

Sutter Power Project

Mitigation Action Plan *for the Sutter Power Project* **Interconnection**

Prepared to Accompany
DOE/EIS 0294

Sierra Nevada
Customer Service Region
Western Area Power Administration
U.S. Department of Energy
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Mitigation Action Plan for the Sutter Power Project Interconnection

INTRODUCTION

Calpine Corporation (Calpine) proposes to construct the Sutter Power Project (SPP) in Sutter County, California, on a portion of a 77-acre parcel of land owned by Calpine (see Figure 1, page 5). The SPP will consist of a nominal 500-megawatt (MW) net electrical output natural gas-fired, combined-cycle generating facility. The power plant and Western's Keswick-Elverta and Olinda-Elverta double-circuit 230-kilovolt (kV) transmission lines will be interconnected by a generation tie line consisting of approximately 4 miles of 230-kV transmission line and a 230-kV switching station at some point south and west of the plant. This generation tie line will be constructed as a double-circuit transmission line, but initially operated as a single circuit. A new 12-mile natural gas pipeline would be constructed to provide fuel for the project. The SPP will be a "merchant plant," selling power on a short-term and midterm basis to customers, and on the spot market. Calpine will assume all economic costs. Power produced by this plant will be sold at the market price and made available to all market participants.

Calpine submitted a request to Western for a direct interconnection of Calpine's SPP with Western's electric transmission system. In response to this request, Western completed an Interconnection Feasibility Study that determined it would need certain direct interconnection facilities, modification of associated facilities and operational adjustments to its transmission system to accommodate the SPP generation. Western is moving forward on an Interconnection Agreement with Calpine for the SPP, including agreements for making the appropriate modifications to Western's transmission system.

Western is the lead federal agency pursuant to the National Environmental Policy Act (NEPA) for the SPP. The California Energy Commission (Commission), a regulatory agency of the state of California, has the statutory authority to license thermal power plants of 50 MW or more and is the state lead agency for the SPP. The Commission prepares environmental documentation equivalent to the California Environmental Quality Act. Western and the Commission determined that joining the two processes would provide many benefits to the public. The Commission and Western released a joint *Draft Environmental Impact Statement (EIS)/Final Staff Assessment (FSA)* in October 1998. Following the release of Western's *Draft EIS*, Western determined that the next document in the Commission process, the *Presiding Member's Proposed Decision (PMPD)*, would be an inappropriate form for Western to present responses to comments on the *Draft EIS*. Western was concerned that combining the *PMPD* and the *Final EIS* could appear to predecision the outcome of the review process. Therefore, Western prepared its own *Final EIS*, with input from the Commission. Western released

the *Final EIS* in April 1999. Western has prepared a *Record of Decision (ROD)* for the SPP and this *Mitigation Action Plan (MAP)* details the specific mitigation required in that *Record of Decision*. This *MAP* was developed in accordance with NEPA (42 U.S.C. 4321, et seq.), the Council on Environmental Quality NEPA implementing regulations (40 CFR parts 1500-1508), and Department of Energy regulations implementing NEPA procedures (10 CFR part 1021). This *MAP* specifically addresses the requirements of 10 CFR § 1021.331 on mitigation action plans.

MITIGATION

The EIS process identified impacts that would occur as a result of the proposed action and a series of mitigative measures to minimize those impacts. A total of 165 Conditions of Certification, essentially mitigation measures and controls, were identified in the Commission's Decision on the SPP. Western has summarized all of these conditions in the *Final EIS*, Appendix O. However, not all of these Conditions relate to Western's action of agreeing to an interconnection. This *MAP* details mitigation for those actions needed to allow an interconnection with Western's transmission system. The site specific mitigation measures listed in Appendix A are fully described in the *Final EIS* (Appendix O) and in the Commission's Decision. These documents should be reviewed in conjunction with this plan to better understand the mitigation measures listed in the appendix. Additionally, some mitigative measures were included to provide Western with information to monitor and interact with the project, as necessary, such as providing the names of project managers, etc.

Copies of the Draft and Final EIS may be obtained by contacting:

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Websites containing these documents and information regarding this project include:

Western Area Power Administration: <http://www.wapa.gov>
U.S. Department of Energy: <http://www.tis.eh.doe.gov/nepa/>

MONITORING AND REPORTING

Western's Sierra Nevada Customer Service Region will monitor the mitigation described in this Plan (Appendix A). In accordance with DOE Order 5440.1E, Western will submit

an annual report to DOE's Office of NEPA Policy and Assistance, EH-42, beginning with the first Annual Site Environmental Report prepared after the onset of construction activities, regarding the status of the mitigative measures and any changes associated with them. (The changes could come about as the result of a landowner request or changes in the status of an environmental resource.) The Commission's Compliance Project Manager (CPM) will monitor the 165 Conditions of Certification. Western will be consulted on these actions, where appropriate. Western's contact for mitigation monitoring will be the Environmental Project Manager, see above.

CONSERVATION

Section 7(a)(1) of the Endangered Species Act (ESA) directs Federal agencies to use their authorities to further the purposes of the ESA by carrying out conservation programs benefiting endangered and threatened species and the ecosystems upon which they depend. To that end, Western will incorporate conservation recommendations provided in the U.S. Fish and Wildlife Service (FWS)¹ biological opinion, to the extent practicable.

This *MAP* has provisions for the FWS conservation recommendation to include random ground searches for bird strikes during migration and wintering periods.²

DOCUMENT PREPARERS

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DOCUMENTS REFERENCED

California Energy Commission. 1999. *Commission Decision: Application for Certification for the Sutter Power Plant Project, Docket No. 97-AFC-2*. Sacramento, CA.

Calpine Corporation. 1998. *Biological Resources Mitigation Implementation Plan for the Sutter Power Plant Project, Sutter County, California*. Sacramento, CA.

¹ SPP Final EIS, Appendix T.

² *Ibid*, page 31.

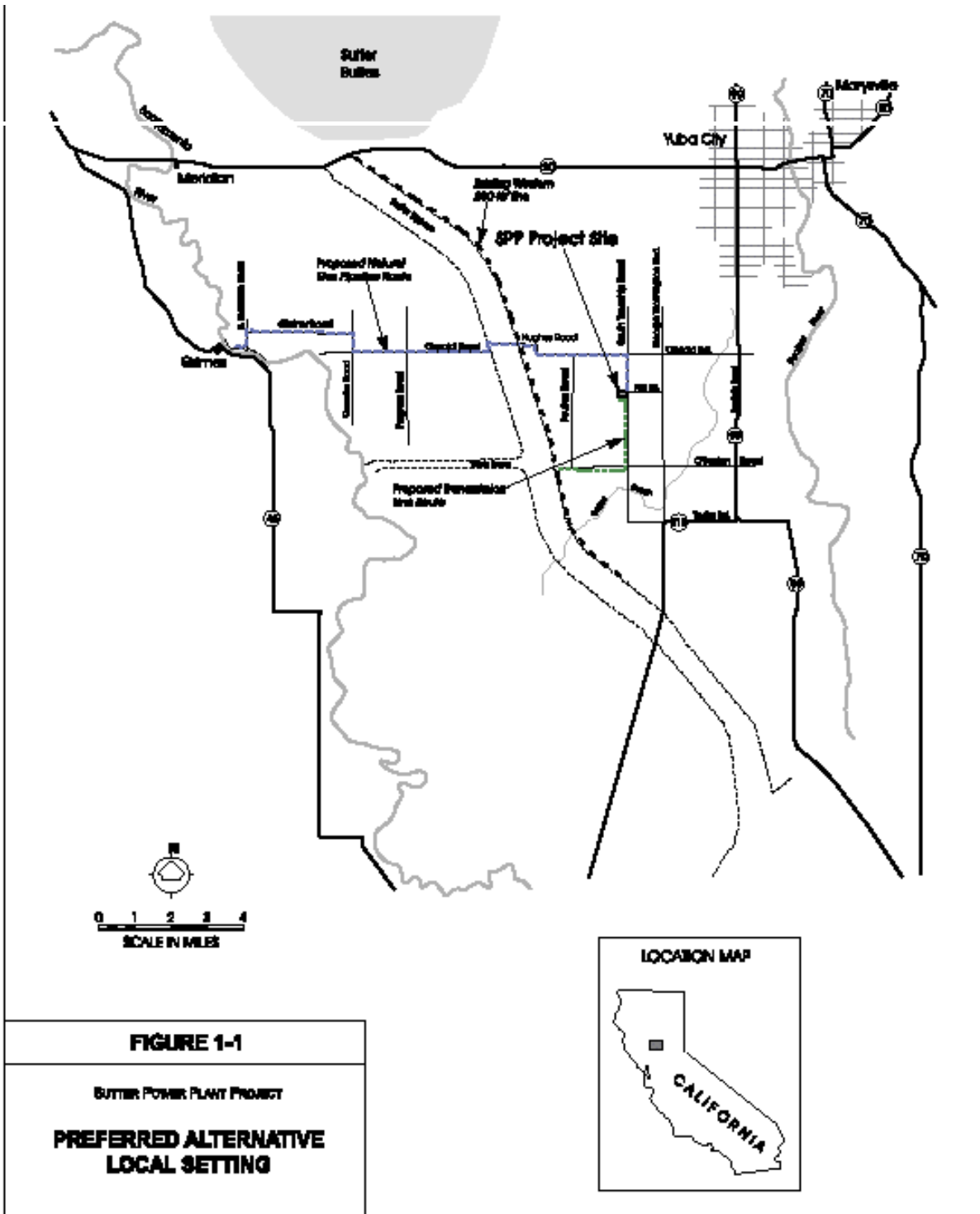
Western Area Power Administration and California Energy Commission. 1998. *Final Staff Assessment/Draft Environmental Impact Statement Filed Jointly for the Sutter Power Project (Application for Certification 97-AFC-2), Sutter County, California*. Sacramento, CA.

Western Area Power Administration. 1999. *Sutter Power Project Final Environmental Impact Statement (DOE-EIS 0294)*. Sacramento, CA

LIST OF ACRONYMS

BO	biological opinion
BRMIMP.....	Biological Resource Mitigation Implementation and Monitoring Plan
Calpine	Calpine Corporation
CBO.....	chief building official
CCR.....	California Code of Regulations
CDFG.....	California Department of Fish and Game
CEQA.....	California Environmental Quality Act
CFR	Code of Federal Regulations
Commission.....	California Energy Commission
COC.....	Condition of Certification (Commission)
Corps	U.S. Army Corp of Engineers
CPM	Compliance Project Manager (Commission)
CRMMP	Cultural Resources Monitoring and Mitigation Plan
EIS.....	Environmental Impact Statement
FSA.....	Final Staff Assessment
FWS.....	U.S. Fish and Wildlife Service
HRSG.....	heat recovery steam generators
kV.....	kilovolt
LORS.....	laws, ordinances, regulations and standards
MAP	Mitigation Action Plan
MP.....	mile post
MW	megawatt
NAHC.....	Native American Heritage Commission
NEPA	National Environmental Quality Act
PMPD.....	Presiding Member’s Proposed Decision
Project owner.....	Calpine Corporation
RE.....	resident engineer
ROD	Record of Decision
SHPO.....	State Historic Preservation Officer
SPP	Sutter Power Project
Western.....	Western Area Power Administration

AREA MAP



Appendix A:

Mitigation of Interconnection Impacts by Resource¹

AIR QUALITY

A. ENVIRONMENTAL COORDINATOR

Description of Commission Condition of Certification (COC): Prior to the start of construction (defined as any construction-related vegetation clearance, ground disturbance and preparation and site excavation and soil remediation activities), the project owner shall provide the CPM with the following information: the name, telephone number, resume and indication of the environmental coordinator’s on-site availability.

Protocol: The resume shall include appropriate education and/or experience in environmental management or coordination such as monitoring hazardous waste site remediation, experience as an inspector with an air pollution control district, or experience as an environmental health and safety project manager.

The CPM will review the qualifications of, and must approve in writing, the project owner’s designated environmental coordinator prior to the start of construction.²

COMMISSION VERIFICATION PROCESS	WESTERN MONITORING
At least 30 days prior to the start of construction, the project owner shall submit to the CPM for review and written approval the information required above. ³	Calpine will provide Western with a copy of the CPM approval and the resume of the selected environmental coordinator.

¹ This document does not attempt to quote verbatim the Commission’s Conditions of Certification. The COC information is provided as background data for Western’s monitoring. A COC citation is provided for reference to the complete text, located in the SPP Final EIS.

² SPP Final EIS, Appendix O, page 1, AQ-3.

³ Ibid, page 1, AQ-3.

LAND USE

A. SUTTER COUNTY BOARD OF SUPERVISORS COORDINATION

Description of Commission Condition of Certification: Where indicated by safety concerns, the transmission line shall have a minimum clearance of 42 feet from the ground to the conductor at maximum sag and the transmission line shall be designed to satisfy the safety concerns of Sutter Extension Water District and Sutter County (on behalf of aerial applicator safety, and public safety), including any applicable provisions of Article 86, state of California High Voltage Electrical Safety Order, section 2946.⁴

COMMISSION VERIFICATION PROCESS	WESTERN MONITORING
At least 30 days prior to the start of construction the project owner shall submit to the CPM a copy of a letter from the Sutter County Board of Supervisors stating that the Board of Supervisors has conferred with Calpine and the Sutter Extension Water District to agree on measures necessary to ensure compliance of the transmission line with the applicable provisions of Article 86, state of California High Voltage electrical Safety Order, section 2946. ⁵	Calpine will provide Western with the letter from the Sutter County Board of Supervisors at the same time it is submitted to the CPM.

VISUAL RESOURCES

A. TRANSMISSION LINE PLAN

Description of Commission Condition of Certification: To minimize potential visual impacts, the project owner shall place all electrical transmission poles so as to not be directly in front of any residence and, to the extent possible, so as to not be directly in the view of the Sutter Buttes from any residence.

Protocol: At least 60 days prior to construction of the transmission line, the project owner shall submit a plan to the CPM showing:

- All proposed pole locations;
- All residences within one-quarter mile of the proposed transmission line route that have a view of the transmission line;

⁴ SPP Final EIS, Appendix O, page 8, Land Use-5.

⁵ Ibid.

- The line of sight from each of the residences toward the Sutter Buttes.

Project owner shall prepare and submit a revised plan if the CPM provides notification to the project owner that it is needed for approval.

Transmission pole placement shall not begin before the plan is approved. The project owner shall notify the CPM when the poles have been installed and are ready for inspection.⁶

COMMISSION VERIFICATION PROCESS	WESTERN MONITORING
<p>At least 60 days prior to beginning transmission line construction, the project owner shall provide the electrical transmission pole plan to the CPM for review and approval.</p> <p>If the CPM notifies the project owner that revisions of the plan are needed before the CPM will approve the plan, the project owner shall submit to the CPM a revised plan within 30 days of receiving that notification</p> <p>The project owner shall notify the CPM within seven days after completing transmission line construction that the line is ready for inspection.⁷</p>	<p>Calpine will provide a copy of the transmission line plan (and any requested revisions) to Western at the same time they submit the required material to the CPM.</p>

BIOLOGICAL RESOURCES

A. DESIGNATION OF BIOLOGIST

Description of Commission Condition of Certification: Construction-site and/or ancillary facilities preparation (described as any ground-disturbing activities other than allowed geotechnical work) shall not begin until the CPM-approved, designated biologist is available on site.

Protocol: The designated biologist must meet the following minimum qualifications:

- 1) A bachelor’s degree in biological sciences, zoology, botany, ecology or a closely related field;

⁶ SPP Final EIS, Appendix O, page 11, VIS-7.

⁷ Ibid.

- 2) Three years of experience in field biology or current certification of a nationally recognized biological society, such as the Ecological Society of America or the Wildlife Society;
- 3) One year of field experience with resources found in or near the project area;
- 4) Ability to demonstrate to the satisfaction of the CPM the appropriate education and experience for biological resource tasks to be addressed during project construction and operation.

If, within 30 days of receiving the proposed designation, the CPM determines the proposed designated biologist is unacceptable, the project owner shall submit another individual's name and qualifications for consideration.

If the approved designated biologist needs to be replaced, the project owner shall obtain approval of a new designated biologist by submitting to the CPM the name, qualifications, address and telephone number of the proposed replacement.

No disturbance will be allowed in any designated sensitive area(s) until the CPM approves a new designated biologist and designated biologist is on-site.⁸

COMMISSION VERIFICATION PROCESS	WESTERN MONITORING
At least 30 days prior to the start of rough grading, the project owner shall submit to the CPM for approval, the name, qualifications, address and telephone number of the individual selected by the project owner as the designated biologist. If a designated biologist is replaced the information on the proposed replacement as specified in the Condition must be submitted in writing at least 10 working days prior to the termination or release of the preceding designated biologist. ⁹	<p>Calpine will provide Western with a copy of the qualifications of the CPM-approved biologist and a copy of the Commission-approval and designation of the designated biologist prior to the commencement of construction activities.</p> <p>Calpine will submit the biologist's qualifications to the FWS for approval. The designated biologist will comply with the FWS reporting documentation and provide copies of all communications with the FWS to Western.</p>

B. BIOLOGICAL NON COMPLIANCE PROTOCOL

Description of Commission Condition of Certification: The project owner's supervising construction and operating engineer shall act on the advice of the designated biologist to ensure conformance with the biological resource COC.

⁸ SPP Final EIS, Appendix O, page 11, BIO-1.

⁹ Ibid.

Protocol: The project owner’s supervising construction and operating engineer shall halt, if needed, all construction activities in areas identified by the designated biologist as sensitive to ensure potential significant biological resource impacts are avoided.

The designated biologist shall:

- 1) Tell the project owner and the supervising construction and operating engineer when to resume construction;
- 2) Advise the CPM if any corrective actions are needed or have been instituted.¹⁰

COMMISSION VERIFICATION PROCESS	WESTERN MONITORING
<p>Within two working days of a designated biologist’s notification of non compliance with a Biological Resources Condition or a halt of construction, the project owner shall notify the CPM by telephone of the circumstances and actions being taken to resolve the problem or the non compliance with a COC.</p> <p>For any necessary corrective action taken by the project owner, a determination of success or failure will be made by the CPM within five working days after receipt of notice that corrective action is completed, or the project owner will be notified by the CPM that coordination with other agencies will require additional time before a determination can be made.¹¹</p>	<p>Calpine will ensure that its supervising construction and operating engineer act on the advice of the designated biologist and understand the biologist has the authority to halt construction, if the biologist deems it necessary. Within two working days of a designated biologist’s notification of non-compliance with a Biological Resources Condition or a halt of construction. Calpine shall notify Western by telephone of the circumstances and actions being taken to resolve the problem or the non-compliance.</p> <p>The designated biologist shall ensure the FWS Sacramento Office Division Chief for Endangered Species (3310 El Camino Avenue, Suite 130, Sacramento, CA, 95821-6340, 916/979-2725) is appropriately notified and consulted regarding endangered species as noted in the biological opinion.¹² This coordination includes all monitoring, notifying and reporting requirements. The designated biologist will comply with the FWS reporting documentation and provide copies of all communications with the FWS to Western.</p>

C. WORKER ENVIRONMENTAL AWARENESS PROGRAM

Description of Commission Condition of Certification: The project owner shall develop and implement a Worker Environmental Awareness Program, in which each

¹⁰ SPP Final EIS, Appendix O, page 12, BIO-3.

¹¹ Ibid.

¹² Ibid., Appendix T.

of its own employees, as well as employees of contractors and subcontractors who work on the project site or related facilities (including any access roads, storage areas, transmission lines, water and gas lines) during construction and operation, are informed about biological resource sensitivities associated with the project.

Protocol: The Worker Environmental Awareness Program:

- 1) Shall be developed by the designated biologist and consist of an on-site or classroom presentation in which supporting written material is made available to all participants;
- 2) Must discuss the locations and types of sensitive biological resources on the project site and adjacent areas;
- 3) Must present the reasons for protecting the resources;
- 4) Must present the meaning of various temporary and permanent habitat protection measures;
- 5) Must identify who to contact if there are further comments and questions about the material discussed in the program.

The program can be administered by a competent individual(s) acceptable to the designated biologist.

Each participant in the on-site Worker Environmental Awareness Program shall sign a statement declaring that the individual understands and shall abide by the guidelines set forth in the program material. The person administering the program shall also sign each statement.

The signed statements for the construction phase shall be kept on file by the project owner and made available for examination by the CPM for a period of at least six months after the start of commercial operation. Signed statements for the project owner for the duration of their employment and for six months shall keep active operational personnel on file after their termination.¹³

COMMISSION VERIFICATION PROCESS	WESTERN MONITORING PROCESS
At least 30 days prior to the start of rough grading, the project owner shall provide copies of the Worker Environmental Awareness Program and all supporting written materials prepared by the designated biologist and the name and qualifications of the person(s) administering the program to the CPM for approval. The project owner shall	Calpine will consult with the FWS in the preparation of the Worker Environmental Awareness Program and provide documentation of this consultation to Western. At least 30 days prior to the start of construction of the transmission line and/or substation, Calpine shall provide copies of the Worker Environmental Awareness Program to

¹³ SPP Final EIS, Appendix O, page 12, BIO-4.

COMMISSION VERIFICATION PROCESS	WESTERN MONITORING PROCESS
state in the monthly compliance report the number of persons who have completed the training in the prior month and a running total of all persons who have completed the training to date. ¹⁴	Western.

D. GIANT GARTER SNAKE MITIGATION

Description of Commission Condition of Certification: The project owner shall ensure the following measures are implemented to avoid or mitigate project impacts to giant garter snakes:

- 1) Avoid trenching or auguring activities within 200 feet of giant garter snake habitat from October 2 through April 30, where feasible.
- 2) Have the designated biologist on-site during construction activities that occur between October 1 and May 1. The FWS will be contacted if a giant garter snake is found trapped and they will come out to remove it.
- 3) Within 24 hours prior to the start of construction activities, the site shall be inspected for snakes by the designated biologist. Observed snakes should be reported and cleared to an area that will not be affected by construction within the next 24 hours. If a snake is encountered during construction activities, the designated biologist shall be contacted and take appropriate measures to ensure the snake is not harmed.
- 4) Avoid obstructing the flow of water through the canals (dewatering). Any dewatered habitat must remain dry for at least 15 consecutive days after April 15 and 15 consecutive days prior to excavating or filling dewatered habitat.
- 5) Prevent construction activities run off from entering giant garter snake habitat.
- 6) Restrict vegetation clearing to the minimal area necessary to facilitate construction activities. Mark and avoid giant garter snake habitat in or adjacent to the project that will not be directly affected by construction activities.
- 7) Provide replacement habitat at a location acceptable to FWS and the California Department of Fish and Game (CDFG) to compensate for habitat lost.
- 8) Mow, rather than disk, to control vegetation on-site. Mower blades should be raised to at least 6 inches during the snake’s active period of May 1 to October 1.
- 9) Conduct activities to clear vegetation in the irrigation canals as necessary to minimize disturbance to snake habitat and in accordance with methods approved by FWS and CDFG.
- 10) Eliminate wastewater discharge (as described in Condition Soils&Water-2¹⁵).¹⁶

¹⁴ SPP Final EIS, Appendix O, BIO-4.

¹⁵ Ibid., Appendix O, page 18.

COMMISSION VERIFICATION PROCESS	WESTERN MONITORING
<p>At least 45 days prior to rough grading, the project owner shall provide to the project CPM for review and approval written documentation (BRMIMP, BIO-12¹⁷) that these measures will be or have been taken by the licensee. The documentation will specify the procedures used or that will be used to implement these measures.¹⁸</p>	<p>Western will provide oversight of construction activities to ensure transmission line and/or substation construction activities:</p> <ul style="list-style-type: none"> (a) avoid auguring activities within 200 feet of giant garter snake habitat between October 2 and April 30, (b) have the CPM-approved biologist on-site between October 1 and May 1, (c) have all areas to be disturbed checked for snakes by the biologist and within 24-hours prior to commencement of construction activities, the site shall be inspected by the biologist, who will prepare a field report for Western and the FWS, (d) minimize vegetation clearing within snake habitat, (e) environmentally sensitive habitat will be flagged by the biologist, as he determines necessary for avoidance, (f) use mowing for fire control, rather than disking, (g) use herbicides with no residual or migratory effects, (h) revegetate habitat after construction, and (i) Calpine shall provide Western with documentation of habitat compensation.

E. SWAINSON’S HAWK MITIGATION

Description of Commission Condition of Certification: The project owner shall ensure the following measures are implemented to mitigate or avoid project impacts to Swainson’s hawks:

¹⁶ SPP Final EIS, Appendix O, page 13, BIO-8.

¹⁷ BRMIMP is a CA Energy Commission term for Biological Resource Mitigation Implementation and Monitoring Plan.

¹⁸ SPP Final EIS, Appendix O, page 13, BIO-8.

- 1) The designated biologist shall conduct preconstruction surveys during March through June construction years to determine if an active nest site is within 0.5 miles of construction activities.
- 2) The owner shall design the project to avoid removal of nest trees and to avoid placement of the transmission line within 0.1 mile of nest trees.
- 3) The designated biologist shall monitor construction activities that occur within 0.5 miles of an active nest site between March 1 and August 15 or until fledglings are no longer dependent on the nest tree. The monitoring plan shall be acceptable to CDFG.¹⁹

COMMISSION VERIFICATION PROCESS	WESTERN MONITORING
At least 45 days prior to rough grading, the project owner shall provide to the project CPM for review and approval written documentation (BRMIMP, Bio-12) that the above measures will be accomplished by the applicant and specify the procedures used or that will be used to implement these measures. ²⁰	Calpine shall provide Western with documentation that the above measures are accomplished. Western will consult with the designated biologist to ensure the project owner avoids placement of transmission line poles within 0.1 miles of Swainson’s hawk nesting trees.

F. MIGRATORY BIRD MITIGATION

Description of Commission Condition of Certification: The project owner shall ensure the following measures are implemented to mitigate or avoid project impacts to migratory birds:

- 1) Powerlines shall be constructed following recommendations in *Suggested Practices for Raptor Protection on Power Lines; The State of the Art in 1996* (Avian Powerline Interaction Committee, 1996).
- 2) Powerlines located in sensitive areas (e.g., over Gilsizer Slough and through potential foraging or flyway areas) shall be fitted with bird flight diverters placed on the ground wire at 16.4-foot intervals. Sensitive areas shall be identified in the BRMIMP (COC Bio-12).
- 3) Between October through March, measures shall be taken in areas of high migratory bird use (such as Gilsizer Slough) to flush birds from the construction area prior to stringing wires.
- 4) Develop a monitoring plan to analyze whether the transmission line and HRSG²¹ stacks are causing significant impacts from avian collision and/or electrocutions. If it is determined that significant impacts are occurring, remedial mitigation

¹⁹ SPP Final EIS, Appendix O, page 13, BIO-9. (A full summary of this COC was not included above.)

²⁰ Ibid., page 13, BIO-9.

²¹ HRSG: heat recovery steam generators.

measures shall be proposed and implemented. A report presenting the monitoring data and a discussion of the mitigation effectiveness shall be provided annually for 10 years following the completion of construction. If it can be shown that impacts to birds from the project are not occurring, the licensee has the option to request staff to decrease the frequency or cease monitoring.²²

COMMISSION VERIFICATION PROCESS	WESTERN MONITORING ²³
<p>At least 45 days prior to rough grading, the project owner shall provide to the project CPM for review and approval written documentation (BRMIMP, Bio-12) that these measures will be accomplished by the licensee and specify the procedures used or that will be used to implement these measures. The avian collision/electrocution monitoring plan annual report shall be provided to the project CPM no later than December 31 for each year monitoring is required.²⁴</p>	<p>Western will provide oversight of construction activities to assure the transmission line and substation activities:</p> <ul style="list-style-type: none"> (a) Consider the <i>Practices for Raptor Protection on Power Lines; The State of the Art in 1996</i>, (b) Fit powerlines located in areas sensitive to migratory birds with bird flight diverters placed on the ground wire at 16.4 –foot intervals, (c) Provide suitable spacing between conductor wires to minimize risk of electrocution, (d) Attempt to flush birds from construction areas prior to stringing wires, (e) Have an avian collision monitoring plan. As a conservation measure, the plan shall include a provision for random ground searches for bird strikes during migration and wintering periods.

G. WETLAND MITIGATION

Description of Commission Condition of Certification: The project owner shall ensure the following measures are implemented to mitigate or avoid project impacts on wetlands:

- 1) Provide in-kind replacement habitat at a location acceptable to FWS for wetlands impacted by the project (BIO-13).

²² SPP Final EIS, Appendix O, page 14, BIO-10. (A full summary of this COC was not included above.)

²³ Although Western’s Biological Assessment indicated that strobe lights would be used on the HRSG stacks to deter avian collision, it was subsequently determined through the NEPA process and public involvement that strobe lights would cause a visual impact. Therefore, they will not be utilized.

²⁴ SPP Final EIS, Appendix O, page 14, BIO-10.

- 2) Establish an endowment account adequate to provide funds for the perpetual maintenance and management of the replacement habitat.
- 3) Mark and avoid all wetlands on site that will not be directly taken by the power plant footprint and all wetlands along Hughes Road in the Sutter National Wildlife Refuge.
- 4) Protect on-site wetlands not taken by the power plant footprint in perpetuity or provide replacement habitat at a location and ratio acceptable to FWS and establish an endowment account adequate to provide funds for the perpetual maintenance and management of the replacement habitat.
- 5) Use an air-cooled condenser to eliminate wet-cooling tower evaporation and incorporate drains designed to route contaminated runoff away from the remaining wetlands or develop and implement a monitoring program to ensure the wetlands remaining on-site are not degraded by project operations. The program shall include parameters acceptable to FWS that monitor hydrologic quality and productivity, and identify and defend reference or control wetlands for comparative analysis. If it is determined that the on-site wetlands are negatively impacted, propose remedial mitigation measures to be implemented. A report presenting the monitoring data and a discussion of the mitigation effectiveness shall be provided annually for the life of the project. If it can be shown that wetlands are not being negatively impacted, the licensee has the option to request Commission staff to decrease the frequency or cease monitoring.
- 6) Place a construction cloth over wetlands that could be impacted only or where feasible, otherwise the wetlands will only be marked and flagged for avoidance.
- 7) Place the pipeline under or in the shoulder of Hughes Road.²⁵

COMMISSION VERIFICATION PROCESS	WESTERN MONITORING
At least 45 days prior to rough grading, the project owner shall provide to the project CPM for review and approval written documentation (BRMIMP, BIO-12) that the above measures will be accomplished by the licensee and specify the procedural terms for implementing these measures. The wetland monitoring plan annual report shall be provided to the project CPM no later than July 1 for each year monitoring is completed. ²⁶	Calpine shall provide Western with written documentation verifying that the above measures have been accomplished. Calpine shall provide Western with a copy of the Wetland Monitoring Plan and subsequent annual report(s).

²⁵ SPP Final EIS, Appendix O, page 14.

²⁶ Ibid., page 14, BIO-11.

H. FINAL BIOLOGICAL REPORTING

Description of Commission Condition of Certification: The project owner shall submit to the CPM for review and approval a copy of the *final Biological Resources Mitigation Implementation and Monitoring Plan*.

Protocol: *The Biological Resources Mitigation Implementation and Monitoring Plan* shall identify:

- All sensitive biologic resources to be impacted, avoided or mitigated by project construction and operation;
- All conditions agreed to in the FWS biological opinion and California Department of Fish and Game (CDFG) Incidental Take Permit;
- All mitigation, monitoring and compliance conditions included in the Commission's Final Decision;
- All conditions agreed to in the U.S. Army Corps of Engineers (Corps) Clean Water Act permits;
- All conditions specified in the CDFG Streambed Alteration permit, if required;
- Required mitigation measures for each sensitive biological resource;
- Required habitat compensation, including provisions for acquisition, enhancement and management, for any loss of sensitive biological resources;
- A detailed plan for protecting the existence and monitoring the integrity of the wetlands remaining on-site;
- A detailed description of measures to be taken to avoid or mitigate temporary disturbances from construction activities;
- All locations, on a map of suitable scale, of laydown areas and areas requiring temporary protection and avoidance during construction;
- Aerial photographs of all areas to be disturbed during project construction activities—one set prior to site disturbance and one set subsequent to completion of mitigation measures. Include planned timing of aerial photography and description of why times were chosen;
- Monitoring duration for each type of monitoring and a description of monitoring methodologies and frequency;
- Performance standards to be used to help decide if/when proposed mitigation is or is not successful;
- All remedial measures to be implemented if performance standards are not met; and
- A process for proposing plan modifications to the CPM and appropriate agencies, for review and approval.²⁷

²⁷ SPP Final EIS, Appendix O, page 15, BIO-12.

COMMISSION VERIFICATION PROCESS	WESTERN MONITORING
<p>At least 45 days prior to rough grading, the project owner shall provide the CPM with the final version of the <i>Biological Resources Mitigation Implementation and Monitoring Plan</i> for this project. The CPM will determine the plan's acceptability within 15 days of receipt of the final plan. The project owner shall notify the CPM five working days before implementing any modifications to the BRMIMP. Within 30 days after completion of construction, the project owner shall provide the CPM, for review and approval, a written report identifying which items of the BRMIMP have been completed, a summary of all modifications to mitigation measures made during the project's construction phase and which condition items are still outstanding.²⁸</p>	<p>Calpine will review the December, 1998 <i>Draft Final BRMIMP</i> and determine if modifications are needed to meet the requirements of the Federal biological opinion. They shall submit written results of this review to Western for review and approval. A final, updated BRMIMP will be provided to Western.</p> <p>Calpine will work with the Commission to ensure that both the BRMIMP and the <i>Mitigation Action Plan</i> are coordinated and implemented.</p>

CULTURAL RESOURCES

A. DESIGNATION OF CULTURAL RESOURCE SPECIALIST

Description of Commission Condition of Certification: Prior to the start of project construction (defined as any construction-related vegetation clearance, ground disturbance and preparation and site excavation activities), the project owner shall provide the CPM and Western with the name(s) and qualifications of its designated cultural resource specialist and mitigation team members.

The designated cultural resource specialist shall be responsible for implementing all the cultural resource COCs, using qualified personnel to assist him or her in project-related field surveys, monitoring, data collection and artifact recovery, mapping, mitigation, analysis of recovered cultural resources and data or report preparation.

After CPM and Western approval of the Cultural Resource Monitoring and Mitigation Plan (CRMMP) (Cul-3),²⁹ the designated cultural resource specialist and team shall be available to implement the mitigation plan prior to, and throughout construction of the project.

²⁸ SPP Final EIS, Appendix O, page 15, BIO-12.

²⁹ Ibid., page 22, CUL-3.

Protocol: The project owner shall provide the CPM and Western with a resume or statement of qualifications for its designated cultural resources specialist and mitigation team members. The resume(s) shall include the following information:

- 1) The resume for the designated cultural resource specialist shall demonstrate that the specialist meets the following minimum qualifications: a graduate degree in archeology, anthropology, California history or cultural resource management; at least three years of cultural resource mitigation and field experience in California, including at least one year’s experience leading cultural resource field surveys; leading site mapping and data recording; marshaling equipment necessary and leading archaeological resource recovery operations; the need for appropriate sampling and/or testing in the field and in the lab; directing the analyses of mapped and recovered materials and data; and the preparation of appropriate reports to be filed with the receiving curation repository, the appropriate regional information center(s), the State Historic Preservation Officer (SHPO), Western and the CPM.
- 2) The resume for the designated cultural resource specialist shall include a list of specific projects the specialist has previously worked on; the role and responsibilities of the specialist for each project listed; and the names and phone numbers of contacts familiar with the specialist’s work on these referenced projects.
- 3) If additional personnel will be assisting the designated cultural resource specialist in project-related field surveys, monitoring, data and artifact recover, mapping, mitigation, material analysis or report preparation, the project owner shall also provide names, addresses and resumes for these team members.
- 4) If the CPM and Western determine the qualifications of the proposed cultural resource specialist are not in concert with the above requirements, the project owner shall submit another individual’s name and qualifications for consideration.
- 5) If the previously approved designated cultural resource specialist is replaced prior to completion of project mitigation, the project owner shall obtain CPM and Western approval of the new designated cultural resource specialist by submitting to the CPM and Western the name and qualifications of the proposed replacement specialist at least ten days prior to the termination or release of the preceding designated cultural resource specialist.³⁰

COMMISSION VERIFICATION PROCESS	WESTERN MONITORING
At least 90 days prior to the start of construction, the project owners shall submit the name and resume of its designated cultural resource specialist to the CPM and Western for review and written approval.	Western shall review the qualifications of the project owner’s selection for the designated cultural resource specialist and provide written approval or disapproval

³⁰SPP Final EIS, Appendix O, page 21, CUL-1.

COMMISSION VERIFICATION PROCESS	WESTERN MONITORING
<p>Thirty days prior to construction, the project owner shall confirm in writing to the CPM, who will notify Western, that the previously approved designated cultural resource specialist and the team of assistants are prepared to implement the monitoring and mitigation measures for cultural resources, as described in the Cultural Resources Monitoring and Mitigation Plan.</p> <p>At least 10 days prior to the termination or release of a designated cultural resource specialist, the project owner shall obtain CPM and Western approval of the new designated cultural resource specialist by submitting to the CPM and Western the name and resume of the proposed replacement specialist.³¹</p>	

B. PROJECT MAPS AND DRAWINGS OF FACILITIES

Description of Commission Condition of Certification: Prior to the start of project construction, the project owner shall provide the designated cultural resource specialist and the CPM with maps and drawings for the SPP. The final center lines and right-of-way boundaries shall be provided on 7.5 minute quad maps, and the location of all the various areas where surface disturbance may be associated with project-related access roads, storage yards, laydown sites, pull sites, pump or pressure stations, Sutter Bypass switching station, on-site switchyard, electrical tower or pole footings, etc.³²

COMMISSION VERIFICATION PROCESS	WESTERN MONITORING
<p>At least 90 days prior to the start of construction on the project, the project owner shall provide the designated cultural resource specialist, the CPM, and Western with final maps at appropriate scale(s) and drawings for all project facilities.³³</p>	<p>Western will review the maps and drawings and coordinate with the designated cultural resource specialist and the CPM, as appropriate.</p>

³¹ SPP Final EIS, Appendix O, page 21, CUL-1.

³² Ibid., page 22, CUL-2. (A full summary of this COC was not included above.)

³³ Ibid., page 22, CUL-2.

C. CULTURAL RESOURCES MONITORING AND MITIGATION PLAN

Description of Commission Condition of Certification: Prior to the start of project construction, the designated cultural resource specialist shall prepare a draft Cultural Resources Monitoring and Mitigation Plan to identify general and specific measures to minimize potential impacts to significant cultural resources. The CPM will review, and must approve in writing, the draft Cultural Resources Monitoring and Mitigation Plan. The CPM will provide copies of the draft plan to Western so that Western may submit this plan to the SHPO for concurrence prior to the project owner taking any actions under the approved monitoring and mitigation plan.

Protocol: The Cultural Resources Monitoring and Mitigation Plan shall include, but not be limited to, the following elements and measures:

- a) A discussion of the sequence of project-related tasks, such as any final preproject surveys, fieldwork, flagging or staking; construction monitoring; mapping and data recovery; preparation for recovering cultural resources; preparation of recovered materials for analysis, identification, and inventory; preparation of preliminary and final reports; and preparation of materials for curation.
- b) An identification of the person(s) expected to assist with each of the tasks identified in above, a discussion of the mitigation team leadership and organizational structure and the inter-relationship of tasks and responsibilities.
- c) When sensitive areas are to be monitored during construction or avoided during operation, the designated cultural resource specialist shall identify measures such as flagging or fencing to prohibit or otherwise restrict access to sensitive resource areas. The discussion should address how these measures will be implemented prior to the start of construction and how long they will be needed to protect the resources from project-related effects.
- d) Where the need for monitoring of project construction activities has been determined by Western, the designated cultural resource specialist, in consultation with the CPM, will establish a schedule for the monitor(s) to be present. If the designated cultural resource specialist determines the likelihood of encountering cultural resource or sites in certain areas is slight, monitoring may be discontinued in that location.
- e) If cultural resources are encountered are exposed during project-related grading, excavation, augering, and/or trenching, the designated cultural resource specialist shall have the authority to halt or redirect construction in the immediate vicinity of the find until the specialist can determine the significance of the find. The designated cultural resource specialist shall act in accordance with the following procedures:
 - The project owner, or designated representative, shall inform the CPM and Western within one working day of the discovery of any potentially significant cultural resources and discuss the specific measure(s) proposed to mitigate potential impacts to these resources.

- The designated cultural specialist, representatives of the project owner, Western, and the CPM shall confer within 5 working days of the notification of the CPM, if necessary, to discuss any mitigation measures already implemented or proposed to be implemented, and to discuss the disposition of any finds.
 - The SHPO will be consulted on potential eligibility, effect and proposed mitigative measures. As the federal lead agency, Western will initiate the consultations with the SHPO.
 - All required data recovery and cultural resource impact mitigation shall be completed as expeditiously as possible.
- f) All isolates encountered will be recorded and mapped; all lithic scatters and/or cultural resource sites will be recorded and mapped and all diagnostic artifacts will be collected for analysis; and all recovered cultural resource materials will be prepared and delivered for curation into a retrievable storage collection in a public repository or museum that meets the Title 36 CFR 79 standards for the curation of cultural resource materials.
- g) The identification of the public institution that has agreed to receive any maps and data, records, reports and any cultural resource materials recovered during project-related monitoring and mitigation work. Also include a discussion of any requirements or specification for materials delivered for curation and how they will be met. The name and phone number of the contact person at the institution shall be included as well.³⁴

COMMISSION VERIFICATION PROCESS	WESTERN MONITORING
At least 60 days prior to the start of construction, the project owner shall provide the CPM and Western with a copy of the draft Cultural Resources Monitoring and Mitigation Plan prepared by the designated cultural resource specialist. The CPM and Western will provide written approval or disapproval of the proposed Cultural Resources Monitoring and Mitigation Plan within 15 days of receipt of the submittal. If the draft plan is not approved, the project owner, the designated cultural resources specialist, the CPM and Western shall meet to discuss comments and work out necessary changes. ³⁵	At least 60 days prior to the start of construction, the project owner shall provide the CPM and Western with a copy of the draft Cultural Resources Monitoring and Mitigation Plan prepared by the designated cultural resource specialist. The CPM and Western will provide written approval or disapproval of the proposed Cultural Resources Monitoring and Mitigation Plan within 15 days of receipt of the submittal. If the draft plan is not approved, the project owner, the designated cultural resources specialist, the CPM and Western shall meet to discuss comments and work out necessary changes.

³⁴ SPP Final EIS, Appendix O, page 22, CUL-3.

³⁵ Ibid.

D. DEVELOPMENT OF CULTURAL RESOURCES EMPLOYEE TRAINING PROGRAM

Description of Commission Condition of Certification: Prior to the start of construction on the project, the designated cultural resource specialist shall prepare an employee training program. The designated cultural resource specialist shall submit the training program to the CPM and Western for review and written approval.

Protocol: The training program shall address the potential to encounter cultural resources during project-related site preparation and construction activities, the sensitivity and importance of these resources and the legal obligations to preserve and protect such resources.

The training program shall also include the set of reporting procedures workers are to follow if any cultural resources are encountered during project activities. This training program may be combined with other training programs prepared for paleontological and biological resources, hazardous materials or any other areas of interest or concern.³⁶

COMMISSION VERIFICATION PROCESS	WESTERN MONITORING
<p>At least 30 days prior to the start of construction, the project owner shall submit to the CPM and Western for review, comment and written approval, the proposed employee training program and set of reporting procedures the workers are to follow if cultural resources are encountered during project construction. Western may be required to submit this training plan to the SHPO for concurrence as part of the consultation process.</p> <p>The CPM and Western shall provide written approval or disapproval of the employee training program and set of procedures within 15 days after receipt of the submittal. If the draft training program is not approved, the project owner, the designated cultural resource specialist, the CPM and Western shall confer as needed to achieve any necessary changes.³⁷</p>	<p>At least 30 days prior to the start of construction, the project owner shall submit to the CPM and Western for review, comment and written approval, the proposed employee training program and set of reporting procedures the workers are to follow if cultural resources are encountered during project construction. Western may be required to submit this training plan to the SHPO for concurrence as part of the consultation process.</p> <p>The CPM and Western shall provide written approval or disapproval of the employee training program and set of procedures within 15 days after receipt of the submittal. If the draft training program is not approved, the project owner, the designated cultural resource specialist, the CPM and Western shall confer as needed to achieve any necessary changes.</p>

³⁶ SPP Final EIS, Appendix O, page 23, CUL-5.

³⁷ Ibid.

E. IMPLEMENTATION OF CULTURAL RESOURCES EMPLOYEE TRAINING PROGRAM

Description of Commission Condition of Certification: Prior to the start of construction, and throughout the project construction period as needed for all new employees, the project owner and the designated cultural resource specialist shall provide the approved training to all project managers, construction supervisors and workers who operate ground-disturbing equipment. The project owner and construction manager shall provide the workers with the approved set of procedures for reporting any cultural resources discovered during project-related ground disturbance.³⁸

COMMISSION VERIFICATION PROCESS	WESTERN MONITORING
<p>Prior to the start of construction, and throughout the project construction period as needed for all new employees, the project owner and the designated cultural resource specialist shall present the CPM- and Western-approved training program on the potential for project impacts to sensitive cultural resources. The training shall include a set of reporting procedures for cultural resources encountered during project activities. The project owner shall provide documentation in the monthly compliance report to the CPM that the employee training and the set of procedures have been provided to all project managers, construction supervisors and to all workers.³⁹</p>	<p>Calpine shall provide documentation (e.g., a list of names, instructor, date completed) containing the names of persons who have completed the training to Western on a quarterly basis.</p>

F. CULTURAL RESOURCES REPORTING-1

Description of Commission Condition of Certification: Throughout the project construction period, the project owner shall provide the designated cultural resource specialist with a current schedule of weekly project activity and a map indicating the area(s) where construction activities will occur. The designated cultural resource specialist shall consult daily with the project superintendent or construction field manager to confirm the area(s) to be worked on the next day(s).

Throughout the monitoring and mitigation phase of the project, the designated cultural resource specialist shall maintain a daily log of monitoring and mitigation activities carried out by the specialist and members of the cultural resource mitigation team. The designated cultural resource specialist shall prepare summary reports on

³⁸ SPP Final EIS, Appendix O, page 23, CUL-6.

³⁹ Ibid.

monitoring activities, any cultural resource finds and recovery efforts and the progress or status of the resource monitoring, mitigation, preparation, identification and analytical work being conducted for the project. Copies of these summaries shall be included in the monthly compliance reports file with CPM by the project owner. The CPM will forward copies of these summary reports to Western. The designated cultural resource specialist may informally discuss the cultural resource monitoring and mitigation activities with their Commission technical counterpart at any time.³¹

COMMISSION VERIFICATION PROCESS	WESTERN MONITORING
The project owner shall include, in the monthly compliance reports to the CPM, a summary of the daily logs prepared by the designated cultural resource specialist; the CPM will forward copies to Western. ⁴⁰	Calpine shall inform Western of any cultural resource finds and recovery efforts, as needed.

G. CULTURAL RESOURCES REPORTING-2

Description of Commission Condition of Certification: The designated cultural resource specialist shall be present at the construction site at all times when construction-related grading, excavation, trenching and/or auguring occurs in areas that lie within the natural river levee zone (found to be generally associated with the Shanghai-Nueva-Columbia soils group). Project areas where the natural levee zones may be found include the switchyard site and portions of the 16-inch and the 4-inch natural gas pipeline routes. Using the mile posts and boundary stakes placed by the project owner, the designated cultural resource specialist shall monitor the route of the 16-inch natural gas pipeline, between Mile Post (MP) 8.97 to 9.51; MP 10.42 to MP 11.41 and MP 12.1 to 13.70. For the route of the 4-inch natural gas pipeline, areas to be monitored full time are from MP 0.00 to MP 1.60. Other sections of the linear facility routes may be monitored as deemed necessary by the CPM and Western.⁴¹

COMMISSION VERIFICATION PROCESS	WESTERN MONITORING
The project owner shall include, in the monthly compliance reports to the CPM, a summary of the daily logs prepared by the designated cultural resource specialist; the CPM will forward copies to Western. ⁴²	Western will consult with the CPM and the designated cultural resource specialist, as necessary.

⁴⁰ SPP Final EIS, Appendix O, page 24, CUL-7.

⁴¹ Ibid., page 24, CUL-8.

⁴² Ibid.

H. DISCOVERY OF HUMAN REMAINS

Description of Commission Condition of Certification: If human remains are encountered during project-related grading, excavation, auguring and/or trenching, the construction crew shall halt or redirect construction in the immediate vicinity of the find and immediately contact the county coroner and the designated cultural resource specialist. If the coroner determines that the find is of Native American origin, the coroner shall notify the Native American Heritage Commission (NAHC) to request a determination of “most likely descendant.” The NAHC is required to notify the descendant(s) and request that they inspect the burial and make recommendations for treatment or disposal. If Native American remains are encountered on Federally managed land (within the Sutter National Wildlife Reserve), the FWS is required to follow the procedures of the Native American Graves Protection and Repatriation Act, to repatriate the remains.³⁵

COMMISSION VERIFICATION PROCESS	WESTERN MONITORING
The designated cultural resource specialist shall notify the county coroner, the project owner, the CPM and Western if any buried human remains are encountered during project construction activities. ⁴³	If human remains are discovered and determined to be of Native American origin, Western will consult with the CPM and the designated cultural resource specialist for the proper disposition of the remains.

I. PRELIMINARY CULTURAL RESOURCES REPORT

Description of Commission Condition of Certification: The project owner shall ensure preparation of a preliminary cultural resources report following completion of data recovery and site mitigation work. The preliminary report is to be prepared by the designated cultural resource specialist and submitted to the CPM and Western for review and written approval. Western will provide copies of the preliminary report to the SHPO.

Protocol: The preliminary report shall include (but not be limited to) preliminary information on the survey report(s), methodology and recommendations; site records and maps; determinations of significance; data recovery and other mitigation activities; discussion of possible results and findings of any analysis to be conducted on recovered cultural resource materials and data; proposed research questions that may be answered, or that may have been raised by the data from the project-related information such as maps, diagrams, charts, photographs and other appropriate materials; and an estimate of the time needed to complete the analysis of recovered cultural resource materials and prepare a final report. As the Federal lead agency,

⁴³ SPP Final EIS, Appendix O, page 24, CUL-9.

Western will provide a standard report format to be followed by the designated cultural resource specialist.

If no cultural resource materials are recovered during project-related construction activities, the approved preliminary report shall also serve as the final report and shall be filed with appropriate entities.⁴⁴

COMMISSION VERIFICATION PROCESS	WESTERN MONITORING
<p>Within 90 days following completion of the data recovery and site mitigation work, the project owner shall submit a copy of the preliminary cultural resources report to the CPM and to Western for review, comment and written approval.⁴⁵</p>	<p>Western will recommend a standard report format to be followed by the designated cultural resource specialist in preparing the preliminary cultural resources report. Western will provide the recommended format to the designated cultural resource specialist upon request and prior to report preparation. Western will review the preliminary cultural resources report (and final cultural resources report, if necessary) and provide written comment and approval or disapproval of the report.</p>

J. FINAL CULTURAL RESOURCES REPORT

Description of Commission Condition of Certification: The project owner will ensure preparation of a final cultural resources report by the designated cultural resource specialist if cultural resource materials are found and recovered during project-related monitoring and mitigation. This final report shall be submitted to the CPM and Western for review and written approval.

Protocol: The final report shall include (but not be limited to) the survey report(s), methodology and recommendations; site records and maps; description and inventory list of recovered cultural resource materials; determinations of sensitivity and significance; summary of data recovery and other mitigation activities; results and findings of any special analyses conducted on recovered cultural resource materials and data; research questions answered or raised by the data from the project; and the name and location of the public institution receiving the recovered cultural resource materials for curation. As the lead Federal agency, Western will provide a standard report format to be followed by the designated cultural resource specialist.⁴⁶

⁴⁴ SPP Final EIS, Appendix O, page 25, CUL-11. (A full summary of this COC was not included above.)

⁴⁵ Ibid.

⁴⁶ Ibid., page 25, CUL-12.

COMMISSION VERIFICATION PROCESS	WESTERN MONITORING
The project owner shall submit a copy of the draft final cultural resources report to the CPM and Western for review, comment, and written approval. The report shall be submitted to the CPM and Western within 90 days following completion of the analysis of the recovered cultural materials and preparation of related information. The project owner shall submit a copy of the final cultural resources report to the CPM and Western for review and written approval. ⁴⁷	Western will review the draft final cultural resources report (as well as the final report) and provide written comment, and approval or disapproval of the report.

K. CULTURAL RESOURCE RECOVERY DOCUMENTATION

Description of Commission Condition of Certification: The project owner shall ensure that Western is provided with an original (or original-quality) copy of the approved final cultural resources report, and other copies necessary to submit to the public institution receiving the recovered data and materials for curation, to the SHPO and to the appropriate regional archaeological information center(s). A legible copy of the approved final cultural resource report shall be filed with the CPM, with a request for confidentiality, if needed to protect any sensitive resources or sites.

The report copy sent to the curating institution and to the appropriate regional information centers shall include the information required by 36 CFR 79 and the regional archaeological information centers.⁴⁸

COMMISSION VERIFICATION PROCESS	WESTERN MONITORING
The project owner shall maintain in its compliance files, copies of all documentation related to the original materials and the approved final cultural resources report with the public institution receiving the recovered data and materials for curation, with the appropriate regional archaeological information repository (ies) and the SHPO. If no cultural resource materials were recorded or recovered, then the approved preliminary cultural resources report shall serve as the final report and is to be filed with these same agencies. ⁴⁹	If cultural resources are recovered, Western will coordinate the report with the SHPO and other agencies, as appropriate.

⁴⁷ SPP Final EIS, Appendix O, page 25, CUL-12.

⁴⁸ Ibid., page 25, CUL-13.

⁴⁹ SPP Final EIS, Appendix O, page 25, CUL-13.

PALEONTOLOGICAL RESOURCES

A. DESIGNATION OF PALEONTOLOGICAL RESOURCE SPECIALIST

Description of Commission Condition of Certification: Prior to the start of project construction (defined as any construction-related vegetation clearance, ground disturbance and preparation, and site excavation activities), the project owner shall provide the CPM with the name(s) and qualifications of its designated paleontologic resources specialists and mitigation team members.

The designated paleontologic resources specialist shall be responsible for implementing all the Conditions of Certification and for using qualified personnel to assist him or her in project-related field surveys; monitoring; fossil stabilization, removal, and transport; data collection and mapping; direction and implementation of mitigation procedures; matrix sampling; screen washing and other micro-fossil recovery techniques; preparation and analysis of recovered fossils and data; identification and inventory of analysis of recovered fossils; preparation of recovered fossils for delivery and curation; and report preparation.

After CPM approval of the paleontologic resources monitoring and mitigation plan, described below in Condition PAL-4, the designated paleontologic resources specialist and team shall be available to implement the mitigation plan prior to and throughout project construction.

Protocol: The project owner shall provide the CPM with a resume or statement of qualifications for its designated paleontologic resources specialist and mitigation team members. The resume(s) shall include the following information:

- 1) The resume for the designated paleontologic resource specialist shall demonstrate the specialist meets the following minimum qualifications: a graduate degree in paleontology or geology or paleontologic resource management; at least three years of paleontologic resource mitigation and field experience in California, including at least one year's experience leading paleontologic resource field surveys; leading site mapping and data recording; marshalling and using of equipment necessary for fossil recovery, sampling, and screen washing; leading fossil recovery operations; preparing recovered materials for analysis and identification; recognizing the need for appropriate sampling and/or testing in the field and in the lab; directing the analyses of mapped and recovered fossil materials; completing the identification and inventory of recovered fossil materials; and the preparation of appropriate reports to be filed with the receiving curation repository, the University Museum of Paleontology at Berkeley, all appropriate regional information center(s) and the Commission.
- 2) The resume for the designated paleontologic resource specialist shall include a list of specific projects the specialist has previously worked on; the role and responsibilities of the specialist for each project listed; and the names and phone numbers of contacts familiar with the specialist's work on these referenced projects.

- 3) If additional personnel will be assisting the designated paleontologic resources specialist in project-related field surveys, monitoring, data and fossil recovery, mapping, mitigation, fossil analysis or report preparation, the project owner shall also provide names, addresses and resumes for these paleontology resource team members.
- 4) If the CPM determines the qualifications of the proposed paleontologic resources specialist do not meet the above requirements, the project owner shall submit another individual's name and qualifications for consideration.

If the previously approved designated paleontologic resources specialist is replaced prior to completion of project mitigation, the project owner shall obtain CPM approval of the new designated paleontologic resources specialist by submitting the name and qualifications of the proposed replacement to the CPM, at least 10 days prior to the termination or release of the preceding designated paleontologic resources specialist.⁵⁰

COMMISSION VERIFICATION PROCESS	WESTERN MONITORING
<p>At least 90 days prior to the start of construction on the project, the project owner shall submit the names and resume for its designated paleontologic resources specialist to the CPM for review and approval. The CPM shall provide written approval or disapproval of the proposed paleontologic resources specialist. Thirty days prior to the start of the construction, the project owner shall confirm in writing to the CPM that the previously approved, designated paleontologic resources specialist and the team of assistants are prepared to implement the monitoring and mitigation measures for paleontologic resources, as described in the CPM-approved paleontologic resources monitoring and mitigation plan, prepared per Condition PAL-4 below.</p> <p>At least 10 days prior to the termination or release of a designated paleontologic resource specialist, the project owner shall obtain CPM approval of the new designated paleontologic resource specialist by submitting to the CPM the name and resume of the proposed replacement specialist.⁵¹</p>	<p>Calpine will provide Western with the qualifications of the paleontological resource specialist and the CPM approval.</p>

⁵⁰ SPP Final EIS, Appendix O, page 26, PAL-1.

⁵¹ Ibid.

B. PALEONTOLOGICAL RESOURCES TRAINING PROGRAM

Description of Commission Condition of Certification: Prior to the start of construction on the project, the designated paleontologic resources specialist shall prepare an employee training program. The designated paleontologic resource specialist shall submit the training program to the CPM for approval.

Protocol: The training program will discuss the potential for encountering fossil resources, the sensitivity and importance of these resources, and the legal obligations to preserve and protect such resources.

The training shall also include the set of reporting procedures that workers will follow if sensitive paleontologic resources are encountered during project activities. The training program will be presented by the designated paleontologic resources specialist and may be combined with other training programs prepared for cultural and biological resources, hazardous materials or any other areas of interest or concern.⁵²

COMMISSION VERIFICATION PROCESS	WESTERN MONITORING
At least 30 days prior to the start of construction, the project owner shall submit to the CPM for review, comment and written approval, the proposed employee training program and set of reporting procedures the workers are to follow if paleontologic resources are encountered during project construction. The CPM shall provide the project owner with written approval or disapproval of the employee-training program and the set of procedures within 15 days of receipt of the submittal. If the draft-training program is not approved, the project owner, the designated paleontologic resources specialist and the CPM shall meet to discuss the comments and work out necessary changes. ⁵³	Calpine will provide Western with a copy of the CPM-approved paleontology training program prior to implementation.

C. FINAL PALEONTOLOGICAL RESOURCES REPORT

Description of Commission Condition of Certification: The project owner shall ensure preparation of a final paleontologic resources report by the designated paleontologic resources specialist if significant fossil resources are found and recovered during project-related surveys, monitoring and mitigation.

⁵² SPP Final EIS, Appendix O, page 28, PAL-5.

⁵³ Ibid.

Protocol: The final report shall include (but not be limited to) the survey report(s), methodology and recommendations; locality records and maps; description and inventory list of recovered fossil materials; determinations of sensitivity and significance; summary of data recovery and other mitigation activities; results and findings of any special analyses conducted on recovered paleontologic resource materials and data; research questions answered or raised by the data from the project; and the name and location of the public institution receiving the recovered paleontologic resources for curation.⁵⁴

COMMISSION VERIFICATION PROCESS	WESTERN MONITORING
<p>The project owner shall submit a copy of the draft final paleontologic resources report to the CPM for review, comment and written approval. The draft final paleontologic resources report shall be submitted to the CPM within 90 days after completing analysis of the recovered fossil materials and preparing text and related information, such as maps, diagrams, tables, charts, photos, etc.⁵⁵</p>	<p>Calpine shall provide Western with a copy of the final paleontological resources report.</p>

FACILITY DESIGN

A. DESIGNATED RESIDENT ENGINEER AND OTHER KEY PERSONNEL

Description of Commission Condition of Certification: Prior to the start of site preparation, the project owner shall assign a California registered architect, structural engineer or civil engineer, as a resident engineer (RE), to be in general responsible charge of the project. [Building Standards Administrative Code (part 1, title 24, C.C.R.), Section 4-209 – Designation of Responsibilities.]

The RE may delegate responsibility for portions of the project to other registered engineers. Registered mechanical and electrical engineers may be delegated responsibility for mechanical and electrical portions of the project, respectively. A project may be divided into parts, provided each part is clearly defined as a distinct unit. Separate assignment of general responsible charge may be made for each designated part.

Protocol: The RE shall:

- 1) Monitor construction progress to ensure compliance with the design intent;

⁵⁴ Ibid., page 30, PAL-11.

⁵⁵ Ibid.

- 2) Ensure construction of all the facilities conforms, in every material respect, to the applicable laws, ordinances, regulations and standards (LORS), approved plans and specifications;
- 3) Prepare documents to initiate changes in approved drawings and specifications when directed by the project owner or as required by conditions on the project;
- 4) Be responsible for providing the project inspectors and testing agency(ies) with complete and up-to-date set(s) of stamped drawings, plans, specifications and other required documents;
- 5) Be responsible for the timely submittal of construction progress reports to the chief building official (CBO) from the project inspectors, the contractor and other engineers who have been delegated responsibility for portions of the project; and
- 6) Be responsible for notifying the CBO of corrective action or the disposition of items noted on laboratory reports or other tests as not conforming to the approved plans and specifications.

The RE shall have the authority to halt construction and to require changes or remedial work if the work does not conform to applicable requirements. FACILITY DESIGN 516 October 19, 1998.

If the RE or the delegated engineers are reassigned or replaced, the project owner shall submit the name, qualifications and registration number of the newly assigned engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO approval of the new engineer.⁵⁶

COMMISSION VERIFICATION PROCESS	WESTERN MONITORING
At least 30 days (or a lesser number mutually agreed to by the project owner and the CBO) prior to the start of rough grading, the project owner shall submit to the CBO for review and approval, the name, qualifications and registration number of the RE and any other delegated engineers assigned to the project. The project owner shall notify the CPM of the CBO's approvals of the RE and other delegated engineer(s) within five days of the approval. If the RE or the delegated engineer(s) are subsequently reassigned or replaced, the project owner has five days in which to submit the name, qualifications, and registration number of the newly assigned engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer within five days of the approval. ⁵⁷	Calpine shall provide Western with the qualifications of the designated resident engineer and any other key personnel, as requested by Western.

⁵⁶ SPP Final EIS, Appendix O, page 32, GEN-4.

⁵⁷ Ibid.

*Appendix B—FWS Standard Avoidance and Minimization
Measures During Construction Activities in Giant Garter Snake
Habitat*

(to be inserted)