

Mitigation Action Plan To Implement Mitigation Requirements for Cheyenne-Miracle Mile and Ault-Cheyenne Transmission Line Rebuild Project, Carbon, Albany, and Laramie Counties, Wyoming, and Weld County, Colorado

September 2006

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CH-MM and AU-CH Mitigation Action Plan Sept. 2006

Action Plan for Standard Project Practices and Mitigation

Mitigation Action Identifier	Resources for Which the Mitigation Will Be Implemented	Responsible Party for Implementing	Mitigation Action	Party Responsible for Monitoring and Ensuring Compliance
1	Land use, transportation	Construction Contractor Western Maintenance	The contractor will limit the movement of crews and equipment to the ROW, including access routes. The contractor will limit movement on the ROW to minimize damage to residential yards, grazing land, crops, orchards,	Western Engineering Construction (during construction) Western Maintenance
	Land use, transportation	Construction Contractor Western Maintenance	and property and shall avoid marring the lands. The contractor will coordinate with the landowners to avoid impacting the normal function of irrigation devices during project construction and operation.	(during maintenance) Western Engineering Construction (during construction) Western Maintenance (during maintenance)
2	Land use, transportation	Construction Contractor Western Maintenance	When weather and ground conditions permit, the contractor will obliterate all construction- caused deep ruts that are hazardous to farming operations and to movement of equipment. Such ruts shall be leveled, filled, and graded or otherwise eliminated in an approved manner. Ruts, scars, and compacted soils in hay meadows, alfalfa fields, pastures, and cultivated productive lands will have the soil loosened and leveled by scarifying, harrowing, disking, or other approved methods. Damage to ditches, tile drains, terraces, roads, and other features of the land will be corrected. At the end of each construction season and before final acceptance of the work in these agricultural areas, all ruts will be obliterated, and all trails and areas that are hard-packed as a result of construction operations will be loosened and leveled. The land and facilities will be restored as nearly as practicable to the original condition.	Western Engineering Construction (during construction) Western Maintenance (during maintenance)

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3	Soils, vegetation	Western Engineering Construction Construction Contractor	Water turnoff bars or small terraces shall be constructed across all ROW trails on hillsides to prevent water erosion and to facilitate natural revegetation on the trails.	Western Engineering Construction will identify locations and quantities of water bars for inclusion in the Project Specifications and Bid Schedule.
4	Soils, vegetation, wildlife, special status and sensitive species, cultural	Construction Contractor Western Maintenance	The contractor will comply with all Federal, state, and local environmental laws, orders, and regulations. Prior to construction, all supervisory construction personnel will be instructed on the protection of cultural and ecological resources. To assist in this effort, the construction contract will address a) Federal and state laws regarding antiquities and plants and wildlife, including collection and removal and b) the importance of these resources and the purpose and necessity of protecting them.	Western Environment will identify and map avoidance areas that the construction contractor is required to avoid. Western Engineering Construction will ensure avoidance is enforced during construction. Western Maintenance will ensure that avoidance is continued through life-of-project.
5	Soils, vegetation, visual resources	Construction Contractor Western Maintenance	The contractor will exercise care to preserve the natural landscape and will conduct construction operations so as to prevent any unnecessary destruction, scarring, or defacing of the natural surroundings in the vicinity of the work. Except where clearing is required for permanent works, approved construction roads, or excavation operations, vegetation will be preserved and shall be protected from damage by the contractor's construction operations and equipment.	Western Engineering Construction (during construction) Western Maintenance (during maintenance)
6	Soils, vegetation	Construction Contractor Western Maintenance	On completion of the work, all work areas except access trails shall be scarified or left in a condition that will facilitate natural revegetation, provide for proper drainage, and prevent erosion. All destruction, scarring, damage, or defacing of the landscape resulting from the contractor's operations shall be repaired by the contractor.	Western Engineering Construction (during construction) Western Maintenance (during maintenance)

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7	Soils, vegetation	Construction Contractor	Construction trails not required for maintenance access shall be restored to the original contour and made impassable to vehicular traffic. The surfaces of such construction trails shall be scarified as needed to provide a condition that will facilitate natural revegetation, provide for proper drainage, and prevent erosion.	Western Engineering Construction
8	Soils, vegetation	Construction Contractor	Construction staging areas shall be located and arranged in a manner to preserve trees and vegetation to the maximum practicable extent. On abandonment, all storage and construction materials and debris shall be removed from the site. The area will be regraded, as required, so that all surfaces drain naturally, blend with the natural terrain, and are left in a condition that will facilitate natural revegetation, provide for proper drainage, and prevent erosion.	Western Engineering Construction
9	Soils, vegetation, visual resources	Construction Contractor	Borrow pits shall be excavated so that water will not collect and stand therein. Before being abandoned, the sides of borrow pits will be brought to stable slopes, with slope intersections shaped to carry the natural contour of adjacent undisturbed terrain into the pit or borrow area, giving a natural appearance. Waste piles will be shaped to provide a natural appearance.	Western Engineering Construction

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10	Surface water, floodplains, wetlands, wildlife	Construction Contractor Western Maintenance	Construction activities will be performed by methods that prevent entrance or accidental spillage of solid matter, contaminants, debris, and other objectionable pollutants and wastes into flowing streams or dry water courses, lakes, and underground water sources. A buffer zone of 500 ft from live waters and wetlands and 75 ft from ephemeral channels will be established in areas where staging, stockpiling, and refueling occur. Such pollutants and wastes include, but are not restricted to, refuse, garbage, cement, concrete, sanitary waste, industrial waste, radioactive substances, oil and other petroleum products, aggregate processing tailings, mineral salts, and thermal pollution.	Western Engineering Construction (during construction) Western Maintenance (during maintenance)
11	Surface water, floodplains, wetlands, wildlife	Construction Contractor Western Maintenance	Dewatering work for structure foundations or earthwork operations adjacent to, or encroaching on, streams or water courses will not be performed without prior notice to appropriate state agencies. A buffer zone of 500 ft from live waters and wetlands and 75 ft from ephemeral channels will be established in areas where staging, stockpiling, and refueling occur.	Western Engineering Construction (during construction) Western Maintenance (during maintenance)
12	Surface water, floodplains, wetlands, wildlife	Construction Contractor Western Maintenance	Excavated material or other construction materials will not be stockpiled or deposited near or on stream banks, lake shorelines, or other water course perimeters where they can be washed away by high water or storm runoff or can in any way encroach upon the actual water source itself. A buffer zone of 500 ft from live waters and wetlands and 75 ft from ephemeral channels will be established in areas where staging, stockpiling, and refueling occur.	Western Engineering Construction (during construction) Western Maintenance (during maintenance)

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13	Surface water, floodplains, wetlands, wildlife	Construction Contractor	Waste waters from construction operations will not enter streams, water courses, or other surface waters without use of such turbidity control methods as settling ponds, gravel-filter entrapment dikes, approved flocculating processes that are not harmful to fish, recirculation systems for washing of aggregates, or other approved methods. Any such waste waters discharged into surface waters will be essentially free of settleable material. Settleable material is defined as material that will settle from the water by gravity during a 1-hour quiescent period.	Western Engineering Construction
14	Air quality	Construction Contractor	The contractor will utilize such practicable methods and devices as are reasonably available to control, prevent, and otherwise minimize atmospheric emissions or discharges of air contaminants.	Western Engineering Construction
15	Air quality	Construction Contractor	Equipment and vehicles that show excessive emissions of exhaust gases due to poor engine adjustments, or other inefficient operating conditions, will not be operated until corrective repairs or adjustments are made.	Western Engineering Construction
16	Air quality	Construction Contractor Western Maintenance	Burning or burying of waste materials on the ROW or at the construction site will not be allowed. The contractor shall remove all waste materials from the construction area. All materials resulting from the contractor's clearing operations will be removed from the ROW.	Western Engineering Construction (during construction) Western Maintenance (during maintenance)
17	Transportation	Construction Contractor Western Maintenance	The contractor shall make all necessary provisions in conformance with safety requirements for maintaining the flow of public traffic and will conduct construction operations so as to offer the least possible obstruction and inconvenience to public traffic.	Western Engineering Construction (during construction) Western Maintenance (during maintenance)

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18	Land use	Construction Contractor Western Engineering Construction Western Maintenance	Western Engineering Construction will apply necessary mitigation to eliminate problems of induced currents and voltages onto conductive objects sharing a ROW, to the mutual satisfaction of the parties involved. Western Engineering Construction will install fence grounds on all fences that cross or are parallel to the proposed line.	Western Engineering Construction (design phase) will quantify and include fence grounds and gates. Western Engineering Construction (during construction) Western Maintenance
19	Floodplains, wetlands, vegetation	Construction Contractor Western Maintenance	The contractor will span riparian areas located along the ROW and avoid physical disturbance to riparian vegetation. A buffer zone of 500 ft from live waters and wetlands and 75 ft from ephemeral channels will be established in areas where staging, stockpiling, and refueling occur.	(during maintenance) Western Engineering Construction (during construction) Western Maintenance (during maintenance)
	Floodplains, wetlands, vegetation	Construction Contractor Western Maintenance	Equipment and vehicles will not cross riparian areas on the ROW during construction and operation activities.	Western Engineering Construction (during construction) Western Maintenance (during maintenance)
	Floodplains, wetlands, vegetation	Construction Contractor Western Maintenance	Existing bridges or fords will be used to access the ROW on either side of riparian areas.	Western Engineering Construction (during construction) Western Maintenance
20	Land use, socioeconomics	Western ROW Acquisition	ROW will be purchased at fair market value, and payment will be made for full value of crop damages or other property damage during construction or maintenance.	(during maintenance) Western ROW Acquisition

¹ Per the EA for this project.

Action Plan for Project- and Site-Specific Mitigation Requirements

Mitigation Action Identifier	Resources for Which the Mitigation Will Be Implemented	Responsible Party AND Action	Mitigation Action Description	Additional Information
21	Wildlife	Western Environment will identify exclusion areas and time periods to be avoided. Western Environment will present requirements to be included in the construction specifications. Western Engineering Construction will oversee implementation by monitoring construction contractor performance. Construction Contractor will implement measures as agreed to or as modified based on the conditions of any exception granted by the BLM.	On the CH-MM portion of the project, construction would not occur within pronghorn, mule deer, or elk crucial winter range between November 15 and April 30 on all public and private lands unless an exception is granted by the BLM. Western Environment will also avoid construction in greater sage-grouse nesting habitat during the nesting season or will conduct nest surveys prior to construction each year and avoid any active nests.	Exceptions may be granted only by the BLM and must be requested in writing. BLM approval of any exceptions must be documented in writing.

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22	Special status and sensitive species	Western Environment will identify the areas to be surveyed and conduct the necessary surveys prior to construction Western Environment will present requirements to be included in the	Western Environment will conduct an inventory prior to construction to determine if any existing structures occur in potential Preble's meadow jumping mouse habitat; these structures will be cut off at ground level to avoid disturbing Preble's meadow jumping mouse habitat.	None
		Western Engineering Construction will oversee implementation by monitoring construction contractor performance.		
23	Special status and sensitive species	Western Environment will identify the areas to be surveyed and conduct the necessary surveys prior to construction.	Western Environment will survey all areas to be disturbed and possible traffic ways for Ute ladies'-tresses during the appropriate time of year when the orchid is in flower, if any are found, will consult with the FWS to determine what actions are necessary to avoid or minimize impacts to Ute ladies'-tresses. During operations, traffic in potential Ute ladies'-tresses habitat will be restricted to existing roads.	None
24	Vegetation	Western Engineering Construction will oversee implementation by monitoring construction contractor performance.	Western Environment will minimize the introduction and/or spread of weeds by washing all equipment at a commercial facility prior to the start of construction each year, by avoiding vehicle traffic in known weedy areas, and by rewashing equipment if weeds are encountered.	None
		will implement measures as agreed to.		

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	Vegetation	Western Environment will map areas to be revegetated, provide the seed mix requirements.	Western Environment will reclaim all disturbed areas as soon as practical after construction each year and will implement a weed control program (in consultation with the BLM and private landowners) if the project causes the spread of weeds.	None
		Western Engineering Construction will present requirements to be included in the construction specifications and estimated quantities for the bid schedule.		
		Western Engineering Construction will oversee implementation by monitoring construction contractor performance.		
		Construction Contractor will implement measures as agreed to or as modified based on field conditions.		

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25	Wildlife	Western Environment will identify exclusion areas and time periods to be avoided. Western Environment will	On the AU-CH portion, Western Environment will avoid construction in pronghorn winter ranges during critical winter periods, to be determined in consultation with the Colorado Division of Wildlife prior to construction each year.	Changes to this stipulation will be made only with the approval of the Colorado Division of Wildlife and will be documented in writing.
		present requirements to be included in the construction specifications.		
		Western Engineering Construction will oversee implementation by monitoring construction contractor performance.		
		Construction Contractor will implement measures as agreed to or as modified based on field conditions.		

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26	Special status and sensitive species	Western Environment will identify off-ROW access around Colorado butterflyplant habitat and provide access information and maps in the construction specifications.	Western Environment will span all 3.5 miles of known Colorado butterflyplant habitat along the ROW and will limit traffic to existing roads. Operations traffic in known or potential Colorado butterflyplant habitat will also be restricted to existing roads.	None
		Western Environment will discuss the requirement with Western Engineering Construction and/or the contractor during the preconstruction meeting.		
		Western Engineering Construction will monitor the avoidance.		
27	Floodplains, wetlands	Western Engineering Construction will oversee implementation by monitoring construction contractor performance.	If construction in floodplains and wetlands were to cause soil compaction or ruts, long-term impacts to wetland vegetation could occur. To avoid this impact, Western Environment will limit construction in floodplains and wetlands to periods when soils are dry or frozen and/or use measures to support construction equipment (e.g., oversized	None
		Construction Contractor will implement measures as agreed to or as modified based on field conditions.	treads on equipment, tracked equipment (e.g., oversheed compacting soils and creating ruts. A buffer zone of 500 ft from live waters and wetlands and 75 ft from ephemeral channels would be established in areas where staging, stockpiling, and refueling occur.	

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28	Wildlife	Western Environment will conduct the necessary surveys and prepare a map and other information that identify the location and restrictions. This information will be included in the project construction specifications by Western Engineering Construction. Western Engineering Construction will oversee implementation by monitoring construction contractor compliance.	If construction is to occur in potential mountain plover habitat during the breeding and nesting season, Western Environment will survey potential habitat for the presence/absence of mountain plover nests and will avoid construction within 0.25 mile of nest sites until 37 days after the nest is discovered or 7 days post-hatching.	Surveys generally will be conducted between April 10 and July 10, although survey timing varies depending upon the type of survey to be conducted. Western Environment will consult with BLM well before April 10 to determine the appropriate survey method and window.

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29	Cultural resources	Western Environment will prepare a map and other information that identifies the location and restrictions. This information will be included in the project construction specifications by Western Engineering Construction.	Removal of the existing wooden transmission line structures on eligible cultural sites will be accomplished by cutting the structures at ground surface, thus requiring no additional excavation of the surrounding area. The structures will be accessed using rubber-tire vehicles to minimize other associated impacts to the site. All structure removals will be monitored by a permitted archaeologist. This measure applies to four structures listed below and will minimize adverse effects caused by structure removal as much as possible.	None			
		Western Engineering Construction will ensure that these restrictions are complied with by the construction contractor.	Site Number	Site Type	Owner	Structure to be removed	
			5WL2622	Historic homestead	Private	58-4	
		Construction Contractor	5WL4830	Prehistoric tipi rings	Private	57-2	
		will implement measures as agreed to or as modified	48AB1405	Prehistoric	Private	71-4	
l I		based on field conditions.	48CR8033	Prehistoric	Private	27-2	

Mitigation Action Identifier	Resources for Which the Mitigation Will Be Implemented	Responsible Party AND Action	Mitigation Action Description	Additional Information
30	Cultural resources	Western Environment will prepare a map and other information that identify the location of important cultural resources and restrictions. This information will be included in the project construction specifications by Western Engineering Construction. Western Environment will develop a mitigation plan for those sites that cannot be avoided. Western Engineering Construction will ensure that the restrictions and the stipulations of the mitigation plan are complied with by the construction contractor. Construction Contractor will implement measures as agreed to or as modified based on field conditions.	Impacts to eligible cultural sites caused by construction of new towers will be minimized by planning. Whenever possible, transmission structures will be planned outside of site boundaries. In cases where avoidance is not possible, a mitigation plan will be formulated. If new structures are planned within 150 feet of a site, an archaeological monitor will be present to ensure that the site is not impacted during structure construction.	None

Mitigation Action Identifier	Resources for Which the Mitigation Will Be Implemented	Responsible Party AND Action	Mitigation Action Description	Additional Information
31	Cultural resources	Western Environment will prepare a map and other information that identify the location of important cultural resources and restrictions. This information will be included in the project construction specifications by Western Engineering Construction. Western Environment will develop a mitigation plan for those sites that cannot be avoided. Western Engineering Construction will ensure that the restrictions and the stipulations of the mitigation plan are complied with by the construction contractor. Construction Contractor will implement measures as agreed to or as modified based on field conditions.	Heavy trucks and other equipment will not cross eligible cultural sites when unimproved access roads are wet. Upgrading or maintenance of access roads within the boundaries of eligible sites will be avoided wherever possible. Where avoidance is not possible, a mitigation plan will be prepared and implemented prior to any construction or roadwork. The plan will include mitigation of adverse effects. These guidelines apply not only to roads surveyed as project access roads but also to roads beneath the transmission lines that were subsumed in the transmission line survey.	None

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32	Paleontology	Western Environment will present the requirements to the construction contractor at the preconstruction conference. Western Engineering Construction will coordinate with Western Environment if suspected finds are made during construction activities.	The contractor will receive instructions from Western Environment regarding the potential presence of fossils in pole excavations and in areas excavated or disturbed for roadwork. The contractor will be notified of his obligation to report any suspected paleontologic finds to Western Environment. Western Environment will retain a paleontologist to assess the significance of the paleontological finds and make recommendations. The BLM maintains staff paleontologists to perform assessments of discoveries on lands managed by them.	None
33	Wildlife, special status and sensitive species	Western Engineering Construction will be responsible for design. Western Engineering Construction will oversee implementation by monitoring construction contractor compliance.	Western Environment will design and construct the transmission line in conformance with Suggested Practices for Protection of Raptors on Powerlines : the State of the Art in 1996 (Avian Power Line Interaction Committee, 1996) to eliminate the potential for raptor electrocution. Western Environment will install bird flight diverters at the Rock Creek crossing on both the rebuilt CH-MM transmission line and the existing HJ-MM transmission line to mitigate the potential of future raptor collisions at the Rock Creek crossing.	None
		Construction Contractor will construct the transmission line and install bird flight diverters in accordance with Western's specifications.		
		Western Maintenance will be responsible for ongoing maintenance of installed devices.		

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34	Visual resources	Western Engineering Construction will be responsible for design. Western Engineering Construction will oversee implementation by monitoring construction contractor compliance.	The 230-kV single-pole steel structures proposed along CH- MM Section 5 and AU-CH Section 1 and Section 2 will be a neutral non-reflective steel material. Non-reflective and compatible toned conductors and insulators will also be used in urban settings. Corten steel will not be used in these settings due to the strong contrasts that the darker steel tone would create in these open settings.	None
		Construction Contractor will erect the structures in accordance with Western's specifications.		
35	Special status and sensitive species	Western Engineering Construction will notify Western Environment of the discovery. Western Environment will define an exclusion area where construction is to cease until further notice. Western Environment will notify the USFWS and re-initiate Section 7 consultation.	In the event any threatened, endangered, candidate, or proposed species are found during construction of the proposed CH-MM and AU-CH transmission line, project- specific surface disturbance will be halted and the USFWS will be immediately notified. Section 7 consultation between Western Environment and USFWS will be re-initiated prior to restarting construction activities in the specific area.	Western Environment will be required to document all consultation with the USFWS regarding the discovery and the Section 7 process.
		Western Environment will notify construction when it is authorized to proceed in the exclusion area.		

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36	Special status and sensitive species	Western Environment will conduct the necessary surveys and prepare a map and other information that identify the location and restrictions. This information will be included in the project construction specifications by Western Engineering Construction. Western Engineering Construction will oversee implementation by monitoring construction contractor compliance.	To minimize impacts to nesting bald eagles, Western Environment will conduct surveys prior to the initiation of construction-related activities within 1.0 mi of the construction corridor. No construction-related activities will occur within 1.0 mile of any active bald eagle nest from February 1 though July 31. If the nest is determined to be active, Western Environment will immediately notify the USFWS, and a raptor mitigation plan will be developed and implemented with the concurrence of the USFWS, the BLM, and the WGFD.	None
		will implement measures as agreed to or as modified based on field conditions.		
37	Special status and sensitive species	Western Engineering Construction will oversee implementation by monitoring construction contractor compliance.	Only those trees, tree tops, and limbs that are deemed to pose a hazard to operation and maintenance of the power line will be removed. Western Environment will minimize tree clearing, topping, and limb clearing, and these activities will only occur within the authorized ROW.	None
		Construction Contractor will implement measures as agreed to or as modified based on field conditions.		