THE WYOMING PUBLIC SERVICE
COMMISSION

ROCKY MOUNTAIN POWER

Exhibit Accompanying Direct Testimony of Rick A. Vail

Mitigation Plans

June 2017

Table 4-1. Environmental Protection Measures for Segments 1, 2, 3, and 3A

GATEWAY WEST TRANSMISSION LINE PROJECT

1	2	3-5			6-8		
EPM Number	Environmental Protection Measures	Application Phase			Applicable to Land Ownership		
		Design and Engineering	Construction	Operations and Maintenance	Federal Land and all Land in Wyoming and Idaho Segments 6, 8, and 9	State Land in Idaho	Private Land in Idaho Segments 4, 5, 7, and 10
OPERATIONS AND MAINTENANCE							
G-1	Resource Management Plan (as amended) design criteria, Best Management Practices (BMPs), and mitigation requirements will apply on BLM-managed lands.	•	•	•	•		
G-3	Third-party Environmental Compliance Inspection Contractor (CIC) Monitors approved by the Agencies will monitor construction activities. Monitoring activities will be structured in accordance with the Environmental Compliance Management Plan included as Appendix C of the Plan of Development.		•		•		
G-4	All wildlife and plant surveys/preconstruction surveys will be considered as "casual use" activities and will not be restricted or prevented to occur due to overlapping season and temporal restrictions.		•		•		
OM-1	The Companies will comply with the road maintenance standards of the federal or state agency controlling the land.		•	•	•	•	•
OM-2	Roads will be maintained to have crossroad drainage in order to minimize the amount of channeling or ditches needed. Water bars will be installed at all alignment changes (curves), significant grade changes, and as requested by the federal or state agency.			•	•	•	•
OM-3	All access road drainage structures, constructed and installed for the Companies' use only, will be maintained or repaired by the Companies during O&M activities or emergency response.			•	•	•	•
OM-4	Although routine and corrective O&M is of limited duration and impact, the Companies will attempt to adhere to specific closure periods and areas and are proposing not to conduct any routine and corrective O&M activities during the timeframes and at the locations identified in Appendix R of the Plan of Development to the greatest extent practical. The appropriate federal or state agency will notify the Companies of any spatial or temporal restrictions that are in effect for the Project area (e.g., fire restrictions) that would be applicable to corrective O&M activities.		•	•	•	•	
OM-5	Existing improvements (fences, gates, etc.) will be repaired or replaced if they are damaged by O&M activities, as agreed to by the parties involved.			•	•	•	•
OM-6	The Agencies may restrict general public access to closed federal or state roads and access roads that the Companies maintain (the Companies will maintain access roads constructed for the Companies' use only). In cases of restricted access, the Companies will physically close the road with a gate. Gates will be locked with both a lock supplied by the Companies and with a federal agency lock. Access management will be updated as necessary to reflect current road closures and gate locations.		•	•	•	•	

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OM-7	Any integrated vegetation management (IVM) control method, including those listed in Appendix R of the Plan of Development, may be used to control the growth of trees and tall shrubs to maintain clearances (the IVM recommended wire and border zones as indicated in Appendix R of the Plan of Development) and improve access to facilities.			•	•	•	•
OM-8	Any IVM control method including those listed in Appendix R of the Plan of Development may be used to control the growth of additional vegetation to maintain clearances, the IVM recommended wire and border zones as indicated in Appendix R, and improve access to facilities.			•	•	•	•
OM-9	Where possible, low-growing vegetation and small tree species within the right-of-way (ROW) that will not grow into the minimum required clearance distance will be left in place; trees may be removed on a subsequent maintenance cycle as they increase in size. Hazard trees are typically those trees or snags within or adjacent to the ROW that are likely to interfere with or fall into transmission lines or associated facilities. Hazard trees and other "hot spots" (high priority areas requiring vegetation management actions) are identified during routine line inspections and removed annually. In addition to hazard trees, other critical conditions that may require immediate attention include trees that interfere with transmission conductors and trees whose growth will not allow safe clearance until the next scheduled maintenance cycle.			•	•	•	•
OM-10	Any vegetation control method may be used for vegetation maintenance on access roads; this is typically scheduled at the same time as vegetation maintenance within the ROW. However, in cases where vegetation grows quickly, removal may occur annually. Vegetation that will not interfere with the safe operation of vehicles and equipment will be left in place.			•	•	•	•
OM-11	Slash will be lopped and scattered throughout the surrounding land. Stumps resulting from vegetation treatments will not be over 1 foot tall (unless the tree is not able to be safely cut at or below one foot from the ground surface), and lopped slash will be left as close to the ground as possible. Lopped slash will be a maximum of 18 inches in length for small trees and limb wood. If the federal land managing agency determines that fuel levels are unacceptable, they shall notify the Companies and develop a mutually agreed upon method to reduce fuels. This may include, but is not limited to, chipping.			•	•	•	•
OM-12	Hazard trees will be felled in a direction away from the ROW. Slash and limbs that fall within the ROW will be treated as described above; boles of trees greater than 8 inches will be left in place.			•	•	•	•
OM-13	Any chemical control will be done in accordance with any applicable local, state, and federal rules and regulations. Pesticides or other chemical control will be selected from the BLM and USFS lists of			•	•	•	•

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	previously approved pesticides and in accordance with any pesticide plans. If the federal land managing agency determines that a previously approved pesticide and/or plan is unacceptable, they shall notify the Companies.						
OM-14	Before beginning an O&M project on federal or state land, the Companies or their subcontractors will clean all equipment that will operate off-road or disturb the ground. Tracks, skid plates, and other parts that can trap soil and debris will be removed for cleaning when feasible, and the entire vehicle and equipment will be cleaned at an off-site location.			•	•	•	•
OM-15	To help limit the spread and establishment of noxious weed species in disturbed areas, desired vegetation needs to be established promptly after disturbance. The Companies will rehabilitate significantly disturbed areas as soon as possible after ground-disturbing activities and during the optimal period. Seed and mulch will be certified "noxious weed free" and seed mix will be agreed to in advance by the landowner or land managing agency.			•	•	•	•
OM-16	Routine and corrective O&M activities in streams with sensitive fish species will occur from July 1 to September 1 in an effort to minimize impact to spawning and migration activities. These activities include, but are not limited to, culvert installation and/or replacement and stream bank stabilization. Forging streams at existing crossings on existing roads (e.g., dip, culvert, bridge) will occur as necessary throughout the year.			•	•	•	•
OM-17	Woody vegetation management within 50 feet of streams will be conducted by hand crews.			•	•	•	•
OM-18	Herbaceous plants and low-growing shrubs will be left in place if they do not interfere with the safe O&M of Project lines and equipment as described in Appendix R of the Plan of Development.			•	•	•	•
OM-19	The Companies will use existing stream crossings or new, permanent crossings that were approved as part of the Project, and will not create additional crossings without prior agency permitting and approval.			•	•	•	•
OM-20	Only pesticides approved by the land managing agency as safe to use in aquatic environments and reviewed by the Companies for effectiveness will be used within 100 feet of sensitive aquatic resources or in areas with a high leaching potential.			•	•		
OM-21	Prior to the start of O&M activities, all supervisory personnel will be instructed on the protection of natural resources, including sensitive plant and wildlife species and habitats. If a contractor is used, the construction contract will address (a) the sensitive plant species that may be present in a particular area based on previous surveys and literature review; (b) the federal and state laws regarding protection of plants and wildlife; (c) the importance of these resources; (d) the purpose and necessity of protecting them; and (e) methods for protecting sensitive resources (e.g., Endangered Species Act,			•	•	•	•

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	Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act, and BLM wildlife policy).						
OM-22	Sensitive plant populations that occur within or near the ROW and work areas will be marked on the ground, where practical, to ensure that they are avoided. If species are discovered during the work, the Companies will establish a spatial buffer zone, will contact the appropriate Agency within 24 hours, and will continue with the O&M activities outside of the established buffer unless otherwise directed. The Agency may evaluate the adequacy of the buffer on a case-by-case basis. Unless the Companies are informed otherwise, work outside of the buffer area will continue. If the Companies need to work within the buffer area, the Agencies and Companies will work together to develop a solution that is acceptable to both parties and will allow for the Companies to complete the work in a timely manner or within the scheduled outage window, if applicable. After the O&M activities are completed, or will no longer poses a threat to the plant population, the marking (stakes), if used, will be promptly removed to protect the site's significance and location from unwanted attention. As needed, marking will be reinstated during the land rehabilitation period.			•	•		
OM-23	If sensitive wildlife species are discovered during O&M activities, and the animals are not directly within ground disturbance areas, they will be protected by marking the edges of the ROW and new access roads in the general vicinity to ensure that workers do not leave those areas. If the animals are within work areas that have, or will have, ground disturbance, the Companies will establish an appropriate buffer zone and will contact the federal or state land manager immediately. The federal or state agency may evaluate the adequacy of the buffer on a case-by-case basis. Unless the Companies are informed otherwise, work outside of the buffer area will continue. If the Companies need to work within the buffer area, the Agencies and Companies will work together to develop a solution that is acceptable to both parties and will allow for the Companies to complete the work in a timely manner or within the scheduled outage window, if applicable. After the O&M activities are completed, or will no longer pose a threat to the species, the marking (stakes) will promptly be removed to protect the site's significance and location from unwanted attention. As needed, marking will be reinstated during the land rehabilitation period.			•	•	•	•
OM-24	The Companies will provide crews and contractors with maps showing environmentally sensitive areas; these maps will include work zones as well as ROW areas where ground disturbance will be avoided.			•	•	•	•
OM-25	In the event any sensitive plants require relocation, permission will be obtained from the federal agency. If avoidance or relocation is not practical, the topsoil surrounding the plants will be salvaged, stored separately from subsoil, and respread during the restoration process.			•	•		

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OM-26	If sensitive wildlife species are killed or injured due to O&M activities, the appropriate federal agency will be notified.			•	•		
OM-27	All on-site personnel will be made aware that all birds of prey are protected by federal and state laws.			•	•	•	•
VISUAL							
VIS-1	The 500-kV transmission line lattice steel towers will be specified to have a dull galvanized finish. The proposed surface finish is a galvanized finish, treated after the initial galvanizing process to produce a dulled finish to reduce surface reflectivity. This process results in an installed tower with more visual absorption and thus allows the towers to blend in better with the landscape.	•			•	•	•
VIS-2	The three subconductors (500-kV) and two subconductors (230-kV) that make up the conductor bundles will be specified to have a non-specular finish. Similar to the dulled finish of the transmission structures, the conductors reduce surface reflectivity. This process results in eliminating the shiny ribbon effect often seen in older untreated transmission lines and thus allows the conductors to blend in better with the landscape.	•			•	•	•
VIS-3	The proposed 230-kV transmission lines between Windstar and Aeolus will use a steel H-frame structure configuration similar to the existing 230-kV line in the same general location. The steel pole H-frame will utilize self-weathering steel. Self-weathering steel is manufactured from a group of steel alloys that were developed to eliminate the need for painting. This type of steel alloy forms a stable rust-like appearance if exposed to the weather for several years. In areas where the 230-kV structures are skylined, dull galvanized steel will be considered to minimize visual impacts. Dull galvanized steel has a galvanized finish, treated after the initial galvanizing process to produce a dulled finish to reduce surface reflectivity. This process results in an installed tower with more visual absorption and thus allows the towers to blend in better with the terrain, while at the same time preserving the corrosion resistant properties of the galvanized coating on the steel.	•			•	•	•
VIS-4	No paint or permanent discoloring agents will be applied to rocks or vegetation to indicate limits of survey or construction activity except as required under the timber sale contracts.		•		•	•	•
VIS-5	To minimize ground disturbance and/or reduce scarring (visual contrast) of the landscape, the alignment of any new access roads or cross-country routes will follow the landform contours where practicable, providing that such alignment does not impact resource values additionally or result in new impacts to resources that were previously avoided.	•	•		•	•	•

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VIS-6	To minimize sensitive feature disturbance and/or visual contrast in designated areas on federal lands, structures will be placed so as to avoid sensitive features such as, but not limited to, riparian areas, water courses and cultural sites and/or to allow conductors to clearly span the features, within the limits of standard tower design. Where conflicts arise between resources, the applicable land manager will be consulted.	•	•		•		
VIS-7	To reduce visual impacts on federal land, including potential impacts on recreation values and safety, towers will be placed at the maximum feasible distance from the highway, canyon and trail crossings within limits of standard design and to the extent practical.	•	•		•		
VIS-8	Crossings of rivers shall be at approximately right angles where practical. Strategic placement of structures will be done both as a means to screen views of the transmission line and ROW and to minimize the need for vegetative clearing.	•	•		•	•	•
VIS-9	Insulators will be made of materials that have reduced potential to reflect and refract light. Glass insulators that are highly reflective will not be permitted in scenic areas on federally managed lands.	•	•		•		
VIS-10	For segments of the line 1) within the 0- to 0.5-mile zone of Interstate highways where existing lines of the same voltage are paralleled and 2) within the 0- to 0.5-mile zone of residences where existing lines of the same voltage are paralleled, new towers will be located adjacent to existing towers, within the limits of standard transmission line design and considering the ruling span length of adjacent proposed and existing lines.	•	•		•	•	•
VIS-11	Site-specific "micrositing," within the limits of standard engineering design, will be required near certain sensitive areas, as identified by the agencies, where proposed transmission facilities will impact visual quality; these situations include: <ul style="list-style-type: none"> • Crossings over major highways; • Crossings of high quality historic trails; • Crossings over the North Platte and Snake Rivers; • Sensitive travelways, use areas, residential areas, recreational facilities as identified by the agencies (including national recreation and scenic trails, campgrounds, recreation areas, and trailheads), and other areas identified by management plans; and • To avoid bisecting forest patches within the Sawtooth NF. The Companies will consult with the applicable local land management agency during transmission line design.	•	•		•		
VIS-12	The lighting specified for the marshaling yards will be the minimum required to meet safety and security standards. All light fixtures within 1,000 feet of a residence will be hooded to eliminate any potential for glare and to prevent light from spilling off the site or up into the sky. Additionally, the fixtures will have sensors and switches to permit the lighting to be turned off at times when it is not required.		•		•	•	•

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VIS-13	To reduce visual contrast in areas where overstory vegetation is removed for access, tower pads, or conductor clearance, specific sections of the ROW on federal land will have uneven edges (trees will be removed from the edge of the ROW out or away from the ROW boundary) to give a natural appearance, where not in conflict with regulatory requirements (e.g., NERC, WECC, and Occupational Safety and Health Administration requirements). This will be a onetime application (not applicable to operations and maintenance) and conducted with agency approval.	•	•		•		
VIS-14	To mitigate potential visual impacts on federal land, the construction and maintenance plan, to be developed by the Companies, will include measures to reduce ROW scarring and enhance restoration. The plan will be approved by the land management agency prior to ground clearing and construction.	•		•	•		
CULTURAL							
CR-1	All work conducted in accordance with the Historic Properties Treatment Plan (HPTP) will be performed by qualified archeologists with trained assistants.		•		•	•	•
CR-2	An Inadvertent Discovery Plan will be included as part of the HPTP. This plan will specify what steps will be taken if a subsurface cultural resource is discovered during construction, including stopping construction in the vicinity of the find, notification of the appropriate land management agency, identification of a qualified archaeologist to conduct an evaluation of the find, and the development of an approved data recovery program or other mitigation measures.		•		•	•	•
CR-3	The Cultural Resources Protection Plan will include provisions for the preparation and curation of artifacts from federal lands and for the preparation of a final report based on the data recovered for activities on federal lands.		•		•		
CR-4	Literature reviews and Class III surveys will be completed for cultural resources. A literature review will be conducted on public and private lands and will cover a study area of one-half mile on either side of the proposed and alternate transmission line alignments as well as areas identified for use as multi-purpose areas and access roads. Class III surveys covering the Area of Potential Effect (APE) as specified in the Programmatic Agreement will be completed. A Class II Sample Survey was conducted that consisted of an intensive pedestrian survey of 15 percent of the length of all alternatives. One-mile long by 500-foot wide transect strips were surveyed along proposed and alternative routes on federal lands only, for use in detailed analysis in the EIS. This also included a detailed preliminary assessment of effects on historic trails on all lands within the APE, including existing trail condition and a visual effects assessment.	•			•	•	•
CR-5	If construction will adversely affect any properties listed on, or eligible for listing on, the National Register of Historic Places (NRHP),		•		•	•	•

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	mitigation will be required. Mitigation will be in accordance with the HPTP and may include, but not be limited to, one or more of the following measures: a) avoidance through the use of relocation of structures through the design process, realignment of the route, relocation of temporary workspace, or changes in the construction and/or operational design; b) the use of landscaping or other techniques that will minimize or eliminate effects on the historic setting or ambience of standing structures; and c) data recovery, which may include the systematic professional excavation of an archaeological site or the preparation of photographic and/or measured drawings documenting standing structures.						
CR-6	Avoidance areas will be flagged or otherwise marked prior to construction activities. Flagging or other marking will be removed once construction is completed in an area.		•		•	•	•
CR-7	To minimize unauthorized collecting of archaeological material or vandalism to known archaeological sites, all workers will attend mandatory training on the significance of cultural resources and the relevant federal regulations intended to protect these resources.		•		•	•	•
CR-8	If human remains are discovered, construction will be halted and the coroner will be notified and measures specified in the HPTP will be followed.		•		•	•	•
RECLAMATION							
WEED 1 – 3, and 6 – 18	(Described under Weeds)						
WQA 32, 34, and 35	(Described under Water Quality)						
REC-1	The Companies' personnel and their contractor will be trained on noxious and invasive weed identification to facilitate avoidance of infestations where possible or identification of new infestations.			•	•	•	•
REC-2	Preconstruction weed treatment will be conducted prior to the start of ground-disturbing activities and at the time most appropriate for the target species.		•		•	•	•
REC-3	Preconstruction weed treatment will be limited to the areas that are expected to have surface-disturbing activities. The Final Reclamation Plan will include a schedule showing the phased in-service dates for different segments. Preconstruction weed treatment will be scheduled accordingly.		•		•	•	•
REC-4	Preconstruction treatment may use mechanical control, hand spraying, grazing, or pesticides. The Final Reclamation Plan will discuss those options, as applicable.		•		•	•	•
REC-5	All pesticide applications will comply with label restrictions, federal, state and/or county regulation, the Companies' specifications and landowner agreements. No spraying will occur prior to notification of the applicable		•		•	•	•

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	land management agency. On federal or state controlled lands, a pesticide use plan will be submitted prior to any pesticide application as recommended in the BLM herbicide EIS (http://www.blm.gov/wo/st/en/prog/more/veg_eis.html). The pesticide use plan will include the dates and locations of application, target species, pesticide, adjuvants, and application rates and methods (e.g., spot spray vs. boom spray). No pesticide will be applied to any private property without written approval of the landowner. The Final Reclamation Plan will contain a list of pesticides that may be used, target species, best time for application, application rates, and if they are approved for use on BLM-managed and NFS lands.						
REC-6	Pesticides may be applied using a broadcast applicator mounted on a truck or all-terrain vehicle (ATV), backpack sprayers, or with hand sprayers as conditions dictate. Pesticide applications will be conducted only by licensed operators or under the supervision of a licensed operator. Vehicle-mounted sprayers (e.g., handgun, boom, and injector) may be used in open areas readily accessible by vehicle. Where allowed, a broadcast applicator will likely be used. In areas where noxious weeds are more isolated and interspersed with desirable vegetation, noxious and invasive weeds will be targeted by hand application methods (e.g., backpack spraying), thereby avoiding other plants. Preconstruction pesticide applications will not occur within 100 feet of known special status species. Calibration checks of equipment will be conducted at the beginning and periodically during spraying to ensure proper application rates are achieved.		•		•	•	•
REC-7	All areas treated will be documented using GPS technologies and included in the annual report.			•	•	•	•
REC-8	Areas of existing noxious weeds and invasive species will be avoided where possible to reduce the risk of spread.		•	•	•	•	•
REC-9	Project vehicles will arrive at the job site clean of all soil and herbaceous material. The Construction Contractor will ensure vehicles and equipment are free of soil and debris capable of transporting noxious weed seeds, roots, or rhizomes before the vehicles and equipment access the Project. The CIC will inspect vehicles to ensure compliance.		•	•	•	•	•
REC-10	When the Construction Contractor demobilizes from the job site where identified infestations of noxious weeds are present, they will use appropriate decontamination measures as defined in the Final Reclamation Plan.		•	•	•	•	•
REC-11	Soil stockpiles from areas that did not have noxious weeds or invasive species present, will not be placed adjacent to populations of noxious weeds or invasive species, where practicable.		•		•	•	•
REC-12	Areas disturbed by Project activities are susceptible to the establishment and spread of noxious weeds. Erosion control		•		•	•	•

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	measures identified in the SWPPP(s) will also assist in preventing the establishment of weeds on exposed soils.						
REC-13	Project-related storage and multi-purpose areas, fly yards, and other areas that are subject to regular long-term disturbance will be kept weed-free through regular site inspections and pesticide applications, subject to the consent of the landowner.		•		•	•	•
REC-14	Where preconstruction surveys have identified noxious or invasive weed species infestations, topsoil and other soils will be placed next to the infested area and clearly identified as coming from an infested area. Movement of stockpiled vegetation and salvaged topsoil will be limited to eliminate the transport of soil-borne noxious weed seeds, roots, or rhizomes, and marked as containing noxious seed materials to avoid mixing with weed-free soil. Topsoil will be returned to the area it was taken from and will not be spread in adjacent areas. If the topsoil is not suitable for backfill, then it will be spread in another previously disturbed area and clearly identified for future weed treatments as applicable. As directed by the BLM or USFS, the Construction Contractor may be required to provide additional treatments (i.e., pre-emergent pesticides) to prevent return of noxious weeds.		•		•	•	•
REC-15	Straw or hay that may be used as a BMP to control erosion and sedimentation must be certified weed free. If certified weed-free materials are not available, then alternative BMPs will be used. The use of alternative BMPs will be coordinated with the construction storm water inspector.		•		•	•	•
REC-16	The topsoil layer will be removed, taking care not to mix it with the underlying sub-soil. Where topsoil separation is employed, topsoil will be stored in a separate stockpile.		•		•	•	•
REC-17	Certified weed-free straw, mulch, gravel, and other BMPs as appropriate, will be used as described in the SWPPP to stabilize the stockpile and limit erosion and standing water, control dust, and control the establishment of noxious or invasive weeds in stockpiled soils.		•		•	•	•
REC-18	Topsoil and sub-surface soils will be replaced in the proper order during reclamation.		•		•	•	•
REC-19	Where it is necessary to spread soils (subsurface soils or waste rock resulting from excavations or foundation drilling), it will be done where practicable and in close proximity to where the disturbance occurred (within the ROW). Material will be spread uniformly to match existing contours, covered with topsoil when available, and reseeded.		•		•	•	•

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REC-20	Temporarily disturbed lands within the ROW will be recontoured to blend with the surrounding landscape. Recontouring will emphasize restoration of the existing drainage patterns and landform to preconstruction conditions, to the extent practicable. (Tower pads will not be recontoured.)		•		•	•	•
REC-21	De-compaction: Areas within the ROW, laydown or multi-purpose areas, and other areas of extensive vehicle travel will typically contain compacted soils. These soils will be de-compacted on a case-by-case basis through negotiation with the landowner or land management agency.		•		•	•	•
REC-22	Final Cleanup: Final cleanup will ensure that all construction areas are free of any construction debris including, but not limited to: assembly scrap metals, oil or other petroleum-based liquids, construction wood debris, and worker-generated litter. Permanent erosion control devices will be left in place.		•		•	•	•
REC-23	The Companies will utilize soil amendments (e.g., fertilizer, wood or straw mulches, tackifying agents, or soil stabilizing emulsions) on a case-by-case basis and with landowner or land management agency approval. Specific soil amendments will be identified in the Final Reclamation Plan and be consistent with the SWPPPs.		•		•	•	•
REC-24	Broadcast seeding will apply the seed directly on the ground surface. The type of broadcast spreader will depend on the size of the area to be seeded, and the terrain. Seed will be placed in direct contact with the soil, ideally at a depth of approximately 0.5 to 1-inch deep. It will then be covered by raking or dragging a chain or harrow over the seed bed to remove air pockets.		•		•	•	•
REC-25	Drill seeding will be used on areas of sufficient size with moderate or favorable terrain to accommodate mechanical equipment. Drill seeding provides the advantage of planting the seed at a uniform depth.		•		•	•	•
REC-26	Hydroseeding, which is the spraying of seeds and water onto the ground surface, or hydroseeding/hydromulching, which is the spraying of seeds, mulch and water, may be implemented on steeper slopes. Tackifier may be added to facilitate adherence of hydromulch to slopes greater than 25 percent.		•		•	•	•
REC-27	Reclamation treatments, such as seeding, will be based on site-specific conditions and the appropriate seed mix approved for those conditions. Seeding will help to reduce the spread of noxious weeds by revegetating exposed soils.		•		•	•	•
REC-28	If areas are not immediately seeded after construction, due to weather or scheduling constraints, all noxious weeds will be eradicated before seeding, preferably in the spring.		•		•	•	•
REC-29	Upon completion of construction, 70 percent of the disturbed area along the transmission line within the ROW, at substations, and at		•		•	•	•

Table 4-1. Environmental Protection Measures for Segments 1, 2, 3, and 3A

GATEWAY WEST TRANSMISSION LINE PROJECT

1	2	3-5			6-8		
EPM Number	Environmental Protection Measures	Application Phase			Applicable to Land Ownership		
		Design and Engineering	Construction	Operations and Maintenance	Federal Land and all Land in Wyoming and Idaho Segments 6, 8, and 9	State Land in Idaho	Private Land in Idaho Segments 4, 5, 7, and 10
	related facilities will be revegetated with approved vegetation (refer to Appendix D – Framework Reclamation Plan).						
VEGETATION							
REC-2–17, 23–29	(Described under Reclamation)						
WEED-6, 7, and 11	(Described under Weeds)						
VEG-1	During construction, blading of native plant communities will be minimized, consistent with safe construction practices. Where feasible, shrubs will be cut at or near ground level to facilitate re-growth after construction. The footprint of construction and operations facilities will be kept to the minimum necessary. Blading near watercourses will be minimized and BMPs identified in the SWPPPs will be implemented to reduce the risk of materials entering watercourses.		•		•	•	•
VEG-2	Where feasible, locate new access roads to minimize the number of trees removed during construction. However, new access roads will not be relocated if the change would result in an increase in the overall disturbance (acres); require additional cut and fill activities, or impact other sensitive resources (e.g., sagebrush plant community, sensitive species habitat, and/or cultural resources or viewshed).	•			•		
VEG-3	In areas where revegetation will be completed, topsoil salvage and replacement will be used for all cut or fill areas and for areas larger than 1 acre where soils will be disturbed during construction.		•		•	•	•
VEG-4	Prior to the start of construction and maintenance activities, all contractor vehicles and equipment (including personal protective equipment) will be cleaned of soil and debris capable of transporting invasive plant seeds or other propagules. All vehicles and equipment will be inspected by Agency-approved inspectors and certified as weed free by agency approved personnel, in order to ensure they have been cleaned properly. The Construction Contractor will identify the location of all cleaning stations, how materials cleaned from vehicles at these stations will be either captured or treated so that cleaning station locations will not become infected, and who will confirm/certify that vehicles leaving cleaning stations and/or entering construction sites are free of invasive plant materials in the Final Reclamation and Noxious Weed Plans.		•	•	•	•	•
VEG-5	The Agency-approved Environmental CIC will approve primary noxious weed-free straw or other erosion control materials on federally managed lands prior to application.		•		•		
VEG-6	The Companies will consult with the appropriate land management agency to determine tree seedlings to be planted in decommissioned roadbeds and other temporarily disturbed areas on federally managed lands (where trees were removed) to assure seedlings are matched to site conditions.			•	•		

Table 4-1. Environmental Protection Measures for Segments 1, 2, 3, and 3A

GATEWAY WEST TRANSMISSION LINE PROJECT

1 EPM Number	2 Environmental Protection Measures	3-5 Application Phase			6-8 Applicable to Land Ownership		
		Design and Engineering	Construction	Operations and Maintenance	Federal Land and all Land in Wyoming and Idaho Segments 6, 8, and 9	State Land in Idaho	Private Land in Idaho Segments 4, 5, 7, and 10
VEG-8	Annual post-construction monitoring and treatment of invasive plants on closed roads (access roads dedicated for use by the Companies only), temporary roads, fly yards, and other disturbed areas in the ROW shall continue for 3 years in areas where infestations or populations of noxious weeds have been identified. If after 3 years, post-construction conditions are not equivalent to or better than preconstruction conditions (in accordance with applicable permit), monitoring and treatment will continue until these conditions are met. If adjacent land uses are contributing to the introduction and/or persistence of invasive plant species within areas disturbed by the Project, then the Companies will not be required to treat noxious weeds for more than 3 years.			•	•		
VEG-10	All timber and other vegetative resources to be sold or removed from federal lands will be appraised and sold at the appraised value. Note that this is an agency imposed measure.		•		Federal land only		
TES-PLANTS							
OM-21–22 and 24–25	(Described under Operations and Maintenance.)						
TESPL-1	Blowout Penstemon – Surface disturbance will be allowed in suitable habitat where species-specific surveys have determined that no populations are present. The species-specific surveys will be conducted the year prior to construction, and the proposed disturbance areas will be redesigned to avoid direct impact to populations.		•		•		
TESPL-2	Colorado Butterfly Plant – Surface disturbance will be allowed in suitable habitat where species-specific surveys have determined that no populations are present. The species-specific surveys will be conducted the year prior to construction, and the proposed disturbance areas will be redesigned to avoid direct impact to populations.		•		•		
TESPL-3	Qualified botanists shall conduct preconstruction surveys during a season when target species are readily identifiable for special status or globally rare species. Where feasible, micrositing of Project facilities shall avoid direct impacts to identified populations. Survey reports documenting the surveys, their results, and recommendations must be provided to the applicable land management agencies for approval prior to construction. Agency botanists may evaluate individual sites based on site-specific conditions. Documentation of the evaluation of avoidance of impacts to sensitive and globally rare plants must be provided to the Agencies prior to construction.	•			•		
TESPL-5	Sand dune and cushion plant communities will be avoided, where feasible.	•	•		•		
TESPL-7	Ute Ladies'-tresses – Qualified botanists shall conduct preconstruction surveys during a season when target species are readily identifiable for special status or globally rare species. Where feasible, micrositing of project facilities shall avoid direct impacts to identified populations.	•			•	•	•

Table 4-1. Environmental Protection Measures for Segments 1, 2, 3, and 3A

GATEWAY WEST TRANSMISSION LINE PROJECT

1 EPM Number	2 Environmental Protection Measures	3-5			6-8		
		Application Phase			Applicable to Land Ownership		
		Design and Engineering	Construction	Operations and Maintenance	Federal Land and all Land in Wyoming and Idaho Segments 6, 8, and 9	State Land in Idaho	Private Land in Idaho Segments 4, 5, 7, and 10
	Survey reports documenting the surveys, their results, and recommendations must be provided to the applicable land management agencies for approval prior to construction. Agency botanists may evaluate individual sites based on site-specific conditions. Documentation of the evaluation of avoidance of impacts to sensitive and globally rare plants must be provided to the Agencies prior to construction.						
WEEDS							
REC-2– 15, 17	(Described under Reclamation)						
OM-13– 15 and 20	(Described under Operations and Maintenance)						
VEG-4 and 8	(Described under Vegetation)						
FISH-3	(Described under Fish)						
SOIL-11 and 12	(Described under Soils)						
WEED-1	The Companies shall consult with each appropriate local land management agency (USFS and BLM) office to determine appropriate seed mix and commercial seed source for revegetation. The Final Reclamation Plan shall specify the approved seed mixes for federal lands. Disturbed soil will not be allowed to support the growth of noxious weeds or invasive weedy species. Prevention of noxious weeds will apply to all phases of the Project.	•	•		•	•	
WEED-2	Weed control and prevention measures shall adhere to all agency standards and guidelines. These measures shall be developed in consultation with local, state, and federal weed agencies; all implemented measures will follow the principle of integrated weed management.		•		•	•	•
WEED-3	Soil stockpiles in areas containing noxious weeds and invasive plant species shall be kept separate from soil removed from areas that are free of noxious weed and invasive plant species, and the soil will be replaced in or near the original excavation. If requested by the applicable land management agency, soil stockpiles shall be covered with plastic if the soil stockpile will be in place for two weeks or more and is not being actively used. On lands managed by the USFS or per private landowner request, stockpiles will not be covered with plastic.		•		•		
WEED-4	Gravel and other materials used for road construction on federally managed lands shall come from certified weed-free sources.		•		Federal land only		
WEED-5	Where feasible, construction will begin in weed-free areas before operating in weed-infested areas. The feasibility of this measure will be determined after survey data is completed to identify weed-free and weed-infested areas.		•		•	•	•

Table 4-1. Environmental Protection Measures for Segments 1, 2, 3, and 3A

GATEWAY WEST TRANSMISSION LINE PROJECT

1 EPM Number	2 Environmental Protection Measures	3-5			6-8		
		Application Phase			Applicable to Land Ownership		
		Design and Engineering	Construction	Operations and Maintenance	Federal Land and all Land in Wyoming and Idaho Segments 6, 8, and 9	State Land in Idaho	Private Land in Idaho Segments 4, 5, 7, and 10
WEED-6	All movement of construction vehicles outside of the ROW will be restricted to pre-designated access, contractor-acquired access, or public roads. All construction sites and access roads, including overland access routes, will be clearly marked or flagged at the outer limits prior to the onset of any surface-disturbing activity. All personnel shall be informed their activities must be confined within the marked or flagged areas.		•		•	•	•
WEED-7	Prior to arrival at the work site, all Construction Contractor vehicles and equipment will be cleaned using high-pressure air or water equipment. The cleaning activities will concentrate on tracks, feet, or tires and the undercarriage with special emphasis on axles, frame, cross members, motor mounts, underneath steps, running boards, and front bumper/brush guard assemblies. Vehicle cabs will be swept out. The locations of vehicle cleaning stations will be identified by the Construction Contractor. Additional wash stations will be required as identified by the BLM, USFS, and CIC. Wash stations shall be no more than one acre in size and preferably located in areas that have previously been disturbed. The Construction Contractor shall provide a detailed design identifying all of the components of the wash stations, including rock surface and geomembrane layer to provide a barrier between noxious weeds and seeds and the soil for approval by the BLM or USFS Authorized Officer or his/her designated representative. The Construction Contractor shall also provide a description of how residue from the wash station will be disposed of for approval by the BLM, BOR, or USFS Authorized Officer or his/her designated representative.		•		•	•	•
WEED-8	When moving from weed contaminated areas to other areas along the transmission line ROW, all construction vehicles and equipment will be cleaned using compressed water or air in designated wash stations before proceeding to new locations. All washing of construction vehicles and equipment must be performed in approved wash stations.		•		•	•	•
WEED-9	Construction personnel will inspect, remove, and appropriately dispose of weed seed and plant parts found on their clothing and equipment.		•		•	•	•
WEED-10	Immediately following construction, the Construction Contractor will implement the reclamation of disturbed land as outlined in Appendix D – Framework Reclamation Plan as required. Continuing revegetation efforts will ensure adequate vegetative cover, reducing the potential for the invasion of noxious weeds.		•		•	•	•
WEED-11	Discing or other mechanical treatments that would disturb the soil surface within native habitats will be avoided in favor of pesticide application, which is an effective means of reducing the size of noxious weed populations, as well as preventing the establishment of new colonies.		•		•	•	•
WEED-12	Implement preventive measures, such as quarantine and closure, to reduce and contain existing noxious weed populations. Flagging will		•		•	•	•

Table 4-1. Environmental Protection Measures for Segments 1, 2, 3, and 3A

GATEWAY WEST TRANSMISSION LINE PROJECT

1	2	3-5			6-8		
EPM Number	Environmental Protection Measures	Application Phase			Applicable to Land Ownership		
		Design and Engineering	Construction	Operations and Maintenance	Federal Land and all Land in Wyoming and Idaho Segments 6, 8, and 9	State Land in Idaho	Private Land in Idaho Segments 4, 5, 7, and 10
	alert personnel and prevent access into areas where noxious weeds occur. Construction disturbance will be minimized in these areas until control measures have been implemented (with the exception of reclamation treatments, as applicable).						
WEED-13	If discing or tilling is an appropriate and feasible weed treatment method, it will only be permitted in bladed areas.		•		•	•	•
WEED-14	Seed selection will be based on site-specific conditions, and the appropriate seed mix will be identified for those conditions based on the presence and treatment of noxious weeds in the Project area. The CIC or weed specialist may recommend modified seeding application rates and timing of implementation to achieve site-specific weed management objectives.		•		•	•	•
WEED-15	Additional weed and/or erosion control measures recommended during monitoring will follow the preventive and control measures outlined in the Noxious Weed Plan. Continued cooperation with the current BLM, BOR, or USFS noxious weed coordinator and local weed management areas is also encouraged.		•		•	•	•
WEED-16	A certified pesticide applicator, approved in the states of Wyoming or Idaho, will perform the application using pesticides selected and approved by BLM or USFS in accordance with applicable laws, regulations, and permit stipulations. All pesticide applications must follow U.S. Environmental Protection Agency label instructions. Application of pesticides will be suspended in accordance with the Companies' vegetation management specifications (e.g., strong winds, etc.).		•		•	•	•
WEED-17	Pesticides will be transported to the Project site daily with the following provisions: <ul style="list-style-type: none"> • Only the quantity needed for that day's work will be transported. • Concentrate will be transported only in approved containers in a manner that will prevent tipping or spilling, and in a location isolated from the vehicle's driving compartment, food, clothing, and safety equipment. • Mixing will be done offsite, over a drip catching device and at the following distances from open or flowing water, wetlands, or other sensitive resources: 100 feet for practically non-toxic to slightly toxic pesticides; 250 feet for moderately toxic or label advisory for ground/surface water; and 250 feet for highly toxic to very highly toxic pesticides. No pesticides will be applied at these areas unless authorized by appropriate regulatory agencies. • All pesticide equipment and containers will be inspected for leaks daily. 		•		•	•	•

Table 4-1. Environmental Protection Measures for Segments 1, 2, 3, and 3A

GATEWAY WEST TRANSMISSION LINE PROJECT

1 EPM Number	2 Environmental Protection Measures	3-5			6-8		
		Application Phase			Applicable to Land Ownership		
		Design and Engineering	Construction	Operations and Maintenance	Federal Land and all Land in Wyoming and Idaho Segments 6, 8, and 9	State Land in Idaho	Private Land in Idaho Segments 4, 5, 7, and 10
	<ul style="list-style-type: none"> Disposal of spent containers will be in accordance with the pesticide label. 						
WEED-18	Pesticide contractors will be state-certified to apply pesticides and will obtain, and have readily available, copies of the appropriate material safety data sheets for the pesticides used. All pesticide spills will be reported in accordance with applicable laws and requirements.		•		•	•	•
STREAMS and WETLANDS							
OM- 16-20	(Described under Operations and Maintenance)						
VIS-6 and 8	(Described under Visual)						
REC-1-22, and 29	(Described under Reclamation)						
FISH-1 and 3	(Described under Fish)						
WQA-1, 2, 4 – 6, 13 – 18, 21, 23 – 29, and 45 – 48	(Described under Water Quality)						
TRANS-13, and 16 – 18	(Described under Transportation)						
WET-1	Impacts on wetland and riparian areas will be avoided unless physically or economically infeasible or where activities are permitted. Land management agencies' plans (RMPs, MFPs, and Forest Plans) that have standards, guidelines, stipulations, or avoidance buffers will be adhered to. Where these do not exist, Inland Fish Strategy (INFISH) buffers will be followed.	•			•		
WET-2	Wetland delineations will be performed prior to construction to support CWA Section 404 permitting and to minimize Project impacts. The delineation will identify both wetland and non-wetland waters of the United States that would be affected by the Project.	•			•	•	•
WET-3	Where impacts on wetlands are not avoidable, site-specific crossing plans and measures to mitigate impacts will be submitted to the appropriate regulatory agency, as well as the land-managing agency. The Companies and/or Construction Contractor will obtain all necessary permits prior to discharging dredged or fill material to waters of the U.S. and state.	•			•	•	•
WET-4	To meet USACE requirements for CWA 404 permitting, the Companies will submit a mitigation plan that is accepted by the USACE. The framework for this plan is included in the Final EIS.	•			•	•	•

Table 4-1. Environmental Protection Measures for Segments 1, 2, 3, and 3A

GATEWAY WEST TRANSMISSION LINE PROJECT

1	2	3-5			6-8		
		Application Phase			Applicable to Land Ownership		
EPM Number	Environmental Protection Measures	Design and Engineering	Construction	Operations and Maintenance	Federal Land and all Land in Wyoming and Idaho Segments 6, 8, and 9	State Land in Idaho	Private Land in Idaho Segments 4, 5, 7, and 10
WET-5	Limit construction equipment operating in streams and wetlands to that needed to clear temporary access, erect towers, pull conductor, and perform ground disturbing activities.		•		•	•	•
WET-6	Limit clearing of vegetation at the edges of a stream or wetland to the minimal area necessary for required conductor clearance and vehicle passage. Reclaim at least 70 percent of potential ground cover within 100 feet from the edges of all perennial streams, lakes, and other water bodies, or to the outer margin of the riparian ecosystem where wider than 100 feet.		•	•	•	•	•
WET-7	Salvage and respread topsoil in areas subject to temporary disturbance where grading and excavation will occur.		•		•	•	•
WET-8	Prohibit the use of imported soil, tree stumps, riprap, or brush to stabilize the construction corridor within wetlands.		•	•	•	•	•
FISH							
OM-16	(Described under Operation and Maintenance)						
BLA-2	(Described under Public Safety)						
FISH-1	On BLM-administered land, all culverts, whether temporary or permanent, must be designed to meet BLM Gold Book standards (Surface Operating Standards and Guidelines for Oil and Gas Exploration Development). On NFS lands, Forest Plan standards and guidelines shall apply.	•	•		•		
FISH-2	When taking water from TES fish-bearing streams for road and facility construction and maintenance activities, intake hoses shall be screened with the most appropriate mesh size (generally 3/32 of an inch), or as determined through coordination with NMFS and/or USFWS.		•	•	•	•	•
FISH-3	All wetlands and waters in the project area are assumed to contain aquatic invasive species and all equipment contacting water will be properly disinfected. After work is complete in a waterbody, any equipment involved in construction in that waterbody must be washed to remove any propagules of aquatic invasive species and to prevent the spread of those species to other waterbodies.		•		•	•	•
WILDLIFE							
WILD-1	Requests for exceptions from closure periods and areas will be submitted by the Companies or the Construction Contractor per the Companies' direction to the appropriate BLM Field Office in which the exception is requested through the Environmental CIC. Established exception processes on BLM-managed lands will be followed. The agency, the CIC, or a contractor chosen by the Companies and approved by the agency, will conduct any surveys and coordinate with any other agencies as necessary. Factors considered in granting the exception include; animal conditions, climate and weather conditions, habitat conditions and availability, spatial considerations (e.g., travel routes and landscape connectivity), breeding activity levels, incubation or nestling stage, and timing, intensity, and duration of the Proposed		•	•	•		

Table 4-1. Environmental Protection Measures for Segments 1, 2, 3, and 3A

GATEWAY WEST TRANSMISSION LINE PROJECT

1 EPM Number	2 Environmental Protection Measures	3-5 Application Phase			6-8 Applicable to Land Ownership		
		Design and Engineering	Construction	Operations and Maintenance	Federal Land and all Land in Wyoming and Idaho Segments 6, 8, and 9	State Land in Idaho	Private Land in Idaho Segments 4, 5, 7, and 10
	action. Requests will be submitted in writing no more than 2 weeks prior to the proposed commencement of the construction period, to ensure that conditions during construction are consistent with those evaluated. The Authorized Officer, on a case-by-case basis, may grant exceptions to seasonal stipulations, and has the authority to cancel this exception at any time. A good faith effort will be made to act on exceptions within 5 business days of receiving a request, to allow for orderly construction mobilization. The CIC will conduct any required site visit and report the status to BLM for consideration of the decision to accept or deny the request. There is no exception process for NFS lands; all closure periods will be adhered to. Any proposed modifications to closure periods will be discussed on a case-by-case basis with the USFS.						
WILD-2	Vehicular speeds during construction and operations will be limited to 25 mph on all unsurfaced access roads. Crew and vehicle travel will be restricted to designated routes while on state designated big game winter range (except for areas within the ROW).		•	•	•		
WILD-3	The Project will be designed and constructed in compliance with Avian Power Line Interaction Committee (APLIC) guidance in order to reduce impacts to avian species. Any changes to the Project's design, as requested by federal, state, or local jurisdictions, as well as any changes considered by the Companies, will also be in compliance with APLIC guidance.	•	•	•	•	•	•
WILD-4	Preconstruction pedestrian or aerial nest surveys will be conducted in suitable habitat during the appropriate nesting time periods needed to identify new raptor nest locations, and to establish the status of previously identified raptor nests. Appropriate buffers will be applied to active nests during construction. All encounters of nesting raptors in the survey area will be reported to the biological monitor and to appropriate agencies.		•		•		
WILD-6	Guy wires will be marked with bird deterrent devices on federal lands to avoid avian collisions with structures, as directed by local land manager.	•		•	•		
WILD-7	Flight diverters will be installed and maintained where the transmission line crosses rivers at the locations identified in Appendix H, Table 4-1.. Additional locations may be identified by the Agencies or the Companies. The flight diverters will be installed as directed in the Companies' approved Avian Protection Plans and in conformance with the MBTA and Eagle Acts as recommended in the current APLIC collision manual.	•		•	•	•	•
WILD-8	Preconstruction pedestrian or aerial surveys will be completed during appropriate nesting time periods, needed to identify each raptor species. The Companies will provide survey results to the Authorized Officer for approval. (See WILD-1)		•		•		

Table 4-1. Environmental Protection Measures for Segments 1, 2, 3, and 3A

GATEWAY WEST TRANSMISSION LINE PROJECT

1 EPM Number	2 Environmental Protection Measures	3-5 Application Phase			6-8 Applicable to Land Ownership		
		Design and Engineering	Construction	Operations and Maintenance	Federal Land and all Land in Wyoming and Idaho Segments 6, 8, and 9	State Land in Idaho	Private Land in Idaho Segments 4, 5, 7, and 10
TESWL-4	The Environmental CIC, an agency biologist, or agency designee will accompany the Construction Contractor site engineers during the final engineering design or prior to ground-disturbing activities to verify and flag the location of any known occupied structures (e.g., nests, burrows, colonies, dens) utilized by sensitive species. This will include, but not be limited to, artificial burrows that have been constructed as part of research/restoration efforts, prairie dog colonies, and raptor nests, which could be impacted by the Project based on the indicative engineering design. The final engineering design will be "micrositied" (routed) to avoid direct impact to these occupied structures to the extent practical within engineering standards and constraints.	•			•		
TESWL-5	Grouse Species – The Companies will provide the Agencies a list of the protocols that the Companies will use during greater sage-grouse and sharp-tailed grouse preconstruction surveys. The Agencies will either approve these protocols, or suggest alternative protocols to be used.	•	•	•	•		
TESWL-6	Sharp-tailed Grouse – In areas where sharp-tailed grouse leks occur in proximity to greater sage-grouse leks, surface disturbance will be avoided within 4 miles of occupied or undetermined greater sage-grouse leks from March 1 to July 15. In areas where sharp-tailed grouse leks occur in isolation from greater sage-grouse leks, surface disturbance will be avoided within 1.2 miles of occupied or undetermined sharp-tailed grouse leks from March 15 to July 15.	•	•	•	•		
TESWL-8	Sage-Grouse – On federal lands, there will be no surface occupancy (NSO) within 0.6 mile of the perimeter (or centroid if the perimeter has not been mapped) of occupied greater sage-grouse leks located within Core areas in Wyoming, and NSO within 0.25 mile in non-Core areas (as required by BLM IM WY-2012-19 and BLM land management plans). "No surface occupancy," as used here, means no new surface facilities, including roads, will be placed within the NSO area. Other activities (i.e., non-surface occupancy) may be authorized, with the application of appropriate seasonal stipulations, provided the resource's protected area is not adversely affected.		•	•	•		
TESWL-9	Sage-Grouse – On federal lands, surface disturbance will be avoided within 4 miles of occupied or undetermined greater sage-grouse leks from March 1 to July 15. This distance (i.e., 4 miles) may be reduced on a case-by-case basis by the applicable agency, if site-specific conditions will allow the Project to be located closer to the lek than 4 miles (e.g., topography prevents the Project from being visible from the lek, or a major disturbance such as a freeway or existing transmission line is located between the Project and the lek).		•	•	•		
TESWL-10	Sage-Grouse – If Winter Concentration Areas for the greater sage-grouse are designated, there will be no surface disturbances within the designated areas from November 1 through March 15.		•	•	•		

Table 4-1. Environmental Protection Measures for Segments 1, 2, 3, and 3A

GATEWAY WEST TRANSMISSION LINE PROJECT

1 EPM Number	2 Environmental Protection Measures	3-5			6-8		
		Application Phase			Applicable to Land Ownership		
		Design and Engineering	Construction	Operations and Maintenance	Federal Land and all Land in Wyoming and Idaho Segments 6, 8, and 9	State Land in Idaho	Private Land in Idaho Segments 4, 5, 7, and 10
TESWL-11	Sage-Grouse – No structures that require guy wires will be used in occupied sagebrush obligate habitats within the area managed under the Kemmerer RMP.		•	•	•		
TESWL-12	Colorado River T&E Fishes – A payment of a one-time fee, based on a fee schedule provided by the USFWS, will be made based on the amount of water used during construction of any segments that cross the Colorado River system.		•		•	•	•
TESWL-13	Midget faded rattlesnake – Preconstruction surveys for occupied or potential midget faded rattlesnake hibernacula (i.e., rock outcrops with south to east aspect) will be conducted. The Companies shall prepare a plan identifying measures to reduce impacts to midget faded rattlesnake if they are discovered. This plan shall require approval by BLM and the WGFD prior to its implementation	•	•	•	•		
TESWL-14	For the protection of aquatic and riparian/wetland dependent species, surface disturbing and disruptive activities will be avoided in the following areas: 1) identified 100-year floodplains; 2) areas within 500 feet of perennial waters, springs, wells, and wetlands; and 3) areas within 100 feet of the inner gorge of ephemeral channels on federally managed lands. Where it is not possible to avoid wetland and riparian habitat, crossing-specific plans will be developed. These plans will: 1) demonstrate that vegetation removal is minimized; 2) show how sediment will be controlled during construction and operation within wetland and riparian areas; 3) attempt to intersect the wetland or riparian habitat at its edge; and 4) provide measures to restore habitat and ensure conservation of riparian microclimates. This plan will be submitted to the appropriate land management agency and approved prior to construction of any portion of the Project within sensitive riparian habitat. Note that this is an agency imposed measure.	•	•	•	Federal land only		
TESWL-15	Anti-perch devices will be required on power poles located within one-quarter mile of prairie dog towns within the BLM's Rawlins Field Office. Note that this is an agency imposed measure.		•		Federal land only		
TESWL-16	Sage-Grouse – If the Kemmerer RMP is amended to allow Proposed Route 4 or Alternatives 4C or 4E to be selected, existing fences within 1 mile of the portion of the Gateway West Project located on lands managed by the Kemmerer RMP will be modified with FireFly Grouse Flight diverters (or a similar product) in order to prevent greater sage-grouse mortalities. Additional site-specific reclamation, such as transplanting sagebrush seedlings within previous disturbed habitats, will also be required to off-set the net loss of sagebrush habitats within the Rock Creek/Tunp management area. Note that this is an agency imposed measure.		•	•	Federal land only		

Table 4-1. Environmental Protection Measures for Segments 1, 2, 3, and 3A

GATEWAY WEST TRANSMISSION LINE PROJECT

1 EPM Number	2 Environmental Protection Measures	3-5			6-8		
		Application Phase			Applicable to Land Ownership		
		Design and Engineering	Construction	Operations and Maintenance	Federal Land and all Land in Wyoming and Idaho Segments 6, 8, and 9	State Land in Idaho	Private Land in Idaho Segments 4, 5, 7, and 10
PALEONTOLOGICAL RESOURCES							
PALEO-1	If significant fossil materials are discovered during Project construction, all surface-disturbing activities in the vicinity of the find will cease until notification to proceed is given by the Authorized Officer. The site will be protected to reduce the risk of damage to fossils and context. Appropriate measures to mitigate adverse effects to significant paleontological resources will be determined by the Authorized Officer.		•	•	•	•	•
PALEO-2	Paleontological resources (as defined by omnibus Public Land Management Act – Paleontological Resources Preservation Section) on federally managed land shall be managed and protected using scientific principles and expertise. Appropriate plans for inventory, monitoring, and the scientific and educational use of these resources shall be developed in accordance with applicable agency laws, regulations and policies.	•	•	•	•		
PALEO-3	Where fossil-bearing sediments are exposed by construction, the sediments must be covered with a 4-inch layer of soil where feasible to reduce unauthorized removal or disturbance of resources.		•	•	•	•	•
PALEO-4	To ensure compliance with the Paleontological Resources Preservation Section of the Public Land Management Act, the Companies' Paleontological Resources Protection Plan for the Project (see PALEO-2) shall specify that: <ul style="list-style-type: none"> • Monitoring of excavation and grading in sensitive sediments, especially access roads and tower sites, must occur when construction is near or in those geologic formations. • Monitoring of excavations in sensitive sediments, screening the excavated spoils, and processing of bulk sediment samples for microinvertebrate fossils must occur where there is a significant potential for data recovery from those spoils. Monitoring must be performed by a qualified paleontologist and in consultation with a designated paleontologist in each state, NF, or BLM district. The Authorized Officer will designate the appropriate paleontologist depending on project location. Note that this is an agency imposed measure.	•	•	•	Federal land only		
PALEO-5	Field surveys will be completed prior to surface disturbance in areas with potential fossil yields of Class 3, 4, or 5, in accordance with criteria stated in the Paleontological Resources Protection Plan and as required by the land management agency. Note that this is an agency imposed measure.	•	•	•	Federal land only		
GEOLOGIC HAZARDS							
BLA-1, 2	(See description under Public Safety)						
GEO-1	Review the final location of the preferred alternative with affected mine operators and lessees to ensure all measures are taken to protect against subsidence.	•			•	•	•

Table 4-1. Environmental Protection Measures for Segments 1, 2, 3, and 3A

GATEWAY WEST TRANSMISSION LINE PROJECT

1 EPM Number	2 Environmental Protection Measures	3-5			6-8		
		Application Phase			Applicable to Land Ownership		
		Design and Engineering	Construction	Operations and Maintenance	Federal Land and all Land in Wyoming and Idaho Segments 6, 8, and 9	State Land in Idaho	Private Land in Idaho Segments 4, 5, 7, and 10
SOIL-20	To prevent accelerated wind or water erosion on dirt roads, gravel mulches may be added if other mitigation measures are not adequate or if the area is not in a sensitive receptor zone. Gravel of approximately 0.75 to 1.5 inches in diameter should be used and cover a minimum of 90 percent of the soil surface. Slopes steeper than 3:1 may require additional sediment and erosion control structures.	•	•	•	•	•	•
SOIL-21	Surface roughening aids establishment of vegetative cover, reduces runoff velocities, increases infiltration, and reduces erosion by providing sediment trapping. Graded areas with smooth surfaces increase the potential for accelerated erosion; therefore, surfaces should be left in a roughened condition whenever possible.	•	•	•	•	•	•
SOIL-22	On steep slopes (greater than 30 percent) or in areas of concentrated flows (e.g., waterways) erosion control matting or riprap may be used to stabilize the surface and increase infiltration times.	•	•	•	•	•	•
SOIL-23	Areas graveled for stabilization will be inspected to ensure depressions caused by vehicle traffic are filled and runoff is not being directed toward wetlands or other receiving waters.		•	•	•	•	•
SOIL-24	Roughened surfaces should be periodically inspected for rills and washes. Areas exhibiting accelerated erosion will be filled and reseeded as necessary or determined by the BLM or USFS Authorized Officer or his/her designated representative.		•	•	•	•	•
SOIL-25	Construction, operation, and maintenance activities will be restricted when the soil is too wet to adequately support construction or maintenance equipment (i.e., when heavy equipment creates ruts in excess of 4 inches deep, over a distance of 50 feet or more in wet or saturated soils). This standard will not apply in areas with fine-grained soils, which easily form depressions even in dry weather.		•	•	•	•	•
WATER QUALITY							
WET-3	(Described under Streams and Wetlands)						
FISH-1	(Described under Fish)						
SOIL-9, 10, and 12-25	(Described under Soils)						
WQA-1	The appropriate NPDES permits for construction activities that disturb one acre or more of land will be obtained from the Department of Environmental Quality and USEPA or their designees.		•	•	•	•	•
WQA-2	NPDES permit requirements will be met. This includes implementing and maintaining appropriate BMPs for minimizing impacts to surface water.		•	•	•	•	•
WQA-3	One or more responsible persons will be designated to manage stormwater issues, conduct the required stormwater inspections, and maintain the appropriate records to document compliance with the terms of the NPDES permit.		•	•	•	•	•

Table 4-1. Environmental Protection Measures for Segments 1, 2, 3, and 3A

GATEWAY WEST TRANSMISSION LINE PROJECT

1 EPM Number	2 Environmental Protection Measures	3-5			6-8		
		Application Phase			Applicable to Land Ownership		
		Design and Engineering	Construction	Operations and Maintenance	Federal Land and all Land in Wyoming and Idaho Segments 6, 8, and 9	State Land in Idaho	Private Land in Idaho Segments 4, 5, 7, and 10
WQA-4	The SWPPPs will be modified as necessary to account for changing construction conditions.		•	•	•	•	•
WQA-5	The SWPPPs will identify areas with critical erosion conditions that may require special construction activities or additional industry standards to minimize soil erosion.		•	•	•	•	•
WQA-6	Stormwater BMPs will be inspected and maintained on all disturbed lands during construction activities, as described in the SWPPP and appropriate NPDES permit.		•	•	•	•	•
WQA-7	Approved sediment and erosion control BMPs will be installed and maintained until disturbed areas meet final stabilization criteria.		•	•	•	•	•
WQA-8	Temporary BMPs will be used to control erosion and sediment at multi-purpose areas (equipment storage yards, fly yards, lay down areas) and substations.		•	•	•	•	•
WQA-9	The construction schedule may be modified to minimize construction activities in rain-soaked or muddy conditions.		•	•	•	•	•
WQA-10	Damaged temporary erosion and sediment control structures will be repaired in accordance with the SWPPP and appropriate NPDES permit.		•	•	•	•	•
WQA-11	Upon completion of construction, permanent erosion and sediment BMPs will be installed along the transmission line within the ROW, at substations, and at related facilities in accordance with the SWPPPs and appropriate NPDES permit.		•	•	•	•	•
WQA-12	In areas of droughty soils, the soil surfaces will be mulched and stabilized to minimize wind erosion and to conserve soil moisture in accordance with the SWPPPs.		•		•	•	•
WQA-13	Construction industry standard practices and BMPs will be used for spill prevention and containment.		•		•	•	•
WQA-14	Construction spills will be promptly cleaned up and contaminated materials hauled to a disposal site that meets local jurisdictional requirements.		•		•	•	•
WQA-15	All multi-purpose areas and fly yards will contain fueling areas with containment of a minimum of 110 percent capacity of the largest vehicle to be refueled therein. Fueling of vehicles will take place within the transmission line ROW under the guidance of the ROW grant/special-use authorization. The SPCC plan will specify BMPs.		•		•	•	•

Table 4-1. Environmental Protection Measures for Segments 1, 2, 3, and 3A

GATEWAY WEST TRANSMISSION LINE PROJECT

1 EPM Number	2 Environmental Protection Measures	3-5			6-8		
		Application Phase			Applicable to Land Ownership		
		Design and Engineering	Construction	Operations and Maintenance	Federal Land and all Land in Wyoming and Idaho Segments 6, 8, and 9	State Land in Idaho	Private Land in Idaho Segments 4, 5, 7, and 10
WQA-16	If an upland spill occurs during construction, berms will be constructed with available equipment to physically contain the spill and prevent migration of hazardous materials toward waterways. Absorbent materials will be applied to the spill area. Dry materials will not be cleaned up with water or buried. Contaminated soils and other materials will be excavated and temporarily placed on and covered by plastic sheeting, or suitable containers, in a containment area a minimum of 100 feet away from any wetland or waterbody, until proper disposal is arranged in appropriately designated and approved areas off-site.		•		•	•	•
WQA-17	If a spill occurs which is beyond the capability of on-site equipment and personnel, an Emergency Response Contractor will be identified and available to further contain and clean up the spill.		•		•	•	•
WQA-18	For spills in standing water or where spilled materials reach water, floating booms, skimmer pumps, and holding tanks will be used as appropriate by the contractor to recover and contain released materials on the surface of the water. Other actions will be taken, as necessary, to clean up contaminated waters.		•		•	•	•
WQA-19	If pre-existing contamination is encountered during operations, work will 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 will determine the appropriate cleanup method(s) for these areas.		•		•	•	•
WQA-20	The SPCC Plan will include details on the types and quantities of absorbent and protective materials (e.g., visqueen, booms) that must be readily available to construction personnel and requirements for the restocking of materials.		•		•	•	•
WQA-21	Storage of materials such as fuels, other petroleum products, chemicals, and hazardous materials including wastes will be located in upland areas at least 500 feet away from streams, 400 feet for public wells, and 200 feet from private wells.		•		•	•	•
WQA-22	Pumps and temporary fuel tanks for the pumps will be stored in secondary containment. Containment will provide a minimum volume equal to 110 percent of the volume of the largest storage vessel located in the yard.		•		•	•	•
WQA-23	Avoid placement of road bed material in channels (perennial, intermittent or ephemeral). Road bed material contains considerable fines that would create sedimentation in coarse cobble dominated stream channels. Even in seasonally dry reaches those fines could be transported during flow periods and negatively impact fish spawning reaches below.	•	•	•	•	•	•
WQA-24	On federal lands, consult with appropriate land management agency staff prior to siting and design for stream crossings (location, alignment, and approach for culvert, drive-through, and ford	•			•		

Table 4-1. Environmental Protection Measures for Segments 1, 2, 3, and 3A

GATEWAY WEST TRANSMISSION LINE PROJECT

1 EPM Number	2 Environmental Protection Measures	3-5			6-8		
		Application Phase			Applicable to Land Ownership		
		Design and Engineering	Construction	Operations and Maintenance	Federal Land and all Land in Wyoming and Idaho Segments 6, 8, and 9	State Land in Idaho	Private Land in Idaho Segments 4, 5, 7, and 10
	crossings). This may include a hydrologist, engineer and, for perennial and many intermittent streams, an aquatic biologist.						
WQA-27	On non-federal lands, culvert placement should comply with state BMPs.		•	•		•	•
WQA-28	Migration of construction-related sediment to all adjacent surface waterbodies will be prevented.				•	•	•
WQA-29	If the Project proposes to obtain water from wells or surface water sources to suppress dust, written approval from the landowner or regulatory agency will be obtained prior to appropriation.		•				•
WQA-30	In the event of a spill, cleanup will be immediate. The Construction Contractor will keep spill kits in their vehicles to allow for quick and effective response to spills. Items to be included in the spill kit at a minimum are: <ul style="list-style-type: none"> • Protective clothing and gloves • Absorbent clay, "kitty litter," or other commercial absorbents • Plastic bags and a bucket • Shovel • Fiber brush and screw-in handle • Dust pan • Caution tape • Highway flares (use on established roads only) • Detergent 		•		•	•	•
WQA-31	The response to a hazardous material spill will vary with the size and location of the spill, but general procedures include: <ul style="list-style-type: none"> • CIC and BLM, BOR, or USFS notification • Traffic control • Dressing the cleanup team in protective clothing • Stopping any leaks • Containing spilled material • Cleaning up and removing spilled pesticide and contaminated absorbent material and soil • Transporting spilled pesticide and contaminated material to an authorized disposal site 		•		•	•	•
WQA-32	Physical response actions are intended to ensure all spills are immediately and thoroughly contained and cleaned up. However, the first priority in responding to any spill is personal and public safety. Construction personnel will be notified of evacuation procedures to be used in the event of a spill emergency, including evacuation routes. In general, the first person on the scene will:		•	•	•	•	•

Table 4-1. Environmental Protection Measures for Segments 1, 2, 3, and 3A

GATEWAY WEST TRANSMISSION LINE PROJECT

1 EPM Number	2 Environmental Protection Measures	3-5			6-8		
		Application Phase			Applicable to Land Ownership		
		Design and Engineering	Construction	Operations and Maintenance	Federal Land and all Land in Wyoming and Idaho Segments 6, 8, and 9	State Land in Idaho	Private Land in Idaho Segments 4, 5, 7, and 10
	<ul style="list-style-type: none"> Attempt to identify the source, composition, and hazard of the spill. Notify appropriately trained personnel immediately. Isolate and stop the spill, if possible, and begin cleanup (if it is safe). Initiate evacuation of the area, if necessary. Initiate reporting actions. 						
WQA-33	Persons should only attempt to cleanup or control a spill if they have received proper training and possess the appropriate protective clothing and cleanup materials. Untrained individuals should notify the appropriate response personnel. In addition to these general measures, persons responding to spills will consult Appendix P – Framework Hazardous Materials Management Plan, Appendix R – Operations, Maintenance, and Emergency Response Plan, and the MSDSs or USDOT Emergency Response Guidebook (to be maintained by the Construction Contractor onsite during all construction activities), which outlines physical response guides for hazardous materials spills.		•	•	•	•	•
WQA-34	In general, expert advice will be sought to properly cleanup major spills. After contaminated soil is recovered, all machinery used will be decontaminated, and recovered soil will be treated as hazardous waste. Contaminated cleanup materials (absorbent pads, etc.) and vegetation will be disposed of in a similar manner. For spills, cleanup may be verified by sampling and laboratory analysis at the discretion of the Companies.		•	•	•	•	•
WQA-35	If construction activity occurs within a wetland with standing water or a flowing stream, prior to construction, absorbent booms will be placed on the water surface either around or downstream of the construction zone. In addition to this measure, cleanup materials, including absorbent spill pads and plastic bags, will be placed onsite at flowing streams and “wet” wetlands when construction is occurring within 200 feet of these areas (also refer to Appendix F –Framework Stormwater Pollution Prevention Plan).		•	•	•	•	•
WQA-36	Emergency spill response kits will be maintained at all locations where hazardous materials are stored, in sufficient quantities based on the amount of materials stored onsite. Spill response equipment should be compatible with types of materials stored onsite. Spill response equipment should be inventoried regularly to ensure spill response equipment is adequate for the type and quantities of materials being used. The following equipment, are examples of spill response equipment for use in cleanup situations: <ul style="list-style-type: none"> Shovels Absorbent pads/materials Personal protective gear 		•	•	•	•	•

Table 4-1. Environmental Protection Measures for Segments 1, 2, 3, and 3A

GATEWAY WEST TRANSMISSION LINE PROJECT

1 EPM Number	2 Environmental Protection Measures	3-5 Application Phase			6-8 Applicable to Land Ownership		
		Design and Engineering	Construction	Operations and Maintenance	Federal Land and all Land in Wyoming and Idaho Segments 6, 8, and 9	State Land in Idaho	Private Land in Idaho Segments 4, 5, 7, and 10
	<ul style="list-style-type: none"> • Medical first-aid supplies • Bung wrench (nonsparking) • Phone list with emergency contact numbers • Storage containers • Communications equipment 						
WQA-37	<p>The Construction Contractor and subcontractors shall provide spill prevention and response training to appropriate construction personnel. Persons accountable for carrying out spill response activities will be designated prior to construction and informed of their specific duties and responsibilities with respect to environmental compliance and hazardous materials. The training shall inform appropriate personnel of site-specific environmental compliance procedures. Training of personnel should be completed at least once a year. All training events should be documented, including the date and names of those personnel in attendance. These records shall be maintained with the SPCC Plan and/or Hazardous Materials Management Plan. At a minimum, this training shall include the following:</p> <ul style="list-style-type: none"> • An overview of regulatory requirements • Methods for the safe handling/storage of hazardous materials • Spill prevention procedures • Emergency response procedures • Use of personal protective equipment • Use of spill cleanup equipment • Procedures for coordinating with emergency response teams • Procedures for notifying agencies • Procedures for documenting spills • Identification of sites/areas requiring special treatment, if any 		•	•	•	•	•
WQA-38	Notification and documentation procedures for spills that occur during Project construction, operation, or maintenance will conform to applicable federal, state, and local laws and regulations. Adherence to such procedures will be the top priority once initial safety and spill response actions have been taken.		•	•	•	•	•
WQA-39	Notification will begin as soon as possible after discovery of a spill. The individual who discovers the spill will contact the Contractor's supervisory personnel and the CIC. If the Construction Contractor determines the spill may seriously threaten human health or the environment, he/she will orally report the discharge as soon as possible, but no later than 24 hours from the time they become aware of the circumstances, as directed below. A written report must be submitted to Wyoming or Idaho Department of Environmental Quality (DEQ) within 15 days. Prior to initiating notification, the Construction Contractor (or individual initiating notification) should obtain as much information as possible, including:		•	•	•	•	•

Table 4-1. Environmental Protection Measures for Segments 1, 2, 3, and 3A

GATEWAY WEST TRANSMISSION LINE PROJECT

1 EPM Number	2 Environmental Protection Measures	3-5 Application Phase			6-8 Applicable to Land Ownership		
		Design and Engineering	Construction	Operations and Maintenance	Federal Land and all Land in Wyoming and Idaho Segments 6, 8, and 9	State Land in Idaho	Private Land in Idaho Segments 4, 5, 7, and 10
	<ul style="list-style-type: none"> current threats to human health and safety, include known injuries, if any spill location, including landmarks and nearest access route reporter's name and phone number time spill occurred type and estimated amount of hazardous materials involved potential threat to property and environmental resources, especially streams and waterways status of response actions 						
WQA-40	<p>The following mandatory notifications will be made by the Construction Contractor. These numbers should be documented in the SPCC plan, along with the contact information for the cleanup contractor. Select and notify the appropriate government agencies based on geographic location of the spill site.</p> <ul style="list-style-type: none"> Wyoming DEQ (24 hours) at (307) 777-7781. Idaho Communication Center (24 hours) at (800) 632-8000 or (208) 846-7610. If spill threatens human health, call 911, and the appropriate county response center. National Response Center (NRC) (800) 424-8802. The NRC should be notified of a reportable spill as required by 40 CFR 110, 40 CFR 117, and/or 49 CFR 171. <p>The Construction Contractor will verify and update these emergency phone numbers before and during construction. The Construction Contractor (or other person in charge) will notify the CIC of all spills or potential spills within construction areas.</p>		•	•	•	•	•
WQA-41	<p>When a spill poses a direct and immediate threat to health and safety and/or property, the land management agency and landowners potentially affected by a spill will be notified directly by the Construction Contractor. Immediate notification of land management agencies and landowners is required for all situations in which the spill poses a direct and immediate threat to health and safety and/or property. Failure to report a spill could result in substantial penalties and fines.</p>		•	•	•	•	•
WQA-42	<p>The Construction Contractor will maintain records for all spills. State and federal agencies that have been verbally notified of a spill will be informed in writing within 10 days for state agencies and 30 days for federal agencies.</p>		•	•	•	•	•
WQA-43	<p>The Construction Contractor shall record spill information in a daily log. The following is a list of items that should be included in the daily log (as appropriate, based on the spill incident):</p> <ul style="list-style-type: none"> time and date of each log entry name of individual recording log entry list of all agencies notified, including name of individual notified, time, and date 		•	•	•	•	•

Table 4-1. Environmental Protection Measures for Segments 1, 2, 3, and 3A

GATEWAY WEST TRANSMISSION LINE PROJECT

1 EPM Number	2 Environmental Protection Measures	3-5			6-8		
		Application Phase			Applicable to Land Ownership		
		Design and Engineering	Construction	Operations and Maintenance	Federal Land and all Land in Wyoming and Idaho Segments 6, 8, and 9	State Land in Idaho	Private Land in Idaho Segments 4, 5, 7, and 10
	<ul style="list-style-type: none"> • type and amount of material spill • resources affected by spill • list of response actions taken, including relative success • copies of letters, permits, or other communications received from government agencies throughout the duration of the spill • copies of all outgoing correspondence related to the spill • photographs of the response effort (and surrounding baseline photographs if relevant) 						
WQA-44	During the Project's operation and maintenance phase, the Companies will ensure its facilities, personnel, and contractors comply with federal, state, and local laws and regulations pertaining to the use, storage, transport, and disposal of hazardous materials and adhere to required emergency response and cleanup procedures in the event of a hazardous material spill. The Companies and all operations and maintenance subcontractors shall develop hazardous materials management and response plans and properly train employees for handling, packaging, and shipping hazardous materials and responding to hazardous materials spills or emergency events.			•	•	•	•
WQA-45	Reclaim stream channels/bottoms and wetlands to their approximate preconstruction configuration/contours, unless the original stream bank contours are excessively steep and/or unstable and a more stable final contour can be specified or where permanent stream crossings must be created to maintain access throughout the life of the Project.	•	•	•	•	•	•
WQA-46	Stabilize stream banks, wetlands, and adjacent upland areas by establishing permanent erosion control measures and vegetation cover after the completion of construction (refer to Appendix N – Framework Erosion, Dust Control, and Air Quality Plan and Appendix D – Framework Reclamation Plan).		•	•	•	•	•
WQA-47	Use permanent waterbars, if needed, on slopes above streams or wetland boundaries, on travel routes, and along the ROW to minimize sediment flow from adjacent uplands into the stream or wetland.		•	•	•	•	•
WQA-48	Remove all prefabricated equipment pads, swamp mats, and geotextile fabric used for stream and wetland crossings on completion of construction.		•		•	•	•
LAND USE							
TRANS-5	(See description under Transportation)						
LU-1	Signs shall be posted at access points to access roads where public access is restricted by a land use plan, and on private, state, and Tribal lands at the request of the landowner, agency, or Tribal government. Signs shall indicate the restriction or regulation, location, penalty for violation, and appropriate contact information for reporting violations. Signage shall be maintained and replaced as part of the routine maintenance.			•	•	•	•
AGRICULTURE							

Table 4-1. Environmental Protection Measures for Segments 1, 2, 3, and 3A

GATEWAY WEST TRANSMISSION LINE PROJECT

1 EPM Number	2 Environmental Protection Measures	3-5 Application Phase			6-8 Applicable to Land Ownership		
		Design and Engineering	Construction	Operations and Maintenance	Federal Land and all Land in Wyoming and Idaho Segments 6, 8, and 9	State Land in Idaho	Private Land in Idaho Segments 4, 5, 7, and 10
AGRI-1	Consult with the Farm Service Agency and landowners to determine how construction may affect the CRP status of the land currently enrolled in CRP.	•					•
TRANSPORTATION							
FIRE-6	(See description in Public Safety (Blasting, Fire, Contamination))						
TRANS-1	A Final Traffic and Transportation Management Plan will be developed and implemented to provide site-specific details showing how the Project will comply with the EPMs listed in this attachment. The Final Traffic and Transportation Management Plan will be submitted to, and approved by, the appropriate federal, state, and local agencies with authority to regulate use of public roads, and approved prior to the issuance of a Notice to Proceed with construction.	•			•	•	•
TRANS-2	If a construction method requires the closure of a state- or county-maintained road for more than 1 hour, a plan will be developed to accommodate traffic as required by a county or state permit.	•	•			•	•
TRANS-3	On county- and state-maintained roads, caution signs will be posted on roads, where appropriate, to alert motorists of construction and warn them of slow traffic. Traffic control measures such as traffic control personnel, warning signs, lights, and barriers will be used during construction to ensure safety and to minimize traffic congestion.	•	•			•	•
TRANS-4	To reduce traffic congestion and roadside parking hazards, an equipment yard will be provided for primary parking for employee personal vehicles.	•	•		•	•	•
TRANS-5	Unauthorized vehicles will not be allowed within the construction ROW or along roadsides near the ROW.		•		•	•	•
TRANS-6	Construction vehicles will follow a 25 mph speed limit on unposted project roads.		•		•	•	•
TRANS-7	Landowners will be notified at least 48 hours prior to the start of construction within 0.25 mile of a residence.		•		•	•	•
TRANS-8	Emergency vehicle access to private property will be maintained.		•				•
TRANS-9	Roads in residential areas will be restored as soon as possible, and construction areas near residences will be fenced off at the end of the construction day, without blocking residential traffic.		•				•
TRANS-10	Roads negatively affected by construction and as identified by the applicable jurisdictional agency and/or landowner will be returned to preconstruction condition. The method of preconstruction condition documentation will be coordinated by the Construction Contractor and the applicable jurisdictional agency and/or landowner.		•		•	•	•
TRANS-11	Roads developed specifically for this project that are identified by the Companies as no longer necessary will be reclaimed as specified in the Final Reclamation Plan. Culverts will be removed.		•		•	•	•
TRANS-12	The Companies will attempt to identify existing two-track trails as preferred access roads for construction when existing maintained (e.g., gravel or asphalt) roads are not available.	•	•		•	•	•

Table 4-1. Environmental Protection Measures for Segments 1, 2, 3, and 3A

GATEWAY WEST TRANSMISSION LINE PROJECT

1 EPM Number	2 Environmental Protection Measures	3-5			6-8		
		Application Phase			Applicable to Land Ownership		
		Design and Engineering	Construction	Operations and Maintenance	Federal Land and all Land in Wyoming and Idaho Segments 6, 8, and 9	State Land in Idaho	Private Land in Idaho Segments 4, 5, 7, and 10
TRANS-13	Roads will be designed so proper drainage is not impaired and roads will be built to minimize soil erosion. Consult with appropriate Agencies during the design stage.	•	•	•	•	•	•
TRANS-14	Access roads built for the Project on federal lands shall be closed to the public unless otherwise agreed upon with the land management agency. Signs shall indicate the restriction or regulation, location, penalty for violation, and appropriate contact information for reporting violations. Signage and road closure measures shall be evaluated during routine visits and maintained or replaced as necessary as part of routine maintenance. Access roads constructed solely for use by the Companies will be maintained by the Companies as needed for the Companies' use in accordance with the ROW grants/special use authorization.	•	•	•	•		
TRANS-15	Roads to be abandoned may be left intact through mutual agreement of the land management agency, landowner, the tenant, and the Companies, unless located in flood areas or drainage hazard areas or otherwise restricted by federal, state, or local regulations.	•	•	•	•	•	•
TRANS-16	All temporary culverts and associated fill material will be removed from stream crossings after construction. All permanent culverts will be engineered by the Construction Contractor and approved by the Companies prior to installation.		•		•	•	•
TRANS-17	The road or highway within the ROW corridor shall be used to the maximum extent possible for construction and maintenance of the new ROW.	•	•	•	•	•	•
TRANS-18	To help set public expectations for when temporary access roads are decommissioned, signs shall be posted on all temporary roads and overland access routes identifying them as reclamation areas. Signs will state "Restoration in Progress – No Vehicle Traffic Allowed."		•	•	•	•	
TRANS-19	During wet road conditions, any ruts deeper than 4 inches remaining on the roads from the Project will be repaired.	•	•	•	•		
AIR QUALITY							
FISH-3	(Described under Fish)						
TESWL-12	(Described under TES-Wildlife)						
SOIL-18 and 19	(Described under Soils)						
AIR-1	Minimize idling time for diesel equipment whenever possible.		•		•	•	•
AIR-2	Ensure that diesel-powered construction equipment is properly tuned and maintained, and shut off when not in direct use.		•		•	•	•
AIR-3	Prohibit engine tampering to increase horsepower.		•		•	•	•
AIR-4	Reduce construction-related trips as feasible for workers and equipment, including trucks.		•		•	•	•
AIR-5	Dust suppression techniques will be applied, such as watering construction areas or removing dirt tracked onto a paved road as		•		•	•	•

Table 4-1. Environmental Protection Measures for Segments 1, 2, 3, and 3A

GATEWAY WEST TRANSMISSION LINE PROJECT

1 EPM Number	2 Environmental Protection Measures	3-5			6-8		
		Application Phase			Applicable to Land Ownership		
		Design and Engineering	Construction	Operations and Maintenance	Federal Land and all Land in Wyoming and Idaho Segments 6, 8, and 9	State Land in Idaho	Private Land in Idaho Segments 4, 5, 7, and 10
	necessary to prevent safety hazards or nuisances on access roads and in construction zones near residential and commercial areas and along major highways and interstates.						
ELECTRICAL ENVIRONMENT							
EE-1	During final design, limit the conductor surface gradient in order to meet the IEEE Radio Noise Guideline.	•	•			•	•
EE-2	During construction, identify objects such as fences, metal buildings, pipelines, and other metal objects within or near the proposed ROW that have the possibility for induced potentials and currents and implement electrical grounding of these objects according to the utility's and National Electric Code standards.		•		•	•	•
EE-3	During final design and construction, identify areas where large equipment is anticipated and provide sufficient conductor clearance to ground to meet the NESC 5 mA rule or limit size or access of large equipment.	•	•			•	•
PUBLIC SAFETY (Blasting, Fire, Contamination)							
WQA-13 - 20	(Described under Water Quality)						
WEED-24, 25	(Described under Weeds)						
WILD-11	(Described under Wildlife)						
BLA-1	The Blasting Plan will identify blasting procedures including safety, use, storage, and transportation of explosives that will be employed where blasting is needed, and will specify the locations of needed blasting.		•		•	•	•
BLA-2	All blasting will be performed by registered licensed blasters who will be required to secure all necessary permits and comply with regulatory requirements in connection with the transportation, storage, and use of explosives, and blast vibration limits for nearby structures, utilities, wildlife, and fish (where blasting is conducted in waterbodies).		•		•	•	•
BLA-3	Appropriate flags, barricades, and warning signals will be used to ensure safety during blasting operations. Blast mats will be used when needed to prevent damage and injury from fly rock.		•		•	•	•
BLA-4	Blasting in the vicinity of pipelines will be coordinated with the pipeline operator, and will follow operator-specific procedures, as necessary.		•		•	•	•
BLA-5	Damages that result from blasting will be repaired or the owner fairly compensated.		•		•	•	•
BLA-6	Proper blasting techniques, including proper cover of charges, will be followed.		•		•	•	•
BLA-7	Matting will be used in rock blasting operations to minimize and control dust.		•		•	•	•
BLA-8	Notification of blasting activities will be provided to nearby residents.		•		•	•	•
BLA-9	The Construction Contractor will prepare site specific blasting plans.	•	•		•	•	•

Table 4-1. Environmental Protection Measures for Segments 1, 2, 3, and 3A

GATEWAY WEST TRANSMISSION LINE PROJECT

1	2	3-5			6-8		
EPM Number	Environmental Protection Measures	Application Phase			Applicable to Land Ownership		
		Design and Engineering	Construction	Operations and Maintenance	Federal Land and all Land in Wyoming and Idaho Segments 6, 8, and 9	State Land in Idaho	Private Land in Idaho Segments 4, 5, 7, and 10
BLA-10	<p>The Blasting Plan for the proposed Project will also stipulate the following:</p> <ul style="list-style-type: none"> • Explosives will not be stored on federal land without prior written permission from the land-management agency. Copies of this permission will be posted on each magazine. • Seventy-two hours advance notice of blasting activities will be given to the land-management agency, railroads, highway departments, and local communities; occupants of nearby residences, buildings, and businesses; and local farmers. • Warning signs will be erected and maintained at all approaches to the blast areas and flaggers will be stationed on all roadways passing within 1,000 feet of blasting activities. • Explosives will not be primed or fused until just before use. • Blasting will take place during daylight hours only and will be monitored with three axis seismographs to ensure safe vibration levels are not exceeded. • Vibration measured as peak particle velocity will not exceed 4 inches per second adjacent to an underground pipeline and 2 inches per second for any aboveground structure (including water wells). 	•	•		•	•	•
FIRE-1	Train all personnel about the measures to take in the event of a fire including; fire dangers, locations of extinguishers and equipment, emergency response, and individual responsibilities for fire prevention and suppression.		•	•	•	•	•
FIRE-2	Equip all construction equipment operating with internal combustion engines (including off-highway vehicles, chainsaws, generators, heavy equipment, etc.) with spark arresters. Qualified spark arresters will be in a maintained and nonmodified condition and meet U.S. Department of Agriculture Forest Service Standard 5100-1a, or the Society of Automotive Engineers Recommended Practices J335 or J350. Refer to 43 Code of Federal Regulations §8343.1.		•	•	•	•	•
FIRE-3	Restrict motorized equipment, including worker transportation vehicles, to the designated and approved work limits. Operate all vehicles on designated roads or park in areas where vegetation is less than 8 inches tall. Vehicles, including the undercarriages, will be cleared of vegetation accumulations and checked periodically to ensure no buildup of flammable vegetation.		•	•	•	•	•
FIRE-4	Require all motor vehicles and equipment to carry, and individuals using handheld power equipment to have, specified fire prevention equipment. Carry shovels, water, and fire extinguishers on all equipment and vehicles. Equipment will carry extinguishers rated ABC-10 pound minimum and vehicles will carry ABC-2.5 pound minimum.		•	•	•	•	•
FIRE-5	Provide a list of equipment capable of being adapted to fighting fires to local fire protection agencies.		•	•	•	•	•

Table 4-1. Environmental Protection Measures for Segments 1, 2, 3, and 3A

GATEWAY WEST TRANSMISSION LINE PROJECT

1 EPM Number	2 Environmental Protection Measures	3-5			6-8		
		Application Phase			Applicable to Land Ownership		
		Design and Engineering	Construction	Operations and Maintenance	Federal Land and all Land in Wyoming and Idaho Segments 6, 8, and 9	State Land in Idaho	Private Land in Idaho Segments 4, 5, 7, and 10
FIRE-6	Notify the appropriate fire suppression agencies of scheduled road closures.		•	•	•	•	•
FIRE-7	Prohibit burning of slash, brush, stumps, trash, explosives storage boxes, or other Project-generated debris unless authorized by the applicable land management agency.		•	•	•	•	•
FIRE-8	Designate a Fire Guard on each construction crew prior to the start of construction activities each day and provide a communications system for maintaining contact with fire control agencies.		•	•	•	•	•
FIRE-9	The Companies shall comply with fire restrictions and/or waivers as applicable.		•	•	•	•	•
FIRE-10	If a fire spreads beyond the suppression capability of workers with these tools, all will cease fire suppression action and leave the area immediately via pre-identified escape routes.		•	•	•	•	•
FIRE-11	Initiate fire suppression actions in the work area to prevent fire spread to or on federally administered lands. If fire ignitions cannot be prevented or contained immediately, or it may be foreseeable to exceed the immediate capability of workers, the operation must be modified or discontinued. No risk of ignition or re-ignition will exist on leaving the operation area.		•	•	•	•	•
FIRE-12	Prior to any operation involving potential sources of fire ignition from vehicles, equipment, or other means, review weather forecasts and potential fire danger. Prevention measures to be taken each workday will be included in the specific job briefing. Consideration for additional mitigation or discontinuing the operation must be given in periods of extreme wind and dryness.		•	•	•	•	•
FIRE-13	Operate welding, grinding, or cutting activities in areas cleared of vegetation within range of the sparks for that particular action. A spark shield adequate for the sparks may be used to prevent sparks from carrying. A spotter equipped with a round-nose shovel and two ABC-rated 5-pound fire extinguishers and a 5-gallon backpack waterpump is required to watch for ignitions during, and one hour after, the activity. Water may be used to wet down surrounding vegetation but does not take the place of an adequately cleared area and spark shield.		•	•	•	•	•
FIRE-14	No smoking will be allowed while operating equipment or while walking or working in areas with vegetation.		•	•	•	•	•
FIRE-15	Smoke only in cleared areas.		•	•	•	•	•
FIRE-16	In areas where smoking is allowed, completely extinguish all burning tobacco and matches and discard them in ash trays, not on the ground.		•	•	•	•	•
FIRE-17	Do not allow any fires or barbecues on the transmission line ROW, at material yards, substations, access roads, or other construction areas.		•	•	•	•	•
FIRE-18	Clear away all flammable material to a minimum of 10 feet, including snags (fallen or standing dead trees) from areas of operation where a spark, fire, or flame could be generated.		•	•	•	•	•

Table 4-1. Environmental Protection Measures for Segments 1, 2, 3, and 3A

GATEWAY WEST TRANSMISSION LINE PROJECT

1 EPM Number	2 Environmental Protection Measures	3-5			6-8		
		Application Phase			Applicable to Land Ownership		
		Design and Engineering	Construction	Operations and Maintenance	Federal Land and all Land in Wyoming and Idaho Segments 6, 8, and 9	State Land in Idaho	Private Land in Idaho Segments 4, 5, 7, and 10
FIRE-19	If a fire does start by accident, take immediate steps to extinguish it (if it is safe to do so) using available fire suppression equipment and techniques taught at field crew emergency response training provided by the Construction Contractor or the Companies.		•	•	•	•	•
CON-1	All construction staff will be trained on the types of contamination that could be encountered and how to respond if contamination is encountered.		•		•		
NOISE							
NOISE-1	Identify and provide a public liaison person before, and during, construction to respond to concerns of neighboring receptors, including residents, about construction noise disturbance.		•	•	•	•	•
NOISE-2	Establish a toll-free telephone number for receiving questions or complaints during construction, and develop procedures for responding to callers.		•		•	•	•
NOISE-3	Implement and maintain a noise complaint review process to deal with residents' or other potential queries and complaints as they arise. Such complaints will be logged and investigated on an individual basis to facilitate resolution of the issue of concern.		•		•	•	•

1/ TESWL-3 has been offered by the Companies; however, although the Companies are encouraged to protect all prairie dog towns, formal black-footed ferret surveys within those towns will no longer be required by the BLM.

AGRI – agriculture; AIR – air quality; BLA – blasting; CON – contamination; CR – cultural resources; EE – electrical environment; FIRE – fire; FISH – fish; G – general; GEO – geologic