WAPA F 1400.59#
(7-91)

United States Government **Department of Energy**

Western Area Power Administration

memorandum

DATE:

REPLY TO ATTN OF: N1400

SUBJECT: Sacramento Municipal Utility District 230-Kilovolt Folsom Dam Transmission Line Relocation Project and the Department of Energy Environmental Assessment DOE/EA-1588

TO: N0000

The Sacramento Municipal Utility District (SMUD) and Reclamation prepared an Environmental Assessment (EA) to analyze a northern alignment for SMUD's 230-kilovolt (kV) transmission line (T-line) that is being relocated as a result of the Folsom Dam Bridge Road Project (Project). Reclamation is the lead agency for preparation of the EA for the proposed Project. SMUD's 230-kV northern alignment would cross over Western's Folsom Substation and will require Western to issue a license outgrant to SMUD. As a result, you authorized Western's participation in the EA process as a cooperating agency in March 19, 2007.

Based on our participation in the development of the EA, we believe that it meets the requirements of the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA) (40 CFR parts 1500-1508) and the U.S. Department of Energy NEPA Implementing Procedures (10 CFR part 1021). Based on your June 25, 1999, delegation of EA authority from the Administrator, we recommend you adopt the EA for SMUD's 230-kV Folsom Dam Transmission Line Relocation Project. Further, I recommend that you approve and issue the accompanying Finding of No Significant Impact.

Please let me know if you have any questions.

Stephen Tuggle
Natural Resources Manager

Attachments

APPROVED: Tim Carter

DISAPPROVED: _____

DATE: 4/4/07

Finding of No Significant Impact
for the
Sacramento Municipal Utility District
230 kV Folsom Dam Transmission Line Relocation
March 30, 2007

Lead Agency:
U.S. Department of the Interior
Bureau of Reclamation
Mid-Pacific Region
Sacramento, California

Cooperating Agency:
U. S. Department of Energy
Western Area Power Administration
Sierra Nevada Region
Folsom, California

Local Agency:
Sacramento Municipal Utility District
Sacramento, California

This Finding of No Significant Impact (FONSI) for the issuance of a temporary license and a license outgrant for the Sacramento Municipal Utility District (SMUD) 230 kV and 12 kV Folsom Dam Transmission Lines Relocation as been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended, and the Council on Environmental Quality's Regulations for Implementing the Procedural Provisions of NEPA (40 CFR Parts 1500-1508). The Mid-Pacific Regional Office of the U.S. Bureau of Reclamation (Reclamation) and the Western Area Power Administration, Sierra Nevada Region (Western) have determined that the Proposed Action will not significantly affect the quality of the environment; therefore, an Environmental Impact Statement (EIS) is not required.

1.0 BACKGROUND

SMUD owns and operates the double circuit Orangevale-Lake/Whiterock-Orangevale 230 kV transmission line that extends from east to west along the northern boundary of the State of California's Folsom Prison property. The transmission line is a critical portion of the regional electric grid and provides electricity from SMUD's Upper American River Project (UARP) hydro-electric facilities. These lines provide critical base load and peaking power to the SMUD service area and a portion of Placer County. SMUD also operates a 12kV line that is connected to a pad mount transformer (1-kmp-4) which serves the U.S. Army Corps of Engineers (Corps) building on the east side of Folsom Dam. The 12 kV line extends northwest, paralleling the

current 230 kV line and terminates at the Corps building. A portion of the 12 kV service is located outside of SMUD's existing easement.

SMUD's Proposed Action consists of the removal and relocation of a section of the existing double circuit Orangevale-Lake/Whiterock Orangevale 230 kV transmission line presently located within the project footprint for the Folsom Bridge and road project (Corps and City of Folsom 2006) and the Folsom Auxiliary Spillway Project. The proposed relocation generally is midway between the future road and Folsom Dam, and adjacent to the existing Western Area Power Administration (Western) 230 kV Folsom-Roseville transmission line. SMUD also plans to relocate a portion of the 12 kV line. The project is located in the City of Folsom within Sacramento County in northern California. The project area encompasses approximately 106 acres located just below and parallel to Folsom Dam. The project area extends from Folsom Dam Road, west past Folsom-Auburn Road to near Lakeside Way. The City of Folsom and the Corps will be starting excavation of the Folsom Dam Road and bridge in April, 2007. Reclamation will be excavating Phase 1 of the Folsom Dam Auxiliary Spillway in fall 2007 and Phase 2 in approximately fall 2009.

SMUD, Reclamation, the Corps, Western, and the City of Folsom had originally planned a proposed alignment that started at SMUD existing Tower No. 279 (see Figure 2.3A) and proceeded on a northwest route across the proposed Folsom Dam Road and Folsom Dam Auxiliary Spillway, over the Western Folsom Dam Substation, and across Folsom-Auburn Road to the SMUD existing Tower No. 292. Relocating the transmission line over the Western Folsom Dam Substation will allow for the possible future connection of the SMUD transmission line to the substation. This possible future connection will be addressed by a separate environmental document. An Environmental Assessment for the proposed SMUD transmission line relocation was completed by Reclamation in March 2007. Section 7 Consultation has also been completed with the United States Fish and Wildlife Service. The Biological Opinion was received on March 29, 2007.

Recent developments related to the future Folsom Dam Auxiliary Spillway Project have resulted in Reclamation requiring SMUD to realign the proposed transmission line replacement section on the east side of the American River. SMUD will not be able to complete a new permanent transmission line alignment in time to avoid the Folsom Dam Road and bridge construction or replace the regional transmission line prior to SMUD's peak energy use period. Peak energy use generally begins around May 1 of each year. Therefore, SMUD has proposed a temporary transmission line alignment (see Figure 2.3A of the environmental assessment) that follows the original east alignment from existing SMUD Tower 279 through the proposed SMUD Structures K and 12B. The temporary line will then cross the proposed Folsom Dam road and auxiliary spillway to SMUD's existing Tower 281. SMUD will utilize its existing Towers 281, 285, and 286 and the existing overhead conductor proceeding west to the American River. SMUD will install a new conductor span from existing Tower 286 to the proposed Structure S located on west side of the river. The location of Structure S and the remaining SMUD Structures proceeding west will continue as originally proposed. SMUD will use existing access roads as originally planned to access both the proposed and existing SMUD structures and facilities.

The temporary route will resolve the conflicts with the alignment of SMUD's existing transmission line and the proposed Folsom Dam Road and Bridge project for Phase 1 of the Folsom Dam Auxiliary Spillway project, while replacing a critically important transmission line

to SMUD's regional electric grid. The route is temporary because Phase 2 of the auxiliary spillway project will require the relocation of the temporary alignment to a permanent alignment to be determined within the next two years. It is anticipated the temporary transmission line will remain in place for approximately one to two years. Reclamation will issue a temporary license agreement to SMUD for the temporary transmission line alignment on the east side of the American River with the understanding that SMUD will vacate the temporary alignment and remove the existing structures and overhead conductor between proposed SMUD Structures 12B and S.

This Proposed Action would provide continued reliable power service to SMUD customers during the activities associated with the Folsom Bridge and Folsom Dam Safety and Flood Damage Reduction projects. The Dam Safety efforts planned at Folsom, are under the authority of Reclamation, and the Flood Damage Reduction efforts, are under the authorities of the Corps. The temporary 230kV and 12kV transmission corridor will be constructed on Reclamation managed lands, therefore, Reclamation is the project proponent. Western is designated as a cooperating agency under NEPA for this action. Western's Federal action under this project involves Western issuing a License Outgrant to SMUD for that portion of SMUD's 230 kV line crossing over Western's Folsom Substation . Western also will issue a License Agreement to SMUD for the right to occupy the currently unused southern 125-feet of Western's existing 250-foot Folsom-Roseville (FOL-RSC) 230 kV transmission line easement for the relocation of the portion of SMUD's double-circuit Orangevale-Lake/Whiterock-Orangevale 230 kV overhead transmission line that will be located adjacent to the existing Western FOL-RSC transmission line. The issuance of a Lisence Outgrant on Western's part constitutes a Federal action requiring Western to comply with regulations set forth in NEPA. This document satisfies the regulatory requirements stipulated under NEPA.

2.0 FINDINGS

An EA has been prepared to disclose the potential environmental impacts of the proposed action in compliance with NEPA. The analysis presented in the EA evaluates the potential for the Proposed Action to impact the following resource categories:

Air Quality	Hazardous/Public Health and Worker Safety
Biological Resources	Noise
Cultural Resources	Transportation/Traffic
Geology and Soils	

During preparation of the EA, it became evident that the project would not impact several resources (i.e., agriculture; mineral resources; and population and housing) because they are not located in the project study area. Other environmental resources are present in the project study area, but no potential impacts were identified as a result of the Proposed Action and the Action Alternatives. These resources include: aesthetics/visual; hydrology and water quality; land use; and public services.

In accordance with NEPA, the CEQ implementation guidelines, and the EA for the SMUD 230 kV and 12 kV Folsom Dam Transmission Line Relocation, Reclamation and Western find that the Proposed Action will not result in significant impacts to the environment. The finding is supported by the following:

Air Quality

- Sacramento Metropolitan Air Quality Management District thresholds of significance and Environmental Protection Agency conformity thresholds for nitrogen oxides (NOx) would not be exceeded under the Proposed Action. Therefore, potential impacts associated with increases in NOx due to implementation of the Proposed Action would be less than significant, relative to the No Action Alternative.

Biological Resources

- Based on the minimal presence of vegetation within the staging areas and construction site, potential impacts of the Proposed Action on terrestrial vegetation and associated terrestrial resources would be less than significant, relative to the No Action Alternative.

- No direct impacts on the valley elderberry longhorn beetle (VELB) or its habitat (i.e., elderberry shrubs) would be expected to occur as a result of construction activities; however, disturbance of VELB and elderberry shrubs could result from dust accumulation and noise vibration. Impact avoidance measures incorporated into the Proposed Action would eliminate potential impacts on VELB and VELB habitat to less than significant. The Service concurs with Reclamation's determination that the project may affect, but is not likely to adversely affect the beetle.

- Although bald eagles could be present in the local project setting during the construction period, this species is rare, does not nest in the area, and is highly mobile. Under the Proposed Action, disturbances associated with excavation and fill activities are not anticipated to affect roosting areas or foraging habitat of the bald eagle. Therefore, potential impacts to bald eagles from the Proposed Action would less than significant, relative to the No Action Alternative. The Service concurred in Biological Opinion with Reclamation's determination that the proposed project would not effect on the bald eagle.

Cultural Resources

- Reclamation and SMUD have consulted with the State of California's Historic Preservation Officer and the U.S. Advisory Council on Historic Preservation to ensure compliance with Section 106 of the National Historic Preservation Act. Reclamation has determined that the proposed alteration in the powerline alignment has no potential to affect historic properties.

Geology and Soils

- Potential impacts to geology and soils within the project study area as a result of the Proposed Action are considered less than significant, relative to the No Action Alternative.

Hazardous/Public Health and Worker Safety

- Project operation and maintenance activities, with regard to use of hazardous substances, would not differ from those performed under existing conditions. Consequently, no increased risk associated with substances used and stored on site would occur from

operation and maintenance activities. Therefore, the increased risk to public health from the Proposed Action would be less than significant..

- As part of construction management, a right-to-know reporting program would be implemented and project contractors would be responsible for enforcing worker standards procedures for the correct handling and storage of various commercially available substances. SMUD and Reclamation would also ensure that the construction contractor complies with appropriate hazardous materials regulations. SMUD will have Hazmat cleanup equipment and materials (i.e., absorbent pads) on site to ensure proper management of hazardous materials used during construction or encountered unexpectedly during construction. Best construction practices for hazardous materials have been incorporated into the design and construction of the project. With these measures in place, the risk to workers from accidental fires and explosions related to commercially available hazardous materials will be less than significant, relative to the No Action Alternative.

Noise

- County of Sacramento and City of Folsom noise ordinances would not be exceeded under the Proposed Action. Therefore, potential impacts associated with increases in noise due to implementation of the Proposed Action would be less than significant, relative to the No Action Alternative.

Transportation and Traffic

- Construction activities under the Proposed Action would generate 20 or fewer daily trips on local area roadways. This small number of daily trips generated by the Proposed Action would result in a less-than-significant impact on local traffic, relative to the No Action Alternative.

3.0 CONCLUSION

Reclamation and Western have fully evaluated the information and analysis contained in the EA for the relocation of the SMUD 230 kV and 12 kV Folsom Dam Transmission Line. On the basis of these considerations, Reclamation and Western have determined that the EA adequately addresses the environmental issues and impacts of the Proposed Action and finds that the Proposed Action will not significantly impact the quality of the natural or human environment. Therefore, an EIS is not required and will not be prepared for this project, based on the fact that there will be no long-term adverse impacts resulting from the issuance of a temporary license and a license outgrant for the relocation of the SMUD Folsom Dam Transmission Line.

Comments or questions regarding this FONSI for the relocation of the SMUD 230 kV Folsom Dam Transmission Line may be directed to:

Mr. Shawn Oliver
U.S. Bureau of Reclamation
Central California Area Office
7794 Folsom Dam Road
Folsom, CA 95630-1799

This Finding of No Significant Impact has been prepared and is submitted to document the environmental review and evaluation of the Proposed Action in compliance with the National Environmental Policy Act of 1969, as amended.

Recommended:

Central California Area Office NEPA Coordinator — March 30, 2007
Date

Approved:

Area Manager, Central California Area Office — 3/30/07
Date

for Regional Manager, Western Area Power Administration — 4/4/07
Date

FONSI No. _____

RECLAMATION

Managing Water in the West

SACRAMENTO MUNICIPAL UTILITY DISTRICT

230 kV FOLSOM DAM TRANSMISSION LINE RELOCATION

FINAL ENVIRONMENTAL ASSESSMENT/ FINDING OF NO SIGNIFICANT IMPACT

Prepared by:

HDR | ONE COMPANY *Many Solutions®*

U.S. Department of the Interior
Bureau of Reclamation

January 2007

SACRAMENTO MUNICIPAL UTILITY DISTRICT
FOLSOM DAM TRANSMISSION LINE RELOCATION

ADMINISTRATIVE FINAL ENVIRONMENTAL ASSESSMENT/ FINDING OF NO SIGNIFICANT IMPACT

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List of Acronyms

APCD ..... Air Pollution Control
APE ..... area of potential effect
AQAP ..... Air Quality Attainment Plan
AQMD ..... Air Quality Management District
ARWEC ..... American River Water Education Center
ATCM ..... Airborne Toxic Control Measure

BMPs ..... Best Management Practices

CAA ..... Clean Air Act
CARB ..... California Air Resources Board
CCR ..... California Code of Regulations
CDFG ..... California Department of Fish and Game
CDPR ..... California Department of Parks and Recreation
CEQ ..... Council on Environmental Quality
CERCLA ..... Comprehensive Environmental Response, Compensation and Liability Act
CESA ..... California Endangered Species Act
CFR ..... Code of Federal Regulations
CO ..... carbon monoxide
Corps ..... U.S. Army Corps of Engineers
CWA ..... Clean Water Act

dBA ..... A-weighted decibels
DEH ..... Department of Environmental Health
DWR ..... Department of Water Resources

EA ..... Environmental Assessment
EIS/EIR ..... Environmental Impact Statement/Environmental Impact Report
EPA ..... Environmental Protection Agency
FESA ..... federal Endangered Species Act
ESA ..... Environmental Site Assessment

FOL-RSC ..... Western's Folsom-Roseville 230 kV Transmission Line
FONSI ..... Finding of No Significant Impact

HTRW ..... hazardous, toxic, and radiological waste

ITAs ..... Indian Trust Assets

kV ..... kilovolt

LOS ..... Level of Service

MIAD ..... Mormon Island Auxiliary Dam
mph ..... miles per hour

NAAQS..... National Ambient Air Quality Standards
NAHC..... Native American Heritage Commission
NEPA ..... National Environmental Policy Act
NOx..... nitrogen oxide
NRCS..... National Resource Conservation Service

OES..... Office of Emergency Services
OSHA..... Occupational Safety and Health Administration

PM_{10}..... particulate matter measuring 10 microns or less
$PM_{2.5}$ ..... particulate matter measuring 2.5 microns or less

Reclamation ..... United States Bureau of Reclamation
ROD..... Record of Decision
ROG..... reactive organic gasses
ROW..... right-of-way

SHPO ..... State Historic Preservation Officer
SIPs..... State Implementation Plans
SMAQMD ..... Sacramento Metropolitan Air Quality Management District
SMUD ..... Sacramento Municipal Utilities District
SVAB..... Sacramento Valley Air Basin

UARP ..... Upper American River Project
USFWS..... U.S. Fish and Wildlife Service

VELB ..... Valley Elderberry Longhorn Beetle

Western..... Western Area Power Administration

Chapter 1 Introduction

The U.S. Army Corps of Engineers (Corps) proposes to construct a new vehicle bridge across the American River downstream about 800 feet east and 1,100 feet west of Folsom Dam, which will be located in an existing right-of-way (ROW) currently occupied by the Sacramento Municipal Utility District (SMUD) double-circuit Orangevale–Lake/Whiterock-Orangevale 230 kilovolt (kV) and 12 kV transmission lines. These lines will need to be relocated to accommodate the new bridge. SMUD proposes to relocate a portion of the existing 230 kV and 12 kV transmission lines to the north of the proposed Folsom Bridge and road project, generally midway between the future road and Folsom Dam, and adjacent to the existing Western Area Power Administration (Western) 230 kV Folsom-Roseville transmission line along the base of Folsom Dam.

1.1 Background

The Folsom Bridge and Folsom Dam Safety and Flood Damage Reduction projects fall under the authority of the Corps. The Dam Safety efforts planned at Folsom, under the authority of the U.S. Bureau of Reclamation (Reclamation), and the Flood Damage Reduction efforts, under the authorities of the Corps, and the new 230kV and 12kV transmission corridor will be constructed on Reclamation managed lands therefore, Reclamation is the project proponent. Congress has authorized the Folsom Dam Safety and Flood Damage Reduction project and the Folsom Bridge project under the umbrella of the American River Watershed Investigations Project. The Corps has responsibility for design and construction of the Folsom Bridge; Reclamation has responsibility for the design and construction of the various components of the Folsom Dam Safety and Flood Damage Reduction project. The Folsom Dam Safety and Flood Damage Reduction project is a multi-feature joint Federal project, which will entail dam face modification and construction of an auxiliary spillway. The proposed 230 kV and 12 kV line would be located in this joint Federal project area, and the existing 230 kV and 12 kV lines would be removed from the proposed Folsom Bridge project area while avoiding impacts to the planned auxiliary spillway. The SMUD double-circuit Orangevale–Lake/Whiterock-Orangevale 230 kV overhead transmission line is a critical link in the SMUD electrical grid, which connects the Orangevale switchyard to both SMUD's Lake substation, which receives electricity from SMUD's Upper American River Project (UARP), and directly to SMUD's Whiterock powerhouse, which is part of the UARP. The 12kV line provides power to the Corps building on the east side of Folsom Dam and conducts power to a pad mount transformer (1-kmp-4) which serves only this building. The 12 kV line extends northwest, paralleling the current 230 kV line and terminates at the Corps building.

1.2 Project Purpose and Need

The construction of the proposed Folsom Bridge necessitates the relocation of the transmission lines, as identified in the *American River Watershed Project Final Supplemental Environmental Impact Statement/Environmental Impact Report* (EIS/EIR) (September 2006). SMUD is proposing to relocate the existing 230 kV and 12 kV transmission lines adjacent to the existing Western 230 kV Folsom-Roseville transmission line along the base of Folsom Dam to provide continued reliable power service to SMUD customers during the activities associated with the Folsom Bridge and Folsom Dam Safety and Flood Damage Relocation projects. Resultant of a series of meetings with the Corps, Reclamation and City of Folsom, SMUD identified the need to move the line to the north in order the avoid construction activity conflicts with the Folsom Bridge project and to provide for future connection into the Western substation. This possible future

connection into the Western Folsom substation would be addressed by a separate environmental document.

Reclamation will be excavating for an auxiliary spillway in fall 2007. This auxiliary spillway will be located between the proposed bridge road and Folsom Dam on the south side of the American River. Reclamation has identified uses of this area to include: maintenance and construction roads; stockpile storage; concrete batch plant; materials sorting and processing plant; and other general staging area functions which most likely require relocation of a portion of the proposed north route. Reclamation has informed SMUD that if the north route for the planned 230kV and 12 kV line result in impacts to the planned auxiliary spillway project then SMUD may be required to move portions of the transmission line at SMUD's expense. Before construction is scheduled to be complete construction of the north alignment Reclamation may require SMUD to move one or more of these transmission line towers to avoid impacting the construction, operation or maintenance of the auxiliary spillway. SMUD intends to avoid impacting any of the activities associated with the Folsom Bridge and road and auxiliary spillway construction.

1.3 Purpose of this Environmental Assessment

This document meets Reclamation's impact assessment obligations under the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321 *et seq.*). NEPA requires full disclosure regarding potential federal actions, their alternatives, potential impacts, and possible mitigation for actions taken by federal agencies.

This document, therefore, will serve as the appropriate environmental review and approval document under NEPA. Under this document, an Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) are included in compliance with NEPA.

1.3.1 Lead Agency

Reclamation is the designated lead agency under NEPA. Reclamation will publish public notice, provide for public and agency review, and respond to substantive comments on this document, as required by NEPA. Reclamation also will consult with the California State Historic Preservation Officer (SHPO) pursuant to the regulatory requirements of Section 106 of the National Historic Preservation Act (NHPA) and with the U.S. Fish and Wildlife Service pursuant to the requirements of Section 7 of the Endangered Species Act (ESA).

1.3.2 Cooperating Agency

Western is designated as a cooperating agency under NEPA for this action. "Cooperating agency" means any Federal agency other than a lead agency which has jurisdiction by law or special expertise with respect to any environmental impact involved in the proposal for legislation or other major action significantly affecting the quality of the human environment (40 CFR § 1508.5). Western's Federal action under this project involves Western issuing a License Agreement to SMUD for the right to occupy the currently unused portion of Western's Folsom-Roseville (FOL-RSC) 230 kV transmission line easement for the relocation of the portion of SMUD's double-circuit Orangevale–Lake/Whiterock-Orangevale 230 kV overhead transmission line that will be located adjacent to the existing Western FOL-RSC transmission line. Western also will issue a License Outgrant to SMUD for that portion of SMUD's 230 kV line crossing over Western's Folsom Substation. These actions on Western's part constitute a Federal undertaking requiring Western to comply with regulations set forth in NEPA, the

NHPA, and the ESA. This document satisfies the regulatory requirements stipulated under these acts.

1.4 Required Decisions, Permits, and Approvals

Several laws and regulations that apply to the project require permits. Agencies and related permits or other environmental requirements are identified in **Table 1-1.** Final permitting requirements for the project will be determined through agency review of the EA and other agency procedures.

Table 1-1. Anticipated Permits and Approvals for the Proposed Action.

Agency	Permit or Other Environmental Requirement
California Department of Fish and Game	California Endangered Species Act (Fish and Game Code Section 2050 et. seq.)
U.S. Fish and Wildlife Service	Endangered Species Act requirements for wildlife and plants (P.L. 93-205; 16 U.S.C. § 1536)
U.S. Bureau of Reclamation	Land use easement/permit
Western Area Power Administration	License Agreement/License Outgrant

1.5 Documents Incorporated by Reference

The draft and final EA will satisfy federal environmental reporting requirements pursuant to NEPA. Incorporation by reference is a procedure for reducing the size of environmental documents and is most appropriate for including long, descriptive, or technical materials that provide general background information, but do not contribute directly to the specific analysis of the project itself. The information contained in the *American River Watershed Project, Post Authorization Decision Document, Folsom Dam Raise/Folsom Bridge Draft Supplemental Environmental Impact Statement/Environmental Impact Report* (Folsom Bridge EIS/EIR) (Corps and City of Folsom 2006) and the *American River Watershed, California, Folsom Dam Modification Project Final Environmental Assessment/Initial Study* (Folsom Mods EA/IS) (Reclamation Board and Corps 2001) is incorporated by reference and should be considered when reviewing this report.

1.6 Agency and Public Involvement

Reclamation, as the lead agency under NEPA, is responsible for ensuring compliance with NEPA environmental documentation and processing requirements for the Proposed Action. Western, as a cooperating agency, has been an active participant in the preparation of the environmental documentation.

In accordance with NEPA, preparation of the EA included contact with affected agencies, organizations, and persons who may have an interest in the Proposed Action. Specific agencies contacted during preparation and public circulation of the Draft EA included:

- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- State Historic Preservation Officer
- California Department of Parks and Recreation

1.6.1 *Final Environmental Assessment*

Reclamation distributed the Draft EA to federal and state resource and regulatory agencies in October 2006. The Final EA has been prepared through consideration and response to substantive comments received from agency review of the Draft EA. The following agencies provided comment letters on the Draft EA:

- Western Area Power Administration
- U.S. Army Corps of Engineers

The comment letters and responses are provided in Appendix A. Additionally, correspondence from USFWS and the SHPO associated with the ongoing federal ESA and NHPA consultation and coordination for the project is provided in Appendices D and E, respectively.

The Final EA therefore consists of the responses to the agency comments, and clarifications or further explanations of information provided in the Draft EA. Based upon this process and associated analysis, Reclamation, through the FONSI, is responsible for determining that the EA is adequate in compliance with NEPA. After making this determination, Reclamation will use the EA/FONSI in making its decision on whether to approve the Proposed Action.

The Draft EA has been modified (October 2006) has been modified top reflect revisions and corrections made in response to agency comments received during the public review and comment period, including updated information or analyses relevant to the assessment of the Proposed Action. These changes to the document provide additional detail regarding the Proposed Action, clarify technical impact discussions, and correct typographical errors found during preparation of the final documents. The modifications do not alter the impact conclusions that were presented in the Draft EA. The revisions and corrections are summarized below (**Table 1-2**).

Table 1-2. Revisions and corrections made to the Draft EA.

Document Section	Revision/Correction
FONSI	Updated language to include description of 12 kV line.
	Inserted description of auxiliary spillway.
List of Acronyms	Updated acronym references used in the Draft EA.
General Document Revisions and Corrections	Corrected acronyms.
	Inserted 12 kV line discussion.
	Inserted auxiliary spillway information.
	Replaced " Folsom Dam Modifications Project" with "Folsom Dam Safety and Flood Damage Reduction Project"
Chapter 1 - Introduction	Made general editorial revisions throughout chapter.
	Inserted 12 kV line description.
	Inserted cooperating agency description.
	Inserted auxiliary spillway information.
	Added section describing the Final EA including summary list of revisions and corrections to the Draft EA.
Chapter 2 - Description of Proposed Action and Alternatives	Made general editorial revisions throughout chapter.
	Revised the description of the Proposed Action to include the 12 kV line.
	Inserted auxiliary spillway information.
	Updated land use easements description.
Chapter 3 - Affected Environment and	Updated figures to include 12 kV line and auxiliary spillway.

Document Section	Revision/Correction
Environmental Consequences	Made general editorial revisions throughout chapter.
	Updated analyses to reflect 12 kV line and auxiliary spillway.
Chapter 4 – Other Impact Considerations	Updated cumulative project descriptions.
Chapter 5 – Compliance with Applicable Laws, Ordinances, Regulations, and Standards	Updated ESA compliance description.
Chapter 6 – Consultation and Coordination	Made general editorial revisions throughout chapter.
Chapter 7 – List of Preparers	Made general editorial revisions throughout chapter.
Chapter 8 - Literature Cited	Made general editorial revisions throughout chapter.
Appendices	Added Appendix A, Comment Letters Received on the Draft Environmental Assessment and Responses to Comments
	Added Appendix D, Endangered Species Act Consultation and Coordination
	Added Appendix E, National Historic Preservation Act Section 106 Consultation and Coordination

Chapter 2 Description of Proposed Action and Alternatives

2.1 PROJECT LOCATION/STUDY AREA

The project is located in the City of Folsom within Sacramento County in northern California (**Figure 2-1**). The project area encompasses approximately 106 acres located north of the proposed Folsom Bridge and road project, generally midway between the future road and Folsom Dam. The project area extends from Folsom Dam Road, west past Folsom Auburn Road to near Lakeside Way, and south to near Lakeside Way (**Figure 2-2**).

2.1.1 *Public Utility Facilities*

The existing facilities and public utilities within the project area are associated with Reclamation's Central California Area Office, Folsom Dam industrial complex, and the Corps' Folsom Dam Modification project. The public utilities include electrical and water supply facilities. The Folsom Dam industrial complex houses Reclamation's staff, shops, warehouses, and administrative buildings. The complex also houses California Department of Parks and Recreation (CDPR) staff and shops, the American River Water Education Center (ARWEC), and buildings supporting the Folsom State Recreation Area. The ARWEC is a joint effort between Reclamation and CDPR to promote water education directly related to the American River Watershed. The facility provides dam tours to school groups, various indoor and outdoor water-related exhibits, picnic areas, amphitheater, and a waterwise garden. In addition, the proposed Corps' resident office, staging area, and part of the proposed parking lot would be located near the project area. Facilities include the resident office building consisting of portable modular trailers assembled together, a storage trailer, two mechanical rooms, and an attached covered deck. Also proposed are paved parking for 42 spaces, various concrete pads, and temporary vehicle staging areas. The area totals 10 acres.

2.1.2 *Sacramento Municipal Utility District Transmission Lines*

SMUD owns and operates the double circuit Orangevale–Lake/Whiterock-Orangevale 230 kV transmission line that extends east/west along the northern boundary of Folsom Prison and provides electricity from the UARP hydropower facilities. This line was constructed in the early 1960s concurrent with construction of the UARP to provide power to the SMUD service area. These lines provide critical base load and peaking power to the SMUD system; originating from SMUD's UARP located in El Dorado County, these lines feed power throughout Sacramento and a portions of Placer County. It serves as a critical link to not only the SMUD service area but also the northern California electrical grid.

SMUD also operates a 12 kV line that provides power to the Corps building on the east side of the dam and conducts power to a pad mount transformer (1-kmp-4) which serves only this building. SMUD assumed ownership of the line from PG&E in the mid 1990s. The line is energized from a pad mounted three-way switch (U-11266-s), which is located on the east side of Folsom Dam Road about 200' north of E Natoma Street. This switch is energized from the Leidesdorff-Coloma substation. The line currently is located on the east side of the project area. The line begins on the east side of Folsom Dam Road just north of E Natoma St. The 12 kV line travels northwest four spans and then crosses to the west side of Folsom Dam Road. It follows along Folsom Dam Road paralleling the 230 kV line and terminates at the Corps building.

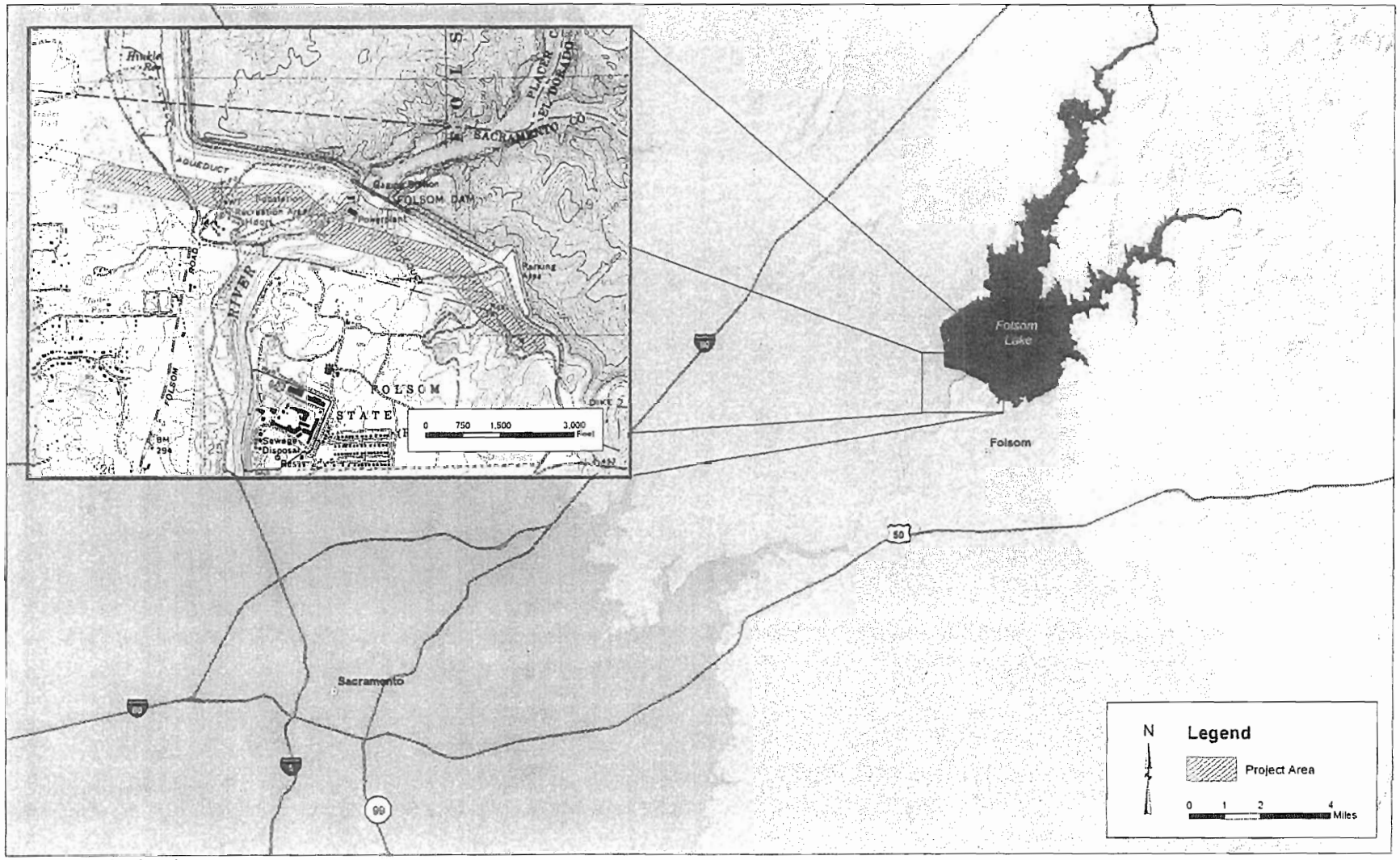

Figure 2-1. Project Location.

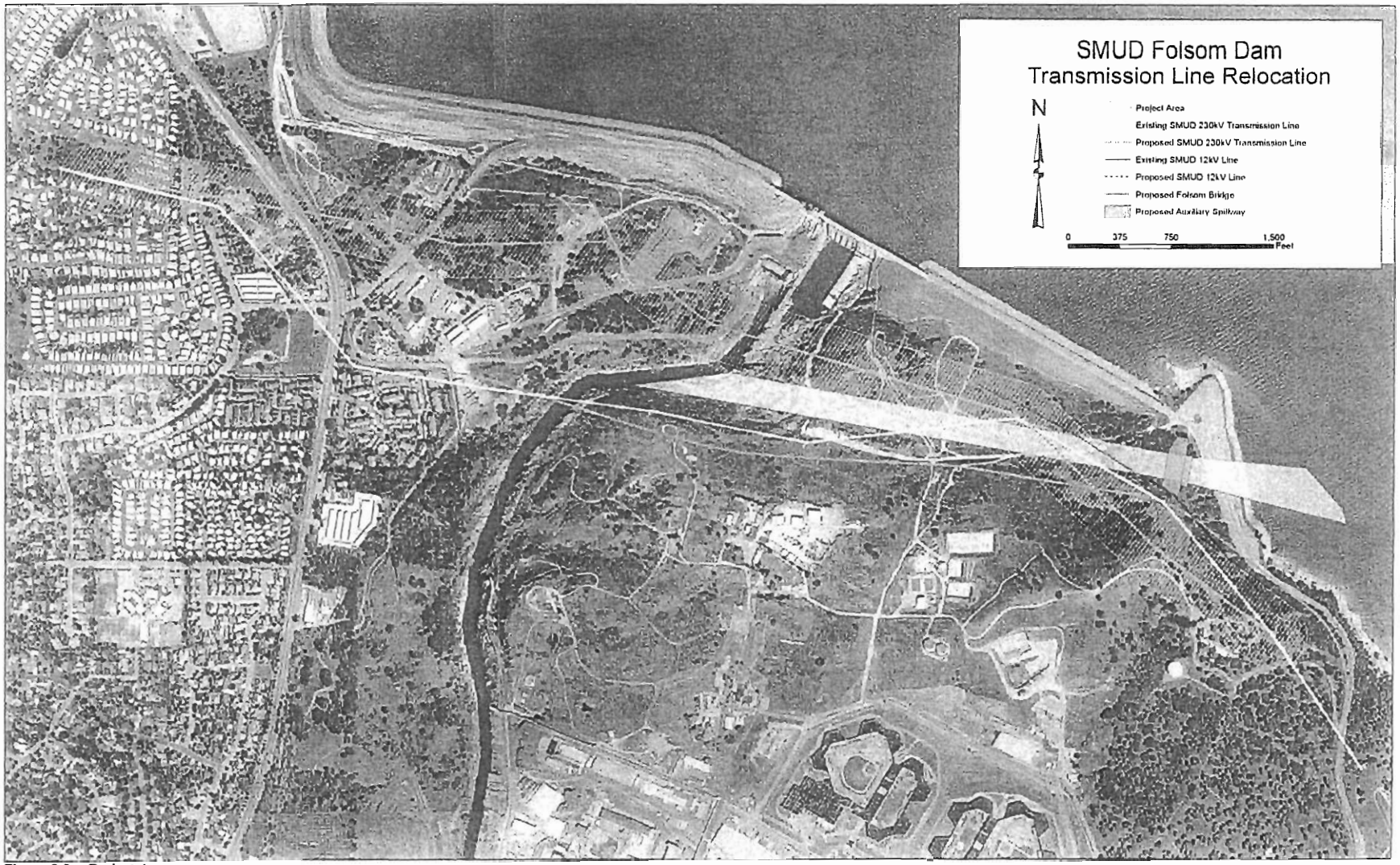

Figure 2-2. Project Area.

The existing SMUD transmission lines are located in an easement granted by Reclamation. This easement will be released back to Reclamation; a new easement will be secured from Reclamation prior to project construction. A portion of the relocated transmission line route is located within Western's right-of way (ROW); Western will issue a License Agreement to SMUD for the right to occupy this portion of the easement. Western also will issue a License Outgrant to SMUD for the portion of SMUD's relocated transmission line that crosses over Western's Folsom substation. In accordance with the California Environmental Quality Act (CEQA), an Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared that includes this new easement.

2.2 PROPOSED ACTION

The Proposed Action consists of removing the existing Orangevale-Lake/Whiterock-Orangevale 230 kV transmission line (presently located in the corridor proposed for the Folsom Bridge) and the existing 12 kV transmission line (currently located on the east side of the project area) and relocating the line sections to the north of the proposed Folsom Bridge and road project, generally midway between the future road and Folsom Dam and partially within the existing Western 230 kV transmission line presently located along the base of Folsom Dam.

2.2.1 *Major Features of Proposed Action*

OPERATION AND MAINTENANCE

The relocated 230 kV and 12 kV transmission lines (relocated transmission line) would be owned and operated by SMUD. The 230 kV transmission line provides power to the SMUD service area, which includes most of Sacramento County and portions of Placer County. The 12 kV line provides power to the Corps building on the east side of the dam and conducts power to a pad mount transformer (1-kmp-4) which serves only this building. The transmission line would be in operation 24-hours per day, seven days a week. The anticipated lifetime of the transmission line is 50 years. Maintenance of the line would occur at least on a biannual basis when helicopter flyovers are made to inspect line, insulators, and pole integrity.

TRANSMISSION LINE AND POLES

Nine existing lattice steel towers would be replaced by 11 new steel/concrete poles. Removal of the existing 230 kV transmission line towers would include dismantling the steel towers and transporting the pieces off-site by truck. The concrete pads from the steel towers would be left in place.

The planned route for the new 230 kV northern transmission line is to the north of the proposed Folsom Bridge and road project, generally midway between the future road and Folsom Dam, extending west adjacent to the existing Western's Folsom Substation to facilitate a future interconnection (**Figure 2-3**). The planned route is approximately 9,787 lineal feet (1.85 miles) long (measured along the route centerline) and extends from existing SMUD Tower No. 279 on the east end to existing SMUD Tower No. 292 on the west end (Figure 2-3).

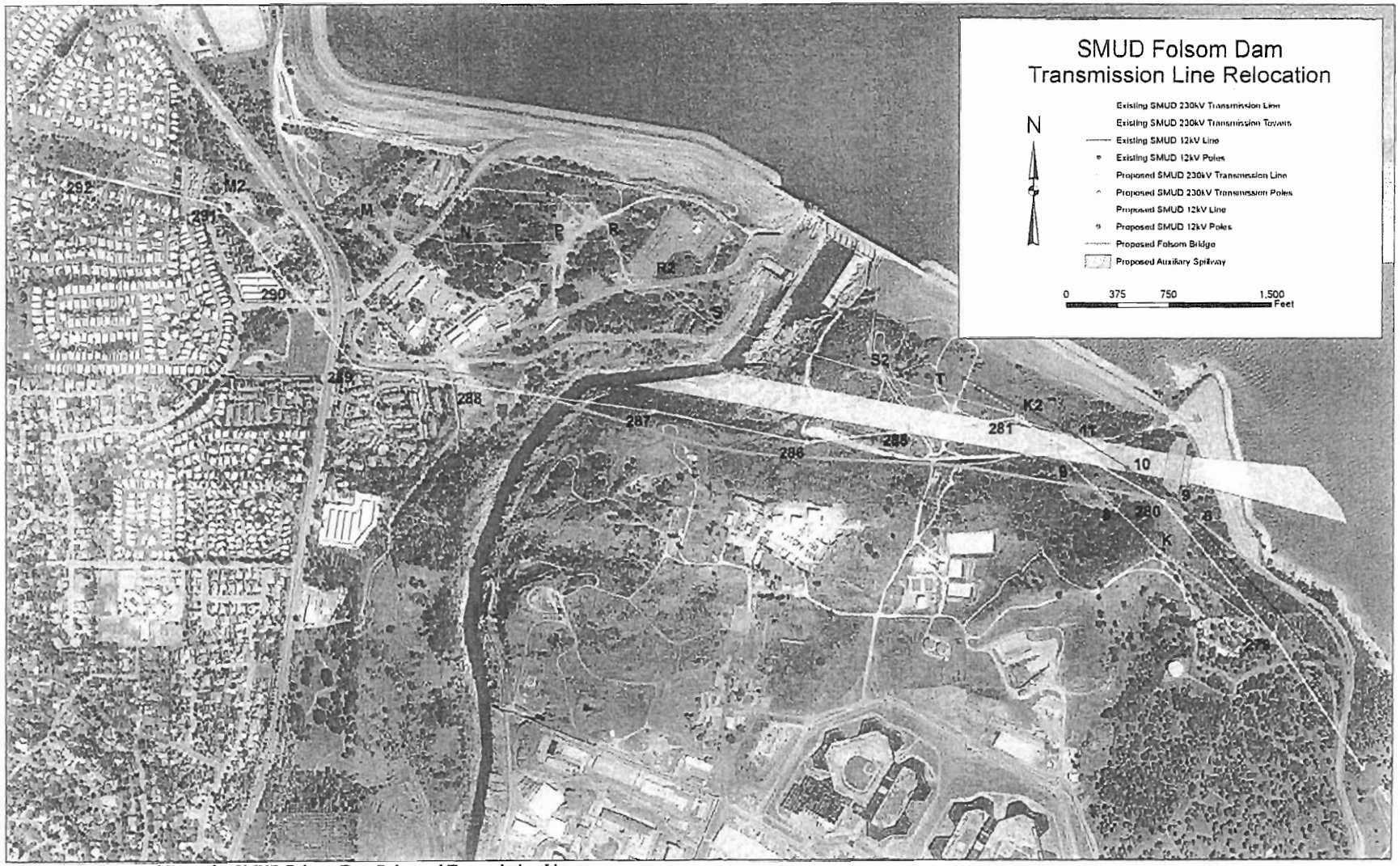

Figure 2-3. Proposed Route for SMUD Folsom Dam Relocated Transmission Line.

The 12 kV line will retain its current path until it crosses Folsom Dam Road. Once the 12 kV line crosses the road, the 12 kV line will be moved onto the 230 kV line as an under build. The 12 kV line will remain on the 230 kV line until it approaches the north side of the proposed spillway. After crossing the spillway, a one new wood pole will be set on the north side of the proposed spillway and three new wood poles will be set on the south side of the proposed spillway and the line will terminate at the Corps building (Figure 2-3).

The new poles would be fabricated from reinforced concrete, galvanized tubular steel, or a combination thereof. Basic configuration would be a single mast with horizontal arms supporting insulators and conductor, with three conductors on each side of the pole (**Figure 2-4**). Typical pole heights would range from 85 feet to 125 feet above the ground, averaging about 110 feet. Poles, arms, insulators, and conductor would be light gray in color.

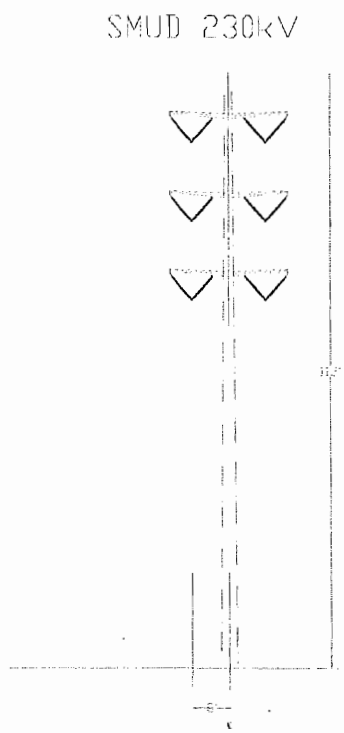

Figure 2-4. Basic Configuration for Relocated Transmission Line Poles.

Average span length between the new transmission line steel/concrete poles would be approximately 815 feet. Ground clearance (distance between the conductor and the ground) under worst case sag conditions would not be less than 30 feet, in conformance with California Public Utilities Commission General Order No. 95 rules for overhead line construction. Minimum vertical and lateral clearance requirements at line crossings and parallel line sections (such as the existing 230 kV Western line) also would be met.

CONSTRUCTION EXCAVATION, ACCESS ROADS, STAGING AREAS

No excavation activities are associated with the removal of the existing 230 kV line steel towers. General access to the existing steel towers would be provided from the existing dam access road

off Folsom Dam Road or Folsom-Auburn Road. Staging areas for the removal of the existing steel towers would include approximately one-fourth acre, and would be located adjacent to the existing steel tower. Staging areas are typically centered around the tower, but would be adjusted according to the site to avoid any disturbance to resources within the area. As tower disassembly progresses, steel members of the tower would be loaded onto an 18-wheel tractor-trailer and transported to the SMUD corporate yard, located in east Sacramento. There would be no disruption to existing vegetation or other resources during the dismantling phase.

Excavation associated with the installation of the new 230 kV line steel/concrete poles would be within an approximate 15 foot by 15 foot project footprint for each pole and would include approximately 20 cubic yards of excavated soil. Each new 12 kV pole will require a 36-inch diameter hole, within a project footprint of approximately 10 foot by 10 foot. The area of disturbance assumes a permanent loss of about seven square feet for each hole. Native soil is used to fill in and around hole. Bentonite is sometimes used as needed if native soil is not available. Materials from excavation would be deposited in the staging area. The staging areas for the new 230 kV line steel/concrete poles and the new 12 kV wood poles would include approximately one-fourth acre, and would be located adjacent to the new pole locations. Staging areas are typically centered around the pole, but would be adjusted according to the site to avoid any disturbance to resources within the area. All excess materials from excavation would be disposed off site. General construction, operation, and maintenance access to the new pole locations would be provided from the existing dam access road off Folsom Dam Road or Folsom-Auburn Road. All lay-down areas associated with the new poles would occur in existing areas, such as paving lots or roads, to avoid disturbance to resources.

CONSTRUCTION EQUIPMENT, WORKERS, SCHEDULE

Construction Equipment and Workers

The type (or equivalent) of equipment required for the Proposed Action is discussed below. Equipment associated with the dismantling and removal of the existing steel towers includes:

- Line truck
- Crew truck
- Crane
- Portable generator equipment
- 18-wheel tractor/trailer

Dismantling of the existing steel towers would require one construction crew consisting of approximately 8 workers, working a single 8-hour shift, 5 days per week, operating concurrently over an anticipated 4-month construction period associated with the whole project. Equipment associated with the installation of the new steel/concrete and wood poles includes:

- Line truck
- Crew truck
- Crane
- Dump Truck
- Backhoe
- Grader
- Concrete truck

- 18-wheel tractor/trailer
- Portable generator equipment
- Truck mounted drill rig

Installation of the new steel/concrete and wood poles would require one construction crew consisting of approximately 8 workers, working a single 8-hour shift, 5 days per week, operating concurrently over an anticipated 4-month construction period.

Schedule

SMUD anticipates ordering the new transmission line steel/concrete poles in November or December 2006, after the Memorandum of Agreement with the City of Folsom is finalized. SMUD plans to commence the dismantling and installation activities associated with the Proposed Action as early as January 2007. It is anticipated that the total project would take four months to complete with the relocated transmission line in place by April 2007. Temporary line relocation may be required, depending on schedule of the Folsom Bridge project construction. Dismantling and temporary relocation of the existing line and towers would be done in advance of bridge crane work as required.

Reclamation will be excavating for an auxiliary spillway in fall 2007. This auxiliary spillway will be located between the proposed bridge road and Folsom Dam on the south side of the American River. Reclamation has identified uses of this area to include: maintenance and construction roads; stockpile storage; concrete batch plant; materials sorting and processing plant; and other general staging area functions which may require relocation of a portion of the proposed north route. Reclamation may require SMUD to move one or more of these proposed transmission line towers to avoid impacting the auxiliary spillway

SMUD intends to avoid impacting any of the activities associated with the Folsom Bridge and road and auxiliary spillway construction. According to the schedules put forth by Reclamation, the City of Folsom and the Corps, the relocation of the SMUD transmission lines would be initiated prior to construction activities associated with the new Folsom Bridge and road and auxiliary spillway. The project would be completed and energized well before the completion of the Folsom Bridge and road and auxiliary spillway. There would be no interruption of the required electrical service as a result of SMUD's proposed actions associated with the relocation of the existing transmission lines.

LAND USE EASEMENTS

SMUD's proposed route for the relocated 230 kV and 12 kV transmission lines would transverse Reclamation property, the western portion of which falls in line within Western's transmission line corridor easement and the eastern portion aligns with SMUD's existing easement. A new easement would be secured from the federal land managed by Reclamation. Temporary easements are typically not granted prior to the granting of the associated permanent easements. SMUD would execute a quitclaim deed for the existing route.

Western would issue a License Agreement to SMUD for the right to occupy the currently unused portion of Western's FOL-RSC 230 kV transmission line easement for the relocation of a portion of SMUD's double-circuit Orangevale-Lake/Whiterock-Orangevale 230 kV overhead transmission line. The underlying ROW land is owned in fee by Reclamation; Western only owns as easement for the ROW. Western also will issue a License Outgrant to SMUD for that

portion of SMUD's 230 kV line crossing over Western's Folsom Substation. The Folsom substation and land is owned in fee by Western. Western will issue the agreement for the same duration (in perpetuity) that Reclamation will be issuing their easement to SMUD. In accordance with Federal Law, licenses are limited to a duration of 50 years; therefore, Western will not stipulate a term in the agreement.

FUTURE ACTIONS

SMUD relocating the transmission line to the north would provide for future SMUD connection into the Western Folsom substation. This possible future connection to the Western Folsom substation would be addressed by a separate environmental document.

Future federal (i.e., Reclamation) projects associated with the Folsom Dam facilities, including the Auxiliary Spillway modifications and Folsom Dam safety/repair work may require that the relocated 230 kV and 12 kV transmission line and poles be moved in order to accommodate any activities associated with these future projects. If the poles and associated transmission line are moved outside of the project study area, additional environmental documentation may be required.

2.2.2 *Environmental Protection Measures*

The Best Management Practices (BMPs) and Environmental Protection Measures incorporated into the Proposed Action for the resources analyzed in this document are included in **Table 2-1.**

2.3 DEVELOPMENT OF PROJECT ALTERNATIVES

The environmental review process under NEPA requires that all reasonable alternatives to the Proposed Action be examined. Alternatives initially developed during the environmental review process have been evaluated and screened so that only a reasonable range of alternatives are carried forward for detailed analysis in this joint environmental document. Those alternatives determined to be unreasonable are eliminated from further consideration. The following sections discuss the alternative development and screening process and identify those alternatives that would fulfill the purpose of and need for the Proposed Action that are selected for further consideration in this joint environmental document.

Consistent and standardized criteria for establishing the reasonableness or feasibility of certain alternatives are typically applied. Reasonable alternatives have been developed that are bound by the notion of desirability, emphasize common sense realities, provide a realistic range of choices designed to accomplish the objectives, consider actions outside of the federal agencies' capability or jurisdiction (if they too, are judged to be reasonable), be practical, technically and economically appropriate, be timely to implement, and include a No Action alternative.

2.3.1 *Alternatives Screening Process*

The following describes the results of the screening process where each preliminary alternative was evaluated based on its ability to pass a set of screening criteria. The screening criteria included the following:

Technical and Physical Criterion (T/P)	An alternative must be technically and physically feasible.
Institutional Criterion (IC)	An alternative must not be conditioned upon speculative approvals, agreements, permits, or other discretionary actions.

Economic Criterion (EC)	An alternative should not incur costs that would result in undue hardships to the consumer or purveyor implementing the project.
Reliability Criterion (RC)	An alternative should minimize the risk of disruptions to power supplies by maximizing technical reliability and be based upon a power source with the least risk of shortages.
Efficacy and Timing Criterion (E/T)	An alternative must be able to be implemented within a reasonable timeframe.
Public Health Criterion (PH)	An alternative must provide a power supply that meets or exceeds state and federal standards associated with its intended use.
Operational Criterion (OC)	An alternative should endeavor to maximize a system's operational and implementation flexibility.
Environmental Criterion	An alternative should avoid or substantially lessen the Proposed Action's significant environmental impacts.

The screening analysis is based on the application of the above screening criteria. The screening criteria assist with identifying which of the preliminary alternatives were carried forward for further analysis and which were rejected as infeasible. The alternatives that were rejected as infeasible include:

A. Relocation of the transmission line to the south of the proposed Folsom Bridge with alignment with Western's transmission line to facilitate a future connection. The alternative would involve SMUD relocating the transmission to the south of the proposed Folsom Bridge route and then align along Western's transmission line to the north, providing potential for future connection.

B. Relocation of the transmission line to the south of the proposed Folsom Bridge with no alignment with Western's transmission line to facilitate a future connection. The alternative would involve SMUD relocating the transmission to the south of the proposed Folsom Bridge route, but would not include the alignment along Western's transmission line to the north.

These alternatives were rejected as infeasible because they did not meet all of the screening criteria, or did not meet the anticipated goals associated with the project. These alternatives would incur additional costs (EC), be dependent on the timing of Folsom Bridge project (E/T) have the potential for additional interruptions to power service (RC), and may have additional environmental impacts (EC).

2.4 Alternatives Selected for Detailed Analysis

2.4.1 *No Action Alternative*

The No Action is defined as the most likely future that could be expected to occur in the absence of the project (§ 8.6.1 of Reclamation's NEPA Handbook). The No Action Alternative is the basis to which all other alternatives are compared (§ 8.6.1 of Reclamation's NEPA Handbook).

The No Action Alternative would leave the existing transmission lines at their present location, with no relocation of existing towers. Two scenarios associated with the No Action Alternative are possible: 1) that the proposed Folsom Bridge alignment be located in a different corridor other than the location being presently considered; and 2) that the proposed Folsom Bridge is

not built. Both of these scenarios would eliminate the need to relocate the transmission line. Under the No Action Alternative, the Lake Natoma Crossing and Rainbow Bridge would continue to be used as the primary route between Folsom and western El Dorado County and communities in northwestern Sacramento County and southern Placer County. SMUD power service would continue to be provided to its customers; however, there would be no alignment with Westerns current transmission line to the north.

2.4.2 *Proposed Action*

The Proposed Action, as described in Section 2.2 above, is carried forward and analyzed for potential impacts to environmental resources associated with the project area in Chapter 3, Affected Environment and Environmental Consequences.

Table 2-1. Proposed Action Projected Best Management Practices[1] and Mitigation Measures

Best Management Practices (BMPs) or Mitigation Measure	BMP Implementation Duration		Monitoring Duration		Responsibility	
	One-time	Ongoing	One-time	Ongoing	BMP Implementation	BMP Monitoring
Air Quality						
AQ 1. Perform routine tuning and maintenance of construction equipment to ensure that the equipment is in proper running order.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD
AQ 2. Monitor dust conditions within the construction area to ensure that the generation of fugitive dust is minimized.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD
AQ 3. Periodic application of water to disturbed areas, up to three times per day.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD
AQ 4. Suspension of soil-disturbing activities during periods with winds over 25 miles per hour (mph).		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD
AQ 5. Apply water, asphalt oil, or suitable soil stabilizers to inactive areas or other areas that can give rides to airborne dust.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD
AQ 6. Cover all inactive stockpiles with tarps or water to prevent airborne dust.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD
AQ 7. Water all haul roads as needed to prevent dust.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD
AQ 8. Limit speed on unpaved roads to less than 15 miles per hour (mph).						
AQ 9. Replace ground cover in disturbed areas as soon as construction in these areas is complete.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD

Best Management Practices (BMPs) or Mitigation Measure	BMP Implementation Duration		Monitoring Duration		Responsibility	
	One-time	Ongoing	One-time	Ongoing	BMP Implementation	BMP Monitoring
AQ 10. Maintain two feet of free board space on haul trucks.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD
AQ 11. Minimize the amount of disturbed area, the amount of materials actively worked, and the amount of material stockpiled.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD
AQ 12. Emissions from all off-road diesel-powered equipment used at the project site shall not exceed 40 percent opacity for more than three minutes in any one hour.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD
AQ 13. Sweep or wash paved streets adjacent to the project construction site at least once a day to remove accumulated dust.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD
Biological Resources						
B 1. Disturbance to VELB would be avoided by establishing and maintaining, to the maximum extent feasible, a 100-foot (or wider) buffer around all elderberry plants located within the immediate project footprint. If, during construction design or construction it is determined that a 100-foot buffer cannot be maintained, SMUD shall consult and gain approval from USFWS for measures that would minimize disturbance, including relocation of transmission line poles.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD
B 2. Work crews and contractors given environmental awareness training that would emphasize the identification of elderberry shrubs and the need to avoid damaging the elderberry plants and the possible penalties of non-compliance.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD

Best Management Practices (BMPs) or Mitigation Measure	BMP Implementation Duration		Monitoring Duration		Responsibility	
	One-time	Ongoing	One-time	Ongoing	BMP Implementation	BMP Monitoring
B 3. Signs erected every 50 feet along the edge of the avoidance area displaying the following information: *"This area is habitat of the valley elderberry longhorn beetle, a federally threatened species, and must not be disturbed. The Endangered Species Act of 1973, as amended, protects this species. Violators are subject to prosecution, fines, and imprisonment."* The signs would be visible from a 20-foot distance and would be maintained for the duration of construction.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD
B 4. Any impacts to the buffer area (the area within 100 feet of elderberry shrubs) during construction would be restored. Erosion control and revegetation with appropriate native plants would be provided for the affected areas.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD
B 5. After construction, if appropriate, buffer areas would continue to be protected from the adverse effects of the project. Appropriate measures would include fencing, weeding, posting signs, and removing trash.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD
B 6. No insecticide, herbicides, fertilizers, or other chemicals that might harm the beetle or its host plant would be used within 100 feet of any elderberry shrub with one or more stems measuring 1.0 inch or greater in diameter at ground level.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD
B 7. A written description of the restoration, protection, and maintenance of the encroachment areas would be provided at the completion of construction.	At conclusion of project construction		At conclusion of project construction		SMUD	SMUD
B 8. On-site construction personnel receive instruction regarding the potential presence of listed species and the importance of avoiding impacts to these species and their habitat.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD

Best Management Practices (BMPs) or Mitigation Measure	BMP Implementation Duration		Monitoring Duration		Responsibility	
	One-time	Ongoing	One-time	Ongoing	BMP Implementation	BMP Monitoring
B 9. USFWS would be supplied with a 7.5 U.S. Geological Survey topographic map that clearly delineates the project area and habitat contained within this area before implementation of the project.	Prior to project construction		Prior to project construction		SMUD	SMUD
B 10. A USFWS-approved biologist would inspect construction-related activities to ensure that no degradation of the seasonal wetland habitat occurs. The biologist would have the authority to stop activities that may result in adverse impacts to the habitat until the necessary corrective measures are implemented.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD
B 11. A sufficient distance of needed staging and/or storage areas from any proximal wetlands will be maintained to ensure their protection during construction activities.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD
B 12. All areas to be avoided during construction activities fenced and flagged.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD
Cultural Resources						
C 1. If any cultural resources, such as structure features, unusual amounts of bone or shell, artifacts, human remains, or architectural remains are encountered during any project development activities, work shall be suspended and the Sacramento County Department of Environmental Review and Assessment shall be immediately notified. At that time, the Department of Environmental Review and Assessment will coordinate any necessary investigations of the site with appropriate specialists, as needed. SMUD shall be required to implement any mitigation deemed necessary for the protection of the cultural resources.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD

Best Management Practices (BMPs) or Mitigation Measure	BMP Implementation Duration		Monitoring Duration		Responsibility	
	One-time	Ongoing	One-time	Ongoing	BMP Implementation	BMP Monitoring
C 2. When Native American archaeological, ethnographic, or spiritual resources are involved, all identification and treatment shall be conducted by qualified archaeologists who meet the federal standards as stated in the Code of Federal Regulations (CFR) (36 CFR 61), and Native American representatives who are approved by the local Native American community as keepers of their cultural traditions. In the event that no such Native American is available, persons who represent tribal governments and/or organizations in the locale in which resources could be affected shall be consulted.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD
C 3. Pursuant to Section 5097.98 of the California Public Resources Code and Section 7050.5 of the State Health and Safety Code, if human remains or bone of unknown origin is found during construction, all work shall stop in the vicinity of the find and the Sacramento County Coroner shall be contacted immediately. If the remains are determined to be Native American, the coroner shall notify the NAHC who shall notify the person it believes to be the most likely descendant. The most likely descendant shall work with the contractor to develop a program for re-interment of the human remains and any associated artifacts. No additional work shall take place within the immediate vicinity of the find until the identified appropriate actions have been implemented.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD
Hazards/Public Health and Worker Safety						
H 1. If an accidental release occurs during refueling or transformer transport, the release shall be cleaned up immediately and reported in accordance with applicable federal, state, and local requirements.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD

Best Management Practices (BMPs) or Mitigation Measure	BMP Implementation Duration		Monitoring Duration		Responsibility	
	One-time	Ongoing	One-time	Ongoing	BMP Implementation	BMP Monitoring
H 2. If an accidental spill occurs during construction, the release shall be cleaned up immediately and reported in accordance with applicable federal, state, and local requirements.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD
H 3. If evidence of contaminated materials is encountered during line construction, construction shall cease immediately and applicable requirements of the Comprehensive Environmental Release Compensation and Liability Act (CERCLA) and the California Code of Regulations (CCR) Title 22 regarding the disposal of waste shall be implemented.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD
H 4. If any subsurface structures are encountered during site development or onsite excavation, care shall be exercised in determining whether or not the subsurface structures contain asbestos. If they contain asbestos, they shall be removed, handled, transported, and disposed of in accordance with applicable federal, state, and local regulations.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD
H 5. If wells and/or septic tanks are uncovered during site development, they shall be abandoned and removed in accordance with federal, state, and local regulations.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD
Noise						
N 1. Construction vehicle staging areas shall be located as far from residences as practical.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD
N 2. Contractor shall ensure that all construction vehicles and equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers at all times. It shall be the contractor's responsibility to obtain the services of a qualified acoustical professional to verify proper equipment mufflers if concerns (e.g., public complaints) relating to this issue arise.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD

Best Management Practices (BMPs) or Mitigation Measure	BMP Implementation Duration		Monitoring Duration		Responsibility	
	One-time	Ongoing	One-time	Ongoing	BMP Implementation	BMP Monitoring
N 3. Construction activities will be limited to occur between the hours of 7:00 a.m. and 6:00 p.m. Monday through Friday, and from 8:00 a.m. to 5:00 p.m. on Saturday and Sunday.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD
N 4. Construction activities would be prohibited on federal- and state-recognized holidays.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD
N 5. Construction equipment powered by an internal combustion engine shall be equipped with suitable exhaust and intake silencers, in accordance with manufacturers' specifications, and shall be maintained in good working order.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD
N 6. Stationary construction equipment (i.e., portable power generators, compressors) shall be located at the furthest distance possible from nearby residential units.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD
Transportation and Circulation						
T 1. Appropriate signage, coning, and flag persons would be on-site to alert the public regarding ongoing construction would be used.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD
T 2. Sacramento County and the City of Folsom would be coordinated with regarding the construction of the project to minimize traffic conflicts.		Throughout the project construction period		Throughout the project construction period	SMUD	SMUD

Chapter 3 Affected Environment and Environmental Consequences

3.1 INTRODUCTION

According to NEPA guidelines, an EA must include *"the environmental impacts of the proposed action and alternatives."* (40 CFR §1508.9(b)). The EA also should include a description of the affected environment (§6.4.3 of Reclamation's NEPA Handbook). This chapter of the EA describes the affected environment and the environmental consequences of implementing the Proposed Action as presented in Chapter 2.0. This chapter also describes the impact analysis methodology, effect indicators and evaluation criteria, and the analytical results used to determine the potential direct and indirect environmental impacts associated with construction, operation, and maintenance of the Proposed Action.

For each resource category, the Affected Environment section characterizes the resource features of the environmental study areas that may be impacted by implementation of the Proposed Action. Generally, the regional setting defines the study area that could be indirectly impacted by the project, while the local project area setting encompasses the area where direct impacts could occur. The regional setting includes Folsom Dam and Reservoir and the lower American River. Because the Proposed Action would not result in changes to the reservoir surface water levels of Folsom Dam and Reservoir or the flow regimes in the lower American River, these water bodies have been removed from the affected environment discussions for all resource categories. Therefore, this document only analyzes the resources within the local project study area. The local project study area includes the area immediately south of Folsom Dam, which encompass the construction footprints, access roads, and staging areas for the Proposed Action.

3.1.1 *Environmental Resources Included for Detailed Analysis*

This EA evaluates the specific environmental impacts of construction, operation, and maintenance of the facilities necessary to implement the Proposed Action. Generally, the approach for these analyses was to consider the type of construction, operation, and maintenance practices that could potentially impact environmental resources. Resource-specific methodologies are presented for each topic. The resource topics addressed in this Draft EA include:

- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazards/Public Health and Worker Safety
- Noise
- Transportation and Circulation

The potential for these resources to occur within the study area is further discussed below.

AIR QUALITY

Emissions from equipment used during construction activities associated with the Proposed Action may result in short-term fugitive dust emissions, including reactive organic gases (ROG), nitrogen oxide (NOx), and particulate matter measuring 10 microns or less (PM_{10}). Emissions from equipment used during construction may have a temporary negative impact on criteria constituents, including carbon monoxide and ozone.

BIOLOGICAL RESOURCES

Sensitive species and associated habitat within the project area, including the valley elderberry longhorn beetle (VELB), bald eagle, and wetland habitat could be affected by construction activities associated with the Proposed Action.

CULTURAL RESOURCES

The Proposed Action could result in the discovery of archaeological, historic or culturally significant resources. In the event such a discovery is made, appropriate action would be taken to preserve the discovered resource, including halting excavation and/or drilling, until a qualified archaeologist is consulted and provides clearance to resume work.

GEOLOGY AND SOILS

There is the potential for temporary erosion and/or temporary loss of topsoil during construction activities associated with the Proposed Action, as surface soils can be loosened and made susceptible to the effects of wind and water movement across the surface.

HAZARDS/PUBLIC HEALTH AND WORKER SAFETY

During construction activities associated with the Proposed Action, there would be a remote possibility of accidental spills of fuel or oil from the equipment used.

NOISE

The Proposed Action would cause a short-term increase in noise levels during construction. Temporary and short-term noise would be generated during the construction activities by increased truck traffic to and from the project site, construction itself, and the installation of the transmission line.

TRANSPORTATION AND CIRCULATION

Traffic in and around the project site may temporarily increase during the hours of construction activities associated with the Proposed Action. The construction crew would likely consist of construction workers, with people working on-site during the peak of construction activities. In addition, there would be equipment and materials deliveries during the project construction period. It is expected that construction activities could result in some minor short-term construction traffic congestion and short-term partial lane blockage.

3.1.2 *Environmental Resources Dismissed from Detailed Analysis*

During preparation of the Draft EA, it became evident that the project would not impact several resources because they are not present in the project study area. The following resources, therefore, are not discussed further in this document: agriculture; mineral resources; and population and housing. Other environmental resources are present in the project study area, but no impact was identified that could potentially occur as a result of the Proposed Action and the Action Alternatives. These resources include: aesthetics/visual; hydrology and water quality; land use; and public services. These topics were therefore dismissed from further analysis, as discussed below.

AESTHETICS/VISUAL RESOURCES

Residents and recreationists downstream of Folsom Dam (i.e., from the American River bike trail) have very limited and mostly obstructed views of the dam and construction staging areas. Currently, the transmission line route is located in a mainly undeveloped open space area; there are office buildings located south of a portion of the proposed transmission line route and the Western substation is located north of a portion of the proposed transmission line route. The views in the area are mainly urban features with occasional views of Folsom Lake. Support facilities for the dam, including a water pipeline and energy substation, combined with the State prison facilities and numerous overhead transmission lines, have resulted in a highly urbanized viewshed. Given that the project area has in the past been disturbed for construction of the Folsom Dam, the area does not offer a high degree of aesthetic value (e.g., no unique vistas). In addition, the project area is secured and is not generally accessible to the public due to national security reasons. The visual quality of the site is considered to be moderate to low (Corps and City of Folsom 2006). There are no known scenic vistas on or adjacent to the proposed transmission line route and the Proposed Action would not result in any changes that would affect scenic vistas. There are no significant scenic resources existing along the proposed transmission line route including trees or rock outcroppings. None of the roadways abutting the project site are designated as scenic. Given that Western has an existing 230 kV line and substation, and other subtransmission and distribution facilities are in the area, installation of the northern transmission line would remain consistent with the current viewshed and not degrade the existing visual character or quality of the site and its surroundings.

HYDROLOGY AND WATER QUALITY

The proposed transmission route crosses the America River, however construction activities associated with transmission pole installation would not be expected to produce runoff that would affect water quality. Operation of the Proposed Action would not include any waste to water discharge. Construction and operation of the Proposed Action would not violate any water quality standards or waste discharge requirements.

Construction and operation of the Proposed Action would not alter the existing drainage pattern of the project area. The proposed transmission pole installation would not take place in or close proximity to the American River (the closest tower is more than 200 feet away) and thus would not alter or influence the course of the river. In addition, construction activities associated with installation of the transmission line steel/concrete poles would not be expected to produce, alter or otherwise influence runoff patterns, and thus would not cause substantial erosion or siltation on- or off-site. Because the Proposed Action would not involve activities that would produce runoff to affect water quality or alter the drainage of the area, no impact to water quality and hydrology is expected to occur.

LAND USE

The Proposed Action would not involve changes in land use, construction of housing or commercial buildings, or the employment of large numbers of workers necessary to induce substantial growth or concentrate population. Construction and operation of the Proposed Action would not result in division of an established community. The Proposed Action involves relocation of an overhead transmission line in an area that is designated for recreation and flood control. Overhead transmission lines exist within the project area. The land use designation for the project area is described in the County of Sacramento General Plan (December 1993) as open space recreation. The land uses surrounding the project site include

residences, industrial and office buildings, and open space. Transmission lines do not interfere with recreational opportunities, and may in fact facilitate recreation in some cases, because structures cannot be built within transmission line ROW or easements. Therefore, the Proposed Action is consistent with the current uses at the project site, and would not conflict with applicable land use plans, policies or regulations, including the general plan and zoning ordinances.

Reclamation will be excavating for an auxiliary spillway in fall 2007. This auxiliary spillway will be located between the proposed bridge road and Folsom Dam on the south side of the American River. Reclamation has identified uses of this area to include: maintenance and construction roads; stockpile storage; concrete batch plant; materials sorting and processing plant; and other general staging area functions which may require relocation of a portion of the proposed north route. Reclamation may require SMUD to move one or more of these proposed transmission line towers to avoid impacting the auxiliary spillway. However, this would not conflict with applicable land use plans, policies or regulations, including the general plan and zoning ordinances. Because the Proposed Action would not conflict with existing land uses or policies or induce new growth, no impact to land use is expected to occur.

PUBLIC SERVICES

No significant impacts to public services (e.g., waste disposal, emergency services) are expected to result from the removal and relocation of the transmission line. Under the Proposed Action, no road closures would be required, thus, no interruptions to emergency access are expected to occur. In addition, no public utilities or infrastructure would be impacted as a result of the project.

3.2 AIR QUALITY

3.2.1 *Affected Environment*

PROJECT AREA SETTING

The project area is located in the Sacramento Valley Air Basin (SVAB) within the northern portion of the Central Valley. During the summer in the SVAB, the Pacific high-pressure system can create low-elevation inversion layers that prevent the vertical dispersion of air. As a result, air pollutants can become concentrated during summer, lowering air quality. During winter, when the Pacific high-pressure system moves south, stormy, rainy weather dominates the region intermittently. Prevailing winter winds from the southeast disperse pollutants, often resulting in clear, sunny weather and good air quality over most of this portion of the region.

The criteria pollutants of greatest concern in Sacramento County are carbon monoxide (CO), ozone, PM_{10}, and fine particulate matter less than 2.5 microns in diameter ($PM_{2.5}$). The main stationary source of CO in Sacramento County is fuel combustion. The main stationary source of ROG in Sacramento County is solvent use, while commercial and industrial fuel combustion represents the largest source of NOx emissions. Mineral processes (aggregate extraction) represent the largest stationary source of PM_{10} emissions in Sacramento County. The main mobile source of CO, ROG, NOx, and PM_{10} is light-duty passenger vehicles (CARB 2004).

REGULATORY SETTING

Air quality within California is regulated by the Environmental Protection Agency (EPA), the California Air Resources Board (CARB), and locally by Air Pollution Control or Air Quality

Management Districts (APCD and AQMD, respectively). The Sacramento Metropolitan Air Quality Management District (SMAQMD) manages air quality within Sacramento County. SMAQMD developed the 1991 Air Quality Attainment Plan (AQAP) for Sacramento County (SMAQMD 1991). The 1991 AQAP addresses attainment of California air quality standards for ozone and CO. The Sacramento area is classified as a nonattainment area for the State ozone and PM_{10} standards. No locally prepared attainment plans are required for areas that violate the state PM_{10} standards.

The federal Clean Air Act (CAA) requires the EPA to establish and maintain standards for common air pollutants. These standards are used to manage air quality across the country. The State of California also has adopted standards for these pollutants. In most cases, California standards are more stringent than EPA standards. Pollutants for which national and state standards have been established are termed "criteria" pollutants, because the standards are based on studies of health effects criteria that show a relationship between the pollutant concentration and its effect. From this relationship, the EPA and California also established acceptable pollutant concentration levels and ambient air quality standards. The criteria pollutants of primary concern (ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and particulate matter) are described in **Table 3-1.** The California and federal ambient air quality standards for these criteria pollutants are provided in **Table 3-2.**

Table 3-1. Criteria Pollutants (California and EPA).

Pollutant	Characteristics	Health Effects	Major Sources
Ozone	A highly reactive photochemical pollutant created by the action of sunshine on ozone precursors (reactive organic gasses and oxides of nitrogen).	Eye irritation. Respiratory function impairment.	Combustion sources, such as factories and automobiles, and evaporation of solvents and fuels.
Carbon Monoxide	Odorless, colorless gas that is highly toxic. Formed by the incomplete combustion of fuels.	Impairment of oxygen transport in the bloodstream. Aggravation of cardiovascular disease. Fatigue, headache, dizziness.	Automobile exhaust, combustion of fuels, and combustion of wood in woodstoves and fireplaces.
Nitrogen Dioxide	Reddish-brown gas formed during combustion.	Increased risk of acute and chronic respiratory disease.	Automobile and diesel truck exhaust, industrial processes, fossil-fueled power plants.
Sulfur Dioxide	Colorless gas with a pungent odor.	Increased risk of acute and chronic respiratory disease.	Diesel vehicle exhaust, oil-powered power plants, industrial processes.
PM_{10}	Small particles that measure 10 microns or less are termed PM_{10}. Solid and liquid particles of dust, soot, aerosols, smoke, ash, and pollen and other matter that are small enough to remain suspended in the air for a long period.	Aggravation of chronic disease and heart/lung disease symptoms.	Dust, erosion, incinerators, automobile and aircraft exhaust, and open fires.

Table 3-2. Ambient Air Quality Standards (California and EPA).

Pollutant	Averaging Time	California Standard	Federal Standard
	1 Hour	0.09 ppm	0.12 ppm
	8 Hour	--	0.08 ppm
	Annual Mean	30 ppm (20 ug/m^3)[a]	50 ug/m^3
	24 Hour	50 ug/m^3	150 ug/m^3
	Annual Mean	12 ug/m^3[a]	15 ug/m^3
	24 Hour	--	65 ug/m^3
	1 Hour	20 ppm	35 ppm
	8 Hour	9.0 ppm	9.0 ppm

Pollutant	Averaging Time	California Standard	Federal Standard
	Annual Arithmetic Mean	--	0.053 ppm
	1 Hour	0.25 ppm	--
	24 Hour	25 ug/m^3	--
	24 Hour	0.04 ppm	0.14 ppm
	Annual Arithmetic Mean	--	0.03 ppm
	1 Hour	0.25 ppm	--

Source: California Air Resources Board.

[a] Adopted by the California Air Resources Board on June 20, 2002; however, final action has not been taken to fully implement standard. For the purposes of this document, 30 ug/m^3 is used as the state standard for PM_{10}.

If pollutant concentration levels of any of the criteria pollutants exceed the state or federal standards established for those pollutants, the area is designated as being in "nonattainment" for those pollutants. An area can be designated as a moderate, severe, serious, or extreme nonattainment area depending upon the level of pollutant concentrations. Likewise, if standards for pollutants are met in a particular area, the area is designated as being in "attainment" for those pollutants. Where standards may not have been established for certain criteria pollutants, the areas are considered "unclassified" for those pollutants.

The federal CAA requires states with nonattainment areas to develop plans, known as State Implementation Plans (SIPs), describing the measures the state will take to achieve attainment with national ambient air quality standards and an inventory of existing and projected emissions, by source for each county within the state. Local air districts and other agencies prepare SIP elements for the areas under their regulatory jurisdiction, and submit these elements to CARB for review and approval. CARB incorporates the individual air district elements into a statewide SIP and the plan is then submitted to EPA for approval and publication in the Federal Register.

Under the conformity provisions of the federal CAA, no federal agency can approve a project unless the project has been demonstrated to conform to National Ambient Air Quality Standards. These conformity provisions were put in place to ensure that federal agencies would contribute to the efforts of attaining the National Ambient Air Quality Standards. The EPA has issued two conformity guidelines: transportation conformity rules that apply to transportation plans and projects; and general conformity rules that apply to all other federal actions. A conformity determination is only required for the alternative that is ultimately approved and selected.

As discussed above, on a local basis, AQMDs or APCDs set regulatory standards for new stationary emission sources. AQMD and APCD boundaries are based on meteorological and geographic conditions and, where possible, jurisdictional boundaries such as a county area.

At its July 2001 hearing, the CARB approved an Asbestos Airborne Toxic Control Measure (ATCM) for Construction, Quarrying, and Surface Mining Operations. Effective November 19, 2002 for all air districts, the ATCM requires road construction and maintenance activities, construction and grading operations, and quarry and surface mining operations in areas where naturally occurring asbestos is likely to be found to employ best available dust mitigation measures. The contractor would be required to adhere to the CARB's standard mitigation program as a standard condition of approval, and implement a Fugitive Dust Prevention and Control Plan (**Appendix B**) to control fugitive dust at the construction site. No asbestiform surface features have been identified in the project area, however in the event that asbestiform containing soils are suspected or

identified, the contractor also shall implement the Asbestos Hazard Dust Mitigation Plan as identified in **Appendix C**.

3.2.2 *Environmental Consequences*

ASSESSMENT METHODOLOGY

Impacts on air quality within the project area were evaluated by comparing expected changes in pollutant emissions that would result from the Proposed Action, and considering whether these changes could violate state or federal ambient air quality standards.

In order to complete the analysis, information was collected on construction activities, duration, and timing; proposed equipment use and activities for each construction year; volumes of waste concrete or debris handled; proposed delivery truck and commute vehicle use; and local traffic changes caused by construction. In addition, information was collected on existing access roads for construction, commute, and delivery vehicle travel (e.g., distance from existing roads, whether the access roads are paved or unpaved). The analysis also considered the following factors:

- Emissions associated with vehicle exhaust for employee commute vehicles and delivery trucks were estimated using CARB EMFAC 2002 emission factors. These emissions were based on a 10-mile commute each way for delivery trucks and a 20-mile commute each way for workers.
- Incorporated into the project is a requirement that 30 percent of the construction vehicles use low-NO_x engines pursuant to heavy diesel engine requirements promulgated by the CARB in 1996. Accordingly, construction vehicle emission rates are reduced due to the use of lower emission technologies.
- Emissions associated with the operation of construction equipment were estimated using the Sacramento Metropolitan AQMD's Guide to Air Quality Assessment (Draft January 2004). Construction equipment data was provided by the project design engineer in the form of equipment descriptions and hours of operation. The assigned hours of operation were used to determine the number of pieces of equipment in use at any given time within each equipment category. This information was used to estimate average daily and annual exhaust emissions for construction equipment.

The estimated air emission factors for each piece of equipment needed and estimated hours used each day for this phase of the Proposed Action (i.e., dismantling of current transmission line and installation of relocated line) are described in **Table 3-3** and **Table 3-4**. Using the data from the Guide to Air Quality Assessment in Sacramento County (2004) and other sources, the following emission estimates are made (all unmitigated) as noted in Table 3-3 and Table 3-4. Calculations were based on an estimate of hours per day that equipment would operate, and then summed at the bottom of the table.

Table 3-3. Predicted Emissions for Installation of the Relocated Transmission Line.

Equipment	Miles/day	Hours/ day	Air emission factors (1 day = 8 hours; 1 g = 0.0022 lbs)	Daily ROG (lbs/day)	Daily NOx (lbs/day)	Daily PM_{10} (lbs/day)	Daily CO (lbs/day)	Source
Line truck	35	2	ROG: 2.02 lbs/day NOx: 8.5 g/mi PM_{10}: 0.04 g/mi CO: 0.17 g/mi	0.51	0.65	0.01	0.01	1, 2
Crew truck	35	2	ROG: 2.02 lbs/day NOx: 1.0 g/mi PM_{10}: 0.0 lbs/mi CO: 7.0 g/mi	0.51	0.08	0	0.54	1, 2
Crane	-	4	ROG: 0.18 lbs/hr NOx: 1.05 lbs/hr PM_{10}: 0.03 lbs/hr CO: 1.53 lbs/hr	0.72	4.2	0.12	6.12	1
Dump truck	65	6	ROG: 2.02 lbs/day NOx: 9.68 g/mi PM_{10}: 0.39 g/mi CO: 2.26 g/mi	1.52	1.38	0.06	0.32	1, 2
Backhoe	-	4	ROG: 0.65 lbs/day NOx: 4.98 lbs/day PM_{10}: 0.19 lbs/day CO: 4.64 lbs/day	0.33	2.49	0.1	2.32	1
Grader	-	4	ROG: 1.76 lbs/day NOx: 10.22 lbs/day PM_{10}: 0.28 lbs/day CO: 14.98 lbs/day	0.88	5.11	0.14	7.49	1
Concrete truck		4	ROG: 2.08 lbs/day NOx: 15.15 lbs/day PM_{10}: 0.55 lbs/day CO: 15.39 lbs/day	1.04	7.58	0.28	7.70	1
18-wheel tractor/trailer	35	2	ROG: 2.08 lbs/day NOx: 15.15 lbs/day PM_{10}: 0.55 lbs/day CO: 15.39 lbs/day	0.52	3.78	0.14	3.85	1
Portable generator equipment	-	4	ROG: 1.71 lbs/day NOx: 12.46 lbs/day PM_{10}: 0.46 lbs/day CO: 12.66lbs/day	0.86	6.23	0.23	6.33	1
Project daily total				6.89	31.50	1.08	34.68	
SMAQMD threshold				-	85 lbs/day	-	-	

[1] Sacramento Metropolitan Air Quality Management District *Guide to Air Quality Assessment in Sacramento County*, 2004 (factor year = 2007).

[2] Manufacturer's data or other emission data (e.g., Air Resources Control Board)

Table 3-4. Predicted Emissions for Removal of the Existing Transmission Line.

Equipment	Miles/day	Hours/day	Air emission factors (1 day = 8 hours; 1 g = 0.0022 lbs)	Daily ROG (lbs/day)	Daily NOx (lbs/day)	Daily PM_{10} (lbs/day)	Daily CO (lbs/day)	Source
Line truck	35	2	ROG: 2.02 lbs/day NOx: 8.5 g/mi PM_{10}: 0.04 g/mi CO: 0.17 g/mi	0.51	0.65	0.01	0.01	1
Crew truck	35	2	ROG: 2.02 lbs/day NOx: 1.0 g/mi PM_{10}: 0.0 lbs/mi CO: 7.0 g/mi	0.51	0.08	0	0.54	2
Crane	-	6	ROG: 0.18 lbs/hr NOx: 1.05 lbs/hr PM_{10}: 0.03 lbs/hr CO: 1.53 lbs/hr	1.08	6.3	0.18	9.18	1
Portable generator equipment	-	4	ROG: 1.71 lbs/day NOx: 12.46 lbs/day PM_{10}: 0.46 lbs/day CO: 12.66lbs/day	0.85	6.23	0.23	6.33	1
18-wheel tractor/trailer	35	2	ROG: 2.08 lbs/day NOx: 15.15 lbs/day PM_{10}: 0.55 lbs/day CO: 15.39 lbs/day	0.52	3.78	0.14	3.85	1
Project daily total				3.48	17.04	0.56	19.91	
SMAQMD threshold				-	85 lbs/day	-	-	

IMPACT INDICATORS AND SIGNIFICANCE CRITERIA

SMAQMD has established significance criteria to determine whether a project will have a significant effect on the environment relative to air quality. These criteria include ozone precursors (e.g., NOx and ROGs), other criteria pollutants (e.g., projects that produce large quantities of carbon dioxide), offensive odors (such as emissions that may result in detriment to human health), toxic air contaminants (such as emissions containing heavy metals), or cumulative air impacts. According to SMAQMD thresholds, a construction project is considered to have a significant short-term impact if it would: 1) generate more than 85 pounds per day of NOx; or 2) substantially contribute to an existing or projected violation of a California Ambient Air Quality Standards where a substantial contribution is defined as 5 percent of the standards. Values for daily NOx are below SMAQMD's threshold limits. ROG has operational, but no construction thresholds (as established by the SMAQMD). Daily values for PM_{10} and CO are

not significant. The impact indicators and evaluation criteria used in the air quality impact analysis are presented in **Table 3-5**.

Table 3-5. Air Quality Impact Indicators and Evaluation Criteria.

Impact Indicators	Evaluation Criteria
Exceedance of annual NO_x and ROG emissions under EPA's general conformity thresholds.	Emit more than 25 tons per year of ozone precursors (NO_x and ROG).
Exceedance of annual PM_{10} emissions under EPA's general conformity thresholds.	Emit more than 100 tons per year of PM_{10}.
Exceedance of local NO_x established by SMAQMD for construction activities.	Emit more than 85 lb/day of ozone precursors (NO_x).
Exceedance of local PM_{10} threshold established by SMAQMD for construction activities.	Exceed 30 ppm concentration of PM_{10} (annual mean; 24 hour).
Exposure of sensitive receptors to air pollutants.	Expose sensitive receptors to significant amounts of air pollutants, as defined by the above thresholds.

Impact Analysis and Mitigation Measures

The Proposed Action will consist of two general phases: dismantling of the existing transmission and distribution lines and construction of the new transmission and distribution line. The construction phase will precede the dismantling phase by several days to a few weeks, with some possible overlap, depending on the overall Folsom Bridge and auxiliary spillway project construction schedule. This will allow the relocation of the conductors, which transmit the electricity and result in little or no interruption of power. Air quality considerations are made only for construction of the project; there are no operational air quality considerations.

Constructing the transmission and distribution lines will require the use of a team of linemen and various pieces of internal combustion engine equipment. It is anticipated that for the construction phase of the project, a line truck, crew truck, crane, dump truck, backhoe, grader, concrete truck, 18-wheel tractor-trailer and portable generating equipment will be used. Since the SMAQMD's URBEMIS (Urban Emissions Model) does not apply to projects such as this one, predicted emissions have been calculated using air emission factors and estimated miles driven/hours of use. The estimated air emission factors for each piece of equipment needed and estimated hours used each day for this phase of the project are described in Table 3-3.

Dismantling the transmission and distribution lines will again require the use of a team of linemen and various pieces of internal combustion engine equipment. It is anticipated that for dismantling the project, a line truck, crew truck, crane, portable generator equipment and an 18-wheel tractor-trailer will be used. The estimated air emission factors for each piece of equipment needed and estimated hours used each day for this phase of the project are described in Table 3-4.

The SMAQMD manages air quality within Sacramento County. SMAQMD developed the 1991 AQAP for Sacramento County (SMAQMD 1991). The 1991 AQAP addresses attainment of California air quality standards for ozone and CO. The plan listed Sacramento as a severe nonattainment area for ozone (compliance to be achieved after 1997) and a moderate nonattainment area for CO (compliance achieved by 1994). The Proposed Action does not conflict with the SMAQMD rules for construction or operation of the project. Additionally, the project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Emissions from equipment used during construction may have a temporary negative impact on these criteria constituents, however these temporary impacts would be considered less than significant with the incorporation of all best available control measures and best management practices (BMPs), as described below and summarized in Table 2-1. The contractor would be required to adhere to the CARB's standard mitigation program as a standard condition of approval, and implement a Fugitive Dust Prevention and Control Plan to control fugitive dust at the construction site (Appendix B). In the event that asbestiform containing soils are suspected or identified, the contractor also shall implement the Asbestos Hazard Dust Mitigation Plan, as described in Appendix C.

Best Management Practices for air quality include:

- AQ 1. Perform routine tuning and maintenance of construction equipment to ensure that the equipment is in proper running order.
- AQ 2. Monitor dust conditions within the construction area to ensure that the generation of fugitive dust is minimized.
- AQ 3. Periodic application of water to disturbed areas, up to three times per day.
- AQ 4. Suspension of soil-disturbing activities during periods with winds over 25 miles per hour (mph).
- AQ 5. Apply water, asphalt oil, or suitable soil stabilizers to inactive areas or other areas that can give rides to airborne dust.
- AQ 6. Cover all inactive stockpiles with tarps or water to prevent airborne dust.
- AQ 7. Water all haul roads as needed to prevent dust.
- AQ 8. Limit speed on unpaved roads to less than 15 miles per hour (mph).
- AQ 9. Replace ground cover in disturbed areas as soon as construction in these areas is complete.
- AQ 10. Maintain two feet of free board space on haul trucks.
- AQ 11. Minimize the amount of disturbed area, the amount of materials actively worked, and the amount of material stockpiled.
- AQ 12. Emissions from all off-road diesel-powered equipment used at the project site shall not exceed 40 percent opacity for more than three minutes in any one hour.
- AQ 13. Sweep or wash paved streets adjacent to the project construction site at least once a day to remove accumulated dust.

Therefore, since the project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment, but would contribute an insignificant amount of pollution resulting from construction of the Proposed Action, a less than significant impact would result.

Sensitive receptors include residences, schools, parks, playgrounds, hospitals, day care facilities, and health care facilities. As the operator of the Folsom Dam and Reservoir facility, Reclamation has offices located at the facility, approximately 175 feet from the relocated transmission line. Approximately 90 to 100 Reclamation personnel work out of these offices, of which a portion either work shifts other than the day shift or could work at other locations on

any given day. Of the nearby land uses, Folsom State Prison is located approximately 2,450 feet from the relocated transmission line. The nearest residence is located approximately 109 feet from the relocated transmission line. Neither the Reclamation facilities nor Folsom State Prison offices nor facilities are considered sensitive receptors. The project would not expose sensitive receptors to substantial pollutant concentrations or create objectionable odors affecting a substantial number of people.

Mitigation Measures

No mitigation measures are required.

3.3 Biological Resources

3.3.1 *Affected Environment*

Project Area Setting

A variety of special-status species may be found in the project area, as identified during consultation for the American River Watershed Folsom Dam Raise/Folsom Bridge project, including: vernal pool fairy shrimp (*Branchinecta lynchi*), valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphus*), vernal pool tadpole shrimp (*Lepidurus packardi*), California tiger salamander (*Ambystoma californiense*), California red-legged frog (*Rana aurora draytonii*), giant garter snake (*Thamnophis gigas*), bald eagle (*Haliaeetus leucocephalus*), and Sacramento Orcutt grass (*Orcuttia viscida*). Critical habitat also was identified as having the potential to occur for vernal pool invertebrates and vernal pool plants (Corps and City of Folsom 2006).

The project area supports a variety of habitat types. Oak woodland is the predominant habitat type in the project area, consisting of mostly blue oak, interior live oak, some valley oak, buckeye, and an understory of annual grassland species. Smaller areas of riparian woodland and seasonal wetlands are also found. Riparian areas have sparse vegetation including various willow species and Fremont cottonwood. Seasonal wetland species include cattail, blackberry, soft chess brome, perennial ryegrass, curly dock, and various willow species. Common chaparral species include manzanita and chemise, while understory species include poison oak, California wild rose, and lupine. Nonnative grassland species include wild oats, soft chess brome, ryegrass, mustard, and foxtail. In addition, there are numerous elderberry shrubs associated with the oak woodland.

The habitats in the project area support various wildlife species. Mammal species include mule deer, coyote, bobcat, gray fox, black-tailed jackrabbit, Virginia opossum, striped skunk, and a variety of rodents. Common bird species in the project area include acorn woodpecker, Nuttall's woodpecker, loggerhead shrike, western wood pewee, scrub jay, Bullock's oriole, California quail, introduced wild turkey, and plain titmouse. Common raptors include red-tailed hawk, Cooper's hawk, red-shouldered hawk, golden eagle, ferruginous hawk, rough-legged hawk, American kestrel, prairie falcon, great horned owl, and bald eagle.

Reptile and amphibian species likely found in the project area include western fence lizard, gopher snake, western rattlesnake, common kingsnake, Pacific treefrog, and western toad. The VELB is federally listed as threatened, is endemic to the Central Valley, and is found in riparian habitats and associated uplands where the elderberry (*Sambucus* spp.), the beetle's food plant, grows. The beetle is a pith-boring species that depends on elderberry plants during its entire life

cycle. Bald eagle is federally listed threatened and state listed endangered. This bird nests and roosts in coniferous forests within 1 mile of a lake, reservoir, or stream. Bald eagles are known to winter at lakes, reservoirs, and along river systems throughout most of central and northern California. Current bald eagle breeding distribution is limited to mountainous habitats in the northern quarter of the state, primarily in the northern Sierra Nevada, Cascades, and northern Coast Ranges (Reclamation 1996). Bald eagles are not known to nest in or near the project area or at Folsom Reservoir during the breeding season, although they can occasionally be found in the winter as transients migrating to higher elevations. One bald eagle was observed just downstream of Folsom Dam during field studies for the Folsom Bridge project in February 2005 (Corps and City of Folsom 2006).

Regulatory Setting

Federally protected endangered and threatened riparian and terrestrial species in the action area are under the jurisdiction of the USFWS. Projects involving a federal agency require consultation with the U.S. Fish and Wildlife Service (USFWS) under Section 7 of the federal Endangered Species Act (FESA) (16 U.S.C. § 1536). California State endangered and threatened species and those species being considered for listing (candidate species) within the action area are regulated under the CESA by California Department of Fish and Game (CDFG).

The project proponent is obligated to fulfill the requirements described under Section 7 of the FESA and Section 2090-2095 of the California Fish and Game Code. Compliance with both FESA and CESA requires a determination of the presence/absence of listed species within the action area and an evaluation of the potential of the project to adversely affect those species through secondary indirect growth-related impacts. Wetlands are regulated by the Corps under Section 404 of the Clean Water Act (CWA) (33 U.S.C. § 1251 et seq.). Impacts to greater than three acres of jurisdictional wetlands or "waters of the United States" would require an individual permit from the Corps while impacts less than three acres likely would be eligible for coverage under an existing Nationwide Permit.

3.3.2 *Environmental Consequences*

Assessment Methodology

The evaluation of potential terrestrial resource impacts due to construction or maintenance of the Proposed Action was determined by identifying: (1) the composition and location of plant communities and wildlife habitats within the affected portion of the regional setting (i.e., the land directly adjacent to and downstream of Folsom Reservoir) through review of aerial maps and site surveys; (2) the location of the project features; (3) the type and duration of construction activities; and (4) the areas affected by construction and maintenance activities. The description of project features and the type and duration of construction activities are based on the preliminary design of the Proposed Action. In addition, the impact assessment utilized information from VELB surveys to assist in the determination of potential impacts to VELB and VELB habitat (i.e., elderberry shrubs). In support of the Folsom Dam Safety and Flood Damage Reduction project and the Folsom Dam Raise/Folsom Bridge project, Corps biologists previously surveyed for elderberry shrubs and VELB on the north and south sides of Folsom Dam.

Impact Indicators and Significance Criteria

The impact assessment provides a comparison of the potential effects upon terrestrial habitat and resources that may result from the Proposed Action. A summary of impact indicators and

evaluation criteria is provided in **Table 3-6**. The evaluation criteria have been developed for use in assessing potential impacts of the construction and maintenance activities.

Table 3-6. Biological Resources Impact Indicators and Evaluation Criteria.

Impact Indicators	Evaluation Criteria
Composition and location of plant community or wildlife within the project area, the location of project features, and the type and duration of construction activities.	Decrease in habitat quantity and quality, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect long-term populations of listed and special-status species.
Size and quality of seasonal wetland identified south of the lower American River downstream of Folsom Dam.	Decrease in seasonal wetland size and quality, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect wetland habitat and special-status species.
Quantity and quality of elderberry shrubs identified within the project area setting.	Decrease in elderberry shrub quantity or quality, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect long-term population of VELB.

Impact Analysis and Mitigation Measures

It has been determined through technical assistance conducted with USFWS that habitat of the type required for breeding and maintenance of the California tiger salamander and giant garter snake is not present within the project area (Corps and City of Folsom 2006). Therefore, the Proposed Action would not be expected to adversely affect the California tiger salamander or giant garter snake or their habitat.

In the spring of 2003, Reclamation's Central California Area Office in Folsom, California, completed construction of a small pond, which is intended to serve as a research area containing habitat for future experimental populations of the California red-legged frog. Potential uses of this pond include: (1) a captive propagation site for reintroduction of breeding populations within the Sierra Nevada Foothills and Central Valley recovery unit core areas; and (2) research on red-legged frog translocation and/or captive breeding as outlined in the USFWS 2002 Recovery Plan for the California Red-legged Frog. The pond is located approximately 350 feet away from the nearest proposed transmission line steel/concrete poles. The pond is not anticipated to be affected by construction-related activities associated with the Proposed Action because: (1) USFWS has not yet determined that habitat around the pond is suitable for introduction of the species and, thus, California red-legged frogs are not present; and (2) California red-legged frog habitat, or areas that could become occupied by red-legged frog communities, do not extend into the riparian areas that potentially could be influenced by construction of the Proposed Action. Therefore, the Proposed Action would not be expected to adversely affect the red-legged frog or its habitat.

A bald eagle was observed in the project area in February 2005 (Corps and City of Folsom 2006). Construction activities related to the Proposed Action would occur in highly disturbed areas around Folsom Dam. Although noise related to construction and human presence could disturb bald eagles if they are present in the area, the species is highly mobile and would be able to temporarily use other similar or higher quality habitats in adjacent areas. Additionally, construction-related activities would not eliminate foraging habitat or forage base availability for this species because the Proposed Action would not alter existing lower American River flow regimes or water surface elevations in Folsom Reservoir. Therefore, temporary disturbances of construction activities would not be expected to increase disturbance to bald

eagles that may be present in the area and the Proposed Action would not be expected to adversely affect the bald eagle or its habitat.

Elderberry shrub surveys were recently completed for the American River Watershed Folsom Dam Raise/Folsom Bridge project and the joint Federal project. Numerous shrubs were identified within the project area and, as shown on **Figure 3-1,** and a few shrubs are located adjacent to proposed transmission line poles "R" and "N" (as designated on Figure 2-3). Disturbance to VELB would be avoided by implementing the BMPs outlined in Table 2-1 and the mitigation measures described below. Elderberry shrubs could be affected by project construction; however, the USFWS environmental protection measures listed below would be implemented to ensure conservation of the shrubs and the listed VELB. In addition, SMUD would relocate their transmission line poles so no elderberry shrubs would be removed or damaged during construction activities. SMUD also would ensure that all project activities that could constitute disturbance to the VELB (i.e., construction areas, staging areas, etc.), would remain outside the 100-foot buffer required by USFWS to avoid impacts to VELB and their associated habitat. In addition, SMUD would work in conjunction with the Corps and Reclamation for the implementation of the environmental projection measures associated with the American River Watershed Folsom Dam Raise/Folsom Bridge project and the joint Federal project. Therefore, the Proposed Action would not be expected to adversely affect the VELB or its habitat.

Three wetlands have been identified in proximity to the proposed transmission line poles. One wetland area is located approximately 70 feet south of the proposed pole "S" (as designated on Figure 2-3); another is located approximately 182 feet south of the proposed pole "M" (as designated on Figure 2-3). There also is a wetland located approximately 466 feet south of the proposed pole "T" (as designated on Figure 2-3). The wetland features are shown on Figure 3-1. Wetlands could be affected by project construction; however, the BMPs and mitigation measures outlined in Table 2-1 and listed below would be implemented to ensure conservation of the wetlands. In addition, SMUD would relocate their transmission line steel towers so no wetlands would be damaged during construction activities. SMUD also would work in conjunction with the Corps and Reclamation for the implementation of the environmental projection measures associated with the American River Watershed Folsom Dam Raise/Folsom Bridge project and the joint Federal project. Typically, when SMUD commences a project, all required local, county, state and federal permits (e.g., EPA 404 permit) have typically been secured, and all needed environmental authorizations (e.g., streambed alteration agreement) have also been secured. SMUD is generally not encumbered to secure the above noted permits, however SMUD would coordinate with the appropriate regulatory agencies to ensure all needed permits have been secured before construction begins. If, for some reason a permit is required that somehow affects the project area, SMUD would be bound to the terms of the mitigation requirements that the Corps issues. A USFWS-approved biologist would inspect construction-related activities to ensure that no degradation of the seasonal wetland habitat occurs. The biologist would have the authority to stop activities that may result in adverse impacts to the habitat until the necessary corrective measures are implemented. No vernal pools were observed within the project area (Corps and City of Folsom 2006).

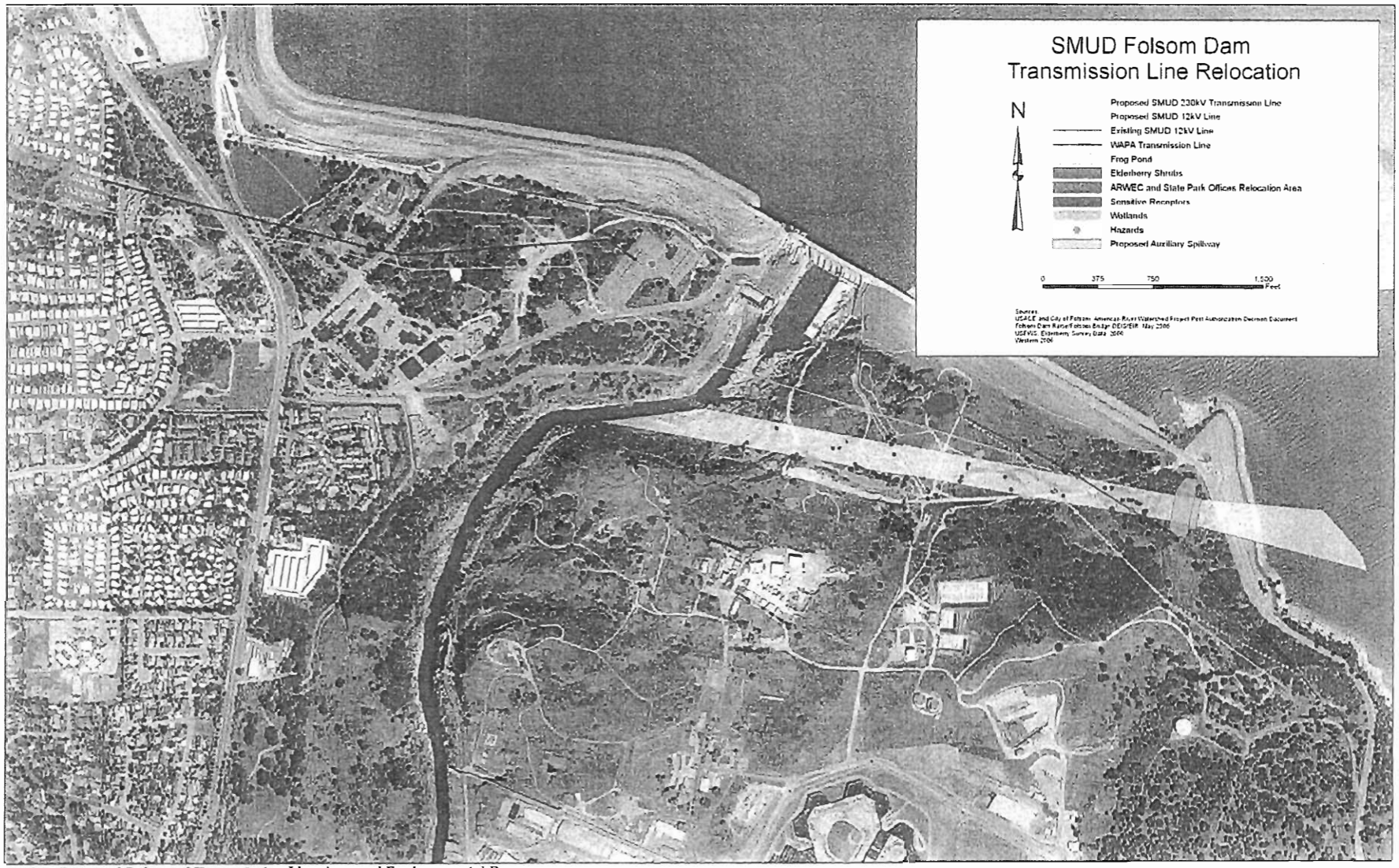

Figure 3-1. *Proposed Relocated Transmission* Line Area and Environmental Resources.

Although wetlands may be located in the project vicinity, no vernal pools were observed within the project area (Corps and City of Folsom 2006) and therefore, the Proposed Action would not be expected to adversely affect the vernal pool fairy shrimp and vernal pool tadpole shrimp or its habitat.

Through implementation of the mitigation measures, the project would not have a substantial adverse effect, either directly or through habitat modification, on any species identified as candidate, sensitive or special-status species in local or regional plans, policies, or regulations, a less than significant impact would result from construction of the Proposed Action.

Mitigation Measures

The following mitigation measures are required to reduce potential impacts to elderberry shrubs and VELB to a less-than-significant level:

- B1. Disturbance to VELB would be avoided by establishing and maintaining, to the maximum extent feasible, a 100-foot (or wider) buffer around all elderberry plants located within the immediate project footprint. If, during construction design or construction it is determined that a 100-foot buffer cannot be maintained, SMUD shall consult and gain approval from USFWS for measures that would minimize disturbance, including relocation of transmission line poles.
- B 2. Work crews and contractors would be given environmental awareness training that would emphasize the identification of elderberry shrubs and the need to avoid damaging the elderberry plants and the possible penalties of non-compliance.
- B 3. Signs would be erected every 50 feet along the edge of the avoidance area displaying the following information: *"This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. The Endangered Species Act of 1973, as amended, protects this species. Violators are subject to prosecution, fines, and imprisonment."* The signs would be visible from a 20-foot distance and would be maintained for the duration of construction.
- B 4. Any impacts on the buffer area (the area within 100 feet of elderberry shrubs) during construction would be restored. Erosion control and revegetation with appropriate native plants would be provided for the impacted areas.
- B 5. After construction, if appropriate, buffer areas would continue to be protected from the adverse impacts of the project. Appropriate measures would include fencing, weeding, posting signs, and removing trash.
- B 6. No insecticide, herbicides, fertilizers, or other chemicals that might harm the beetle or its host plant would be used within 100 feet of any elderberry shrub with one or more stems measuring 1.0 inch or greater in diameter at ground level.
- B 7. A written description of the restoration, protection, and maintenance of the encroachment areas would be provided at the completion of construction.
- B 8. On-site construction personnel would receive instruction regarding the potential presence of listed species and the importance of avoiding impacts to these species and their habitat.

- B 9. USFWS would be supplied with a 7.5 U.S. Geological Survey topographic map that clearly delineates the project area and habitat contained within this area before implementation of the project.

The following mitigation measures are required to reduce potential impacts to wetland habitat to a less-than-significant level:

- B 10. A USFWS-approved biologist would inspect construction-related activities to ensure that no degradation of the seasonal wetland habitat occurs. The biologist would have the authority to stop activities that may result in adverse impacts to the habitat until the necessary corrective measures are implemented.
- B 11. A sufficient distance of needed staging and/or storage areas from any proximal wetlands would be maintained to ensure their protection during construction activities.
- B 12. All areas to be avoided during construction activities would be fenced and flagged.

3.4 CULTURAL RESOURCES

3.4.1 *Affected Environment*

PROJECT AREA SETTING

"Cultural resources" describe several different types of properties: prehistoric and historic archeological sites; architectural properties such as buildings, bridges, and infrastructure; and resources of importance to Native Americans (traditional cultural properties). "Artifacts" include any objects manufactured or altered by humans.

Prehistoric archeological sites date to the time before recorded history, and in this area of the U.S. are primarily sites associated with Native American use before the arrival of European explorers and settlers. Archeological sites dating to the time when these initial Native American-European contacts occurred are referred to as protohistoric. Historic archeological sites can be associated with Native Americans, Europeans, or any other ethnic group. In the project area, these sites include the remains of historic structures and buildings. Structures and buildings are considered historic when they are more than 50 years old or when they are exceptionally significant. Exceptional significance can be attributed if the properties are integral parts of districts that meet the criteria for eligibility for listing in the National Register of Historic Places or if they meet special criteria considerations.

The Corps conducted a records and literature search at the Northwest Information Center at California State University, Sacramento, and consulted with Reclamation and the CDPR in Sacramento, as part of the Folsom Bridge project. A previous study by PAR Environmental Services, Inc., investigated the general alignment of the Folsom Bridge project's preferred alternative. The study did not identify any cultural resources within the Folsom Bridge area of potential effect (APE). The current transmission lines and the proposed route for the relocated transmission line both are located within the APE investigated for the Folsom Bridge project. In December 2001 and January 2002, Ric Windmiller completed a cultural resources survey and evaluation of areas for the Folsom Auburn Road Widening Project. Several resources were recorded and evaluated.

In 2000, Peak and Associated, Inc., prepared a report evaluating Folsom Dam for inclusion in the National Register. At the time, the dam was not yet 50 years old, was not found

exceptionally significant, and was determined ineligible for inclusion in the National Register. A list of potentially interested Native Americans was obtained from the California Native American Heritage Commission (NAHC). These individuals were contacted regarding the proposed Folsom Bridge project.

No properties listed in the National Register were found within the project APE. The Corps has conducted intensive cultural resource field surveys of areas that may be affected by construction of the entire Folsom Bridge project. Investigations have been conducted to investigate additional features associated with a potential Folsom Dam Historic District.

No traditional cultural properties were identified by the Corps. However, one prehistoric site (Folsom Dam Milling Station) and one potential historic district (Folsom Dam Historic District) were identified near or adjacent to the APE (Corps 2005b; Corps 2004; Corps 2005a).

The Corps has made preliminary determinations of eligibility for the identified resources. Comments on the preliminary determination have been solicited from the California State Historic Preservation Officer (SHPO).

Currently, the Folsom Dam and all of its associated facilities are being reevaluated for eligibility. In association with Reclamation project activities in the vicinity of the dam, archaeological surveys were conducted by Pacific Legacy (2006) and URS (2006). These surveys identified resources associated within Beal's /Granite Bay Borrow, Beal's/Dam Borrow and Right Wing Dam Haul, the Right Wing Dam, Dike 8/MIAD Borrow and Left Wing Dam Haul, and Mormon Island Auxiliary Dam (MIAD) Borrow 2 (D2). None of the cultural resources identified are located within the project area for the current and proposed transmission line route. Reclamation has made preliminary determinations of eligibility for the identified resources and is coordinating with SHPO in regards to these resources.

Regulatory Setting

Prior to implementation of an undertaking, the project must comply with Section 106 of the National Historic Preservation Act of 1966 (36 CFR 800). Section 106 requires Federal agencies, or those they fund or permit, to consider the effects of their actions on the properties that may be eligible for listing or are listed in the National Register. To determine whether an undertaking could affect National Register-eligible properties, cultural resources (including archeological, historical, and traditional cultural properties) must be inventoried and evaluated for listing in the National Register.

3.4.2 *Environmental Consequences*

Assessment Methodology

Previously completed cultural record searches and field surveys were reviewed to determine if the Proposed Action would have any effects on cultural resources within the project area.

Impact Indicators and Significance Criteria

Any adverse effects on cultural resources that are listed or eligible for listing on the National Register of Historic Places are considered to be significant. Effects are considered to be adverse if they:

- Alter, directly or indirectly, any of the characteristics of a cultural resource that qualify that resource for the National Register so that the integrity of the resource's location, design, setting, materials, workmanship, feeling, or association is diminished.

In California, effects to a historic resource or unique archaeological resource are considered to be adverse if they:

- Materially impair the significance of a historical or archaeological resource.

IMPACT ANALYSIS AND MITIGATION MEASURES

Numerous cultural resource surveys and records search have been completed for the Folsom Bridge project in the area along the current and proposed relocated transmission line route. None of these surveys has documented any prehistoric or historic period sites or features, traditional use areas, or sacred lands within, adjacent, or close to the project area. One cultural site has been identified within the relocated transmission line ROW. However, there would be no construction activities associated with the Proposed Action adjacent to or near the site. Therefore, there would be no impact to historical resources associated with the Proposed Action. However, the present evaluation and recommendations are based on findings of an inventory-level survey only. There is always the possibility that previously unidentified cultural materials could be encountered on or below the surface as a result of construction activities. This is particularly relevant considering the constraints generally to archaeological field survey, and particularly where grasses and other vegetation, and past disturbance related to various historic activities, have obscured original ground surface configuration. In the event of an inadvertent discovery of previously unidentified cultural material, archaeological consultation shall be sought immediately. Implementation of the measures described below would reduce potential significant impacts to a less than significant level.

The Proposed Action is not expected to disturb paleontological resources. However, there is a possibility of potentially significant impacts to paleontological resources not previously identified or recorded. Implementation of the measure described below would reduce potentially significant impacts to a less than significant level.

Based on the negative results achieved during the previous surveys as summarized above, the Proposed Action would not disturb any human remains, including those interred outside of formal cemeteries. Therefore, no further investigations are recommended for the project area. However, evidence of human burial or scattered human remains related to prehistoric occupation of the project site could be inadvertently encountered anywhere within the project area during construction. In the event of such an inadvertent discovery, the County Coroner and the State of California NAHC would be informed and consulted, in accordance with State law.

Mitigation Measures

Although it is unlikely that any significant prehistoric, historic, or paleontological resources are located in the project area, there is always the possibility that potentially significant unidentified materials could be encountered on or below the surface during project construction activities. In such a situation, the following measures shall be implemented:

- C 1. If any cultural resources, such as structure features, unusual amounts of bone or shell, artifacts, human remains, or architectural remains are encountered during any project development activities, work shall be suspended and the Sacramento County

Department of Environmental Review and Assessment shall be immediately notified. At that time, the Department of Environmental Review and Assessment would coordinate any necessary investigations of the site with appropriate specialists, as needed. SMUD shall be required to implement any mitigation deemed necessary for the protection of the cultural resources.

- C 2. When Native American archaeological, ethnographic, or spiritual resources are involved, all identification and treatment shall be conducted by qualified archaeologists who meet the federal standards as stated in the Code of Federal Regulations (CFR) (36 CFR 61), and Native American representatives who are approved by the local Native American community as keepers of their cultural traditions. In the event that no such Native American is available, persons who represent tribal governments and/or organizations in the locale in which resources could be affected shall be consulted.
- C 3. Pursuant to Section 5097.98 of the California Public Resources Code and Section 7050.5 of the State Health and Safety Code, if human remains or bone of unknown origin is found during construction, all work shall stop in the vicinity of the find and the Sacramento County Coroner shall be contacted immediately. If the remains are determined to be Native American, the coroner shall notify the NAHC who shall notify the person it believes to be the most likely descendant. The most likely descendant shall work with the contractor to develop a program for re-interment of the human remains and any associated artifacts. No additional work shall take place within the immediate vicinity of the find until the identified appropriate actions have been implemented.

3.5 GEOLOGY AND SOILS

3.5.1 *Affected Environment*

PROJECT AREA SETTING

The project lies within the northwest trending zone, which is 30 to 50 miles wide and 250 miles long. To the east lies the Sierra Nevada granitic batholith, which has intruded into and marks the eastern margin of the metamorphic belt. The Foothill Fault system is located within the metamorphic belt. This series of subparallel, northwest trending vertical faults includes at least two major fault zones. The easternmost is called the Melones Fault zone, and the westernmost is the Bear Mountains Fault zone, which intersects the main body of Folsom Reservoir. These strata are complex, faulted, and folded. Following this faulting and folding, these strata were eroded to a landscape of moderate relief. Volcanic and sedimentary rocks were deposited over this surface. Regional uplift and western tilting formed the present drainage patterns, including erosion and canyon cutting.

Geologic formations underlying the Sacramento Valley downstream of Folsom Dam include igneous, metamorphic, and sedimentary rock types, which range in age from pre-Cretaceous to recent. The valley is situated on vast alluvial deposits that have slowly accumulated over the last 100 million years. The materials have been derived from the surrounding uplands, transported by major streams, and deposited in successive clay, silt, sand, and gravel layers on the valley floor. There has been no recent seismic movement in the project area, and it is assumed that the area is at low risk for seismic events.

The soils in the project area consist of Andregg and Xerolls soils. Published soil data indicate that soils in the project area are not subject to structural loss of strength (collapse or quick

failure) or to excessive shrinking and swelling (USDA Website 2006). Within the project area, the Andregg soils occur on 3 to 15 percent slopes; they are moderately deep, well-drained soils located on foothill locations. Xerolls soils are shallow to very deep and somewhat excessively drained soils on terrace escarpments and steep hillslopes near the American River.

3.5.2 *Environmental Consequences*

ASSESSMENT METHODOLOGY

Impacts to geology and soils that could result from construction activities were qualitatively evaluated based on expected construction practices, materials, location and duration. It was assumed that the design and construction of the Proposed Action would meet or exceed standards for seismic stability, seepage, and liquefaction. It also was assumed that erosion and sediment control measures would be implemented as part of the project.

IMPACT INDICATORS AND SIGNIFICANCE CRITERIA

There are no formal, specific regulations for analyzing effects on geology and soils. Impact indicators and evaluation criteria were developed for this analysis and are presented in **Table 3-7**. These criteria were developed based on the Guidelines for Geologic/Seismic Considerations in Environmental Impact Reports (California Division of Mines and Geology 1982) and other relevant documents.

Table 3-7. Geology and Soils Impact Indicators and Evaluation Criteria.

Impact Indicators	Evaluation Criteria
Amount of change in slope stability/geologic substructure.	Substantially increase or exacerbate unstable earth conditions, including unstable slopes, or substantial changes in geologic substructures that could affect human safety.
The number of people and facilities at the project site directly exposed to geologic hazards.	Increase the exposure of people or property to major geologic hazards, including unstable slopes, ground failure, liquefaction, lateral spreading, or seismic-induced hazards.

IMPACT ANALYSIS AND MITIGATION MEASURES

The Foothill Fault system is located within the metamorphic belt. This series of subparallel, northwest trending vertical faults includes at least two major fault zones. The easternmost is called the Melones Fault zone, and the westernmost is the Bear Mountains Fault zone, which intersects the main body of Folsom Reservoir. This system is geologically old (200 million years), with the last major seismic movement occurring about 140 million years ago. Alquist-Priolo Earthquake Fault Zoning Maps are not available for the project area, because earthquakes are rare in eastern Sacramento County. There has been no recent seismic movement in the project area, and it is assumed that the area is at low risk for seismic events.

Liquefaction is the transformation of uncemented, saturated sand or silt to a liquefied state by the ground shaking of an earthquake. This only occurs in soils with very little or no clay. Liquefaction potential is a function of the level of groundshaking at a given site. The soils in the project area consist of Andregg and Xerolls soils. Published soil data indicate that soils in the project area are not subject to structural loss of strength (collapse or quick failure) or to excessive shrinking and swelling. Due to the limited potential for seismic induced ground shaking in the project area, as discussed above, it is unlikely that liquefaction would occur at the

project site. Therefore, there would be no seismic induced ground failure, including liquefaction, with implementation of the Proposed Action and it is unlikely the Proposed Action would expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic induced ground failure.

A landslide is defined as the downslope movement of soil and rock material under the influence of gravity. The formation of landslides under natural conditions depends on several factors including, but not limited to steepness of slopes, the presence of soft sediments, proximity to areas undergoing active erosion, and earthquake-generated ground shaking. Within the project area, the Andregg soils occur on 3 to 15 percent slopes; they are moderately deep, well-drained soils located on foothill locations. Xerolls soils are shallow to very deep and somewhat excessively drained soils on terrace escarpments and steep hillslopes near the American River. Due too the nature of the soils in the project area and the flat topography of the project site, the hazards of landslides at the project site are unlikely.

The Proposed Action is not expected to result in substantial soil erosion or the loss of topsoil. The construction footprint for the transmission line steel/concrete poles is limited to 15 feet by 15 feet in size, and would result in minimal soil disturbance during construction of the project. However, there is the potential of temporary erosion and/or temporary loss of topsoil during construction, as surface soils can be loosened and made susceptible to the effects of wind and water movement across the surface. Impacts, however, are not considered significant because erosion would be controlled on-site in accordance with construction BMPs, as summarized in Table 2-1.

The project site is not located in an area with unstable geologic formations or unstable soils, as discussed above. The hazards of landslides are unlikely due to the flat topography of the project site and the nature of the soils in the project area. In addition, the project site is not considered susceptible to liquefaction due to the limited potential for seismic induced ground shaking in the project area, as discussed above.

Expansive soils are those with high clay content. Minerals in certain clays swell with increased moisture content and then contract during dry periods. The volume changes associated with seasonal variations in moisture content (called shrink-swell characteristics) can damage shallow buildings, pavement, and other structures. On slopes, the continuous shrinking and swelling of expansive soils can cause soil to migrate downslope. Per discussions above, soils in the project area are not subject to structural loss of strength (collapse or quick failure) or to excessive shrinking and swelling. In addition, there are no structures along the proposed transmission line route that would be exposed to shrink-swell potential of soils.

Mitigation Measures

No mitigation measures are required.

3.6 HAZARDS/PUBLIC HEALTH AND WORKER SAFETY

3.6.1 *Affected Environment*

PROJECT AREA SETTING

Sensitive receptors include residences, schools, parks, playgrounds, hospitals, day care facilities, and health care facilities. As the operator of the Folsom Dam and Reservoir facility, Reclamation has offices located at the facility, approximately 175 feet from the relocated

transmission line. Approximately 90 to 100 Reclamation personnel work out of these offices, of which a portion either work shifts other than the day shift or could work at other locations on any given day. Of the nearby land uses, Folsom State Prison is located approximately 2,450 feet from the relocated transmission line. The nearest residence is located approximately 109 feet from the relocated transmission line. Neither the Reclamation facilities nor Folsom State Prison offices nor facilities are considered sensitive receptors.

Land uses surrounding the project area include residences, industrial and office buildings, and open space. A Phase I Environmental Site Assessment (ESA) was completed by the Environmental Chemistry Section of the Corps' Sacramento District in May 2005 for the proposed American River Watershed Project - Folsom Dam Raise/Folsom Bridge. The ESA, which consisted of a records investigation, interviews, and site reconnaissance, encompassed the proposed roadway and bridge alignment project area as well as the surrounding area, which included the proposed transmission line route. The ESA identified 174 hazardous, toxic, and radiological waste (HTRW) sites in the entire study area. These sites consisted of 131 above ground storage tanks, underground storage tanks, treatment, generator, storage, or disposal facilities, and 43 mitigating sites or sites that had reported spills in the past.

Homeowners in neighborhoods adjacent to overhead power lines frequently express concerns regarding the potential for health effects from exposure to electric and magnetic fields (EMF). Overhead electric power lines produce electric fields; however, a house will shield most of the electric field from outside sources. Other objects, such as trees, shrubs, walls, and fences will also provide electric field shielding. SMUD's Board of Director's adopted Resolution No. 91-04-18 on April 18, 1991, approving an EMF policy statement and authorizing the implementation of an EMF program. Since 1991, SMUD has followed studies on EMF, adopted practices where practicable to minimize potential EMF exposure from new transmission, subtransmission and distribution facilities, and included a practice of prudent avoidance in designing and building future facilities. SMUD has also contributed funds to the National EMF Research program and the California Department of Health Services EMF Program (EMF Risk Assessment completed in October 2002). The medical and scientific communities generally agree that the available research evidence has not demonstrated that EMF creates a health risk. However, they also agree that the evidence has not dismissed the possibility of such a risk. Finally, they agree that while this is an important issue that needs resolution, it is uncertain when such a resolution will occur. The present scientific uncertainty means that public health officials cannot establish any standard or level of exposure that is known to be either safe or harmful. As a result of this uncertainty, SMUD implements no-cost and low-cost steps to reduce EMF levels for new electric facilities. SMUD also encourages the public to use prudent avoidance when they are near EMF. No CEQA standards or any health-based standards exist that indicate that EMF emissions should be considered a significant impact of this project.

Regulatory Setting

Emergency response in the project area is the responsibility of many agencies. Sacramento County has an incident response plan that is followed when a hazardous materials incident is reported. While hazardous material spills and other emergencies would be reported to the Sacramento County Sheriff's dispatch through 9-1-1, a series of contacts with other agencies also would be made. Depending on the level of the incident, agencies involved in an emergency incident could include Folsom Fire District, Sacramento County Office of Emergency Services (OES), Sacramento County Department of Environmental Health (DEH), the Sacramento

County Hazardous Materials Response Team, CDPR, CDFG, the EPA National Response Center, and SMUD.

The Sacramento County Hazardous Materials Division requires contractors to develop a Business Plan to prevent and handle hazardous materials incidents if their stored hazardous materials are greater than 55 gallons, 500 pounds, or 200 cubic feet. The Business Plan includes: (1) identification of the owners and contact persons; (2) a list of hazardous materials on site, their respective hazards, and their storage locations; and (3) an Emergency Response Plan that identifies the specific actions to be taken if the incident is handled with or without notification and assistance from other agencies. Hazardous materials will not be used in such quantities as described above for this project.

3.6.2 *Environmental Consequences*

ASSESSMENT METHODOLOGY

Preliminary impact analysis consisted of identifying the nearest population center and sensitive receptors located in the project area. Hazardous materials that would be used and stored on-site during construction were identified and evaluated to determine the potential risk to sensitive receptors resulting from exposure to these materials.

For public health, potential effects were considered in relation to the type and quantities of hazardous materials to be used and generated by construction, as well as the potential for the public to come in contact with such materials. This review included consideration of the amount of hazardous materials as well as hazardous material storage handling and disposal procedures. The location of sensitive public receptors also was considered relative to the risk posed by project site accidents and hazardous material wind dispersal. Potential effects on worker safety were considered in relation to Occupational Safety and Health Administration (OSHA) requirements. OSHA requirements considered included those that specify the storage, handling, and disposal procedures for hazardous materials.

IMPACT INDICATORS AND SIGNIFICANCE CRITERIA

Public health and worker safety impact indicators and evaluation criteria were developed based on the location of sensitive receptors and the types of hazardous materials that would be used and stored on site. The effect indicators and evaluation criteria used in the impact analysis are presented in **Table 3-8.**

Table 3-8. Public Health and Worker Safety Impact Indicators and Evaluation Criteria.

Impact Indicators	Evaluation Criteria
Public Health	
Hazardous material incidents in the project area of large enough magnitude to pose a health risk to the nearest sensitive receptors.	Result in a substantial increased risk of exposure to commercially available hazardous substances and the hazards associated with those materials such as explosions or fires.
Worker Safety	
Worker exposure to explosions or fires associated with commercially available chemicals (e.g., solvents, fuels, and oils).	Result in a substantial increased risk of exposure to explosive and fire hazards associated with spills or incorrect handling, storage, or use of commercially available substances in relation to applicable worker safety regulations.

IMPACT ANALYSIS AND MITIGATION MEASURES

There would be no routine transport, use, or disposal of hazardous materials associated with the transmission line relocation. A significant hazard to the public or the environment would not be created associated with the project development.

During construction activities associated with the Proposed Action, there would be a remote possibility of accidental spills of fuel or oil from the equipment used. SMUD would have Hazmat cleanup equipment and materials (i.e., absorbent pads) on site to ensure proper management of hazardous materials used during construction or encountered unexpectedly during construction. Best construction practices for hazardous materials have been incorporated into the design and construction of the project as identified below and summarized in Table 2-1.

Homeowners in neighborhoods adjacent to overhead power lines frequently express concerns regarding the potential for health effects from exposure to electric and magnetic fields (EMF). The medical and scientific communities generally agree that the available research evidence has not demonstrated that EMF creates a health risk. However, they also agree that the evidence has not dismissed the possibility of such a risk. Finally, they agree that while this is an important issue that needs resolution, it is uncertain when such a resolution would occur. The present scientific uncertainty means that public health officials cannot establish any standard or level of exposure that is known to be either safe or harmful. Section 3.6 has a more detailed discussion of EMF. No CEQA standards or any health-based standards exist that indicate that EMF emissions should be considered a significant impact of this project.

A Phase I ESA was completed by the Environmental Chemistry Section of the Corps' Sacramento District in May 2005 for the proposed American River Watershed Project - Folsom Dam Raise/ Folsom Bridge Project. The ESA, which consisted of a records investigation, interviews, and site reconnaissance, encompassed the proposed roadway and bridge alignment project area as well as the surrounding area, which included the proposed transmission line route. The ESA identified 174 HTRW sites in the entire study area. These sites consisted of 131 above ground storage tanks, underground storage tanks, treatment, generator, storage, or disposal facilities, and 43 mitigating sites or sites that had reported spills in the past. None of the identified sites from the previously completed Phase I ESA are located within the project area. The nearest hazardous sites are a garbage container leaking petroleum located at the Folsom Dam powerplant, and the Western-Folsom substation, which are approximately 330 and 80 feet, from the relocated transmission line route, respectively. Given that the ESA investigation did not identify any hazardous materials sites within the proposed relocated transmission line route, the Proposed Action is not located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would not create a significant hazard to the public or the environment.

Best Management Practices for hazards include:

- H 1. If an accidental release occurs during refueling or transformer transport, the release shall be cleaned up immediately and reported in accordance with applicable federal, state, and local requirements.
- H 2. If an accidental spill occurs during construction, the release shall be cleaned up immediately and reported in accordance with applicable federal, state, and local requirements.

- H 3. If evidence of contaminated materials is encountered during line construction, construction shall cease immediately and applicable requirements of the Comprehensive Environmental Release Compensation and Liability Act (CERCLA) and the California Code of Regulations (CCR) Title 22 regarding the disposal of waste shall be implemented.
- H 4. If any subsurface structures are encountered during site development or onsite excavation, care shall be exercised in determining whether or not the subsurface structures contain asbestos. If they contain asbestos, they shall be removed, handled, transported, and disposed of in accordance with applicable federal, state, and local regulations.
- H 5. If wells and/or septic tanks are uncovered during site development, they shall be abandoned and removed in accordance with federal, state, and local regulations.

Mitigation Measures

No mitigation measures are required.

3.7 NOISE

3.7.1 Affected Environment

PROJECT AREA SETTING

Noise levels in the project study area are assumed to be relatively low and the project area itself is relatively free of noise intrusions and constitutes a quiet environment. With the exception of the noise generated by the Western substation operations, there are no other man-made noise sources within the immediate project area. Noise sources near the project area include: the City of Folsom, including typical traffic noise and commercial and industrial sources; the Folsom State Prison; and Reclamation facilities.

Sensitive receptors include residences, schools, parks, playgrounds, hospitals, day care facilities, and health care facilities. As the operator of the Folsom Dam and Reservoir facility, Reclamation has offices located at the facility, approximately 175 feet from the relocated transmission line. Approximately 90 to 100 Reclamation personnel work out of these offices, of which a portion either work shifts other than the day shift or could work at other locations on any given day. Of the nearby land uses, Folsom State Prison is located approximately 2,450 feet from the relocated transmission line. The nearest residence is located approximately 109 feet from the relocated transmission line. Neither the Reclamation facilities nor Folsom State Prison offices nor facilities are considered sensitive receptors.

REGULATORY SETTING

Construction scheduling would comply with the Sacramento County General Plan noise policies, which set forth maximum noise levels as related to potentially sensitive surrounding land uses. The construction contractor is required to comply with adopted Sacramento County General Plan noise policies (Sacramento County, 1993). The Sacramento County noise ordinance states that exterior noise limits of 50 A-weighted decibels (dBA) to 65 dBA are acceptable for areas with land use categories that include office buildings and commercial and professional businesses (Sacramento County 1993).

Construction scheduling also would comply with the City of Folsom General Plan (Folsom Community Development Department 1988). The Noise Element defines an acceptable exposure criterion of 50 dBA to 70 dBA for areas with land use categories that include office buildings, businesses, and commercial and professional uses. The acceptable noise exposure criterion for land use categories that include utilities is 50 dBA to 75 dBA (Folsom Community Development Department 1988).

3.7.2 *Environmental Consequences*

ASSESSMENT METHODOLOGY

Potential impacts were evaluated considering the Proposed Action activities and site conditions. Local noise ordinances and the general plans for the City of Folsom and Sacramento County, and the CCR were reviewed and used to develop significance criteria. The noise levels expected to result from construction and operation of the Proposed Action were examined and compared with the significance criteria to identify potential noise-related impacts.

IMPACT INDICATORS AND SIGNIFICANCE CRITERIA

The impact indicators and significance criteria developed for the evaluation of noise impacts are presented in **Table 3-9**.

Table 3-9. Noise Impact Indicators and Evaluation Criteria.

Impact Indicators	Evaluation Criteria
Increase in noise levels associated with construction activity.	Result in an increase in noise levels above 50 dBA to 65 dBA for areas with land use categories that include office buildings and commercial and professional businesses.

IMPACT ANALYSIS AND MITIGATION MEASURES

The Proposed Action would cause a short-term increase in noise levels during construction. Construction scheduling would comply with the Sacramento County General Plan and City of Folsom noise policies, which set forth maximum noise levels as related to potentially sensitive surrounding land uses. The Sacramento County noise ordinance states that exterior noise limits of 50 dBA to 65 dBA are acceptable for areas with land use categories that include office buildings and commercial and professional businesses (Sacramento County 1993). The Noise Element of the City of Folsom General Plan defines an acceptable exposure criterion of 50 dBA to 70 dBA for areas with land use categories that include office buildings, businesses, and commercial and professional uses. The acceptable noise exposure criterion for land use categories that include utilities is 50 dBA to 75 dBA (Folsom Community Development Department 1988). The noise impacts associated with the Proposed Action would be temporary and there would be no long-term significant noise impacts. Incorporation of the measures outlined below and summarized in Table 2-1 would reduce the temporary increase in noise levels associated with construction activities. There would be no sustained or permanent exposure of persons to or prolonged generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Temporary and short-term noise would be generated during the construction phase of the Proposed Action by increased truck traffic to and from the project site, construction itself, and the installation of the transmission line. The construction contractor is required to comply with adopted Sacramento County General Plan and City of Folsom noise policies, as described

above. The construction contractor also is required to maintain the manufacturer's noise suppression devices on the equipment at all times and keep them in good operating condition, as a standard condition of project approval. In addition, incorporation of the measures outlined below would reduce the temporary increase in noise levels associated with construction activities.

Mitigation Measures

- N 1. Construction vehicle staging areas shall be located as far from residences as practical.
- N 2. Contractor shall ensure that all construction vehicles and equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers at all times. It shall be the contractor's responsibility to obtain the services of a qualified acoustical professional to verify proper equipment mufflers if concerns (e.g., public complaints) relating to this issue arise.
- N 3. Construction activities would be limited to occur between the hours of 7:00 a.m. and 6:00 p.m. Monday through Friday, and from 8:00 a.m. to 5:00 p.m. on Saturday and Sunday.
- N 4. Construction activities would be prohibited on federal- and state-recognized holidays.
- N 5. Construction equipment powered by an internal combustion engine shall be equipped with suitable exhaust and intake silencers, in accordance with manufacturers' specifications, and shall be maintained in good working order.
- N 6. Stationary construction equipment (i.e., portable power generators, compressors) shall be located at the furthest distance possible from nearby residential units.

3.8 TRANSPORTATION AND CIRCULATION

3.8.1 *Affected Environment*

PROJECT AREA SETTING

The closest freeway to Folsom is State Highway 50 (Highway 50). Highway 50 is a major east-west transportation route, moving traffic west from the Folsom area toward downtown Sacramento and east from the Folsom area toward South Lake Tahoe. Highway 50 is located between four and five miles south of the project site. Local access to the project site is provided through Folsom.

The main roads associated with the project area are Folsom Dam Road and Auburn-Folsom Road. Folsom Dam Road is a two-lane road that connects Folsom-Auburn Road to East Natoma Street. It was closed to public use in February 2003 due to security concerns. Bicycle and pedestrian traffic has always been restricted. Folsom-Auburn Road is a two-lane undivided north-south arterial north of Folsom Dam Road, a four-lane undivided arterial south of Folsom Dam Road to Oak Avenue, and a four-lane divided arterial south of Oak Avenue.

Traffic studies were recently conducted for the Folsom Dam Bridge project and it was determined that the Level of Service (LOS) for Auburn-Folsom Dam Road is F. Level of Service F (LOS F) represents stop-and-go conditions for two- and four-lane roads. Traffic flow is constrained, and lane changes are minimal. Drivers at signalized intersections may wait

through several green phases prior to being served. Motorists on stop-controlled approaches experience insufficient gaps of suitable size to cross safely through a major traffic stream. Under existing conditions, approximately 90 to 100 Reclamation personnel travel to and from the Folsom Dam and Reservoir facility daily. These workers generally use the Folsom-Auburn Road entrance at Folsom Dam Road, traveling from Interstate 80 to Greenback Lane or from Highway 50 to Folsom Boulevard. Reclamation operations and maintenance personnel generate approximately 180 to 200 trips each day during a standard work year.

3.8.2 *Environmental Consequences*

ASSESSMENT METHODOLOGY

Methods used to assess potential impacts on transportation include review and application of relevant laws, ordinances, regulations, and standards, as well as identification of anticipated traffic increases due to implementation of the Proposed Action. The most recent traffic counts and the recent and projected LOS values for Folsom were compared to anticipated average daily traffic volumes during construction of the Proposed Action. Anticipated daily traffic was determined based on the number of workers and deliveries expected at the site. This methodology provides a quantitative measure of the potential traffic impacts and represents a conservative, or "worst-case," analysis because the traffic estimates that are used represent peak construction activity levels, rather than average levels.

IMPACT INDICATORS AND SIGNIFICANCE CRITERIA

The impact indicators and evaluation criteria used in the transportation and circulation analysis are listed in **Table 3-10.**

Table 3-10. Transportation and Circulation Impact Indicators and Evaluation Criteria.

Impact Indicator	Evaluation Criteria
Average daily traffic volumes.	A substantial increase in average daily traffic volumes such that road capacity becomes adversely affected.
Roadway levels of service.	A decrease in the roadway operating level to below LOS C within Folsom, as determined in relation to the existing traffic load and capacity of the street system

IMPACT ANALYSIS AND MITIGATION MEASURES

The main roads associated with the project area are Folsom Dam Road and Auburn-Folsom Road. Folsom Dam Road is a two-lane road that connects Folsom-Auburn Road to East Natoma Street. It was closed to public use in February 2003 due to security concerns. Bicycle and pedestrian traffic has always been restricted. Folsom-Auburn Road is a two-lane undivided north-south arterial north of Folsom Dam Road, a four-lane undivided arterial south of Folsom Dam Road to Oak Avenue, and a four-lane divided arterial south of Folsom Dam Road. Traffic in and around the project site may temporarily increase during the hours of construction, however any delays would be minor and would be considered insignificant. Easements for the transmission line have already been obtained. The construction crew would likely consist of construction workers, with people working on-site during the peak of construction activities. In addition, there would be equipment and materials deliveries during the project construction period. It is expected that construction activities could result in some minor short-term construction traffic congestion and short-term partial lane blockage. SMUD would incorporate best management practices to control traffic during construction of the Proposed Action, as outlined below and summarized in Table 2-1.

Traffic studies were recently conducted for the Folsom Dam Bridge project and it was determined that the LOS for Auburn-Folsom Dam Road is F. LOS F represents stop-and-go conditions for two- and four-lane roads. Traffic flow is constrained, and lane changes are minimal. Drivers at signalized intersections may wait through several green phases prior to being served. Motorists on stop-controlled approaches experience insufficient gaps of suitable size to cross safely through a major traffic stream. Traffic in and around the project site may temporarily increase during the hours of construction, but any delays would be minor. In addition, SMUD would incorporate best management practices to control traffic during construction of the project, as described in (a) above. Vehicle trips associated with construction activities would not be expected to increase the LOS for Folsom-Auburn Road.

During removal of the existing transmission line there may temporary disruption of the bike trails and pedestrian traffic in the project area, however these disruptions would be minor and considered insignificant. No bike way systems currently exist in the vicinity of the new transmission line route. The Proposed Action does not include activities or features that conflict with any policy, plan, or program relating to alternative transportation

Mitigation Measures

- T 1. Appropriate signage, coning, and flag persons would be on-site to alert the public regarding ongoing construction would be used.
- T 2. Sacramento County and the City of Folsom would be coordinated with regarding the construction of the project to minimize traffic conflicts.

Chapter 4 Other Impact Considerations

4.1 CUMULATIVE EFFECTS

4.1.1 Introduction

The NEPA regulations require that an EA discuss project effects that, when combined with the effects of other projects, result in significant cumulative effects. The NEPA regulations define a cumulative effect as: "The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonable foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor or collectively significant actions taken over a period of time" (40 CFR 1508.7).

4.1.2 Methodology

Cumulative effects are evaluated by first identifying other projects that could have significant adverse or beneficial environmental effects in the study area. These effects are then compared with the degree and timing of the potential adverse and beneficial effects of the proposed alternatives to determine the types and significance of potential cumulative effects. The cumulative effects on environmental resources are classified by:

- Neutral, beneficial, or adverse, which compares the final condition of a given resource to its existing condition.
- Minor, moderate, or substantial, which considers the relative contribution of the current project to a given effect, as well as the importance of the resource in the study area to the regional resource.
- Temporary or permanent, with permanent being assumed unless otherwise noted.

4.1.3 Related Projects

Existing and planned projects in the vicinity of the Proposed Action are identified and briefly described below. The exact construction timing and sequencing of these projects are not yet determined or may depend on uncertain funding sources. Projects with potential for concurrent construction and/or operational periods with the Proposed Action are also considered in this analysis.

PAST ACTIONS

- Year 1999. Lake Natoma Crossing. One of two bridge crossings over the American River at Lake Natoma.
- Year 2003. Folsom Historic District Traffic Calming Program. A City of Folsom Program aimed at limiting and diverting traffic away from the City's historic district and surrounding neighborhood.
- Year 2003. Folsom Dam Road Closure. Closure of the Folsom Dam road by Reclamation for reasons of public safety and security.

PRESENT ACTIONS

- Year 2006. Folsom Dam Raise/Folsom Bridge Project. A Corps and City of Folsom project that involves building of a road and bridge crossing to alleviate traffic associated with the Folsom Dam Road closure.
- Year 2007. Embankment Dams and Dikes Static Modification. A Reclamation project that includes modifications to its dams and dikes.
- Year 2007. Folsom Dam Safety and Flood Damage Reduction Environmental Impact Statement/Environmental Impact Report.
- Year 2007. Construction of an Auxiliary Spillway.
- Year 2007. Seismic work at Mormon Island and Main Dam.
- Year 2007. Modifications to dikes and embankments.

REASONABLY FORESEEABLE FUTURE ACTIONS

- Year 2007 – 2021. Folsom Dam Raise. Increasing the height of Folsom Dam to provide increased downstream flood protection. Projects include:
  - Dam Raise and wingwalls (2012-2021)
  - Dikes and wingdams (2007-2009)
  - Mormon Island Auxiliary Dam (MIAD) (2008-2009)
  - LL Anderson Dam (2008-2009)
  - Temperature shutters (2011-2012)
  - Bushy Lake and Woodlake (2007-2010)
- Year unknown. Folsom Dam Outlet Modification. Enlargement of existing river outlets, construction of two new outlets, and modifications of surcharge storage to improve flood control.
- Year unknown. Folsom Dam Redundant Water Supply Intake. Construction of a new water supply outlet for Roseville, Folsom, and the San Juan Water District to provide redundancy to their raw water supply systems.

4.1.4 *Analysis of Potential Effects*

Potential cumulative effects of the Proposed Action on resources within the cumulative effects study area are discussed below. If the project is not expected to substantially contribute to a cumulative effect on a significant resource, that resource is not addressed. These include aesthetics/visual; cultural; hydrology and water quality; land use; and public services.

AIR QUALITY

The Proposed Action could overlap with ongoing Corps and Reclamation projects at Folsom Dam, as well as various transportation improvement projects.

These concurrent construction activities could have considerable adverse cumulative air quality effects. The SMAQMD's guidance states that a Proposed Action should be considered cumulatively significant if it meets one of the following criteria:

- The project requires a change in the existing land use designation and projected emissions of ROG, NOx, or PM_{10} are greater than the emissions for the site if it was developed under the existing land use designation.
- Project emissions of ROG or NOx or emission concentrations for the Proposed Action are greater than the emissions anticipated for the site if developed under the existing land use designation.
- Project emissions would exceed the project specific significance criteria.
- The lead agency is not implementing all applicable emission control measures adopted in the SIP.

Based on these criteria, the Proposed Action emissions would be less than the SMAQMD's thresholds. In addition, the Proposed Action is not considered to have a cumulatively significant effect using the criteria developed by the SMAQMD (SMAQMD 2004a). That is, the Proposed Action would not result in emissions that are greater than the existing land use designation; the Proposed Action emissions would be less than the SMAQMD's significance thresholds; and the Proposed Action does not exclude applicable SIP measures. Although the Proposed Action would result in some emissions during construction, the Proposed Action would not result in a cumulatively considerable contribution to significant cumulative effects on air quality based on estimated construction emissions.

Biological Resources

Cumulative effects on vegetation and wildlife resources would include increased disturbance of plant communities, loss of native vegetative cover, substantial disturbance of a sensitive natural community, or substantial reduction in the quality and quantity of important habitat or access to such habitat for wildlife species during construction, operation, and maintenance of the Proposed Action.

For the Proposed Action, vegetation and wildlife would not be expected to result in loss of habitat or adverse effects to species within the project area. Future residential, industrial, commercial, and transportation projects can be reasonably expected to contribute to a cumulative loss of native vegetation due to the conversion of native habitat to other land uses. However, the Proposed Action would not result in a cumulatively considerable contribution to significant cumulative significant effects on biological resources based on its construction, operation, and maintenance activities, nor contribute cumulatively to any vegetation and wildlife losses as a result of any future residential, industrial, commercial or transportation projects.

Cultural Resources

During construction of the Proposed Action and other projects in the cumulative effects study area, there is the possibility that unidentified cultural resources may be encountered, particularly if there are concurrent construction activities. The projects at Folsom Dam, combined with the Proposed Action, would not result in a cumulatively considerable contribution to significant cumulative effects on cultural resources because each project would implement appropriate measures, as discussed in Chapter 3, Cultural Resources.

GEOLOGY AND SOILS

There is the potential of temporary erosion and/or temporary loss of topsoil during construction of the Proposed Action and other projects in the cumulative effects study area, as surface soils can be loosened and made susceptible to the effects of wind and water movement across the surface. The projects at Folsom Dam, combined with the Proposed Action, would not result in a cumulatively considerable contribution to significant cumulative effects on geology and soils because each project would implement appropriate erosion control BMPs, as discussed in Table 2-1.

HAZARDS/PUBLIC HEALTH AND WORKER SAFETY

During construction of the Proposed Action and other projects in the cumulative effects study area, temporary increases in traffic congestion, exposure to hazardous materials, accident rates, and emergency response times may result, particularly if there are concurrent construction activities. During construction activities associated with the Proposed Action, there would be a remote possibility of accidental spills of fuel or oil from the equipment used, however, there would be no routine transport, use, or disposal of hazardous materials associated with the Proposed Action. In addition, the Proposed Action would not be expected to result in activities that would limit emergency response times or exposure the workers or public to hazards. Therefore, the Proposed Action would not result in a cumulatively considerable contribution to significant cumulative effects on hazards and public health and worker safety based on its construction, operation, and maintenance activities.

NOISE

Construction noise would be minimized by such measures as proper equipment maintenance and appropriate timing of construction activities (hours and days of the week) in accordance with Federal, State, or local standards, as applicable. Therefore, the Proposed Action would not result in a cumulatively considerable contribution to significant cumulative effects on noise based on its construction, operation, and maintenance activities.

TRANSPORTATION AND CIRCULATION

Over the short term, there would continue to be insufficient roadway/bridge lanes to accommodate traffic movement in the rapidly growing Folsom area. The Proposed Action, concurrent with other projects related to and in the vicinity of the Folsom Dam, may result in increased traffic volumes from construction equipment and worker vehicles, thereby increasing delays/congestion. Traffic in and around the project site may temporarily increase during the hours of construction of the Proposed Action, however any delays would be minor and would be considered insignificant. Therefore, the Proposed Action would not result in a cumulatively considerable contribution to significant cumulative effects on transportation and circulation based on its construction, operation, and maintenance activities.

4.2 RELATIONSHIP BETWEEN SHORT-TERM USES AND LONG-TERM PRODUCTIVITY

NEPA policies require that during preparation of an EA, both short- and long-term impacts should be addressed (40 CFR §1502.16). Short-term refers to the time period that includes the immediate implementation of the project and long-term refers to the time period that includes the operation life of the project facilities and beyond. Short-term uses and affects are fully addressed in Chapter 3.0, Affected Environment and Environmental Consequences. The

following discussion addresses how the implementation of the Proposed Action would affect the long-term productivity of the natural and human environment.

Implementation of the Proposed Action would maintain the reliability of power service to current SMUD customers. At some future date, SMUD would tie into the existing Western Folsom substation located at the base of Folsom Dam, resulting in an increased level of regional electric service reliability. This increase in reliability would help the meet current and projected electrical load demands and provide grid stability during high demand periods. The future connection to the Western Folsom substation would be addressed by a separate environmental document.

4.3 Irreversible and Irretrievable Commitments of Resources

NEPA policies require that during preparation of an EA, any irreversible or irretrievable commitment of resource should be addressed (40 CFR §1502.16). As stated in Reclamation's NEPA Handbook:

> *"Irreversible commitments are decisions affecting renewable resources such as soils, wetlands, and waterfowl habitat. Such decisions are considered irreversible because their implementation could affect a resource that has deteriorated to the point that renewal can occur only over a long period of time or at great expense or because they would cause the resource to be destroyed or removed."*

No irreversible commitments of resources associated with implementation of the Proposed Action have been identified.

The handbook states further:

> *"Irretrievable commitment of natural resources means loss of production or use of resources as a result of a decision. It represents opportunities foregone for the period of time that a resource cannot be used."*

Irretrievable commitments of resources that could result from implementation of the Proposed Action and Action Alternatives include:

- Potential reduction in power generation; and
- Energy needed for operation and maintenance of facilities.

4.4 Conflicts with U.S. Bureau of Reclamation Policies

In addition to NEPA compliance, Reclamation must comply with Department of Interior directives such as protection of Indian Trust Assets (ITAs) and Executive Orders, such as Environmental Justice. Compliance with these directives is discussed below.

4.4.1 Indian Trust Assets

ITAs are legal interests in property held in trust for Indian tribes or individuals by the United States. It is Reclamation's policy to protect ITAs from adverse impacts resulting from its programs and activities. There have been no ITAs identified within the project study area and Reclamation has confirmed that no adverse impacts would occur to ITAs as a result of this

project (Welch 1998). For a more detailed discussion of ITAs, refer to Section 5.4, Indian Trust Assets Policy.

4.4.2 *Environmental Justice*

Executive Order 12898, Environmental Justice, requires that review of proposed federal actions analyze any disproportionately high and adverse environmental or human health effects on minority and low-income communities. No disproportionately high or adverse environmental or human health impacts on minority or low-income communities have been identified for this Proposed Action. For a more detailed discussion of Executive Order 12898, refer to Section 5.5, Executive Order 12898–Environmental Justice.

Chapter 5 Compliance With Applicable Laws, Ordinances, Regulations, And Standards

5.1 National Environmental Policy Act

NEPA requires federal agencies to examine the impact of any major federal actions affecting the environment (42 U.S.C. Sec. 102). Federal actions include projects undertaken or funded by the agencies as well as proposals over which the agency has approval powers. Reclamation is the lead federal agency under NEPA for this project. The EA has been prepared in compliance with NEPA.

5.2 Federal Endangered Species Act of 1973, as Amended

Section 7 of the FESA requires federal agencies, in consultation with the Secretary of the Interior, to ensure that their actions do not jeopardize the continued existence of endangered or threatened species, or result in the destruction or adverse modification of the critical habitat of these species. The USFWS has responsibility for listed and proposed listed terrestrial species.

Through the technical assistance process, Reclamation has been involved in coordination and informal consultation activities with USFWS since August 2006. In August 2006, a meeting was attended by representatives of Reclamation, SMUD, and USFWS to initiate discussions regarding the scope, identifying listed and proposed species potentially affected by the Proposed Action, as well as developing an appropriate approach for assessing the potential effects of the federal action (i.e., Proposed Action) on listed and proposed species and their habitat, as part of the Section 7 consultations required by the FESA. Species considered in the Section 7 ESA consultation for this project include: bald eagle and VELB.

Following a meeting on November 3, 2006 with USFWS and subsequent correspondence (Appendix D), it was determined that due to the "avoidance measures" incorporated into the project description, there would be no effect to species or their habitat within the project area, and therefore formal consultation by Reclamation is not required, as indicated in the Final ESA Section 7 Consultation Handbook (USFWS and NMFS 1998).

5.3 National Historic Preservation Act (15 U.S.C. Sec. 470 et Seq.)

The National Historic Preservation Act requires the federal government to list significant historic resources in the National Register of Historic Places. Federal agencies must consult the National Register when planning to undertake or grant approval for a project. Prior to issuing any license or implementing a project, the federal agency shall consider the effects of the project or license on any historical buildings, sites, structures, or objects that are included in, or eligible for inclusion in, the National Register (16 U.S.C. § 470, f). An analysis of cultural resources has been completed by the Corps for the Folsom Bridge project and determinations of eligibility for the identified resources have been made. Comments on the preliminary determinations have been solicited from SHPO. Reclamation has been involved in consultation and coordination activities with the SHPO for the Proposed Action to satisfy the regulatory requirements of Section 106 of the NHPA (Appendix E).

5.4 Indian Trust Assets Policy

ITAs are legal interests in property or rights held in trust by the United States for Indian tribes or individuals. Trust status originates from rights imparted by treaties, statutes, or executive

orders. Indian reservations, rancherias, allotments, traditional use areas, hunting and fishing rights, and water rights are commonly recognized ITAs. All federal bureaus and agencies share a responsibility to protect and maintain ITAs. There have been no ITAs identified within the project study area, and therefore, the Proposed Action would not result in adverse impacts to ITAs.

5.5 Executive Order 12898 - Environmental Justice

Executive Order 12898 on Environmental Justice requires that environmental analyses of proposed federal actions address any disproportionately high and adverse human health or environmental effects on minority and low-income communities. In addition, each federal agency must ensure that public documents, notices, and hearings are readily accessible to the public. No disproportionately high or adverse human health or environmental effects on minority and low-income communities by the Proposed Action have been identified. Mailing notices and distribution of other project information includes property owners and potentially affected persons and institutions without any distinction based on minority or income status.

5.6 Executive Order 11990 - Protection of Wetlands

Executive Order 11990 calls for each federal agency, in carrying out its ordinary responsibilities, to take actions to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands. Federal agencies must avoid undertaking new construction located in wetlands unless no practicable alternative is available and the proposed action includes all practicable measures to minimize harm to wetlands. The Proposed Action would not result in the loss or degradation of any wetlands.

5.7 Executive Order 11988 - Floodplain Management

Executive Order 11988 on Floodplain Management requires the Corps to provide leadership and take action to: 1) avoid development in the base (100-year) floodplain; 2) reduce the hazards and risks associated with floods; 3) minimize the impact of floods on human safety, health, and welfare; and 4) restore and preserve the natural and beneficial values of the base flood plain. The Proposed Action is in compliance with this executive order.

5.8 Section 176 of the Clean Air Act

Section 176 of the Clean Air Act (42 U.S.C. 7401, et seq.) prohibits any department, agency, or instrumentality of the Federal Government to engage in, support in any way or provide financial assistance for, license or permit, or approve, any activity which does not conform to State Implementation Plan. The Proposed Action is not expected to exceed the SMAQMD and EPA conformity thresholds for NOx, increase violations within the project area, or hinder the attainment of air quality objectives in the vicinity of Folsom Dam and Reservoir, Sacramento County, California.

Chapter 6 Consultation and Coordination

6.1 Agencies and Persons Consulted

SMUD, Reclamation and the City of Folsom are collaborating in this effort. Additional agencies (including those listed below) had the opportunity to review the Draft EA during the public and agency review period, and to use this information in consideration of the Proposed Action. Any comments on the Draft EA received from these agencies and the general public would be considered in project decision-making. Other public agencies with review authority over the project may include:

- California Department of Fish and Game (CDFG)
- California Department of Parks and Recreation (CDPR)
- Department of Water Resources (DWR)
- Sacramento Area Flood Control Agency (SAFCA)
- State Historic Preservation Office (SHPO)
- U.S. Army Corps of Engineers (Corps)
- U.S. Environmental Protection Agency (EPA)
- U.S. Fish and Wildlife Service (USFWS)
- Western Area Power Administration (Western)

6.2 Public Involvement

In accordance with NEPA, preparation of this EA has included contacts with affected agencies, organizations, and persons who may have an interest in this project. In reviewing the Draft EA, affected public agencies and the interested public focused on impact issues and ways in which potentially significant effects of the project are proposed to be avoided or mitigated. Comments on the Draft EA were made in writing during the review and comment period.

Chapter 7 List of Preparers

The names and area of participation of the lead and resource agency representatives who were primarily responsible for providing input to the Draft EA are identified in **Table 7-1**. the names, qualifications, and area of participation of the persons who primarily responsible for preparing the EA, as well as those persons who provided substantive supporting information or analyses are included in **Table 7-2.**

Table 7-1. Resource Agency Participants and Preparers.

Name	Area of Participation
Sacramento Municipal Utility District	
Lonn Maier	Agency Contact; Description of Project; Document Review
Paul Olmstead	Agency Contact; Description of Project; Document Review
Dave Porter	Description of Project; Document Review
Ronald Scott	Agency Contact; Document Review
U.S. Bureau of Reclamation	
Shawn Oliver	Agency Contact; Document Review
Drew Lessard	Agency Contact; Document Review
City of Folsom	
Gordon Tornberg	Agency Contact; Document Review
U.S. Fish and Wildlife Service	
Stephanie Rickabaugh	ESA Coordination

Table 7-2. Consultant List of Preparers.

Name	Expertise and Education	Area of Participation
HDR | Surface Water Resources, Inc.		
George "Buzz" Link	Water Resources Systems and Hydrologic Modeling B.S., Civil Engineer, 1975 Professional Engineer, California	Principal-in-Charge; Agency Coordination; and Document Review
Meryka Atherstone	Environmental Planning B.S. Earth Systems Science and Policy, 2001	Project Management; Project Coordination; ESA Facilitations; and EA Document Management
Carolyn Bragg	Environmental Planning B.S. Earth Systems Science and Policy, 2006	Affected Environment; and Applicable Law Compliance
Brandon Lee	Graphics and GIS B.S. Graphic Design and Photography Special Major, 2002	Cartography; Maps; and Figures
Linda Standlee	Administrative Support and Document Management	Document Compilation; Editing; and Formatting

Chapter 8 Literature Cited

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Appendix A

Comments Letters Received on the Draft Environmental Assessment

and Responses to Comments

COMMENT LETTER 1

Department of Energy
Western Area Power Administration
Sierra Nevada Customer Service Region
114 Parkshore Drive
Folsom, California 95630-4710

Mr. Sean Oliver
Natural Resource Specialist
Bureau of Reclamation
Central California Area Office
7794 Folsom Dam Road
Folsom, CA 95630

Dear Mr. Oliver:

Western submits the enclosed comments on Reclamation's Sacramento Municipal Utility District 230-kV Folsom Dam Transmission Line Relocation Draft Environmental Assessment/Finding of No Significant Impact dated October 2006. These comments also pertain to the Sacramento Municipal Utility District's (SMUD) accompanying draft entitled Initial Study/Mitigated Negative Declaration 230-kV Folsom Dam Transmission Line Relocation. These comments are based on a review by Western of the two subject documents and by a subsequent meeting on October 26, 2006, between Western, SMUD, and Reclamation.

If you have any questions regarding these comments, please contact Ms. Cherie Johnston-Waldear at (916) 353-4035.

Sincerely,

Stephen Tuggle
Environmental Manager

Enclosure

Western submits the following comments on Reclamation's Sacramento Municipal Utility District 230-kV Folsom Dam Transmission Line Relocation Draft Environmental Assessment/Finding of No Significant Impact dated October 2006.

1. Western requests to be a cooperating agency on the Environmental Assessment (EA). Per a coordination meeting with the Sacramento Municipal Utility District (SMUD), Reclamation, and Western on October 26, 2006, Reclamation will provide Western with an official letter addressed to the Sierra Nevada Region's (SNR) Regional Manager, Mr. James D. Keselburg, requesting Cooperating Agency status from SNR. A

2. Western will issue a License Agreement to SMUD for the right to occupy the currently unused portion of Western's Folsom-Roseville (FOL-RSC) 230-kilovolt (kV) transmission line easement for the relocation of a portion of SMUD's Orangevale-Lake/Whitcrock-Orangevale 230-kV transmission line. The underlying Right-of-Way (ROW) land is owned in fee by Reclamation; Western only owns an easement for the ROW. Western will also issue a License Outgrant to SMUD for that portion of SMUD's 230-kV line crossing over Western's Folsom Substation. The Folsom Substation and land is owned in fee by Western. This action on Western's part constitutes a Federal undertaking requiring Western to comply with regulations set forth in the National Environmental Policy Act, as well as the National Historic Preservation Act (NHPA), and the Endangered Species Act (ESA). B

3. It is understood that Reclamation will be the lead agency assuring regulatory environmental compliance for this undertaking between Reclamation and Western. Reclamation will be the lead agency in consultation requirements with the California State Historic Preservation Officer (SHPO) regarding Section 106 of the NHPA, Native American Consultation requirements, and U.S. Fish and Wildlife Service (USFW) consultation pursuant to Section 7 of ESA. C D

4. Western requires Reclamation to add language to the draft EA detailing Western's Federal action and how it relates to the undertaking, regulatory requirements for Western as a result of the proposed action, potential impacts of the undertaking to Western's FOL-RSC Transmission Line ROW, and Western's Folsom Substation. Reclamation will further add language to the draft EA stipulating Reclamation's role as lead agency and their responsibility to satisfy Western's regulatory requirements for this undertaking. E

5. Regarding the licenses between Western and SMUD, Reclamation would like Western to issue the Agreement for the same duration (in perpetuity) that Reclamation will be issuing to SMUD for an Easement Agreement within the FOL-RSC ROW Transmission Line. Due to Federal law, Licenses are limited to a duration of 50 years; therefore, Western will not stipulate a term in the Agreement. F

6. Reclamation requires Western to provide a written statement (in the form of a memorandum) to be included in the final EA stating that Western has every intention of granting a License Agreement to SMUD for SMUD's 230-kV transmission line relocation within Western's ROW on the FOL-RSC Transmission Line and a License Outgrant for Western's Folsom Substation area. Western will grant a License Outgrant provided all regulatory environmental laws and compliance are satisfied by Reclamation for the entire project including any requirements and G

responsibilities on Western's behalf. Note: The License Agreement will stipulate that in the event Western needs to put a second line, relocate an existing line, or modify the substation, SMUD will need to relocate their line or provide alternate rights to Western. Reclamation is granting the easement for the line within Western's existing easement. Western is concurring with the right to occupy the currently unused portion until such time that Western needs the easement. G (Cont.)

7. Reclamation requires Western to have a final decision and description of the exact type of Agreement document to be issued to SMUD for the relocation in the final EA. Currently, the draft EA states that a "Letter of Common Consent" will be issued by Western to SMUD. This needs to be revised. A License Agreement will be issued for the currently unused easement portion and a License Outgrant for the Folsom Substation Area. Items 5 and 6 above provide the details of the Agreement documents. H

8. Reclamation will ensure that the proposed project will not adversely affect environmentally sensitive resources, including cultural or biological resources identified within Western's FOL-RSC ROW and the Folsom Substation. Reclamation will also ensure that the proposed project will not disturb hazardous substances, pollutants, or contaminants. This includes activities outside of Western's ROW related to the construction and placement of the SMUD transmission towers within Western's ROW. Any impacts to cultural, biological, or other resources will be mitigated by Reclamation. I

9. Reclamation will be responsible for any project changes after the finalization of the EA that may require additional compliance with SHPO, USFW, or other regulatory agencies. J

10. Western will require a review of all compliance correspondence from Reclamation to SHPO and USFW for this project. K

11. Regarding the relocation of SMUD's 12-kV distribution line as described in the draft EA, Western had stated to SMUD that the 12-kV distribution line cannot be relocated within the same ROW as Western's FOL-RSC . Since SMUD is getting the easement rights from Reclamation and not from Western, the 12-kV distribution line could be located within the 125-foot unused portion of the easement as a separate line or underbuild. L

12. Western will require funding in accordance with Section 1501.6 of CFR Part 1021, Council on Environmental Quality, which states that "the lead agency shall, to the extent available funds permit, fund those major activities or analyses it requests from cooperating agencies. Potential lead agencies shall include such funding requirements in their budget requests." M

RESPONSES TO COMMENT LETTER 1

A. Inserted description of Western acting as a cooperating agency for the Proposed Action into Chapter 1.

B. Inserted description of Western's federal action into Chapter 1 and Chapter 2.

C. Comment noted. Inserted description of Reclamation's consultation requirements as lead agency.

D. Comment noted. Inserted description of Reclamation's consultation requirements as lead agency.

E. Inserted information into Chapter 1 regarding Western's federal action and Reclamation's role as lead agency.

F. Inserted description of duration of license issued by Western into Chapter 2.

G. Comment noted.

H. Updated description of Western's federal action in Chapter 1 and Chapter 2.

I. Updated individual environmental resource category analyses in Chapter 3 to reflect Western's federal action.

J. Comment noted.

K. Comment noted.

L. Inserted description of 12 kV line into Chapter 2.

M. Comment noted.

COMMENT LETTER 2

From: Fujitsubo, Miki SPK [Miki.Fujitsubo@spk01.usace.army.mil]
Sent: Tuesday, November 14, 2006 7:28 AM
To: Lonn Maier
Cc: Atherstone, Meryka; Victorine, Rebecca A SPK; Piccola, Francis C SPK; Rinck, Jane L SPK
Subject: Folsom PAC/EDR - Joint Federal Plan
Lonn

My understanding is that we are commenting formally to your draft EA. The one major issue is your report does not reference or address the proposed auxiliary spillway for flood damage reduction and dam safety. It will affect your utility alignment decisions. A

Mr. Miki Fujitsubo
Landscape Architect / Water Resource Planner
U.S. ARMY CORPS OF ENGINEERS
1325 J Street
Sacramento, CA 95814-2922
916.557.7440
FAX: 916.557.7856
Miki.Fujitsubo@usace.army.mil

RESPONSES TO COMMENT LETTER 2

A. The project area maps have been updated to include the auxiliary spillway alignment and the project description and associated analyses have been updated to account for the auxiliary spillway.

Appendix B
Fugitive Dust Prevention and Control Plan

Appendix B
Fugitive Dust Prevention and Control Plan

At its July 2001 hearing, the California Air Resources Board (CARB) approved an Asbestos Airborne Toxic Control Measure (ATCM) for Construction, Quarrying, and Surface Mining Operations. Effective November 19, 2002 for all air districts, the ATCM requires road construction and maintenance activities, construction and grading operations, and quarry and surface mining operations in areas where naturally occurring asbestos is likely to be found to employ best available dust mitigation measures.

Emissions from equipment used during construction may have a temporary negative impact on air quality, however these temporary impacts would be considered less than significant with the incorporation of all best available control measures and best management practices (BMPs), as described below.

Standard Measures for Construction Equipment

- Maintain all construction equipment in proper tune according to manufacturer's specifications.
- Fuel all off-road and portable diesel powered equipment, including but not limited to bulldozers, graders, cranes, loaders, scrapers, backhoes, generator sets, compressors, and auxiliary power units, with CARB-certified motor vehicle diesel fuel (non-taxed version suitable for off-road).
- Maximize to the extent feasible, the use of diesel construction equipment meeting the CARB's 1996 or newer certification standard for off-road heavy-duty diesel engines.
- Install diesel oxidation catalysts, catalyzed diesel particulate filters or other approved emission reduction retrofit devices.
- Minimize length of time construction equipment is left idling.
- Reduce the number of construction vehicles operating concurrently.
- Construction vehicle staging areas shall be located as far from residences as possible.

The contractor also would be required to adhere to the CARB's standard mitigation program as a standard condition of approval, and implement a Fugitive Dust Prevention and Control Plan to control fugitive dust at the construction site. The measures associated with the Fugitive Dust Prevention and Control Plan is further described below.

Fugitive Dust Prevention and Control

1. Land Clearing/Earth Moving:
   - Water shall be applied by means of truck(s), hoses and/or sprinklers in late morning and at the end of the day during clearing, moving, or other site preparation activities to minimize dust emissions.
   - Haul vehicles transporting soil into or out of the property shall be covered.

- A water truck shall be on site at all times. Water shall be applied to disturbed areas as necessary to control dust, but no less than 4 times per day during construction.
- Equipment speeds shall not exceed 15 miles per hour (mph) on construction sites. Speed signs shall be posted at 1,000-foot intervals.
- The disturbed area shall be sprayed down at the end of the work shift to form a thin crust. This application shall be in addition to the minimum rate of application (four times per day.)
- Security measures (gate) shall be placed at the project entrance to prevent the entry of unauthorized vehicles during non-working hours and weekends.
- No spoil materials shall be transported off-site, except to approved sites.

2. Visibly Dry Disturbed Soil Surface Areas:
   - All visibly dry disturbed soil surface areas of operation shall be watered to minimize dust emissions.
   - A water truck shall be on-site at all times. A minimum of four passes shall be made per day with the water truck or more as necessary. Water shall be the sole spray medium.
   - The water frequency shall be increased whenever the winds at project site exceed 15 mph.

3. Paved Road Track-Out:
   - Existing roads and streets adjacent to the project shall be washed down at least once per day unless conditions warrant a greater frequency. The contractor shall consistently monitor the off-site road conditions for the formation of fugitive dust.

4. Visibly Dry Disturbed Unpaved Driveways:
   - All visibly dry disturbed unpaved driveway surface areas of operation shall be watered to minimize dust emissions.
   - Unpaved driveways may be graveled to reduce dust emissions.
   - A water truck shall be on site at all times. A minimum of four passes shall be made per day with the water truck or more as necessary. Water shall be the sole spray medium.
   - Haul road speed shall not exceed 15 mph. Speed limit signs shall be posted at 1,000-foot intervals.
   - Haul roads shall be sprayed down at the end of the work shift to form a thin crust. This application of water shall be in addition to the minimum rate of application (four times per day).
   - The contractor shall keep a daily record of measures taken to control fugitive dust in accordance with this plan.
   - A copy of said report shall be submitted to APCD for inspection as requested by the district and a copy kept at the job site during construction.

5. Vehicles Entering/Exiting Construction Area:
   - Vehicles entering or exiting construction area shall travel at a speed which minimizes dust emissions, not to exceed 15 mph.

6. Employee Vehicles:
   - Construction workers shall park in designated parking area(s) to help reduce dust emissions.

7. Soil Piles:
   - Soil pile surfaces shall be moistened if dust is being emitted from the pile(s). Adequately secured tarpaulins, plastic or other material required to further reduce dust emissions.

Appendix C
Asbestos Hazard Dust Mitigation

Appendix C
Asbestos Hazard Dust Mitigation

At its July 2001 hearing, the California Air Resources Board (CARB) approved an Asbestos Airborne Toxic Control Measure (ATCM) for Construction, Quarrying, and Surface Mining Operations. Effective November 19, 2002 for all air districts, the ATCM requires road construction and maintenance activities, construction and grading operations, and quarry and surface mining operations in areas where naturally occurring asbestos is likely to be found to employ best available dust mitigation measures, as described in Appendix A. No asbestiform surface features have been identified in the project area, however in the event that asbestiform containing soils are suspected or identified, the contractor also shall implement the Asbestos Hazard Dust Mitigation Plan, as described below.

Asbestos Hazard Dust Mitigation

1. Asbestiform Containing Soils: In the event asbestiform containing soils are suspected or identified, the contractor shall implement the following Asbestos Hazard Dust mitigation measures immediately to minimize and control potential asbestos dust emissions which shall include, but not be limited to the following:
   - Cease construction activities in the discovery area. A California-registered geologist shall verify suspected material within two (2) working days. If geologist is unable to verify material as an asbestiform mineral, suspect material shall be analyzed using CARB Test Method 435 or other approved test method to confirm the asbestos containing material. Analyses shall be completed within ten (10) working days from date asbestiform containing soil was suspected.
   - Pre-wet work area and follow with fine spray application on the immediate area being worked to eliminate visible dust to the greatest extent possible.
   - To the extent feasible, construction activity should avoid disturbance of asbestiform minerals and during periods of inactivity, cover any disturbed asbestos material area with non-asbestos cover material.
   - Limit vehicle access and speed on exposed serpentine and rock containing asbestos material areas.
   - Cover areas exposed to vehicle travel with non-asbestiform cover material.
   - Maintain a high moisture condition of the disturbed surface or treat the disturbed surface of the work area with an approved "palliative" material to seal loose fibers together to the parent rock particle.
   - Material transfers or stockpiles of loose material shall be kept adequately wet, and sealed by an approved palliative or covered when conditions warrant.
   - Employee/worker notification, safety and monitoring shall be performed in accordance with applicable agency laws and requirements (e.g., CCR, Title 8, Section 1529 et al).
   - During disturbance activities, the contractor shall maintain on-site records of watering schedules, daily logs of dust mitigation and air monitoring activities (if required) by the SMAQMD at the construction site. Upon request, all such records shall be made available to the Air Pollution Control Officer (APCO) and/or other applicable County staff/inspector(s) as designated by the APCO.

- Copies of all test results, reports, and locations of asbestiform containing soils shall be submitted to the APCO upon completion of coverage; retained at the construction site and, upon request, be readily available to the APCO and/or other applicable County staff/inspector(s) as designated by the APCO.
- The contractor shall maintain copies of all test results, daily logs, maps, consultant reports and location of asbestiform containing soils, as applicable, for real property disclosures.
- Asbestiform containing soils removed by excavation shall be placed into fills to be constructed elsewhere on the project. The location(s) of such removals and the placement quantities and locations shall be documented in an asbestos management report which shall include a copy of the grading plan showing the locations of removal and placement locations.
- Asbestiform containing soils placed within fills shall be covered by at least two feet of non-asbestiform cover soil material.
- Asbestiform containing soils uncovered during the construction of utilities shall be appropriately covered, such as by placement within deep fills. Utility trenches shall be backfilled with non-asbestiform cover materials.
- Asbestiform containing soils moved off-site shall be managed as a hazardous substance and in accordance with appropriate agency laws and requirements.
- The Sacramento County APCO or his/her designee may require additional mitigation and/or air monitoring measures to be included in this Asbestos Hazard Dust Mitigation Plan whenever he/she finds that such measures are necessary to protect the public health and safety.

Appendix D

Endangered Species Act Consultation and Coordination

Appendix D

Endangered Species Act Consultation and Coordination

Federally protected endangered and threatened riparian and terrestrial species in the action area are under the jurisdiction of the U. S. Fish and Wildlife Service (USFSW). Projects involving a federal agency require consultation with the USFWS under Section 7 of the Federal Endangered Species Act (FESA) (16 U.S. C. §1536). A species list for the project area provided by USFWS is included below. California endangered and threatened species and those species being considered for listing (candidate species) within the action area are regulated under the California ESA (ECSA) by the California Department of Fish and Game (CDFG).

The project proponent is obligated to fulfill the requirements described under Section 7 of the FESA and Section 2090-2095 of the California Fish and Game Code. Compliance with both FESA and CESA requires a determination of the presence/absence of listed species within the action area and an evaluation of the potential of the project to adversely offset those species through secondary indirect growth-related impacts.

Following a meeting on November 3, 2006 with USFWS and subsequent correspondence (below), it was determined that due to the "avoidance measures" incorporated into the project description, there would be no effect to species or their habitat within the project area, and therefore formal consultation by Reclamation is not required, as indicated in the Final ESA Section 7 Consultation Handbook (USFWS and NMFS 1998). The ESA Handbook states, "***Although not required***, an action agency may request written concurrence from the Services that the proposed action will have no effect on listed species or critical habitat" (USFWS and NMFS 1998; emphasis added). SMUD's relocated transmission line pole and associated construction, staging and lay down areas are all located outside of the 100-foot buffer required to avoid impacts to VELB and their habitat.

From: Stephanie_Rickabaugh@fws.gov
Sent: Tuesday, November 14, 2006 10:50 AM
To: Atherstone, Meryka
Cc: Link, Buzz; Drew Lessard; Standlee, Linda; Lonn Maier; Shawn Oliver; Cherie Johnston-Waldear
Subject: Re: SMUD Folsom Dam T/L Relocation - ESA Consultation Requirements

Hi Meryka,

If all aspects of the proposed project are at least 100 feet from any elderberry shrub then yes, the applicant (BOR in this case) can make a no-effect determination to the valley elderberry longhorn beetle. However, like I mentioned in our meeting sometimes federal agencies still send us consultation letters asking for concurrence on their determination.

Call if you have questions, SR

Stephanie Rickabaugh
U.S. Fish & Wildlife Service
Fish & Wildlife Biologist
Sacramento Field Office
2800 Cottage Way Rm W-2605
Sacramento, CA 95825
916.414.6724
916.414.6713 fax

"Atherstone, Meryka" <Meryka.Atherstone@hdrinc.com>

11/14/2006 09:14 AM

To <Stephanie_Rickabaugh@fws.gov>
cc "Link, Buzz" <Buzz.Link@hdrinc.com>, "Standlee, Linda" <Linda.Standlee@hdrinc.com>, "Lonn Maier" <lmaier@smud.org>, "Shawn Oliver" <SOLIVER@mp.usbr.gov>, "Drew Lessard" <DLESSARD@mp.usbr.gov>, "Cherie Johnston-Waldear" <WALDEAR@wapa.gov>
Subject SMUD Folsom Dam T/L Relocation - ESA Consultation Requirements

Hi Stephanie,

We are in the process of revising the environmental documentation for the SMUD 230 kV Folsom Dam Transmission Line Relocation project, including updating the transmission line pole alignment to allocate for the 100' buffer from the elderberry shrubs within the project area. During our November 3rd meeting discussions, you noted that if the transmission line poles remained outside the 100' buffer then there would be no effect to the VELB and their habitat and therefore, no need to consult. The Final ESA Section 7 Consultation Handbook (USFWS and NMFS 1998) also states that it is not required for an action agency to request concurrence from the Service that the proposed action will have no effect on listed species. I wanted to verify this with you so we can include this statement in the revised environmental documentation, noting that the project has satisfied/met ESA requirements.

Thank you for your assistance and feel free to call me if you have any questions.

Kind regards,

Meryka

Meryka Atherstone
Associate Environmental Planner

HDR | SWRI Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110 | Sacramento, CA | 95825
Phone: (916) 563-6364 | Fax: (916) 286-0957 | Cell: (916) 201-0201

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825

November 30, 2006

Document Number: 061130104256

M. Atherstone
HDR|SWRI
2031 Howe Avenue, Suite 110
Sacramento, CA 95825

Subject: Species List for SMUD Folsom Dam Transmission Line Relocation

Dear: Ms. Atherstone

We are sending this official species list in response to your November 30, 2006 request for information about endangered and threatened species. The list covers the California counties and/or U.S. Geological Survey 7½ minute quad or quads you requested.

Our database was developed primarily to assist Federal agencies that are consulting with us. Therefore, our lists include all of the sensitive species that have been found in a certain area *and also ones that may be affected by projects in the area*. For example, a fish may be on the list for a quad if it lives somewhere downstream from that quad. Birds are included even if they only migrate through an area. In other words, we include all of the species we want people to consider when they do something that affects the environment.

Please read Important Information About Your Species List (below). It explains how we made the list and describes your responsibilities under the Endangered Species Act.

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be February 28, 2007.

Please contact us if your project may affect endangered or threatened species or if you have any questions about the attached list or your responsibilities under the Endangered Species Act. A list of Endangered Species Program contacts can be found at www.fws.gov/sacramento/es/branches.htm.

Endangered Species Division

TAKE PRIDE IN AMERICA

Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the Counties and/or U.S.G.S. 7 1/2 Minute Quads you requested

Document Number: 061130104256
Database Last Updated: October 27, 2006

Species of Concern - The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts. See www.fws.gov/sacramento/es/spp_concern.htm for more information and links to these sensitive species lists.

Red-Legged Frog Critical Habitat - The Service has designated final critical habitat for the California red-legged frog. The designation became final on May 15, 2006. See our map index.

Species

Listed Species

Invertebrates

Branchinecta conservatio
Conservancy fairy shrimp (E)

Branchinecta lynchi
vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus
valley elderberry longhorn beetle (T)

Lepidurus packardi
vernal pool tadpole shrimp (E)

Fish

Hypomesus transpacificus
delta smelt (T)

Oncorhynchus mykiss
Central Valley steelhead (T) (NMFS)
Critical habitat, Central Valley steelhead (X) (NMFS)

Oncorhynchus tshawytscha
Central Valley spring-run chinook salmon (T) (NMFS)
winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Ambystoma californiense
California tiger salamander, central population (T)

Rana aurora draytonii
California red-legged frog (T)

Reptiles

Thamnophis gigas
giant garter snake (T)

Birds

Haliaeetus leucocephalus
bald eagle (T)

Plants

Orcuttia viscida
Critical habitat, Sacramento Orcutt grass (X)
Sacramento Orcutt grass (E)

Candidate Species

Fish

Oncorhynchus tshawytscha
Central Valley fall/late fall-run chinook salmon (C) (NMFS)
Critical habitat, Central Valley fall/late fall-run chinook (C) (NMFS)

Selected Quads

FOLSOM (511B)

County Lists

Sacramento County

Listed Species

Invertebrates

Branchinecta conservatio
Conservancy fairy shrimp (E)

Branchinecta lynchi
Critical habitat, vernal pool fairy shrimp (X)
vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus
Critical habitat, valley elderberry longhorn beetle (X)
valley elderberry longhorn beetle (T)

Elaphrus viridis
delta green ground beetle (T)

Lepidurus packardi
Critical habitat, vernal pool tadpole shrimp (X)
vernal pool tadpole shrimp (E)

Fish

Hypomesus transpacificus
Critical habitat, delta smelt (X)
delta smelt (T)

Oncorhynchus mykiss
Central Valley steelhead (T) (NMFS)
Critical habitat, Central Valley steelhead (X) (NMFS)

Oncorhynchus tshawytscha

Central Valley spring-run chinook salmon (T) (NMFS)
Critical Habitat, Central Valley spring-run chinook (X) (NMFS)
Critical habitat, winter-run chinook salmon (X) (NMFS)
winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Ambystoma californiense
California tiger salamander, central population (T)
Critical habitat, CA tiger salamander, central population (X)

Rana aurora draytonii
California red-legged frog (T)

Reptiles

Thamnophis gigas
giant garter snake (T)

Birds

Haliaeetus leucocephalus
bald eagle (T)

Plants

Castilleja campestris ssp. succulenta
Critical habitat, succulent (=fleshy) owl's-clover (X)

Oenothera deltoides ssp. howellii
Antioch Dunes evening-primrose (E)

Orcuttia tenuis
Critical habitat, slender Orcutt grass (X)
slender Orcutt grass (T)

Orcuttia viscida
Critical habitat, Sacramento Orcutt grass (X)
Sacramento Orcutt grass (E)

Candidate Species

Fish

Oncorhynchus tshawytscha
Central Valley fall/late fall-run chinook salmon (C) (NMFS)
Critical habitat, Central Valley fall/late fall-run chinook (C) (NMFS)

Birds

Coccyzus americanus occidentalis
Western yellow-billed cuckoo (C)

Key:

(E) *Endangered* - Listed as being in danger of extinction.
(T) *Threatened* - Listed as likely to become endangered within the foreseeable future.
(P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.
(NMFS) Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service. Consult with them directly about these species.

Critical Habitat - Area essential to the conservation of a species.
(PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.
(C) *Candidate* - Candidate to become a proposed species.
(V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.
(X) *Critical Habitat* designated for this species

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, **or may be affected by** projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the nine surrounding quads through the California Native Plant Society's online Inventory of Rare and Endangered Plants.

Surveying

Some of the species on your list may not be affected by your project. A trained biologist or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list.

For plant surveys, we recommend using the Guidelines for Conducting and Reporting Botanical Inventories. The results of your surveys should be published in any environmental documents prepared for your project.

Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

> Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal consultation with the Service.

  During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846

In reply refer to:
1-1-07-I-0665

MAR 2 9 2007

Memorandum

To: Michael R. Finnegan, U.S. Bureau of Reclamation, Folsom, California

From: Peter A. Cross
Deputy Assistant Field Supervisor, Sacramento Fish and Wildlife Office, Sacramento, California

Subject: Formal Consultation on the Sacramento Municipal Utility District 230 kV Folsom Dam Transmission Line Relocation, Sacramento County, California

This memorandum is in response to your February 23, 2007, letter and March 14, 2007, memorandum requesting formal consultation on the proposed *Sacramento Municipal Utility District* (SMUD) *230 kV Folsom Dam Transmission Line Relocation* project (proposed project), Sacramento County, California. The U.S. Fish and Wildlife Service (Service) received your requests on February 23, 2007, and March 15, 2007, respectively. This response is in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act). At issue are effects to the federally threatened and valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) (beetle). In accordance with section 7 of the Act, this document represents the Service's biological opinion of the effects of the proposed action on federally listed species.

Although other federally listed species, such as the California red-legged frog (*Rana aurora draytonii*) and bald eagle (*Haliaeetus leucocephalus*) may occur in Sacramento County, the Service has determined the proposed project area is outside the known habitat for the California red-legged frog.

California red-legged frogs occupy a fairly distinct habitat, combining both specific aquatic and riparian components. The adults require dense, shrubby or emergent riparian vegetation closely associated with deep (greater than 2 1/3-foot deep) still or slow moving water. Average dispersal distance for the species is 0.7 mile. There are no verified occurrences of California red-legged frogs within the project area.

Bald eagles have been occasionally observed around Folsom Reservoir during the winter but no documented nesting sites have been recorded. In winter, bald eagles often perch near open water in tall trees or poles; although they have not been documented perching within the proposed project area. The proposed project involves the construction and installation of new

steel/concrete transmission poles and vegetation clearing; however, the distance between the conductors and the conductor and supporting arms is 16 and 8 feet respectively which is adequate distance to prevent electrocution. The tallest trees and thus most likely to be used as bald eagle perch trees will be removed during the Phase 1- summer work window.

Therefore, the Service concurs with U.S. Bureau of Reclamations' (Reclamation) determination that the proposed project as described would have no effect on these two species. Unless new information reveals effects of the proposed project that affect listed species in a manner or to an extent not considered; or a new species is listed or critical habitat designated that may be affected by the proposed action, no further action pursuant to the Act is necessary for the bald eagle and California red-legged frog.

Our analysis of potential effects from the proposed project is based on the following information: (1) Reclamations' February 23, 2007, letter requesting formal consultation on the proposed *Sacramento Municipal Utility District 230 kV Folsom Dam Transmission Line Relocation project*; (2) a site visit conducted on March 7, 2007, by Stephanie Rickabaugh of the Service, Shawn Oliver and Drew Lessard of Reclamation, Mark Frizzell and Mike Deis with SMUD, and Meryka Atherstone and Carolyn Bragg with HDR Consulting; (4) the Environmental Assessment for the proposed project; (3) Reclamations' March 14, 2007, memorandum with the supplemental information on the proposed project; (5) Electronic correspondences between Meryka Atherstone, Mike Deis and Stephanie Rickabaugh between March 19-20, 2007, to clarify and update information in the March 14, 2007, supplemental information packet; and (6) other information available to the Service.

The proposed project, as described, involves removing an existing section of double circuit Orangevale-Lake/Whiterock Orangevale 230 kV transmission line presently located in the corridor of the new Folsom bridge project and relocating a new line to the north. The new 230kV transmission corridor would be constructed on Reclamation managed lands.

Nine existing lattice steel towers would be replaced by 11 new steel/concrete poles. Removal of the existing 230kV transmission line tower would include dismantling the steel towers and transporting the pieces off-site by truck. The existing concrete foundations from the steel towers would be left in place. No excavation activities would be needed for the removal of the existing steel towers. Access would be via existing access roads. Staging areas for the removal of the existing steel towers would be approximately a quarter of an acre, and would be located adjacent to the existing steel tower. As tower disassembly progresses, steel members of the tower would be loaded onto an 18-wheel trailer and transported to the SMUD corporation yard. No disruption to existing vegetation or other resources is expected during the dismantling phase.

Excavation associated with the installation of the new steel/concrete poles would include an area of approximately 30 x 30-foot footprint for each pole and would include approximately 10 cubic yards of excavated soil. Material from excavation would be spread evenly in the staging area. The staging areas for the new steel/concrete poles would include approximately a quarter of an acre, and would be located adjacent to the new pole site. All excess materials from excavation

would be disposed of off-site. General construction, operation and maintenance access to the new pole sites would be primarily from existing access roads. All line lay-down areas associated with the new pole construction would occur in existing areas, such as parking lots, roads, or material storage areas to avoid disturbance to resources.

Installation of the new steel/concrete poles would require some vegetation management activities, including tree pruning and removal. In order to account for sensitive species within the proposed project area, Reclamation and SMUD propose to complete the vegetation clearing in two phases.

Phase 1 would occur at the end of March 2007, and continue through May 2007. Phase 1 consists of select tree pruning and removal activities only deemed necessary for pole setting and transmission line safety. Tree pruning and removal typically involves clearing all trees and brush under the new transmission line to reduce fire risk in accordance with the utility regulations and standards, however Reclamation and SMUD have proposed to postpone clearing of vegetation within 100 feet of any elderberry shrub the sole host plant for the threatened valley elderberry longhorn beetle, until Phase 2 to minimize effects to the beetle except in the following locations:

a. Per Reclamations' March 14, 2007, memorandum Poles N and P. In this section three small and one large gray pine trees (*Pinus sabiniana*) would be removed for safety purposes. These pines are approximately 50 feet from three elderberry shrubs (No.148, No.150 and No.160 per, Reclamations' March 14, 2007, memorandum). These four pines would be felled away from the elderberry shrubs, pieced down by hand, as appropriate, and the debris left on site until the Phase 2 work. The elderberry shrubs would be flagged and fenced a minimum of 20 feet from the drip line. Two of these shrubs are located within other vegetation and the topography of the area surrounding the shrub protects them.

b. Per Reclamations' March 14, 2007, memorandum Pole R. There are three elderberry shrubs (No. 156, No. 157 and No 158, per Reclamations' March 14, 2007, memorandum) located to the east and south of the pole R site. However, these three elderberry shrubs approximately 80 feet away and protected by an existing 12-foot-high chain link fence.

Phase 2 would be scheduled during the elderberry shrub dormant period (November 2007-February 15, 2008) to reduce stress to the elderberry shrubs during the larval state of the beetle. Phase 2 would include vegetation management activities necessary to clear all trees and brush, excluding elderberry shrubs under the new transmission line to minimize the fire risk in accordance with utility regulations and standards. Trees and brush within the 20-feet of the drip line of the elderberry shrubs would be cleared by hand. No elderberry shrubs will be trimmed or removed.

In addition to following the Services' *1999 Conservation Guidelines for the Valley Elderberry Longhorn Beetle*, Reclamation and SMUD have proposed implementation of the following specific conservation measure and Best Management Practices as part of the project description:

a. Except for two specific areas described above disturbance to the beetle would be avoided by establishing and maintaining a 100-foot minimum buffer around all elderberry shrubs located within the project footprint. For those locations that encroach on the 100-foot buffer and approved by the Service elderberry shrubs would be flagged and fenced a least 20-foot from the drip line. Any impacts to the buffer area would be restored. Erosion control and re-vegetation with appropriate native plants would be provided for any affected areas.

b. Work crews and contractors would be given environmental awareness training that will emphasize the identification of elderberry shrubs, the need to avoid damaging the elderberry shrubs, and possible penalties of non-compliance. All vegetation management work shall be directed by a SMUD certified arborist.

c. Appropriate tree pruning and tree removal techniques (i.e. pieced down by hand) shall be utilized in order to avoid disturbance to elderberry shrubs.

d. Vegetation management equipment would be washed, and work crews and contractors would be trained to prevent the introduction of invasive plant species to the project site.

e. Signs will be erected every 50 feet along the edge of the avoidance areas displaying the following information: *"This area is habitat of the valley elderberry longhorn beetle, a federally threatened species, and must not be disturbed. The Endangered Species Act of 1973, as amended, protects this species. Violators are subject to prosecution, fines, and imprisonment."* These signs would be visible from a 20-foot distance and be maintained for the duration of construction.

f. After construction, if the Service finds it appropriate, buffer areas would continue to be protected from adverse effects of the project. Appropriate measures would include fencing, weeding, posting signs, and removing trash.

g. No insecticide, herbicides, fertilizers, or other chemicals that might harm the beetle or its host plant would be used within 100 feet of any elderberry shrub containing one or more stems measuring one inch or greater in diameter at ground level.

h. A written description of the restoration, protection, and maintenance of the encroachment areas would be provided at the completion of construction.

There are 58 elderberry shrubs (*Sambucus* sp.) located within 100 feet of the proposed project. Elderberry shrubs are the sole host plant for the federally threatened beetle. Based on the location and short duration of the proposed project, as well as, time of year for completing the proposed project, the Service concurs with your determination that the project may affect, but is not likely to adversely affect the beetle given the implementation of the conservation measures listed above. This concurrence is provided specific to this action area.

This concludes the Service's review of the proposed *Sacramento Municipal Utility District 230 kV Folsom Dam Transmission Line Relocation project* and no further coordination with the Service under the Act is necessary at this time. Please note that this letter does not authorize take of listed species. As provided in 50 CFR § 402.14, initiation of formal consultation is required where there is discretionary Federal involvement or control over the action (or is authorized by law) and if: (1) new information reveals the effects of the project that may affect listed species or critical habitat in a manner or to an extent not considered in this review; (2) the project is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this opinion; or (3) a new species is listed or critical habitat designated that may be affected by the project.

Therefore, unless new information reveals effects of the proposed project that may affect listed species in a manner or to an extent not considered, or a new species or critical habitat is designated that may be affected by the proposed action, no further action pursuant to the Act is necessary.

If you have any questions regarding the proposed *Sacramento Municipal Utility District 230 kV Folsom Dam Transmission Line Relocation project,* Sacramento County, California, please contact Stephanie Rickabaugh, staff biologist or Holly Herod, Sacramento Valley Branch Chief, at (916) 414-6600.

cc:
Shawn Oliver, U.S. Bureau of Reclamation, Folsom, California
Dee Warenycia, California Department of Fish and Game- Region 2, Rancho Cordova, California
Merkya Atherstone, HDR|Surface Water Resources, Inc., Sacramento, Californa

Appendix E

National Historic Preservation Act Section 106 Consultation and Coordination

MP-153
ENV-3.00

CERTIFIED – RETURN RECEIPT REQUESTED

Mr. Milford Wayne Donaldson
State Historic Preservation Officer
Office of Historic Preservation
P.O. Box 942896
Sacramento, California 94296-0001

Subject: National Historic Preservation Act Compliance for the Sacramento Municipal Utility District Folsom Dam 230 kV Line and 12 kV Transmission Line Relocation, Sacramento County, California (Tracking #07-CCAO-039)

Dear Mr. Donaldson:

The Bureau of Reclamation is granting an easement to the Sacramento Municipal Utility District (SMUD) to relocate existing 230 kV and 12 kV transmission lines located parallel to the Folsom Dam on Reclamation-managed land (Figure 1). This project constitutes an undertaking as defined in the National Historic Preservation Act (NHPA) (16U.S.C.470f). We are consulting with your office pursuant to the 36 CFR 800 regulations implementing Section 106 of the NHPA.

The project is located adjacent to the City of Folsom within Sacramento County in northern California (Figure 2). SMUD proposes to remove a section of the existing double circuit Orangevale-Lake/Whiterock Orangevale 230 kV transmission line presently located in the corridor proposed for the Folsom Bridge Project (Corps and City of Folsom 2006). This portion of the 230 KV line will be relocated north of the proposed Folsom Bridge, approximately midway between the future road and Folsom Dam. A portion of the 12 kV line will also be relocated as an under build to the 230 kV line (Figure 3). This project provides continued reliable power service to SMUD customers during activities associated with the Folsom Bridge and Folsom Dam Safety and Flood Damage Reduction Projects.

Excavation associated with the installation of the new 230 kV line steel/concrete poles is within an approximate 15 foot by 15 foot project footprint for each pole. Each new 12 kV pole will require a 36-inch diameter hole within an approximately 10 foot by 10 foot project footprint. The staging areas for the new 230 kV line steel/concrete poles and the new 12 kV wood poles include approximately one-fourth acre adjacent to the new pole locations (Figure 3). All lay-

down areas associated with the new poles are located on existing paved lots or roads. The old towers will be removed using existing access routes.

The Area of Potential Effects (APE) is located in Section 24 of Township 10 North, Range 7 East and Sections 19 and 30 of Township 10 North, Range 8 East on the Folsom USGS 7.5 minute Quadrangle. The APE encompasses approximately 106 acres and extends from Folsom Dam Road, west past Folsom Auburn Road to Lakeside Way, and south to Lakeside Way. The APE includes staging, access, and installation for new power poles as well as the removal of existing power poles.

The current transmission lines and the proposed route for the relocated transmission lines are both located within the APE investigated for the Folsom Bridge Project (Figures 4 and 5). The Corps conducted intensive cultural resource field surveys of areas that may be affected by construction of the entire Folsom Bridge Project. Folsom Dam was determined eligible for inclusion in the National Register of Historic Places under Criterion A by the Corps. The Corp determined that the project would have no adverse affects to the dam because it did not alter any character defining featurs of the dam and would not diminish its integrity. The Corps subsequently consulted with your office regarding these findings and determinations, receiving concurrence from your office on June 26, 2006 and August 8, 2006 (file #COE050303A) (attached).

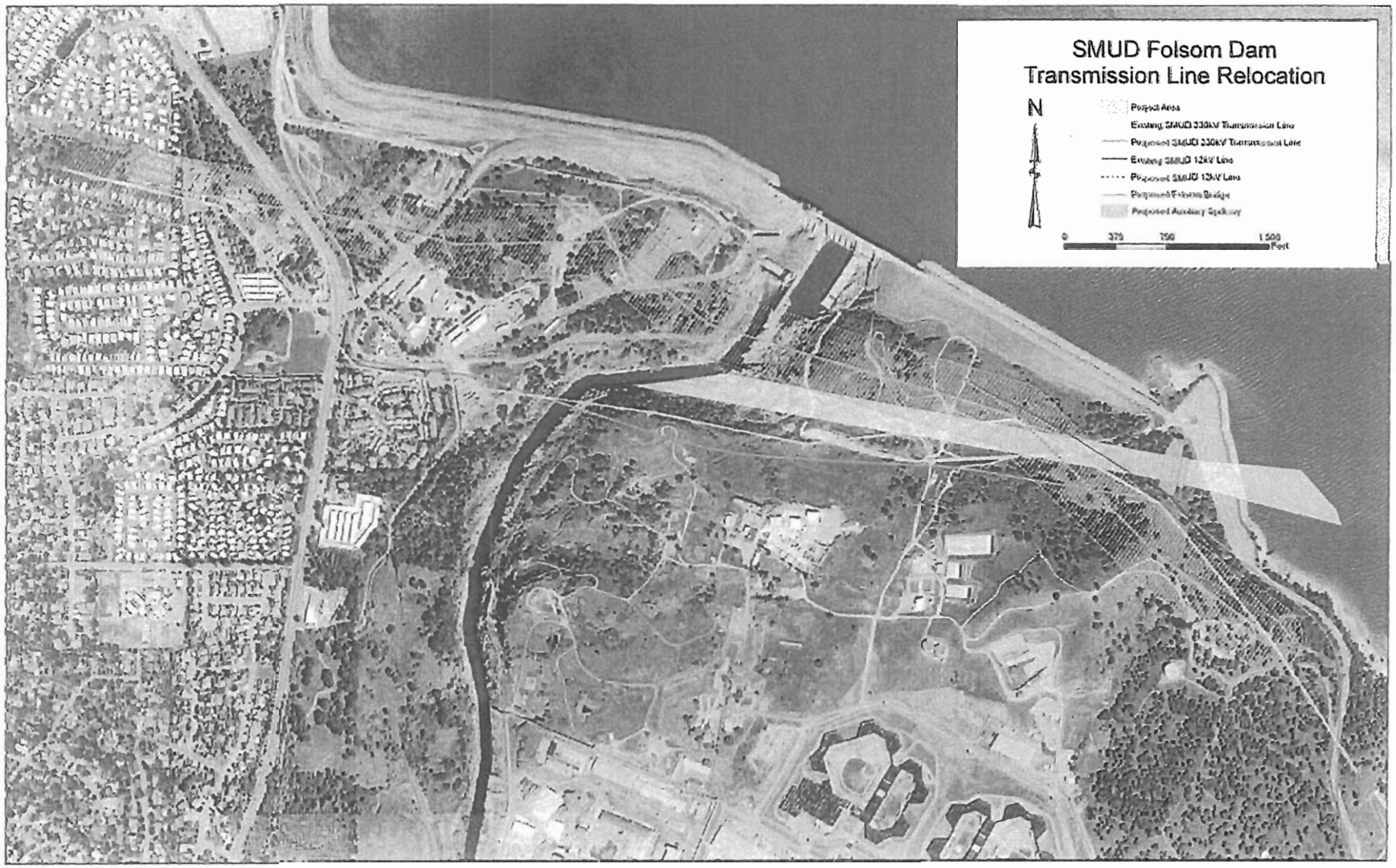
Potentially interested Native Americans representatives have been contacted for the Folsom Bridge and American River Folsom Dam Modifications Project. To date, no responses or comments have been received from the Native Americans on these or similar projects within or near the APE.

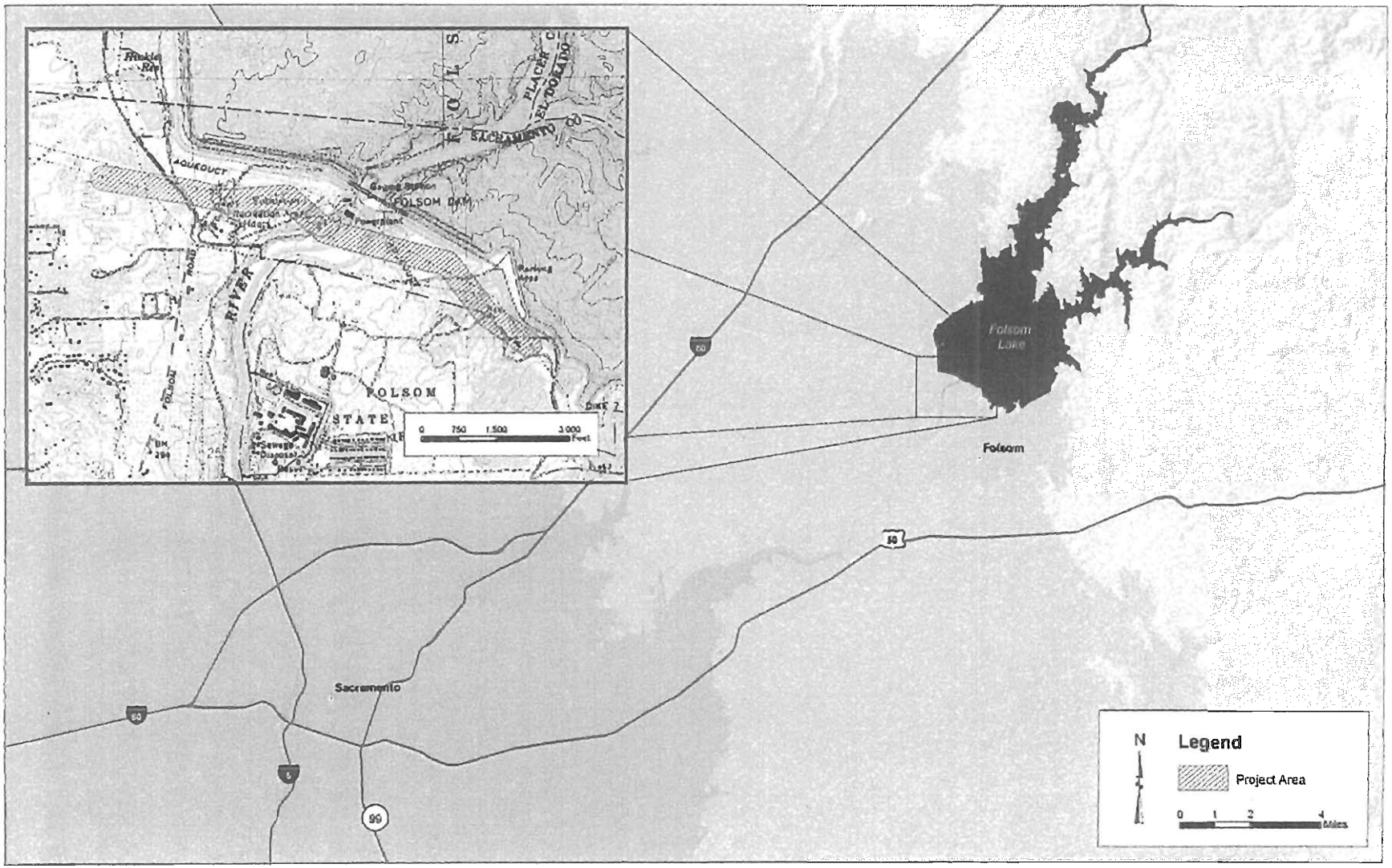
Given the similarities between the APE for this undertaking and the APE inventoried by the Corps for the Folsom Bridge Project, Reclamation concludes that the identification efforts by the Crops is sufficient to conduct 106 consultation for this undertaking. Based on this, Reclamation concludes that there will be no adverse affects to historic properties resultant of SMUD's proposed relocation of the 230 kV and 12 kV transmission lines. Reclamation requests your concurrence with our determination of the APE and finding of effects pursuant to 36 CFR Part 800.5(b). Please contact Mr. Patrick Welch at 916-978-5040, or email at pwelch@mp.usbr.gov, if you have questions or comments regarding this project.

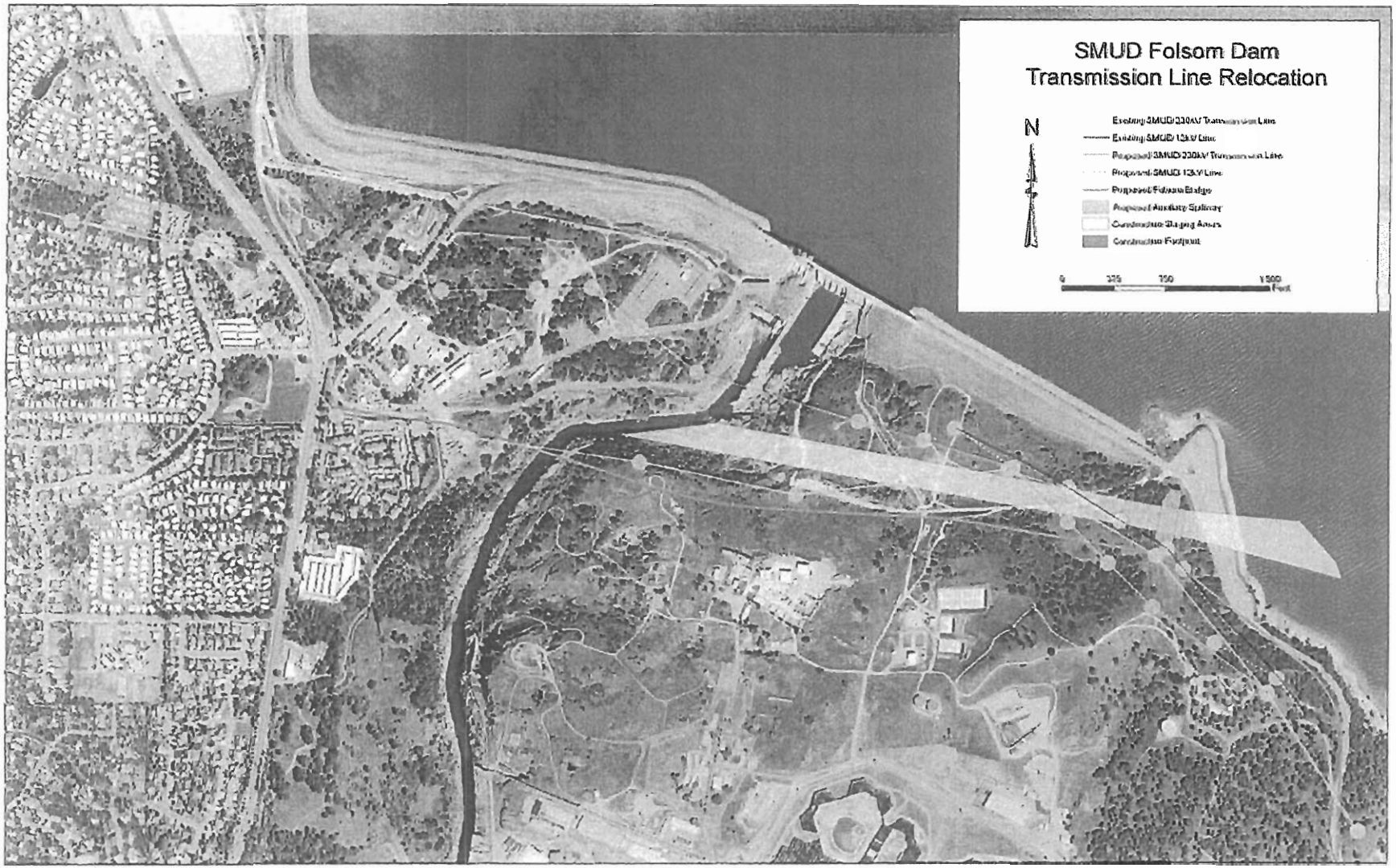
Sincerely,

Frank Michny
Regional Environmental Officer

Enclosures


SMUD Folsom Dam
Transmission Line Relocation
N
Project Area
Existing SMUD 230kV Transmission Line
Proposed SMUD 230kV Transmission Line
Existing SMUD 12kV Line
Proposed SMUD 12kV Line
Proposed Auxiliary Spillway
0
375
750
1,500
Feet


Folsom Lake
Folsom
Sacramento
50
80
5
99
N
Legend
Project Area
0 1 2 4
Miles
FOLSOM DAM
FOLSOM STATE
AQUEDUCT
RIVER
0 750 1,500 3,000
Feet


SMUD Folsom Dam
Transmission Line Relocation
N
Existing SMUD 230kV Transmission Line
Existing SMUD 12kV Line
Proposed SMUD 230kV Transmission Line
Proposed SMUD 12kV Line
Proposed Folsom Bridge
Proposed Auxiliary Spillway
Construction Staging Areas
Construction Footprint
0
375
750
1,500
Feet

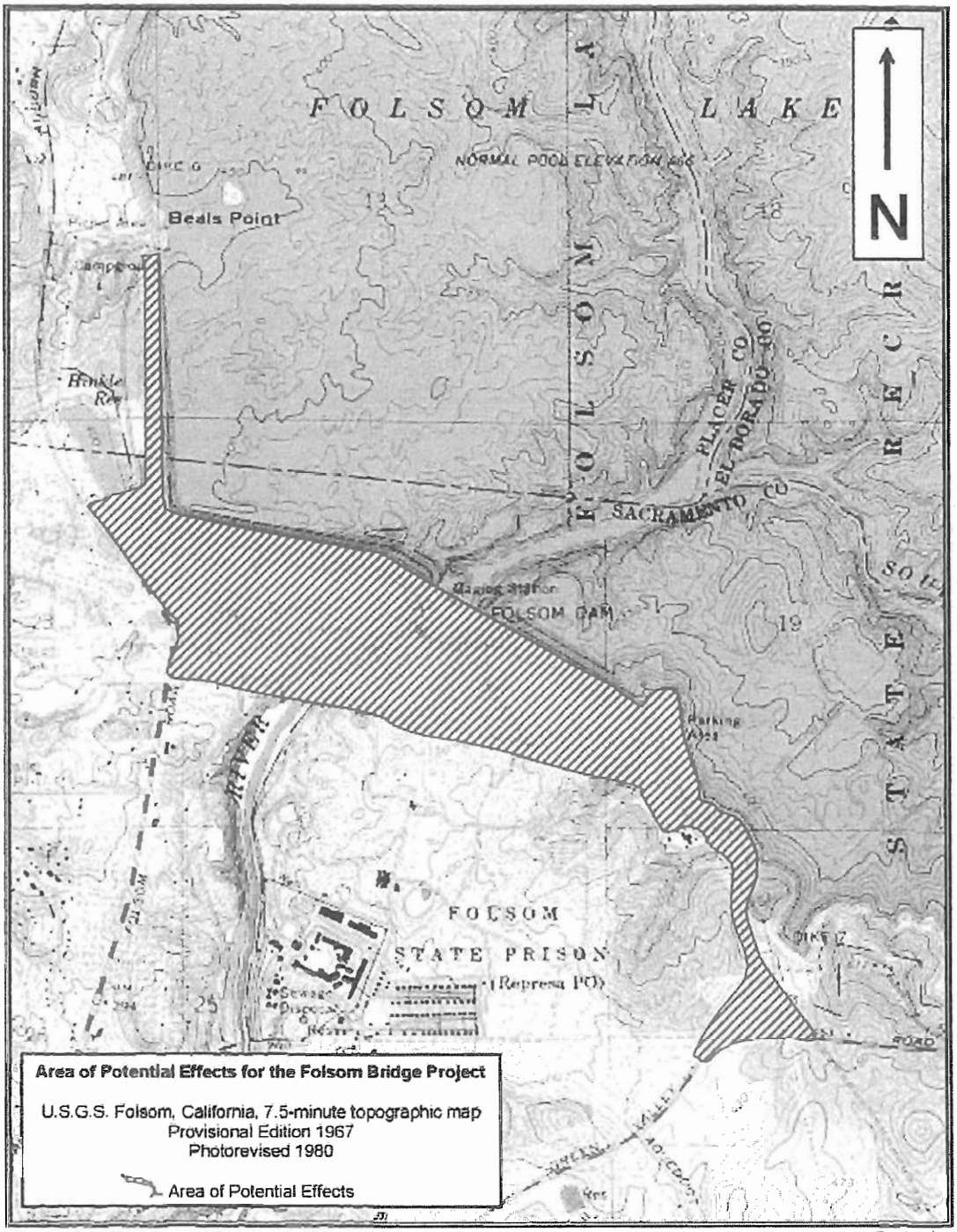
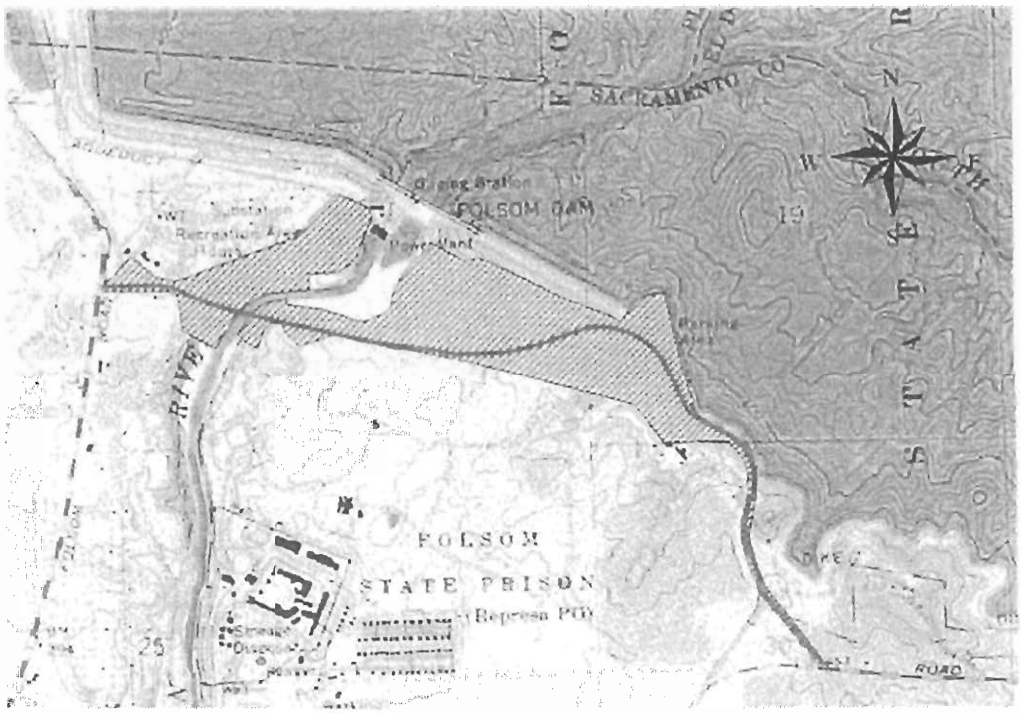

FOLSOM LAKE
NORMAL POOL ELEVATION 466
Beals Point
FOLSOM DAM
FOLSOM STATE PRISON
PLACER CO
EL DORADO CO
SACRAMENTO CO
N
Area of Potential Effects for the Folsom Bridge Project
U.S.G.S. Folsom, California, 7.5-minute topographic map
Provisional Edition 1967
Photorevised 1980
Area of Potential Effects

Plate 1

Archaeolological Survey Coverage Folsom Dam Vicinity



Primary Bridge Alignment
Bridge Survey Coverage

U.S.G.S. Folsom, CA
7.5-minute topographic map, revised 1980
T10N R7E, Section 24
T10N R8E, Section 19
T10N R8E, Section 30

Revised March 2005

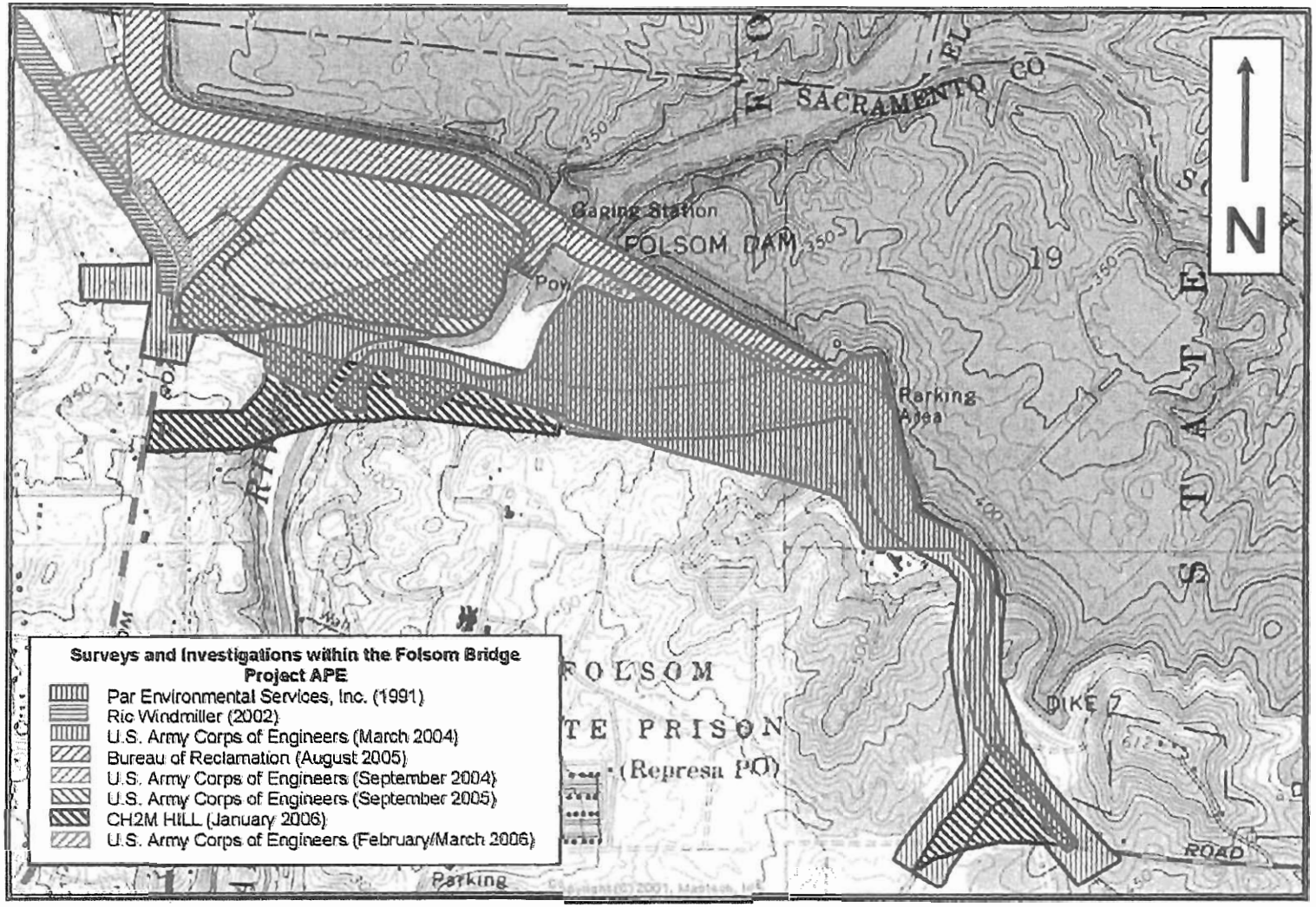

SACRAMENTO CO
Gaging Station
POLSOM DAM
Parking Area
FOLSOM
TE PRISON
(Represa PO)
DIKE 7
ROAD
Parking
N
Surveys and Investigations within the Folsom Bridge Project APE
Par Environmental Services, Inc. (1991)
Ric Windmiller (2002)
U.S. Army Corps of Engineers (March 2004)
Bureau of Reclamation (August 2005)
U.S. Army Corps of Engineers (September 2004)
U.S. Army Corps of Engineers (September 2005)
CH2M HILL (January 2006)
U.S. Army Corps of Engineers (February/March 2006)

Plate 2