

**APPENDIX A  
MITIGATION**

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# APPENDIX A MITIGATION

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## INTRODUCTION

Two types of mitigation measures were developed during the SWIP EIS process and included as conditions in the ROD that approved the SWIP. These included generic mitigation and selectively committed mitigation measures.

Generic mitigation measures are those that apply to the project as a whole and are typically part of the project description. Selectively committed measures are applied on a case-by-case basis, in specific impact locations. Since the SWIP was approved in 1994, both generic and selectively committed measures have been revisited and revised as a result of several meetings with agency personnel. The following two tables provide a list of the most recent mitigation measures identified to reduce impacts to environmental resources resulting from the construction, operation, and maintenance of the proposed transmission line. During construction, these measures will be monitored by the Construction Inspection Contractor who will review the applicability of these measures and make final determinations regarding their implementation.

Additional mitigation measures have been proposed by Great Basin or requested or required by the BLM, USFWS and other resource agencies, in connection with the preparation of this EA and the BA, BO, and COM Plan. All of the mitigation measures from these various sources have been incorporated in the COM Plan, and compliance with that plan would be included as an enforceable stipulation in the amended ROW grant, just as it is in the original SWIP ROW grant.

<b>Southwest Intertie Project GENERIC MITIGATION MEASURES TABLE A-1</b>	
<b>1.</b>	All construction vehicle movement outside the ROW would normally be restricted to predesignated access, contractor acquired access, or public roads.
<b>2.</b>	The areal limits of construction activities would normally be predetermined, with activity restricted to and confined within those limits. No paint or permanent discoloring agents would be applied to rocks or vegetation to indicate survey or construction activity limits.
<b>3.</b>	In construction areas where recontouring is not required, vegetation would be left in place wherever possible and original contour would be maintained to avoid excessive root damage and allow for resprouting.
<b>4.</b>	In construction areas (e.g., marshalling yards, tower sites, spur roads from existing access roads) where ground disturbance is significant or where recontouring is required, surface restoration would occur as required by the landowner or land management agency. The method of restoration would normally consist of returning disturbed areas back to their natural contour, reseeding (if required), cross drains installed for erosion control, placing water bars in the road, and filling ditches.
<b>5.</b>	Watering facilities (e.g., tanks, natural springs and/or developed springs, water lines, wells, etc.) would be repaired or replaced if they are damaged or destroyed by construction activities to their predisturbed condition as required by the landowner or land management agency.
<b>6.</b>	Towers and/or ground wire would be marked with high-visibility devices where required by governmental agencies (Federal Aviation Administration).
<b>7.</b>	On agricultural land, ROW would be aligned, in so far as practical, to reduce the impact to farm operations and agricultural production.

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GENERIC MITIGATION MEASURES  
TABLE A-1**

<b>8.</b>	Prior to construction, all supervisory construction personnel would be instructed on the protection of cultural and ecological resources. To assist in this effort, the construction contract would address: (a) federal and state laws regarding antiquities and plants and wildlife, including collection and removal; (b) the importance of these resources and the purpose and necessity of protecting them.
<b>9.</b>	Cultural resources would continue to be considered during post-EIS phases of project implementation in accordance with the programmatic agreement that would be developed in conjunction with preparation of the EIS. This would involve intensive surveys to inventory and evaluate cultural resources within the selected corridor and any appurtenant impact zones beyond the corridor, such as access roads and construction equipment yards. In consultation with appropriate land managing agencies and state historic preservation officers, specific mitigation measures would be developed and implemented to mitigate any identified adverse impacts. These may include project modifications to avoid adverse impacts, monitoring of construction activities, and data recovery studies.
<b>10.</b>	The Project Sponsors would respond to complaints of line-generated radio or television interference by investigating the complaints and implementing appropriate mitigation measures. The transmission line would be patrolled on a regular basis so that damaged insulators or other line materials that could cause interference are repaired or replaced.
<b>11.</b>	The Project Sponsors would apply necessary mitigation to eliminate problems of induced currents and voltages onto conductive objects sharing ROW, to the mutual satisfaction of the parties involved.
<b>12.</b>	The Project Sponsors would continue to monitor studies performed to determine the effects of audible noise and electrostatic and electromagnetic fields in order to ascertain whether these effects are significant.
<b>13.</b>	Roads would be built as near as possible at right angles to the streams and washes. Culverts would be installed where necessary. All construction and maintenance activities shall be conducted in a manner that would minimize disturbance to vegetation, drainage channels, and intermittent or perennial streambanks. In addition, road construction would include dust-control measures during construction in sensitive areas. All existing roads would be left in a condition equal to or better than their condition prior to the construction of the transmission line. Towers will be sited with a minimum distance of 200 feet from streams.
<b>14.</b>	All requirements of those entities having jurisdiction over air quality matters would be adhered to and any necessary dust control plans will be developed, and permits for construction activities would be obtained. Open burning of construction trash would not be allowed unless permitted by appropriate authorities.
<b>15.</b>	Fences and gates would be repaired or replaced to their original predisturbed condition as required by the landowner or the land management agency if they are damaged or destroyed by construction activities. Temporary gates would be installed only with the permission of the landowner or the land management agency; and would be restored to its original predisturbed condition following construction.
<b>16.</b>	Transmission line materials would be designed and tested to minimize corona. A bundle configuration (three conductors per phase) and larger diameter conductors would be used to limit the audible noise, radio interference (RI), and television interference (TVI) due to corona. Tension would be maintained on all insulator assemblies to assure positive contact between insulators, thereby avoiding sparking. Caution would be exercised during construction to avoid scratching or nicking the conductor surface which may provide points for corona to occur.
<b>17.</b>	During operation of the transmission line, the ROW would be maintained free of non-biodegradable debris. Slash will be left in place or disposed of in accordance with requirements of the land management agency.
<b>18.</b>	The primary focus of paleontological mitigation efforts should be areas of greatest disturbance and areas likely to have significant fossils. Preconstruction surveys of such areas may be conducted as agreed upon by the land-managing and lead federal agency.

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TABLE A-1**

<b>19.</b> Mitigation measures that will be developed during the consultation period under Section 7 of the Endangered Species Act (1974) will be adhered to as specified in the Biological Opinion of the USDI Fish and Wildlife Service.
<b>20.</b> Hazardous materials shall not be drained onto the ground or into streams or drainage areas. Totally enclosed containment shall be provided for all trash. All construction waste including trash and litter, garbage, other solid waste, petroleum products, and other potentially hazardous materials shall be removed to a disposal facility authorized to accept such materials.
<b>21.</b> Pre-construction surveys for plants and wildlife species, designated as sensitive or of concern will be conducted in areas of known occurrence or habitat, including noxious weed surveys as stipulated by the land-administering agency during the development of the Construction, Operation, and Maintenance Plan once the transmission line centerline, access roads, and tower sites have been located and staked in the field.
<b>22.</b> Prior to construction, a Noxious Weed Management Plan will be developed in accordance with BLM standards. Included in the noxious weed plan will be stipulations regarding construction, restoration and operation (e.g., use of weed free materials, washing of equipment, etc.).

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SELECTIVELY COMMITTED MITIGATION MEASURES  
TABLE A-2**

<b>1.</b> No widening or upgrading of existing access roads would be undertaken in the area of construction and operation, except for repairs necessary to make roads passable, where soils and vegetation are very sensitive to disturbance.
<b>2.</b> There would be no blading of new access roads in the area of construction and operation. Existing crossings would be utilized at perennial streams, National Recreational Trails, and irrigation channels. Off-road or cross-country access routes would be used for construction and maintenance. This would minimize ground disturbance impacts. These access routes must be flagged with an easily seen marker and the route must be approved in advance of use by the authorized officer.
<b>3.</b> The alignment of any new access roads or overland route would follow the designated area's landform contours where possible, providing that such alignment does not additionally impact resource values. This would minimize ground disturbance and/or reduce scarring (visual contrast).
<b>4.</b> All new access roads not required for maintenance would be permanently closed using the most effective and least environmentally damaging methods appropriate to that area as approved by BLM in coordination with the Project Proponent (e.g., stock piling and replacing topsoil, or rock replacement). This would limit new or improved accessibility into the area.
<b>5.</b> Modified tower design or alternate tower type would be utilized to minimize ground disturbance, operational conflicts, visual contrast, and/or avian conflicts.
<b>6.</b> In designated areas, structures would 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 limits of standard tower design. This would minimize amount of sensitive feature disturbed and/or reduce visual contrast.
<b>7.</b> Standard tower design would be modified to correspond with spacing of existing transmission line structures where feasible and within limits of standard tower design. The normal span would be modified to correspond with existing towers, but not necessarily at every location. This would reduce visual contrast and/or potential operational conflicts.
<b>8.</b> At highway, canyon, and trail crossings, towers are to be placed at the maximum feasible distance from the crossing, to reduce visual impacts
<b>9.</b> Nonspecular conductors would be used, where specified by the authorized officer, to reduce visual impacts.

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TABLE A-2**

<b>10.</b> “Dulled” metal finish towers would be used to reduce visual impacts.
<b>11.</b> With the exception of emergency repair situations, ROW construction, restoration, maintenance, and termination activities in designated areas would be modified or discontinued during sensitive periods (e.g., nesting and breeding periods) for candidate, proposed threatened and endangered, or other sensitive animal species. Sensitive periods, species affected, and areas of concern would be approved in advance of construction or maintenance by the authorized officer.
<b>12.</b> Helicopter placement of towers would be used to reduce ground disturbance impacts (e.g., soil erosion).
<b>13.</b> Construction and/or post-construction monitoring, and treatment in selective areas will occur in accordance with Section 106 Compliance (see Generic Mitigation Measure 9), Paleontological Resources (see Generic Mitigation Measure 18), Section 7 of the Endangered Species Act (See Generic Measure 19), or as specified by the land management agency and state or county authority. Mitigation measures identified will be included in the Construction, Operation, and Maintenance Plan.
<b>14.</b> To minimize disturbance to timber resources and reduce visual contrast, clearing of trees in and adjacent to the ROW will be minimized to the extent practicable to satisfy conductor-clearance requirements (National Electric Safety Code and 10 years of timber growth). Trees and other vegetation will be removed selectively (e.g., edge feathering) to blend the edge of the ROW into adjacent vegetation patterns, as practicable and appropriate.

**APPENDIX B**  
**BIOLOGICAL OPINION**

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