Western Area Power Administration

Mitigation Action Plan
for the
Los Banos – Gates (Path 15) Transmission Project

1.0 INTRODUCTION

1.1 HISTORY AND BACKGROUND

In May 2001, Secretary of Energy Spencer Abraham directed the Western Area Power Administration (Western) to take the first steps, including the preparation of environmental studies, toward developing the Los Banos - Gates Transmission Project, also known as the Path 15 Project. This directive was issued to carry out a recommendation in the May 2001 National Energy Policy. Western is a Power Marketing Administration within the Department of Energy (DOE) whose role is to market and transmit electricity from multi-use water projects in the western United States, including California. The Path 15 Project, located in California's western San Joaquin Valley, would relieve a bottleneck (Path 15) in the interstate power transmission system.

Path 15 is not a single transmission line, but rather a group of interconnected lines that allow power to flow between northern and southern California. Transmission restrictions on Path 15 can also affect power flows in other western states. The Path 15 Project would upgrade the current transfer capacity of Path 15, currently rated at 3,750 megawatts (MW) south-to-north, to 5,000 MW or more, and would increase transfer capacity to meet California's energy needs. The proposed Path 15 Project would consist of building a new 84-mile long, 500-kilovolt (kV) transmission line between Los Banos Substation in Merced County, California, and Gates Substation near Coalinga in Fresno County, California. Related improvements would be necessary at both substations, and in the underlying 230-kV transmission system. Trans Elect, Inc. is a major participant in the Path 15 Project.

The Project, as proposed, is the same as the preferred alternative described and analyzed in the environmental documents for the original Los Banos – Gates Transmission Project which was prepared in conjunction with the California - Oregon Transmission Project (COTP) in 1988. These two projects were the subject of a single set of documents prepared in 1988 that served as the Final Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA) and the Environmental Impact Report (EIR) under the California Environmental Quality Act (CEQA). The EIS is entitled *"Final Environmental Impact Statement for the California – Oregon Transmission Project (DOE/EIS-0128)."*

Since the Final EIS was prepared in 1988, Western elected to prepare a Supplement Analysis to determine whether a supplemental EIS would be required for the Project. The purpose of the Supplement Analysis was to determine if the revived Path 15 Project presented substantial changes in the proposed action relevant to environmental concerns, or if there were significant new circumstances or information relevant to environmental concerns and bearing on

the proposed action or its impacts (10 Code of Federal Regulations [CFR] 1021.314 (c) and 40 CFR 1502.9 (c) (1) (i)). The Supplement Analysis was prepared by reviewing the 1988 Final EIS environmental analysis and supporting documents and the most current information available on the Project. It was issued in August 2001.

The Supplement Analysis addressed resource and regulatory changes that had occurred since 1988, but did not identify any substantial changes to the significant environmental impacts identified in the 1988 FEIS, or any new significant impacts. Based on the findings of the Supplement Analysis, Western determined that a supplemental EIS was not required and issued a Record of Decision (ROD) on December 20, 2001 (66 FR 65703).

2.0 FUNCTION AND ORGANIZATION OF THE MITIGATION ACTION PLAN

The DOE requirements for preparing a Mitigation Action Plan (MAP) are specified in 10 CFR 1021 (Section 331(a), National Environmental Policy Act Implementing Procedures). These regulations state that following the completion of each EIS and its associated ROD, DOE shall prepare a MAP that addresses mitigation commitments expressed in the ROD. The MAP shall explain how the corresponding mitigation measures, designed to mitigate adverse environmental impacts associated with the course of action directed by the ROD, will be planned and implemented.

This MAP addresses the construction, operation, and maintenance of the new 84-mile long 500-kV transmission line. Necessary work conducted by Pacific Gas and Electric (PG&E) at their substations will occur within the previously disturbed area inside the substation boundaries. Western or Trans Elect, Inc. will also not have a role in upgrading the various existing PG&E 230-kV system components.

Mitigation measures were identified in the 1986 draft EIS, the Final EIS, and in the Supplement Analysis. The mitigation measures in the original EIS were the basis for those adopted in the Supplement Analysis. Since the original Los Banos – Gates Transmission Project was envisioned as a joint participation project, the EIS was written to satisfy both NEPA and CEQA requirements. The Project is now a Federal undertaking. As such, some of the original mitigation measures that applied to the State-regulated participants were not carried forward from the EIS into the Supplement Analysis. The California Public Utility Commission's (CPUC) October 2001 *"Los Banos – Gates 500-kV Transmission Project: Draft and Final Supplemental Environmental Impact Report (SCH #850-40914)"* identifies extensive mitigation and reporting/monitoring requirements which would be imposed on PG&E if they were responsible for the Path 15 Project. Western is familiar with these mitigation measures, and its identified mitigation addresses many of the same concerns. However, Western, as a Federal agency and not a State-regulated utility, is not subject to CPUC authority or the mitigation provisions of its EIR.

The following sections describe the plans and actions Western will implement and verify mitigation action commitments expressed in the Supplement Analysis and the ROD.

Section 3.0 describes the monitoring and verification of mitigation actions and the reporting requirements. Section 4.0 describes the mitigation commitments and action plans for the Path 15 Project. The mitigation commitment and action plan, as specified in the Supplement Analysis and ROD, is composed of the tasks, responsible parties, and action target completion dates for the mitigation.

3.0 MITIGATION ACTION PLAN MONITORING AND REPORTING SYSTEM

Section 5.d.(11)(f) of DOE Order 451.1B, National Environmental Policy Act Compliance Program, requires Western to report MAP activities in its Annual Site Environmental Report, published by January 31 of each year. This annual report reflects new information or changed circumstances. If major changes to mitigation included in this MAP are necessary, these changes will be described in the annual report. Western will make the annual report available to the public and post it on Western's web site.

A member of Western's environmental staff will verify mitigation results and determine if the mitigation action achieved its intended purpose. Western will use existing organizational and administrative controls to gather information regarding implementation and status of mitigation actions. Such controls include applicable reporting systems, inspection, and verification. Western will report inspection and verification results in its Annual Site Environmental Report on the anniversary of the MAP. When mitigation actions are completed and verified, the information will be included in the Annual Site Environmental Report.

Mitigation also may be monitored in accordance with Western's Mitigation Monitoring Policy (Attachment 1).

The construction contractor will secure permits required by applicable Federal, State, and local environmental laws, orders, and regulations. The construction contractor shall comply with any mitigation conditions set in permits issued for the Path 15 Project. Since those conditions are not known at this time, they are not addressed in this MAP. The contractor shall also hire, subject to Western approval, independent qualified biological and cultural resources monitors. The monitors shall ensure the protection of the resources through adherence to all specified mitigation measures, permit stipulations, Biological Opinion conditions, and State Historic Preservation Office (SHPO) requirements.

4.0 MITIGATION COMMITMENTS AND ACTION PLANS

Generic, general mitigation practices are part of Western's construction standard specifications (Standard 13, Environmental Quality Protection). More detailed mitigation measures, or those not covered in Standard 13, are included in Divisions 2a and 13 of the construction specifications package. Applicable generic mitigation measures were defined for the new transmission line, and are included in Table 4.1 below, along with the parties responsible for their application, specific actions needed to ensure effectiveness, and target dates for completion. The generic mitigation practices are determined by the type of construction project being considered and its environmental impacts. In some instances, environmental impacts are reduced with the employment of these mitigation measures. Western adopted the generic mitigation measures as Appendix E of the Supplement Analysis. The MAP

ensures the generic mitigation practices are implemented. The short-term mitigation commitments and action plan identified in the Supplement Analysis are presented in Table 4.2. Table 4.3 presents the long-term mitigation commitments and action plan that Western committed to in Appendix E of the Path 15 Supplement Analysis.

In addition to the mitigation in the tables below, Western also committed in its ROD to the completion of the Endangered Species Act Section 7 consultation, the National Historic Preservation Act Section 106 consultation, and the consultation with interested Native American tribes. These processes were all under way as this mitigation action plan was finalized. The mitigation action plan is a living document and will be updated periodically as tasks are completed.

Some of the mitigation measures below still reference PG&E actions or obsolete transmission line segments. This is partly due to the fact that the original mitigation measures are from the 1988 EIS. Also, when the Supplement Analysis was completed, PG&E was still involved in a parallel CPUC applicant process. It was thought at that time that if the project were to come under a Federal lead, it would remain a joint participation project; this is no longer the case. For these reasons, some of the mitigation measures below are no longer applicable and are followed by notes in brackets to reflect the current situation.

Table 4.1: Applicable Generic Mitigation Measures and Action Plan for Path 15 Transmission Line Project.

Generic Mitigation Commitment	Responsible Party	Action	Target Completion Date
1. Avoid active oil wells and water extraction wells and critical facilities. Cross non-critical facilities if resources cannot be avoided. [Note: Since the FEIS was completed, most of the oil/gas facilities at the south end of the project have been abandoned, and some removed.]	A7900 G5600 G5600/A7400/ Contractor	Task a: Incorporate requirement into structure locations. Task b: Completed through centerline selection. Task c: Monitor site work.	Complete Complete 12/04
2. PG&E will work with California Department of Water Resources (CDWR) to site towers compatible with the existing facilities at Little Panoche Reservoir (West-5) or the proposed facilities at the Los Banos Grandes Offstream Storage project (West-3 and East). [Western will assume this responsibility for the proposed route.]	G5600 A7400/ N1600 G5600/A7400/ Contractor	Task a**:** Determine structure locations. Task b: Coordinate with CDWR. Task c: Monitor site work.	Complete 2/17/03 12/ 04
3. Conduct site specific scoping sessions as required under Section 7 (Endangered Species Act, 1973, as amended) consultation procedures to focus field studies, impact analysis, and potential mitigation assessments. [The above 1988 mitigation measure is poorly written and somewhat redundant with those below. Western will coordinate with Federal, State and Tribal resource agencies to identify sensitive species and develop appropriate field surveys for those species.]	A7400 A7400/N5800 N5800	Task a: Obtain species list for project area. Task b: Prepare Statement of Work (SOW) for contractor to conduct field surveys for listed species. Task c: Procure contractor services.	Complete Complete Complete
4. Conduct ground surveys of potential sensitive plant habitat during the appropriate period, prior to selection of final alignments.	Contractor Contractor/ A7400	Task a: Contractor to conduct field surveys per SOW. Task b: Field maps available. Task c: Contractor prepares biological report in Biological Assessment format.	4/28/03 5/31/03 6/28/03

Generic Mitigation Commitment	Responsible Party	Action	Target Completion Date
5. Detailed mitigation plans would be developed that define the extent and types of additional field studies, and how the results of these studies could be coordinated with detailed engineering surveys. As part of the siting process, numerous construction and siting details will be developed and presented to the regulatory agencies for review and comment. Where mitigation measures are specified in the plan, field monitoring schedules and progress reports will be prepared and submitted to the agencies. Biologists and archaeologists could accompany crews during the site selection and construction phases to ensure sensitive resources are identified and avoided. The results of the siting and mitigation efforts for the Los Banos-Gates project would also be presented in a report of findings to the CPUC and other appropriate agencies. [This measure is written to accommodate a joint participation project. Western has developed this Mitigation Action Plan, and has (and will) utilize biological and cultural resources information in siting structures and identifying exclusion areas. Reporting and coordination appropriate for a Federal project will be accomplished.]	A7400 Contractor/ A7400 A7400 Contractor/ A7400 G5600 A7400/G5600 G5600/A7400/ Contractor	Task a: Prepare and finalize Mitigation Action Plan. Task b: Complete cultural resources and paleontological field surveys. Task c: Complete Biological Assessment and submit to FWS. Task d: Conduct spring biological surveys on access road locations and centerline relocations. Task e: Adjust structure and access road locations to avoid sensitive resources where necessary/possible. Task f: Ensure compliance with Biological Opinion (BO); stake exc lusion areas in the field. Task g: Monitor site work for compliance with BO.	Complete 3/7/03 11/19/02 4/28/03 5/7/03 5/7/03 12/04
6. Technical specialists, including biologists, will survey the preliminary alignment in the field to determine any site-specific conditions that can be avoided. For biological resources, these will include San Joaquin kit fox burrows and denning areas, areas where blunt-nosed leopard lizard occur, giant kangaroo rat burrows, raptor nesting areas, and productive wetlands areas. [All applicable conditions in the Biological Assessment and Biological Opinion will be adhered to in meeting this mitigation measure.]	Contractor/ A7400 G5600/A7400 G5600/A7400/ Contractor	Task a: Determine site-specific sensitive areas in the field. Task b: Ensure compliance with BO; stake exclusion areas in the field. Task c: Monitor site work for compliance with BO.	4/28/03 11/10/03 4/05
7. PG&E will continue to consult with Merced and Fresno County officials during the siting process. County personnel will be able to review the proposed actions and submit their recommendations to the CPUC. [Western and/or the construction contractor will continue to coordinate with appropriate county officials until the project is completed; reporting to CPUC will not be required.]	N1600/ Contractor	Task a**:** Coordinate with and inform counties of plans and crossings, as needed.	12/04
8. Locate new access roads parallel to contours of landform wherever feasible.	G5600	Task a: Design access roads to follow landforms and minimize erosion potential.	Complete

Generic Mitigation Commitment	Responsible Party	Action	Target Completion Date
9. Avoid diagonal orientations of transmission lines across cultivated fields.	G5600 G5600/ N1600	Task a: Where possible, site the transmission line to avoid agricultural areas entirely. Task b: Where avoidance is not feasible, site structures to minimize impact to agricultural activities. Landowner coordination may be necessary.	Complete Complete
10. If practical, tower placement will be adjusted to avoid orchards and vineyards, row crops, and furrow-irrigated crops (with tower-furrow angles greater than 61%). When possible, the alignment should avoid more heavily cultivated crops in preference for nonagricultural land or crops such as alfalfa, corn, and small grains.	G5600 G5600/ N1600	Task a: Where possible, site the transmission line to avoid agricultural areas entirely. Task b: Where avoidance is not feasible, site structures to minimize impact to agricultural activities. Landowner coordination may be necessary. In certain areas, use a single-pole design to minimize impacts.	Complete Complete
11. When locating towers in row crops is unavoidable, if possible, preference should be given to fields with rows that would be parallel, rather than perpendicular, to the transmis sion line.	G5600 G5600/ N1600	Task a: Where possible, site the transmission line to avoid agricultural areas entirely. Task b: Where avoidance is not feasible, site structures to minimize impact to agricultural activities. Landowner coordination may be necessary. In certain areas, use a single-pole design to minimize impacts.	Complete Complete
12. Place transmission lines and towers toward the center of the field where possible. Avoid placing towers at the edge of fields where canals or irrigation ditches are located.	G5600 G5600/ N1600	Task a: Where possible, site the transmission line to avoid agricultural areas entirely. Task b: Where avoidance is not feasible, site structures to minimize impact to agricultural activities. Landowner coordination may be necessary. In certain areas, use a single-pole design to minimize impacts.	Complete Complete
13. Avoid angular joining of transmission line alignments.	G5600	Task a**:** Consider when defining transmission line centerline.	Complete

Generic Mitigation Commitment	Responsible Party	Action	Target Completion Date
14. Avoid mechanical move irrigation systems. Select crops using flood or border check irrigation over those using furrow irrigation.	G5600 G5600/ N1600	Task a: Where possible, site the transmission line to avoid agricultural areas, and especially irrigated areas, entirely. Task b: Where avoidance is not feasible, site structures to minimize impact to agricultural activities. Landowner coordination may be necessary.	Complete Complete
15. Tower placement should avoid areas where riparian vegetation or other vegetation communities of value occur.	A7400/G5600 A7400/G5600/ Contractor	Task a: Evaluate riparian and other special vegetation communities. Site transmission line to avoid if possible; identify crossing location(s) of least impact if not possible. Task b: Monitor construction activities.	4/28/03 12/04
16. Avoid siting towers on ridgelines and hilltops wherever possible. This measure will serve to reduce the incidence of "skylining;" that is, positioning a tower so that it is seen silhouetted against the skyline. The measure will also help prevent highly visible alterations of land forms resulting from grading operations. [The terrain in the Project area will necessitate placing structures on high points. However, there will be two existing transmission lines in the foreground, and higher ridges behind the new line, so visual impacts will be slight.]	A7400/G5600	Task a: Incorporate visual sensitivity into transmission line siting considerations/criteria.	Complete
17. Minimize the number of towers visible from sensitive viewpoints within recreation areas.	A7400/G5600	Task a: Incorporate visual sensitivity into transmission line siting considerations/criteria.	Complete
18. In areas identified as visually sensitive, the finish on transmission towers should be dull and non-reflective.	A7900	Task a: Incorporate requirement into construction specification – Divisions 4 and 5.	Complete
19. Temporary facilities, such as construction yards, and conductor tensioning and splicing sites should be sited to minimize disruption of the landscape by landform alteration and vegetation removal.	G5600 G5600 A7400/G5600/ Contractor	Task a: Incorporate requirement into construction specification. Task b: Advise construction contractor. Task c: Monitor site work.	Complete 12/03 12/04

Generic Mitigation Commitment	Responsible Party	Action	Target Completion Date
20. PG&E will work with affected property owners, as necessary, on alignment and tower location during the right-of-way acquisition process. [Western will work with property owners on alignment and structure locations, as necessary.]	N1600/G5600	Task a: Work with landowners on final siting of structures and access roads, if necessary.	Complete
21. Appropriate selection of design parameters (i.e, conductor surface gradient, conductor diameter, and conductor configuration) and proper location of the transmission line route to avoid critical locations will reduce corona-induced radio and television interference to acceptable levels.	A7900 N1600/N5500 N5500	Task a: Incorporate into design. Task b: Respond promptly to any complaints. Task c: Complete modifications to mitigate problem.	Complete Open Open
22. Conduct pre-construction field surveys to locate and record cultural and paleontological resources within the project right-of-way and, in particular, resources that are situated at proposed facilities and roadway locations. [Also address traditional cultural properties and Native American use areas, as identified by the ethnographic study.]	Contractor/ A7400 Contractor/ A7400 A7400 A7400 A7400/G5600 A7400/G5600/ Contractor	Task a**:** Conduct intensive field surveys. Task b**:** Conduct ethnographic study. Task c**:** Consult with tribes. Task d**:** Consult with the State Historic Preservation Officer (SHPO). Task e**:** Determine project modifications to avoid/minimize impact. Task f**:** Construction monitoring.	3/7/03 3/14/03 5/30/03 5/30/03 5/30/03 12/04

Generic Mitigation Commitment	Responsible Party	Action	Target Completion Date
23. Avoid sensitive resources by locating construction activities in non-sensitive locations. Consultation with cultural and paleontological resource professionals during the siting of the transmission line will facilitate mitigation through avoidance.	Contractor/ A7400	Task a: Conduct intensive field surveys.	3/7/03
	Contractor/ A7400	Task b: Conduct ethnographic study.	3/14/03
	A7400	Task c: Consult with tribes.	5/30/03
	A7400	Task d: Consult with SHPO.	5/30/03
	A7400/G5600	Task e: Determine project modifications to avoid/minimize impact.	5/30/03
	A7400/G5600/ Contractor	Task f: Construction monitoring.	12/04
24. Conduct cultural resource data recovery programs, through surface collection and excavation, at significant resource sites where adverse impacts cannot be otherwise mitigated.	Contractor/ A7400	Task a: Conduct intensive field surveys.	3/7/03
	Contractor/ A7400	Task b: Conduct ethnographic study.	3/14/03
	A7400	Task c: Consult with tribes.	5/30/03
	A7400	Task d: Consult with SHPO.	5/30/03
	A7400/G5600	Task e: Determine project modifications to avoid/minimize impact.	5/30/03
	A7400/G5600/ Contractor	Task f: Construction monitoring.	12/04

Generic Mitigation Commitment	Responsible Party	Action	Target Completion Date
25. Consult with Native Americans concerning Native American resources that cannot be mitigated through avoidance, in order to seek mutually acceptable solutions to minimize project effects on significant resources.	Contractor/ A7400	Task a**:** Conduct intensive field surveys.	3/7/03
	Contractor/ A7400	Task b**:** Conduct ethnographic study.	3/14/03
	A7400	Task c**:** Consult with tribes.	5/30/03
	A7400	Task d**:** Consult with SHPO.	5/30/03
	A7400/G5600	Task e**:** Determine project modifications to avoid/minimize impact.	5/30/03
	A7400/G5600/ Contractor	Task f**:** Construction monitoring.	12/04

Table 4.2: Short-term Mitigation Commitments and Action Plan for the Path 15 Transmission Project

Short-term Mitigation Commitment	Responsible Party	Action	Target Completion Date
1. Soil surfaces will be wetted at a rate of 0.5 gallons of water per square yard two times per day for dust control (EPA 1977). This measure reduces dust by about 50 percent. [Dusting of agricultural crops, orchards, vineyards, grasslands, etc. will not be allowed. The Contractor shall prevent generating dust by watering, as necessary, the roads, structure sites, staging areas, tensioning and pulling sites, and any other construction area having the potential to generate dust.]	A7400	Task a: Incorporate requirement into construction specification – Division 2a or 13.	Complete
	G5600	Task b: Advise construction contractor.	6/03
	G5600/A7400/ Contractor	Task c: Monitor site work.	12/04
2. When possible construction activities should be scheduled during periods of low wind to reduce fugitive dust emissions.	A7400	Task a: Incorporate requirement into construction specification – Division 2a or 13.	Complete
	G5600	Task b: Advise construction contractor.	6/03
	G5600/A7400/ Contractor	Task c: Monitor site work.	12/04

3. All construction equipment should be frequently monitored and serviced to ensure conformance with exhaust standards.	A7400 G5600 G5600/A7400/ Contractor	Task a: Incorporate requirement into construction specification – Division 2a or 13. Task b: Advise construction contractor. Task c: Monitor site work.	Complete 6/03 12/04
4. Existing roads will be used for access wherever possible. Minimize number and length of new construction access roads particularly in intensively farmed areas. Use temporary spur roads to towers and remove those roads not required for maintenance. Access roads should be designed to the minimum standard necessary for construction and maintenance vehicle access.	A7400 G5600/A7400 G5600 G5600/A7400/ Contractor	Task a: Incorporate access road design requirements into construction specification – Division 2a or 13. Task b: Identify existing roads to be used, and additional access needs. Task c: Identify areas where overland travel will suffice, and where new roads will be required. Task d: Monitor site work; restore/re-seed where appropriate.	Complete Complete Complete 4/05
5. Minimize vegetation stripping along the alignment.	A7400 G5600/A7400/ Contractor	Task a: Incorporate requirement into construction specification – Division 2a or 13. Task b: Monitor site work; restore/re-seed where appropriate.	Complete 4/05
6. Design drainage control structures to carry runoff at appropriate velocities. Use properly sized and installed culverts under permanent access road fill sections and discharge runoff to natural drainages that will not be overloaded.	A7400 G5600 G5600/ Contractor	Task a**:** Incorporate requirement into construction specification – Division 2a or 13. Task b: Advise construction contractor. Task c: Monitor site work.	Complete 6/03 12/04

7. Minimize steepness and unobstructed length of fill slopes. Protect new constructed fills from rain splash and surface runoff with slope protection, such as punch straw, tackifier, or jute netting. [Hydro-mulch or other more recent methods for surface stabilization may also be used.]	A7400 G5600 G5600/ N1600 G5600/A7900/ Contractor	Task a**:** Incorporate requirement into construction specification – Division 2a or 13. Task b: Advise construction contractor. Task c: Coordinate restoration activities with landowner. Task d: Monitor site work.	Complete 6/03 4/05 4/05
8. Replant temporarily disturbed areas with a mixture of perennial grasses, forbs, brush, shrubs, and tree species that will provide effective erosion control. Prepare a firm, rough seedbed on fill or cut slopes and apply appropriate types and amounts of fertilizers and seed mixtures. Consider reseeding with native plants only in sensitive areas not subject to grazing. [Reseeding mixtures shall be landowner/manager approved; an approved seed mixture is provided in the specifications package.]	A7400 G5600 G5600/ N1600 G5600/A7900/ Contractor	Task a**:** Incorporate requirement into construction specification – Division 2a or 13. Task b: Advise construction contractor. Task c: Coordinate restoration activities with landowner. Task d: Monitor site work.	Complete 6/03 4/05 4/05

9. Avoid causative construction operations during the wet season. Moist soil is generally more susceptible to compaction than dry soil. Minimize the use of heavy equipment on agricultural land to avoid soil compaction.	A7400 G5600 G5600/A7900/ Contractor	Task a**:** Incorporate requirement into construction specification – Division 2a or 13. Task b: Advise construction contractor. Task c: Monitor site work.	Complete 6/03 4/05
10. Perform contour discharge or ripping operations at the conclusion of construction. This would loosen compacted soil and develop the seedbed for re-vegetation. [Agricultural areas only. Would increase natural vegetation damage and erosion potential in other areas.]	A7400 G5600 G5600/ N1600 G5600/A7900/ Contractor	Task a**:** Incorporate requirement into construction specification – Division 2a or 13. Task b: Advise construction contractor. Task c: Coordinate restoration activities with landowner. Task d: Monitor site work.	Complete 6/03 4/05 4/05
11. In agricultural areas where sites would be graded, topsoil should be stockpiled. After construction, topsoil should be replaced and the site graded to the original contours. If appropriate, the site should be reseeded in accordance with agency or landowner objectives.	A7400 G5600 N1600 G5600/A7900/ Contractor	Task a**:** Incorporate requirement into construction specification – Division 2a or 13. Task b: Advise construction contractor. Task c: Coordinate with landowner. Task d: Monitor site work.	Complete 6/03 4/05 4/05
12. Add chemical additives to seedbed during re-vegetation to counteract potential chemical imbalances. [If specified by land management agencies.]	A7400 G5600 G5600/A7900/ Contractor	Task a**:** Incorporate requirement into construction specification – Division 2a or 13. Task b: Advise construction contractor. Task c: Monitor site work.	Complete 6/03 4/05

13. Base the tower design on geotechnical evaluation and sound geotechnical engineering practice, including analysis for cut and fill slopes, compaction requirements, and surface or slope drainage. [As a point of clarification, the structure foundations need to be based on geotechnical considerations.]	A7900 G5600 G5600/A7900? Contractor	Task a**:** Incorporate requirement into construction specification – Division 2a. Task b: Advise construction contractor. Task c: Monitor site work.	Complete 6/03 7/04
14. Where possible, avoid road construction on very steep slopes to minimize surface erosion and slumping.	A7400 G5600/A7400 G5600 G5600/A7400/ Contractor	Task a: Incorporate access road design requirements into construction specification – Division 2a or 13. Task b: Identify existing roads to be used, and additional access needs. Task c: Identify areas where overland travel will suffice, and where new roads will be required. Task d: Monitor site work; restore/re-seed where appropriate.	Complete Complete Complete 4/05
15. Re-contour, prepare the surface, and seed all roads, construction sites, and other disturbed areas not required for project operation and maintenance.	A7400 G5600/A7400 G5600 G5600/A7400/ Contractor	Task a: Incorporate access road design requirements into construction specification – Division 2a or 13. Task b: Identify existing roads to be used, and additional access needs. Task c: Identify areas where overland travel will suffice, and where new roads will be required. Task d: Monitor site work; restore/re-seed where appropriate.	Complete Complete Complete 4/05

16. As much as possible, avoid construction activities and land surface disturbance in the immediate vicinity of unique plant communities and habitat features, such as remnant sand dunes, rock outcrops, riparian zones, alkali areas, other wetlands, kit fox natal dens, and raptor nesting cliffs. These unique features will be determined in consultation with the resource agencies.	Contractor/ A7400 G5600/A7400 G5600/A7400/ Contractor	Task a: Determine site-specific sensitive areas in the field. Task b: Ensure compliance with Biological Opinion; stake exclusion areas in the field. Task c: Monitor site work for compliance with BO.	6/03 7/03 4/05
17. Avoid construction activities in watercourses and wetlands since these areas are both infrequent and sensitive in the generally arid project area.	Contractor/ A7400 G5600/A7400 G5600/A7400/ Contractor	Task a: Determine site-specific sensitive areas in the field. Task b: Ensure compliance with Biological Opinion; stake exclusion areas in the field. Task c: Monitor site work for compliance with BO.	6/03 7/03 4/05
18. Avoid work on unstable slopes and rock outcrops.	A7400 G5600/A7400 G5600 G5600/A7400? Contractor	Task a: Incorporate access road design requirements into construction specification – Division 2a or 13. Task b: Identify existing roads to be used, and additional access needs. Task c: Identify areas where overland travel will suffice, and where new roads will be required. Task d: Monitor site work; restore/re-seed where appropriate.	Complete Complete Complete 4/05

19. Minimize surface disturbing activities such as grubbing, grading, ditching and filling to the extent possible.	A7400 G5600/A7400 G5600 G5600/A7400/ Contractor	Task a**:** Incorporate requirement into construction specification – Division 2a or 13. Task b: Identify areas where overland travel will suffice, and where new roads will be required. Task c: Advise construction contractor. Task d: Monitor site work; restore/re-seed where appropriate.	Complete Complete 6/03 4/05
20. Provide fire protection measures and avoid releases of fuels, oils, and other hazardous substances to the ground and water. [No smoking allowed at any time, anywhere on the project, with the sole exception of inside closed vehicles due to extreme fire danger. Butts shall remain inside the vehicles.]	A7400 G5600 G5600/A7400/ Contractor	Task a: Incorporate requirement into construction specification – Division 2a or 13. Task b: Advise construction contractor. Task c: Monitor site work.	Complete 6/03 4/05
21. Schedule activities to minimize construction in the specific vicinity of golden eagle nests or kit fox natal dens during the periods of greatest sensitivity, i.e. February through the end of the nesting or denning period.	Contractor/ A7400 G5600 A7400/G5600 G5600/A7400/ Contractor	Task d: Conduct spring biological surveys on access road locations and centerline relocations. Task e: Adjust structure and access road locations to avoid sensitive resources where necessary/possible. Task f: Ensure compliance with Biological Opinion; stake exclusion areas in the field. Task g: Monitor site work for compliance with BO.	4/28/03 4/28/03 7/03 12/04

22. Attach raptor nesting platforms to towers at intervals greater than one mile in raptor use areas. Place these on the towers in positions least likely to cause operation and maintenance problems. The number of nesting platforms would be determined during the transmission line alignment analysis. [In order to minimize impact on kit foxes and other listed species, raptor nesting platforms will not be installed in certain areas along the line. Use single pole steel structures with anti-perching devices in some areas to minimize raptor advantages. Desirability of raptor perching/nesting platforms will be determined in coordination with appropriate agencies and/or landowners, but perching/nesting platforms will not be placed in agricultural areas.]	A7900/A7400 A7400 G5600 G5600/A7400/ Contractor	Task a: Incorporate requirement into construction specification. Task b: Determine advisability of installing raptor perching/nesting platforms. Task c: Advise construction contractor. Task d: Monitor site work.	Complete Complete 6/03 12/04
23. Construction of staging areas and pulling sites should be located adjacent to roads where practical. Soil from construction activities should be properly disposed of.	A7400 G5600 G5600/A7400/ Contractor	Task a: Incorporate requirement into construction specification – Division 2a or 13. Task b: Advise construction contractor. Task c: Monitor site work.	Complete 6/03 12/04
24. Construction should be timed whenever practical to minimize disruption of normal seasonal activities for both crop and range land.	A7900A7400 G5600 G5600/A7400/ Contractor	Task a: Incorporate requirement into construction specification – Division 2a or 13. Task b: Advise construction contractor. Task c: Monitor site work.	Complete 6/03 12/04
25. Post-construction cleanup and removal practices detailed in Section 2.3.8 should be followed. [Access roads and crane pads may be re-seeded, but kept for maintenance use.]	A7400 G5600 G5600/A7400/ Contractor	Task a: Incorporate requirement into construction specification – Division 2a or 13. Task b: Advise construction contractor. Task c: Monitor site work.	Complete 6/03 4/05

26. Whenever possible shift construction areas (such as conductor pulling and splicing areas and construction yards) to nonagricultural land or less sensitive crops.	A7400 G5600 G5600/A7400/ Contractor	Task a: Incorporate requirement into construction specification – Division 2a or 13. Task b: Advise construction contractor. Task c: Monitor site work.	Complete 6/03 12/04
27. Existing roads damaged by activities related to the transmission line should be repaired to a condition equal to or better than their condition prior to the construction of the transmission line.	A7400 G5600 G5600/A7400/ Contractor	Task a: Incorporate requirement into construction specification – Division 2a or 13. Task b: Advise construction contractor. Task c: Monitor site work.	Complete 6/03 4/05
28. The limits of construction activities should normally be predetermined, with activity confined within those limits. All construction vehicle movement outside the right-of-way should normally be restricted to pre-designated access or public roads.	A7400 G5600 G5600/A7400/ Contractor	Task a: Incorporate requirement into construction specification – Division 2a or 13. Task b: Advise construction contractor. Task c: Monitor site work.	Complete 6/03 4/05
29. No paint or permanent discoloring agents should be applied to rocks or vegetation to indicate survey or construction activity limits. Surveyors, flagging, or other suitable material should be used to delineate limits.	A7900 G5600 G5600/A7400/ Contractor	Task a: Incorporate requirement into construction specification. Task b: Advise construction contractor. Task c: Monitor site work.	Complete 6/03 12/04
30. Where blasting is required for access roads or tower footings, debris should be recovered and removed where practical.	A7400 G5600 G5600/A7400/ Contractor	Task a: Incorporate requirement into construction specification – Division 2a or 13. Task b: Advise construction contractor. Task c: Monitor site work.	Complete 6/03 12/04

31. Excavated material or other construction materials should be removed following construction. [Will be done in agricultural areas. In grassland areas excavated materials will be spread around the structure base or used to level access road and or crane pad at the excavation site.]	A7400 G5600 G5600/A7400/ Contractor	Task a: Incorporate requirement into construction specification – Division 2a or 13. Task b: Advise construction contractor. Task c: Monitor site work.	Complete 6/03 4/05
32. In construction areas where excavation is not required, vegetation should be left in place wherever possible and the original contours should be maintained in an undisturbed condition.	A7400 G5600/A7400 G5600 G5600/A7400/ Contractor	Task a**:** Incorporate requirement into construction specification – Division 2a or 13. Task b: Identify areas where overland travel will suffice, and where new roads will be required. Task c: Advise construction contractor. Task d: Monitor site work; restore/re-seed where appropriate.	Complete Complete 6/03 12/04
33. Where vegetation of high density or low diversity is encountered in the right-of-way, clearing to a harsh right-of-way edge should be avoided. Instead, it should be done to emulate natural clearings with irregular edges. [Since the right-of-way is either grassland or intensive agriculture, this provision will likely not be employed.]	A7400 G5600 G5600/A7400/ Contractor	Task a: Incorporate requirement into construction specification – Division 2a or 13. Task b: Advise construction contractor. Task c: Monitor site work.	Complete 6/03 12/04
34. PG&E will provide clear information about right-of-way acquisition, construction and maintenance activities, and project schedules. [Western will perform these tasks.]	N1600	Task a: Coordinate with landowners.	Open

Table 4.3: Long-term Mitigation Commitments and Action Plan for the Path 15 Transmission Project

Long-term Mitigation Commitment	Responsible Party	Action	Target Completion Date
1. Avoid permanent access road clearing to the extent possible, allowing the short annual grasses to cover the ground surface.	A7400	Task a: Incorporate access road design requirements into construction specification – Division 2a or 13.	Complete
	G5600/A7400	Task b: Identify existing roads to be used, and additional access needs.	Complete
	G5600	Task c: Identify areas where overland travel will suffice, and where new roads will be required.	Complete
	G5600/A7400/ Contractor	Task d: Monitor site work; restore/re-seed where appropriate.	4/05
2. All access roads not required for maintenance should be either permanently closed using the most effective and least environmentally damaging methods appropriate to the landowners, or be re-graded, put to bed, and re-vegetated with concurrence of landowner.	A7400	Task a: Incorporate access road design requirements into construction specification – Division 2a or 13.	Complete
	G5600/A7400	Task b: Identify existing roads to be used, and additional access needs.	Complete
	G5600	Task c: Identify areas where overland travel will suffice, and where new roads will be required.	Complete
	G5600/A7400/ Contractor	Task d: Monitor site work; restore/re-seed where appropriate.	4/05 / Open
3. An ambient noise survey will be conducted at selected, sensitive sites along the route prior to construction and operation of the line. These measurements will then be available if complaints are received after the line is placed in operation. [Due to the remote location of the proposed transmission line route the need for this survey will be minimal.]	N1600/N5000	Task a: Identify locations where ambient noise could potentially be a problem.	Open
	N1600/N5000	Task b: Take field readings.	Open

	N1600/N5300 N5300	Task c: Respond to post-construction noise complaints. Task d: Replace damaged insulators or conductor if found to be the cause.	As needed. As needed.
4. PG&E will resolve AM radio and television interference complaints and make every reasonable effort to promptly correct the cause of the interference when it has been established that this interference is from PG&E facilities. [Western will conduct this activity, unless the problem is PG&E substation equipment.]	N1600/N5300 N5300	Task a: Respond to post-construction noise complaints. Task b: Replace damaged insulators or conductor if found to be the cause.	As needed. As needed.
5. To provide a basis for evaluating and correcting any adverse effects caused by the transmission line, radio and TV field strength measurements will be made after the selection of the final transmission line alignment, prior to construction and operation of the transmission line. If complaints are received after operation of the line, PG&E will be able to take corrective measures to provide satisfactory service. [Due to the remote location of the proposed transmission line route the need for this survey will be minimal. Western will address any interference issues as they may arise.]	N1600 N1600/N5000 N1600/N5300 N5300	Task a: Identify locations where transmission line interference could potentially be a problem. Task b: Take field readings. Task c: Respond to post-construction interference complaints. Task d: Replace damaged insulators or conductor if found to be the cause.	Open Open As needed. As needed.

Note: All dates are keyed to the January 2003 Preliminary Project Schedule, and are subject to change as the Project Schedule is updated, or as tasks are completed.

Attachment 1

Mitigation Monitoring

Policy: Western will ensure that we fulfill our commitments to mitigate the environmental effects of our activities.

Background: Western routinely commits to specific actions for the protection of cultural and biological components of the environment from adverse effects of our activities. For example, before a pole-replacement project, Western might locate an endangered plant community on the transmission right-of-way. The NEPA document for the project would most likely specify that the maintenance crews would avoid the plants. Western routinely commits to implement stormwater pollution prevention strategies, reduce visual impacts, undertake erosion control, limit use of pesticides, and avoid cultural sites, wetlands, riparian areas and other important habitats.

Such commitments often expedite the clearance process and allow Western to proceed with minimum expense and delay. A project, which would otherwise require an EA/FONSI, might be cleared with a CX because Western committed to avoid important environmental resources, thus eliminating adverse effects. In addition, meeting these commitments enhances Western's reputation for responsible environmental stewardship with regulators, land managing agencies, Native American tribes, and private landowners.

To preserve these benefits, Western must ensure that we carry out the mitigation actions to which we commit.

When Western makes mitigation commitments, DOE requires a mitigation action plan that describes how mitigation will be planned and implemented. In such projects, annual mitigation reporting is required and will be submitted with Western's Annual Site Environmental Report. The reporting is required until the mitigation is completed.

Process: Western will audit selected projects that have the following characteristics for mitigation compliance:

National Register eligibility of cultural resources; presence of fossils
Sensitivity and importance of biological resources present
Size and scope of project
Interest from stakeholders

In addition, some projects will be selected at random.

Western will keep records in each regional office of monitored projects and findings, and use this information at least annually to assess the effectiveness of mitigation methods and the effectiveness of its processes for ensuring that mitigation is carried out as planned. Western will take corrective action as soon as deficiencies are identified, and report the results of mitigation monitoring in the Annual Site Environmental Report.