



**Eagle Mountain Pumped Storage Project
Draft Environmental Impact Report
Executive Summary**

**State Clearinghouse No. 2009011010
FERC Project No. 13123**

State Water Resources Control Board
1001 I Street, 14th Floor
Sacramento, California 95814

Prepared by
GEI Consultants, Inc.
10860 Gold Center Drive, Suite 350
Rancho Cordova, California

July 2010

Table of Contents

Executive Summary (bound separately)

ES-1

Proposed Project

Alternatives Considered

Public Involvement and Areas of Concern

Project Effects

Conclusions

List of Tables

Table ES-1. Areas of Controversy/Issues of Concern Identified During Project Scoping

Table ES-2. Summary of Project Impacts, Mitigation Program, and Residual Effects

Executive Summary

The Eagle Mountain Pumped Storage Hydroelectric (proposed Project) Draft Environmental Impact Report (EIR) was prepared in compliance with the California Environmental Quality Act (CEQA) of 1970 [Public Resources Code §§21000-21178] and the 2010 State CEQA Guidelines [California Code of Regulations, Title 14, Chapter 3, §15000-15387]. The State Water Resources Control Board is the CEQA Lead Agency (Public Resources Code §210667).

Pursuant to State CEQA Guidelines §15123, this Executive Summary provides a brief overview of the proposed Project and its environmental consequences (State CEQA Guidelines §15123(a)). This section identifies each potentially significant effect of the proposed Project with proposed mitigation program (State CEQA Guidelines §15123 (b)(1)), describes the areas of controversy known to the Lead Agency, issues raised by agencies and the public (State CEQA Guidelines §15123 (b)(2)) and lists the issues to be resolved [the basis for the scope of EIR] including the choice of project alternatives and how to mitigate significant effects (State CEQA Guidelines §15123 (b)(3)).

A mitigation program summary table (Table ES-2 Summary of Project Impacts, Mitigation Program, and Residual Effect) is provided which demonstrates the identified:

1. Potential Environmental Impacts;
2. Level Of Significance;
3. Details of the Mitigation Program (which have been designed to avoid, reduce, or offset the potential environmental impact); and
4. Level of Significance after Implementation of the Mitigation Program (residual impact).

Pursuant to Public Resources Code §21068, a *significant effect on the environment* is defined as “a substantial, or potentially substantial, adverse change in the environment.” The State Water Resources Control Board (SWRCB) recognizes this definition for the purpose of the environmental review and analysis of the proposed Project contained within this EIR.

ES-1 Introduction

The State Water Resources Control Board has prepared this EIR to provide the public, governmental and/or responsible agencies, and other interested parties with information about the environmental effects of the proposed Eagle Mountain Pumped Storage Hydroelectric Project located near the town of Desert Center, within Riverside County, California.

The proposed action of developing and operating the pumped storage hydroelectric facility constitutes a “project” under CEQA as it requires discretionary approval by the SWRCB (State CEQA Guidelines §15357); as such, the SWRCB is the State [CEQA] Lead Agency (State CEQA Guidelines §15367).

The Federal Energy Regulatory Commission (FERC) is the Federal Lead Agency responsible for licensing the pumped storage hydroelectric facility. As such, FERC will prepare an Environmental Impact Statement (EIS) under the guidelines of the National Environmental Policy Act (NEPA) [which is independent of CEQA]. NEPA requires Federal agencies to integrate environmental values into their decision making processes by considering the environmental impacts of their proposed actions and reasonable alternatives to those actions.

As described in State CEQA Guidelines §15121(a), an EIR is an informational document which will inform public agency decision makers and the public generally of the significant environmental effects of a project, identifies possible ways to minimize the significant effects, and describe reasonable alternatives to the project. The public agency shall consider the information in the EIR along with other information which may be presented to the agency.

CEQA requires that State and local government agencies consider the environmental consequences of projects over which they have discretionary authority. It is not the purpose of an EIR to recommend either approval or denial of a project. Rather, an EIR is a document whose primary purpose is to disclose the potential environmental impacts associated with an action or project. The reader should not rely exclusively on the Executive Summary as the sole basis for judgment of the proposed Project and alternatives. The complete EIR document and supporting technical appendices should be consulted for specific information about the potential environmental effects and implementation of the mitigation program.

ES-2 Overview of the proposed Project

The Project Applicant, the Eagle Crest Energy Company (ECE), has submitted an application for Clean Water Act Section 401 Water Quality Certification to the SWRCB for the proposed Project. The Project will provide system peaking capacity and system regulating benefits to southwestern electric utilities. The Project will use off-peak energy to pump water from a lower reservoir to an upper reservoir during periods of low electrical demand and generate valuable peak energy by passing the water from the upper to the lower reservoir through the generating units during periods of higher electrical demand. The low demand periods are expected to be during weekday nights and throughout the weekend, and the high demand periods are expected to be in the daytime during week days, especially during the summer months.

The Project will provide an economical supply of peaking capacity, as well as load following, electrical system regulation through spinning reserve, and immediately available standby generating capacity. These latter benefits, referred to as ancillary services, are considered

essential for integration of renewable wind and solar power resources to meet State Renewable Portfolio Standards (RPS) of 33 percent by year 2020 and to offset fossil-fueled peak power generation to help meet State GHG emissions reductions goals. Ancillary services are employed as a means to increase stability of the electrical system and provide improved transmission reliability.

Parts of the Project (approximately 1,133 acres) are located on Federal lands managed by the Bureau of Land Management (BLM), through the Palm Springs South Coast Field Office. The remainder of the Project is on privately owned lands (approximately 1,231 acres).

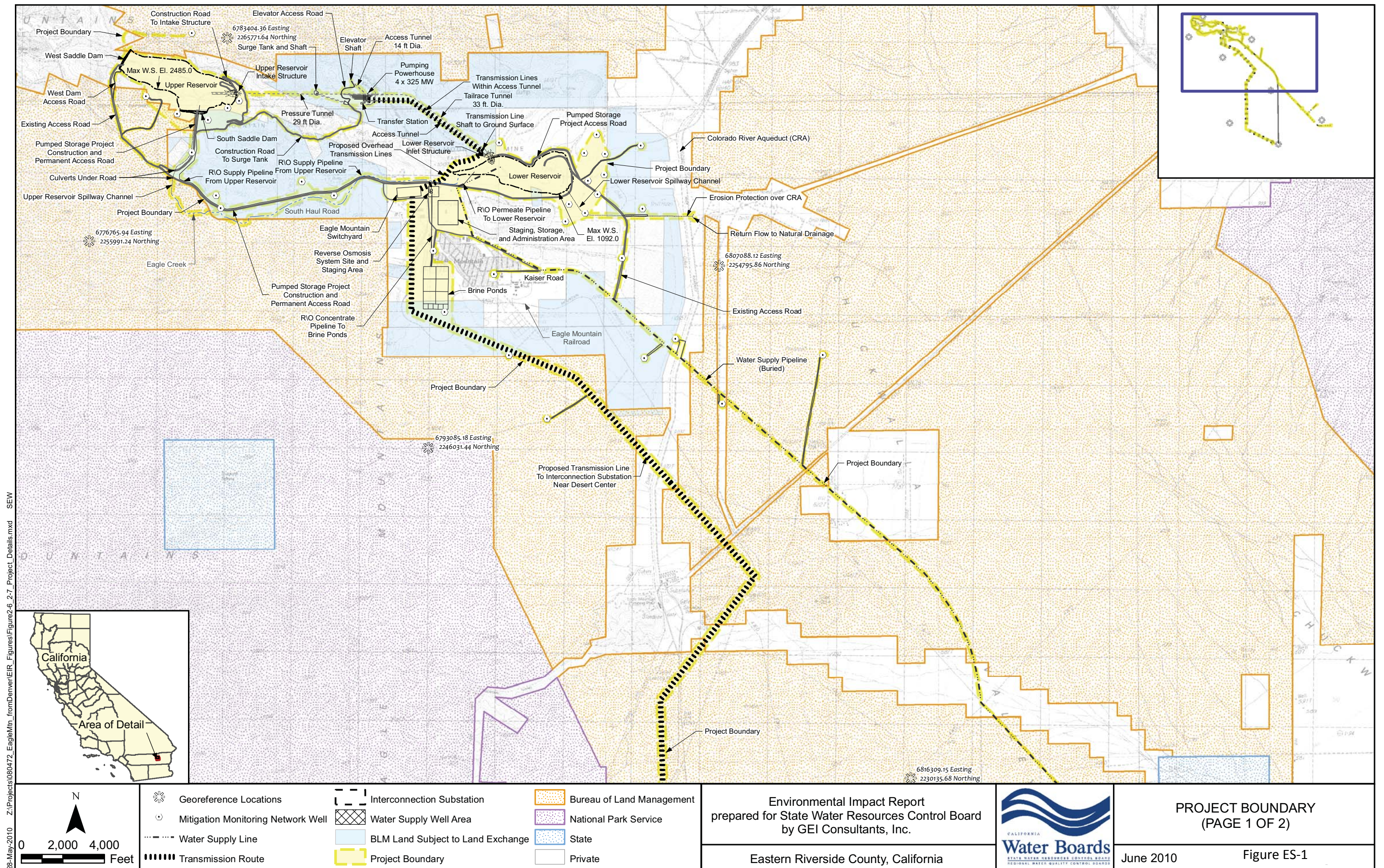
The proposed Project consists of a pumped storage hydroelectric facility using two existing mining pits near the town of Eagle Mountain, California (Figures ES-1 and ES-2). Water will be pumped from a lower pit/reservoir to an upper pit/reservoir during periods of low demand to generate peak energy during periods of high demand. To obtain the needed storage volume at the existing upper pit, two dams will be constructed along its perimeter. As the lower pit has sufficient storage for the total required volume, no dams will be needed for the lower reservoir. The Project will consist of the following facilities:

- Two roller-compacted dams at the upper reservoir at heights of 60-feet and 120-feet
- An upper reservoir with capacity of 20,000 acre-feet
- A lower reservoir with capacity of 21,900 acre-feet
- Inlet/outlet structures
- Water conveyance tunnels consisting of 4,000-foot-long by 29-foot-diameter upper tunnel, 1,390-foot-long by 29-foot-diameter shaft, 1,560-foot-long by 29-foot-diameter lower tunnel, four 500-foot-long by 15-foot-diameter penstocks leading to the powerhouse, 6,835-foot-long by 33-foot-diameter tailrace tunnel to the lower reservoir
- Surge control facilities
- A 72-foot-wide, 150-foot-high, and 360-foot-long underground powerhouse with four Francis-type turbine units
- A 13.5-miles, 500-kilovolt transmission line
- Water supply facilities including a reverse osmosis system and associated brine ponds
- Access roads
- Appurtenant facilities

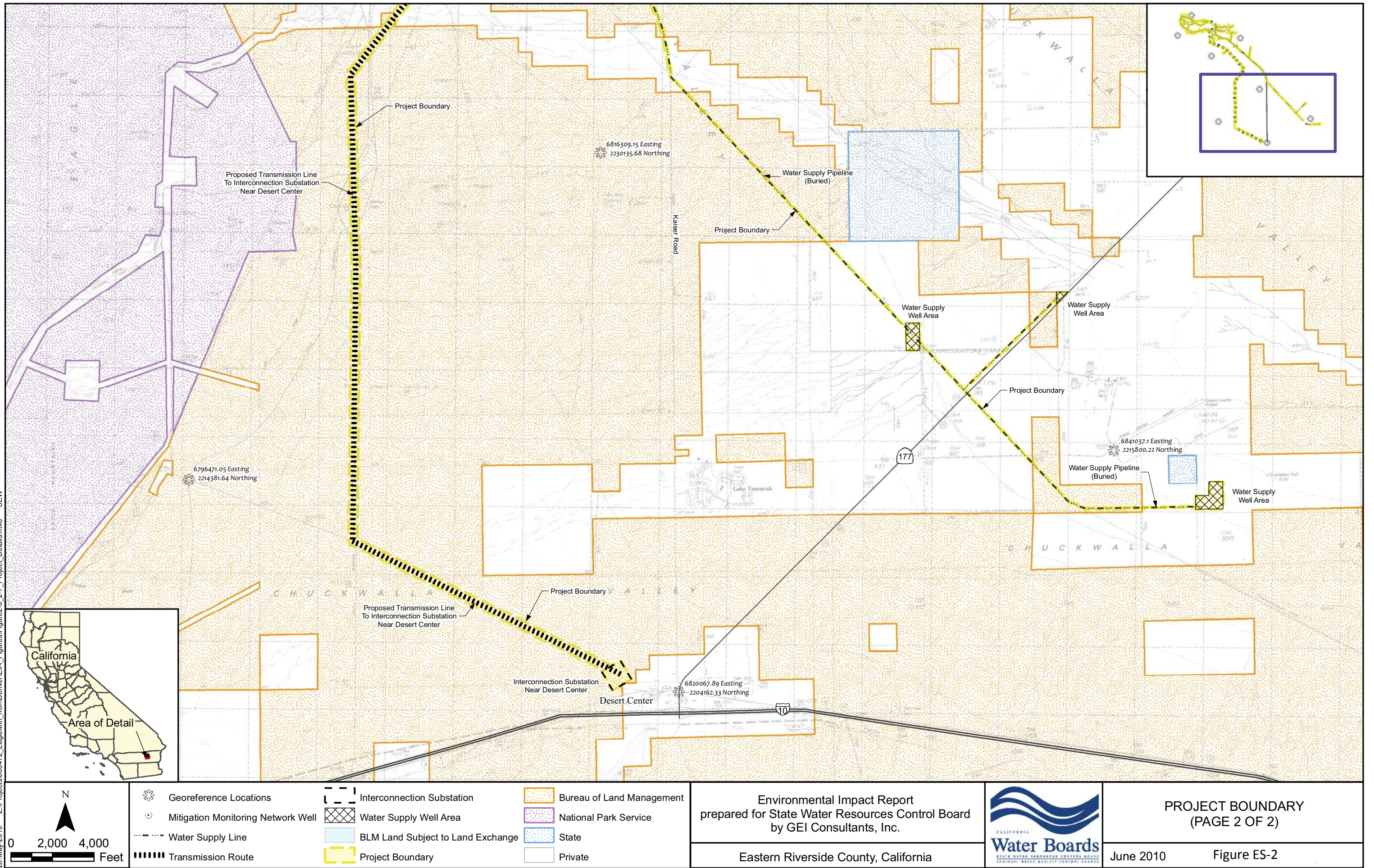
The Project is located within the California portion of the western Sonoran Desert, commonly referred to as the “Colorado Desert.” This includes the area between the Colorado River Basin and the Coast Ranges south of the Little San Bernardino Mountains and the Mojave Desert. The Project is located at the edge of the Eagle Mountains at elevations ranging from approximately 400 to 2,500 feet above mean sea level.

There are no perennial streams or wetlands in the Project vicinity. Drainages in this area are generally limited to high-energy runoff via desert washes that are usually dry. As water from

these events quickly percolates into the surrounding soil or evaporates, the establishment of wetland conditions and related vegetation is precluded. Neither the upper nor lower reservoirs are located on a surface water course. The reservoirs will receive only incidental runoff from small surrounding tributary runoff areas.



28-May-2010 Z:\Projects\080472_EagleMtn_fromDenver\IEIR_Figures\Figure2-6_2-7_Project_Details.mxd SEW



As designed, the Project goals and objectives are:

GOAL AND OBJECTIVE #1

Support California's Energy Policy

California's energy policy is described in the California Energy Commission's, *2009 Integrated Energy Policy Report*. This report states that the driving force for California's energy policy is maintaining a reliable, efficient, and affordable energy system that minimizes the environmental impacts of energy production and use (California Energy Commission, 2009). Energy projects provide for affordable peak power generation and storage of energy to support renewable energy production support California's energy policy.

The CEC recognizes that although the economic downturn has reduced energy demand in the short-term, demand is expected to grow over time as the economy recovers. The CEC states that "it is essential that the state's energy sectors be flexible enough to respond to future fluctuations in the economy and that the state continue to develop and adopt the 'green' technologies that are critical for long-term reliability and economic growth" (California Energy Commission, 2009).

GOAL AND OBJECTIVE #2

Provide Generation to Meet Part of California's Peak Power Requirements

An additional goal of the Project is to provide hydroelectric generation to meet part of California's power requirements, resource diversity, and capacity needs. Peak demand is forecast to increase in California by 1.3 percent per year between 2010 and 2018 (Kavalek and Gorin, 2009). Additional generation will be needed to continue to meet peak power demands.

GOAL AND OBJECTIVE #3

Provide Energy Storage for Integration of Renewable Energy Generation

Energy storage allows integration of intermittent renewable energy generation (primarily wind and solar power) for attainment of California's RPS and greenhouse gas (GHG) reduction goals.

GOAL AND OBJECTIVE #4

Provide Ancillary Services for Management of the Transmission Grid

Ancillary services, including spinning reserves, voltage regulation, load following, Black Start, and protection against over-generation ensures reliability and supports the transmission of energy from generation sites to customer loads.

GOAL AND OBJECTIVE #5

Provide for Flexible Transmission Grid Operations

Provide operational improvements in the electrical grid to substantially improve transmission efficiency, reliability, and affordability, while fully incorporating renewable and traditional energy sources and reducing carbon emissions.

GOAL AND OBJECTIVE # 6

Reduce Greenhouse Gas Emissions

California Assembly Bill 32, the Global Warming Solutions Act of 2006, established the goal of reducing GHG emissions to 1990 levels by 2020. Operating a smarter grid reduces waste, thus reducing GHG emissions. Integrating renewable energy generation sources that do not produce GHG emissions, and providing GHG-free peak power generation, will displace traditional fossil-fueled GHG-producing peak power generation, thus reducing GHG emissions.

GOAL AND OBJECTIVE # 7

Re-use Existing Industrial Sites

The environmental impacts of energy generation can be minimized by siting facilities on already disturbed sites, such as the Eagle Mountain Mine site.

GOAL AND OBJECTIVE # 8

Locate Energy Generation Adjacent to the Transmission Grid

By locating energy generation facilities in close proximity to the transmission grid, the environmental impacts of the construction and operation of transmission interconnection is minimized. In addition, shorter transmission interconnection results in reduced Project costs, benefiting the rate payer. The Project is within approximately 15 miles of a major transmission corridor (including Southern California Edison's [SCE] 500 kV Devers-Palo Verde 1 Transmission Line [DPV1], serving the southern California energy market.

GOAL AND OBJECTIVE # 9

Generate Hydropower Without Causing Impacts to Surface Waters and Aquatic Ecosystems

By locating the Project in existing mining pits, all impacts to streams, fisheries resources, wetlands, and other aquatic ecosystems are completely avoided. No natural waters will be affected.

GOAL AND OBJECTIVE # 10

Redevelopment of the Eagle Mountain Mines – Central and Eastern Pits

The Central Pit of the Eagle Mountain Mine will be utilized for the Upper Reservoir. The East Pit of the Eagle Mountain Mine will form the lower reservoir for the Project. The mining pits are empty and have not been actively mined for decades. The Project reservoirs will be formed by filling the existing mining pits with water. There is an elevation difference between the reservoirs that will provide an average net head of 1,410 feet. Redevelopment of these mining pits provides necessary project components without the need for massive earthwork.

ES-3 Issues of Concern / Areas of Controversy

Pursuant to State CEQA Guidelines §15123(B)(2), the areas of controversy known to the SWRCB, including issues raised by agencies and the public are demonstrated below in Table ES-1 Areas of Controversy / Issues of Concern Identified During Project Scoping.

Public Involvement Process

ECE conducted a pre-filing consultation process under FERC's traditional licensing process. The intent of the FERC's pre-filing process is to initiate public involvement early in the Project planning process and to encourage citizens, governmental entities, tribes, and other interested parties to identify and resolve issues prior to an application being formally filed with the FERC.

On January 10, 2008, ECE filed with the FERC a Notice of Intent to file a license application, a request to use the Traditional Licensing Process (TLP), and a Pre-Application Document (PAD) for the proposed 1,300-megawatt Project¹.

On June 16, 2008, ECE submitted a Draft License Application (DLA). As a part of the FERC licensing process, a public comment period was held on the DLA and many interested stakeholders provided comments.

On October 17, 2008, ECE filed a request for approval of an early scoping process to coordinate both Federal and California State environmental procedures. FERC approved this request on October 29, 2008 and held early scoping to coordinate the FERC's NEPA with the SWRCB's CEQA to initiate the environmental assessment and analysis of the proposed Project.

On December 17, 2008, FERC and the SWRCB issued Scoping Document (SD1) which disclosed FERC and the SWRCB's preliminary view of the scope of environmental issues associated with the proposed Project.

In accordance with State CEQA Guidelines §§15082 and 15161, the SWRCB prepared a Notice of Preparation (NOP) for the proposed Project on January 7, 2009. The NOP was circulated to the State Office of Planning and Research, Clearinghouse and Planning Unit (SCH), responsible and trustee agencies, governmental and tribal entities, and interested persons and organizations.

Scoping meetings (State CEQA Guidelines §15082 (c)(1)) were held on January 15 and 16, 2009, at the University of California, Riverside (Palm Desert Extension) in the City of Palm Desert, California, as well as, a site visit for any interested parties was conducted on January 16, 2009. The purpose of the scoping meeting and public information meeting was to provide information on the proposed Project, CEQA requirements for the scoping and EIR process, to solicit input from individuals and agencies, and to assist in the determination of the scope of analyses and issues to be addressed in the EIR. In addition, and as part of the FERC licensing process, a public comment period was held on the PAD and many interested stakeholders

¹ Previously, the project was given FERC Project No. 12509-001. Upon issuance of a new preliminary permit on August 13, 2008, the project was given FERC Project No. 13123-000. On March 4, 2008, the FERC approved Eagle Crest Energy Company's request to use the TLP.

provided comments. Transcripts of the joint meeting are posted on the FERC Web site, www.ferc.gov

Based on the verbal comments that were received at the scoping meetings, and written comments received throughout the scoping process, FERC and the SWRCB prepared Scoping Document 2 (SD2).

A copy of the NOP, NOP distribution list, public notices, and comment letters received by SWRCB on the NOP and scoping are included in Section 13.0 (Appendix D) of this EIR.

The following table lists the areas of controversy known to the SWRCB, including issues raised by agencies and the public during Project scoping.

**Table ES-1 Areas of Controversy / Issues of Concern
Identified During Project Scoping**

| |
|--|
| <i>Geology and Soils</i> |
| <ul style="list-style-type: none"> • Effects of Project construction, filling, and operation on geology and soil resources in the Project boundary, including assessment of potential geologic hazards such as soil liquefaction, Project-induced seismicity, and slope instability. |
| <ul style="list-style-type: none"> • Effects of Project construction, filling, and operation on soil erosion and sedimentation in the Project area. |
| <ul style="list-style-type: none"> • Effect of Project construction, filling, and operation on the potential for subsidence and hydrocompaction in the Project area and associated Chuckwalla Valley groundwater basin, including potential effects in adjacent river basins (e.g., the Pinto Basin) and on the Aqueduct. |
| <i>Water Resources (Groundwater & Surface Water)</i> |
| <ul style="list-style-type: none"> • Effects of construction activities on water quality in the Project area. |
| <ul style="list-style-type: none"> • Effects of reservoir and tunnel on seepage and on groundwater levels in the Project area. |
| <ul style="list-style-type: none"> • Effects of seepage from the reservoirs and brine pond(s) on groundwater quality in the Project area. |
| <ul style="list-style-type: none"> • Effects of groundwater pumping on groundwater levels, including assessment of groundwater level changes in relation to: other groundwater users; local springs; the Aqueduct; and Reclamation's accounting surface elevation for monitoring use of Colorado River water. |
| <ul style="list-style-type: none"> • Effects of groundwater pumping on groundwater quantity and quality in the Project area. |
| <ul style="list-style-type: none"> • Effects on long-term water quantity and quality in the reservoirs and brine ponds, including the potential for colonization by avian organisms. |
| <i>Biological Resources</i> |
| <ul style="list-style-type: none"> • No issues associated with aquatic resources have been identified. |
| <ul style="list-style-type: none"> • Effects of the reservoirs as a rare water source in the desert environment on the attraction of waterfowl and bats, attraction of predators (e.g., coyotes, badger, and |

| |
|---|
| ravens), and establishment and composition of riparian communities. |
| <ul style="list-style-type: none"> Effects of Project construction (i.e., disturbance and habitat fragmentation) and operation (i.e., lighting, physical and noise disturbance, and migration barriers) on desert bighorn sheep migration patterns, foraging habitat, and breeding and lambing behavior; including an assessment of consequences to desert bighorn sheep populations in the area. |
| <ul style="list-style-type: none"> Potential effects of the Project's reservoirs on deer, big horn sheep, and desert tortoise drowning in the reservoirs, and effectiveness of fencing. |
| <ul style="list-style-type: none"> Effects of the brine ponds on birds, and measures to minimize adverse effects. |
| <ul style="list-style-type: none"> Effects of Project construction and operation, including, but not limited to, construction of the access roads, water pipeline, transmission line, powerhouse, brine ponds and reservoirs, staging areas, transmission line pulling areas, and waste spoil and disposal sites on vegetation. |
| <ul style="list-style-type: none"> Effects of changes in local springs on wildlife, including desert bighorn sheep. |
| <ul style="list-style-type: none"> Effects of Project construction and operation on the spread of invasive species including the consequences of the spread of noxious weeds on vegetation species composition and wildlife habitat values. |
| <ul style="list-style-type: none"> Effects of Project construction and operation on special status species, including BLM sensitive species and State-threatened and endangered species. |
| <ul style="list-style-type: none"> Effects of Project facilities and operations on raven populations. |
| <ul style="list-style-type: none"> Effect of Project construction and operation on federally threatened and endangered species: (1) desert tortoise and its critical habitat, (2) Coachella Valley milkvetch. |
| <ul style="list-style-type: none"> Potential conflicts between the proposed Project and the terms of Kaiser's incidental take statement for the Eagle Mountain Landfill Project. |
| Recreation |
| <ul style="list-style-type: none"> Effects of Project construction and operation on recreational use within the Project area, including lands administered by the BLM for dispersed recreational use and, at the Joshua Tree National Park. |
| <ul style="list-style-type: none"> Effects of Project construction and operation on special designated areas, including BLM's Chuckwalla Valley Dune Thicket Area of Critical Environmental Concern, and Chuckwalla Critical Habitat Unit (an area designated by the U.S. Fish and Wildlife Service as desert tortoise habitat), and federally designated wilderness areas within the Joshua Tree National Park. |
| Land Use Issues |
| <ul style="list-style-type: none"> Effects of Project construction and operation on Aqueduct other land uses, including future mineral development, and solar farms. |
| <ul style="list-style-type: none"> Effects of Project construction and operation on the proposed Eagle Mountain Landfill and Recycling Center, including assessment of potential areas of incompatibility between the proposed Project and the landfill. |
| <ul style="list-style-type: none"> Effects of Project-related desalinization ponds (from the reverse osmosis system) and associated removal of an estimated 2,500 tons of salt from the upper reservoir on land use. |
| <ul style="list-style-type: none"> Effects of the proposed Project on the Riverside County Fire Department's ability to |

| |
|---|
| provide an acceptable level of service. |
| <i>Cultural Resources</i> |
| <ul style="list-style-type: none"> Effects of construction and operation of the proposed Project on historic, archeological, and traditional resources that may be eligible for inclusion in the National Register of Historic Places. |
| <ul style="list-style-type: none"> Effects of Project's construction and operation on the Project's defined area of potential effects. |
| <i>Aesthetic Resources</i> |
| <ul style="list-style-type: none"> Effects of proposed Project facilities on visitors who view the landscape (i.e., Riverside County has designated the section of Interstate 10 from Desert Center to Blythe as a scenic corridor). |
| <ul style="list-style-type: none"> Effects of Project construction and operation on visitors to the area, including visitors to wilderness and non-wilderness areas within the Joshua Tree National Park, and effects on the park's wilderness values. |
| <i>Transportation</i> |
| <ul style="list-style-type: none"> Effects of increased traffic and potential congestion on local roads due to the combination of existing mining-related and landfill traffic and Project construction and operation. |
| <i>Air Quality</i> |
| <ul style="list-style-type: none"> Effects of construction and operation of the Project on air quality in the region |
| <i>Greenhouse Gas Emissions</i> |
| <ul style="list-style-type: none"> Effects of the Project on carbon production emissions. |

ES-4 Organization and Scope of the EIR

Pursuant to State CEQA Guidelines §15123(B)(3), the issues to be resolved and analyzed within this EIR include the following detailed list below. The EIR addresses each of these areas of concern or controversy in detail, examined Project-related and cumulative environmental impacts, and identified significant adverse environmental impacts. Where necessary, recommended mitigation program has been designed to reduce, avoid, or eliminate potentially significant impacts. The Eagle Mountain Pumped Storage Hydroelectric Project Draft EIR is organized as follows:

Executive Summary. This section presents a summary of the proposed Project and Alternatives considered in this EIR, identifies areas of controversy, significant unavoidable impacts, and provides a summary of potential environmental impacts and the mitigation program directly related to such impact. Also within the section is comprehensive table that lists the threshold of significance, environmental impact, trigger point, related mitigation program, and residual impact.

Section 1.0 – Introduction. This section describes the purpose and scope of the EIR which is based on the CEQA EIR process. Public scoping efforts are discussed, including environmental

issues to be analyzed in the EIR. The public review and intent of the EIR document are addressed, followed by an organizational list of EIR sections.

Section 2.0 – Project Description. This section defines the Project Description, including the location and identification of potential environmental issues. Within this section are the Project Objectives, existing environment and background, and identification of potential environmental impacts. Lastly, this section concludes with a list of agencies expected to use the EIR document for review of approvals and permits required for implementation of the proposed Project.

Section 3.0 – Environmental Analysis. This section describes the regional and local environmental setting for the proposed Project. The section also describes the regulatory setting (if applicable), thresholds of significance, and includes a discussion of potentially significant adverse environmental impacts associated with the proposed Project for each environmental issue area. Where applicable, this section outlines a mitigation program based on Project Design Features (PDF) and/or Mitigation Measures (MM) to reduce or avoid potentially significant impacts and identifies the residual level of significance of the impact once the mitigation program is implemented. This section addresses each of these resource topics in detail, accounting for Sections 3.1 through 3.17:

Geology and Soils – Construction activities of the dams and reservoirs, along the water conveyance corridor or transmission line corridor, and Project operations may have the potential to impact the geological resources on-site.

Surface Water – Construction activities along the water conveyance corridor or transmission line corridor, and Project operations planned at the facility may impact groundwater levels, groundwater quality, or springs and wells.

Groundwater – Construction and operation will affect this resource. This section discusses groundwater quality and supply data for the Chuckwalla Valley Groundwater Basin, aqueducts, springs/wells, water bearing formation, and hydraulic characteristics.

Agricultural Resources – This discussion focuses on the Project’s compatibility with existing agricultural and forestry resources land uses.

Biological Resources – Construction and operational activities planned at the facility, along the water conveyance corridor or transmission line corridor may impact plant communities and wildlife. The Project will be required to adhere to Federal, State and regional biological plans.

Threatened & Endangered Species – Project implementation may impact State-listed threatened and/or endangered species having the potential to occur on-site, or having suitable habitat on-site or in the Project vicinity.

Aesthetic Resources – The physical character of the site will be modified. The overall aesthetic appearance of the facilities as viewed from off-site requires evaluation to ensure consistency with national and regional standards.

Cultural Resources – Construction and operational activities proposed at the pumped storage hydroelectric facility or along the water conveyance corridor or transmission line corridor may have the ability to impact archeological, paleontological, or historical resources within the Area of Potential Effect.

Land Use / Public Services – Construction and operational activities proposed at the pumped storage hydroelectric facility, along the water conveyance corridor, or transmission line corridor will change the existing land use on-site, and have the potential to affect public services times and utility capacities. The existing land use is an out-of-use iron ore mine that has been inactive since 1983. At present, gravel mining and military training is conducted on the site. Development on this site will be evaluated for compatibility with surrounding land uses and correspondence with the national and regional long-term goals.

Recreation – Construction and operational activities proposed at the pumped storage hydroelectric facility, along the water conveyance corridor or transmission line corridor may have the ability to impact surrounding recreational areas, including the Joshua Tree National Park and Wilderness Area.

Population / Housing – Construction and operational activities proposed at the pumped storage hydroelectric facility, along the water conveyance corridor or transmission line corridor may increase population and/or housing demands within the region.

Transportation – Construction activities and operational phases have the potential to increase traffic and decrease level of service.

Air Quality – Construction, operational activities, and truck and automotive traffic anticipated and planned at the facility will generate emissions and dust that may have an effect on local and/or regional air quality.

Noise – Construction and operational activities of the pumped storage hydroelectric facility could generate increased noise levels adversely affecting surrounding sensitive receptors.

Greenhouse Gas Emissions – Construction may affect these levels, however, operational activities would displace energy demand for fossil-fueled power plants and if effectively used would reduce GHG emissions necessary for meeting the energy demands in California and assist meeting future targets for a larger portfolio of renewable power generation sources.

Hazards & Hazardous Materials – Construction and operational activities may impact potential public health and environmental issues related to hazards and the use of hazardous materials associated with construction and operations proposed for the Project area. This section also describes potential wildland fire hazards.

Environmental Justice – Although not required under CEQA, the EIR provides this discussion relevant to with applicable regulations and policies. This section addresses the question of whether and how the impacts of the proposed Project and alternatives may disproportionately affect minority populations and low-income populations or Native American communities.

Section 4.0 – Alternatives Analysis. The purpose of the alternatives analysis is to identify ways to mitigate or avoid the significant effects a project may have on the environment; as such, this section begins by providing an overview of the alternative selection process. This section describes the alternatives to the proposed Project and compares their relative impacts to those of the proposed Project while considering the Project objectives and specific evaluation criteria. This section also provides a description of alternatives considered but rejected from further analysis, as well as, the determination of the environmentally superior alternative.

Section 5.0 – CEQA Mandated Discussions. This section discusses potentially significant irreversible effects and irretrievable commitments of resources, the potential for growth-inducing impacts, and cumulative impacts. The purpose of this section is to evaluate the potential for growth-inducing effects of the proposed Project. Additionally, this section considers the effects of the proposed Project that would result in a commitment of resources and uses of the environment that could not be recovered if the proposed Project were constructed, as well as describing the potential for unavoidable adverse impacts from the proposed Project. Cumulative impacts are those impacts that are individually less than significant, but when considered together with related impacts of other projects in the affected area, could result in a combined effect that is significant.

Section 6.0 – Mitigation Summary. This section presents a comprehensive matrix of the mitigation program recommend within the Draft EIR which catalogs the potential environmental impact, level of significance, related mitigation program, and residual impact after implementation of the mitigation program (*see* Table 6-1). In addition, the Mitigation Monitoring and Report Program (MMRP) table (*see* Table 6-2) provides a checklist table listing each MM and PDF, implementation timing, party-responsible for monitoring or reporting, and agency responsible for verification and enforcement. The MMRP has been designed to ensure compliance during Project implementation and will be incorporated into the SWRCB's conditions of approval for the proposed Project.

Section 7.0 – References. This section provides a list of the sources of information cited in the Draft EIR.

Section 8.0 – Organizations and Persons Consulted. This section identifies the individuals, agencies, and organizations consulted in preparing the Draft EIR.

Section 9.0 – List of Draft EIR Preparers. This section provides the names of the SWRCB staff, consulting scientists and planners who contributed to preparation of the Draft EIR.

All Technical Appendices

(Supporting data and technical information referenced in the Draft EIR)

Section 10.0 – Appendix A – Sensitive Species in Project Area

Section 11.0 – Appendix B – Fish and Wildlife Observed in Project Area

Section 12.0 – Appendix C – Technical Memoranda

- 12.1 Stage 1 Design Level Site Investigation Plan
- 12.2 Erosion and Sediment Control Plan
- 12.3 Preliminary Groundwater Supply Wells, Pipeline, and Operating Costs: Eagle Mountain Pumped Storage Project
- 12.4 Groundwater Supply Pumping Technical Memorandum
- 12.5 Eagle Mountain Pumped Storage Project: Seepage Analysis for Upper and Lower Reservoirs
- 12.6 Seepage Recovery Wells, Groundwater Modeling Report
- 12.7 Schedule, Manpower, and Equipment Utilization During Construction of the Eagle Mountain Pumped Storage Project
- 12.8 Eagle Mountain Pumped Storage Project- Landfill Compatibility
- 12.9 Project Drainage Plan and Reservoir Spillway Designs
- 12.10 Appendix to Air Quality Analysis, Construction-Related Data
- 12.11 Class I Cultural Resources Investigation for the Proposed Eagle Mountain Pumped Storage Project.
- 12.12 Class III Cultural Resources Report
- 12.13 Draft Historic Properties Management Plan

12.14 Biological Mitigation and Monitoring Reports, and Biological Assessment of Desert Tortoise.

12.15 Golden Eagle Aerial Surveys for Eagle Mountain Pumped Storage Project in the Mojave Desert Region, California.

12.16 Results of Class I record search and Class III field inventory of Eagle Mountain Pumped Storage Project alternative transmission line corridors and substations

Section 13.0 – Appendix D – Scoping Materials / Public Notices / EIR Notification List

- 13.1 State Clearinghouse Notice of Preparation
- 13.2 Distribution List
- 13.3 FERC Notice of Scoping
- 13.4 Scoping Document 1
- 13.5 Scoping Document 2
- 13.6 Transcript of Scoping Meeting
- 13.7 Comments Received During Scoping Period

Section 14.0 Figures

ES-5 Other CEQA Mandated Sections

CEQA requires consideration and discussion of a range of issues extending beyond analysis of project-specific impacts to individual resource areas. Section 5.0 of the Draft EIR contains a complete analysis of additional mandated State CEQA discussions, as well as discussion of State CEQA Guidelines Appendix F, Energy Conservation. The mandated analyses are as follows:

- Unavoidable Adverse Impacts – State CEQA Guidelines §15126.2(b);
- Growth Inducing Effects – State CEQA Guidelines §15126.2(d);
- Significant Irreversible Environmental Changes – State CEQA Guidelines §15126.2(c); and
- Cumulative Impacts – State CEQA Guidelines §15130.

These potential impacts are summarized below.

Unavoidable Adverse Impacts

Pursuant to State CEQA Guidelines §15126.2(b), the proposed Project will result in significant and unavoidable adverse impacts related to long-term impacts on visual resources in the area north of Interstate 10 (I-10) where the transmission line parallels the highway to reach the substation for interconnection to the southwestern grid, short-term air quality impacts during

construction (NO_x emissions from heavy equipment), and cumulative impacts to groundwater resources from Project pumping combined with groundwater use for other reasonably foreseeable Project water use. A brief description of each significant and unavoidable impact is provided below.

Aesthetics

The transmission line segment from the Eagle Mountain Road turnoff to the interconnection substation (~2.5 miles) would introduce a new utility feature to the landscape, creating high visual contrast within foreground view zones. Of the 10 Key Observation Points established, two (Interstate 10 [I-10] and Desert Center) would be exposed to significant, visual changes that cannot be entirely mitigated to less than significant. Although the proposed Project's transmission line would be similar in design and height to the Southern California Edison, Devers-Palo Verde 2 (DPV2) Transmission line segment proposed to cross I-10 in the foreground (*see* various figures within this EIR for locations of existing and proposed transmission lines), the new structures would cause additional view blockage in the foreground of the panoramic views of the Chuckwalla Valley and surrounding mountains. The new transmission line and new right-of-way (ROW) would also increase the structural complexity and industrial character, which would be more pronounced as the viewer gets closer to the structures. Viewers traveling eastbound on I-10 would be most affected by the Project transmission line whereas unobstructed views of the line would be apparent in the foreground/middle-ground view zones. The new structures will be apparent to westbound travelers as well, but potentially "filtered" due to the proposed DPV2 line. The moderate-to-high level of visual change that would result from this component of the Project would be inconsistent with the applicable United States Bureau of Land Management's (BLM) Visual Resource Management (VRM) Class III management objectives, resulting in a *significant and unavoidable impact*.

Air Quality

The proposed Project will result in a significant [short-term] construction-related impact from nitrogen oxide (NO_x) in construction years 2012 through 2014; resulting in a *significant and unavoidable impact*. Other air quality parameters will not exceed the thresholds of significance. No significant operational air quality impacts were identified.

Groundwater

Pumping will exceed recharge for approximately 4 years of the 50-year project life. During the remaining years, recharge will exceed pumping. By 2065, at the end of the 50-year Federal Energy Regulatory Commission (FERC) Project license period, the aquifer storage (cumulative change) will have been increased by about 74,000 acre-feet. This will not result in depletion of groundwater supplies, and this potential impact is *less than significant*.

However, in combination with pumping for all reasonably foreseeable projects, Basin overdraft of about 9 feet is likely to occur over the life of the project, in which case, this project would contribute to a *significant adverse cumulative effect*.

Growth Inducing Effects

Public Resources Code Section 21100(a)(5) requires that the growth-inducing impacts of a project be addressed in the EIR. A project may be growth-inducing if it directly or indirectly fosters economic or population growth or the construction of additional housing, removes obstacles to growth, taxes community service facilities, or encourages or facilitates other activities that cause significant environmental effects. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment (CEQA Guidelines §15126.2[d]).

The Project proposes to establish industrial activities. Industrial activities are typically associated with economic growth and stimulated population growth. However, the Project's operation does not require a large number of employees that would typically be required for other industrial operations, such as a landfill or mining pit. At Project buildout, the pumped storage facility would be expected to operate with a staff totaling 30 persons based on three work-shifts within a given 24-hour period.

The majority of required manpower is needed during construction, particularly in the time frame approximately 2 years into the construction period, with considerably less needed in the first and last years. Peak monthly employment would occur in Year 2 with a high of 209 employees.

It is expected that most of the general labor required during construction would be available from the labor pool within Riverside County and the Project region. As much as 50 percent of the skilled trades and management and support personnel could also be provided by regional labor. There would be some immigration of non-local workers to meet Project manpower requirements. It is expected that many of these employees will utilize local housing. Significant vacant housing and rental units are available within Riverside County as well as large numbers of hotel/motel rooms. Long-term employment during Project operation may generate additional demand for housing in the Desert Center area, but the number of employees will be small (approximately 30 employees) and the existing housing stock will likely accommodate these employees.

Estimates of peak construction work force and the expected percentage of non-local workers suggest that during the peak period, approximately 105 workers will require short-term (two years) housing accommodations. Therefore, the relatively small number of employees would likely be derived from the area's resident population and significant numbers of employees from outside the area would not be needed long-term. The proposed Project would have no indirect growth-inducing impacts. The Project does not have the ability to remove a barrier to growth.

Based on this analysis, the growth inducing impact based on implementation of the proposed Project would be considered *less than significant*.

Significant Irreversible Environmental Changes

Public Resources Code Section 21100(b)(2)(B) requires an EIR to include a detailed statement setting forth any significant effects on the environment that would be irreversible if a project were implemented. Pursuant to CEQA Guidelines §15126.2(c), the uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely; whereas irreversible damage and irretrievable commitments of resources may result in significant impacts.

The site's use as a pumped storage facility may limit the capacity to recover further iron ore; however, as stated in Section 3.1 Geology and Soils, the property's owner intends to convert the site to a landfill. The remaining deposits contain low average iron content, and no ore processing facilities remain on the site. Furthermore, using rail to transport material would require substantial reconstruction for reoperation. Therefore, future iron mining is unlikely to occur within the proposed Project boundary.

The proposed Project may use part of the fine tailings stored onsite to create a reservoir liner or construction of a low-permeability central core in the embankments proposed for the upper reservoir site. Recycling of the large volumes of mine tailings around the site would be a significant benefit over the long term. None of these changes are irreversible, but resources will be committed for the life of the proposed Project.

The proposed Project will convert disturbed land to industrial use with reservoirs, transmission structures, and other related components; however, these changes would only occur over the life of the Project. This impact could be reversed if the reservoirs were reclaimed [drained] and transmission line is dismantled at the end of the Project. The Project duration is estimated at 30 to 50 years based in part on FERC licensing, California State Water Resources Control Board (SWRCB) permitting, market conditions, and various other components which are unknown at this time. In summary, the proposed Project would have *no significant irreversible environmental changes*.

Cumulative Project / Cumulative Impact

A cumulative project refers to land development projects that are in various phases of entitlement, planning and/or construction and that may affect the same resources and geographic area as the proposed Project. Under the CEQA Guidelines §15130, the EIR must discuss cumulative impacts when they are significant. Cumulative impacts are defined as two or more

individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

The geographic area of cumulative effect varies by resource. For example, air quality impacts tend to disperse over a large area, while traffic impacts are typically more localized. For this reason, the geographic scope for the analysis of cumulative impacts must be identified for each resource area (*see* Table 5-1 Geographic Scope of Cumulative Effects Analysis). The analysis of cumulative effects considers a number of variables including geographic (spatial) limits, time (temporal) limits, and the characteristics of the resource being evaluated. The geographic scope of each analysis is based on topography and the natural boundaries of the resource affected, rather than jurisdictional boundaries. The geographic scope of cumulative effects often extends beyond the scope of the direct effects, but not beyond the scope of the direct and indirect effects of the proposed action and alternatives. The geographic area encompassed by the listed projects covers an approximate 15 to 20 mile radius around the Project site.

The cumulative projects in the immediate Project vicinity include those along the I-10 corridor in eastern Riverside County. The list of cumulative projects was compiled by the BLM for use in the cumulative environmental impact analysis for the proposed solar energy projects and was provided to the SWRCB (Lead Agency) in March 2010 (Ysmael Wariner, BLM staff, personal communication, March 2010). Several projects in the Chuckwalla Valley are in the planning and permitting stage. They include various proposed solar energy projects, the Eagle Mountain Landfill project, and other relevant probable future projects.

The following is a summary of the cumulative impact analysis as contained in Section 5.0 CEQA Mandated Analyses:

Groundwater

Project pumping will exceed recharge for approximately 4 years of the 50-year project life. During the remaining years, recharge will exceed pumping. By 2065, at the end of the 50-year FERC Project license period, the aquifer storage (cumulative change) will have been increased by about 74,000 acre-feet. This will not result in depletion of groundwater supplies, and this potential impact *is less than significant*. However, in combination with pumping for all reasonably foreseeable projects, Basin overdraft of about 9 feet is likely to occur over the life of the project, in which case, this project would contribute to a significant adverse cumulative effect.

Aesthetics

Cumulative projects include the proposed DPV2 Transmission Line Project, with two 500 kilovolt (kV) transmission lines parallel to the existing DPV1. These projects considered together would result in a significant cumulative impact. Because the proposed Project will add to the region's increase in developed facilities and progressive change in visual character of the natural landscape, its contribution to this cumulative impact would be *cumulatively considerable*.

Air Quality

As discussed previously, the proposed Project alone would result in a significant construction-related impact from NO_x in construction years 2012 through 2014. If a project would individually have a significant air quality impact, the Project would also be considered to have a *significant cumulative air quality impact*. As such, the Project would also have a significant cumulative contribution to NO_x impacts as a precursor to ozone formation in construction years 2012 through 2014.

No significant cumulative impacts were identified for geology and soils, surface water, agriculture, biological resources, cultural resources, land use / public services, recreation, population and housing, traffic, greenhouse gas emissions, noise, hazards and hazardous materials, and environmental justice.

Energy Conservation, CEQA Guidelines Appendix F

The State CEQA Guidelines §15126.4(a)(1)(C) states: “Energy conservation measures, as well as other appropriate mitigation measures, shall be discussed when relevant.” Whereas CEQA Appendix F recognizes the goal of conserving energy and implies the wise and efficient use of energy. The means of achieving this goal include:

- Decreasing overall per capita energy consumption
- Decreasing reliance on natural gas and oil
- Increasing reliance on renewable energy sources

As designed, the proposed Project will reliably integrate solar and wind generation and offset natural gas-fired power with the overall benefit of reduced GHG emissions and direct contribution to long-term climate change effects. The Project provides an economical supply of peaking capacity, as well as load following, electrical system regulation through spinning reserve, and immediately available standby generating capacity. These latter benefits, referred to as ancillary services, are considered essential for integration of renewable wind and solar power resources to meet State RPS of 33 percent by year 2020, and to offset fossil-fueled peak power generation to help meet State GHG emissions reductions goals.

The proposed Project has been designed to play a vital role in the integration of renewable energy resources already mandated to be developed by the State of California; as such, the Project is intended to meet existing and future energy demands.

ES-6 Alternatives

State CEQA Guidelines §15126.6 require that an EIR describe and evaluate the comparative merits of a range of alternatives to the Project that could feasibly attain most of the objectives of

the Project but would avoid or substantially lessen significant effects. An EIR is not required to consider alternatives which are infeasible, however, State CEQA Guidelines §15126.6(b) specifies that the EIR shall evaluate alternatives capable of avoiding or substantially lessening significant effects of the Project even if these alternatives could impede to some degree attainment of Project objectives, or impose additional costs.

The alternatives evaluated in this Draft EIR were identified based on a range of alternatives that could feasibly accomplish most of the basic Project objectives and could avoid or substantially lessen one or more significant effects (State CEQA Guidelines §15126.6(c)).

The five alternatives to the proposed Project that are discussed in Chapter 4.0 Alternatives of this EIR include:

- Alternative 1 – Proposed Project Alternative
- Alternative 2 – Extend Construction Period to Limit Equipment to 100 Lbs/Day NO_x
- Alternative 3 – Eastern Red Bluff Substation Alternative
- Alternative 4 – Western Red Bluff Substation Alternative
- Alternative 5 – No Project Alternative

The environmental analysis concluded that based upon the elimination of Project impacts to aesthetics and air quality, the environmentally superior alternative would be the No Project Alternative (Alternative 5). However, while addressing Project-specific impacts, including the Project goals and objectives as criteria, the No Project Alternative would eliminate a major utility-scale energy storage project from development, with the likely effect of impeding State goals for successful integration of 33 percent renewable energy generation sources by year 2020. This outcome would have related consequences for attainment of GHG reduction goals by year 2020 as well. With this perspective, the conclusion that the No Project Alternative is environmentally superior is questionable.

CEQA directs that in the case where the No Project Alternative is identified as the environmentally superior alternative, the EIR shall also identify the environmentally superior *development* alternative (Guidelines §15126.6(e)). As documented in Section 4.0 Alternatives, numerous development alternatives were examined and rejected as either infeasible, or having greater potential environmental consequences. These included alternative locations, transmission, water supply and water treatment, powerhouse location, generation capacity, and reservoir capacities.

The Proposed Project Alternative (Alternative 1) has evolved substantially over a period of years to include a variety of features (fully described in Section 4.0) intended to specifically address and minimize potential environmental effects. This alternative also includes incorporation of a comprehensive mitigation program intended to avoid or minimize environmental effects to the extent feasible, while still permitting attainment of basic project goals and objectives. However,

impacts to groundwater, air quality during construction, and aesthetics remain significant with the application of the mitigation program.

Alternative 2 (Extend Construction Period to Limit Equipment to 100 Lbs/Day NO_x) is the only alternative action that could reduce the NO_x emissions to below the significance threshold and would be to limit the number of pieces of equipment that could operate on any single day to keep NO_x emissions below the 100 lbs/day standard. With NO_x emissions at approximately four times this threshold value, this implies that construction would need to be extended over a much longer period of time, and instead of 3 to 4 years for completion of project works, construction would extend over 10 to 12 years or more.

Alternative 2 does eliminate the short-term construction related air quality impact; however, it may increase other impacts by extending the duration of habitat disturbance, and project traffic and noise. This alternative would also substantially constrain attainment of project goals by substantially extending the time to full project operations, and it very likely would undermine the project's ability to be financed, thereby fundamentally affecting feasibility of the Project.

Two alternative substation locations, Eastern Red Bluff Substation and Western Red Bluff Substation (referred to as Alternatives 3 and 4) provide up to three alternative interconnection routes; all of which were examined. Both of the alternative substation locations have less visual impact than the proposed Project, although impacts remain significant.

From the western substation location, one interconnection route was examined (Interconnection Alternative #3). However, the western substation location has greater impacts to desert tortoise and cultural resources than either the proposed Project or the eastern substation location.

From the eastern substation location, two alternative interconnection routes were examined. Interconnection Alternative #1A has less impact to desert tortoise, land use, and visual resources than Interconnection Alternative #1B or Interconnection Alternative #2. Therefore, it is concluded that the Interconnection Alternative #1A which interconnects to the Eastern Red Bluff Substation, with incorporation of all alternative features and implementation of the mitigation program identified throughout the resource analyses in this DEIR, qualifies as the environmentally superior interconnection (development) alternative; in that it reduces biological, land use and aesthetics impacts, although short-term air quality impacts and visual impacts remain significant and unavoidable.

ES-7 Thresholds of Impact / Level of Significance

The threshold of impact utilized throughout this EIR to assess potential environmental impact as a result of project implementation was developed in consultation with the SWRCB, State CEQA Guidelines, local/regional plans and ordinances, accepted standards of practice, and/or consultation with recognized environmental experts. Within Section 3.0 Environmental Analysis,

each resource section provides specific criteria for determining environmental impact assessment.

The following terminology is used throughout the Draft EIR to describe the level of significance of potential environmental impacts:

- A finding of **no impact** is appropriate if the analysis concludes that the Project would not affect the particular resource in any way.
- An impact is considered **less than significant** if the analysis concludes that it would not cause substantial adverse change to the environment and requires no mitigation.
- An impact is considered **potentially significant and subject to the mitigation program** if the analysis concludes that it could have a substantial adverse effect on the environment and requires implementation of a mitigation program.
- An impact is considered **significant and unavoidable** if the analysis concludes that it would cause substantial adverse change to the environment and no feasible mitigation program was developed taking into account economic, environmental, legal, social, and technological factors.

ES-8 Mitigation Program

Implementation of the recommended mitigation program would reduce potentially significant impacts to a less than significant level; except for the resource areas of Groundwater, Aesthetics, and Air Quality for unavoidable and significant environmental impacts; of which will require a statement of overriding consideration (State CEQA Guideline §15093). Where stated, the potential environmental effects of the proposed Project are categorized to reduce the impacts to levels less than significant. The mitigation program includes both PDFs and MMs.

PDFs are design elements inherent to the Project that reduce or eliminate potential impacts. Because PDFs are incorporated into the Project, either in the Project design or by law as part of Project implementation, they do not constitute MMs, which are required to reduce or avoid a potentially significant impact. For clarity, PDFs are described within the mitigation program and are described within the analysis of each CEQA resource topic. Mitigation measures are provided to reduce all impacts from the proposed Project to below a level of significance, where applicable.

Table ES-2 Summary of Project Impacts, Mitigation Program, and Residual Effect presents a listing by threshold of significance by resource area, identified environmental impacts, mitigation program component, and level of significance after mitigation is incorporated into the

Project. The table also identifies cumulative impacts resulting from build out of the proposed Project in conjunction with the approved and pending cumulative projects.

Please refer to Section 6.0 Mitigation Summary for Table 6.0 Mitigation Monitoring and Reporting Program Summary, which is a variation of the Table ES-2 as it provides a checklist table listing each MM and PDF, implementation timing, party-responsible for monitoring or reporting, and agency responsible for verification and enforcement. The MMRP has been designed to ensure compliance during Project implementation and will be incorporated into the SWRCB's conditions of approval for the proposed Project. The MMRP provides a verification schedule for the mitigation program and will be incorporated into the SWRCB's conditions of approval for the proposed Project and fulfills the SWRCB's monitoring requirements with respect to Assemble Bill 3180 (Public Resources Code §21081.6).

(Note: Both the Summary of Project Impacts, Mitigation Program, and Residual Effect table and Mitigation Monitoring and Reporting Program Summary table are provided in Section 6.0 Mitigation Summary.)

ES-9 Public Review of the EIR

This Draft EIR is being circulated to Federal, State, regional and local agencies, and interested organizations and individuals that may wish to review and comment on the proposed Project. Publication of this Draft EIR marks the beginning of a 45-day public review period during which written comments may be submitted to the SWRCB at the following address:

Mr. Paul Murphey
Hearings and Special Projects
State Water Resources Control Board
1001 I Street, 14th Floor
Sacramento, California 95814
Telephone: (916) 341-5435

Copies of the Draft EIR are available to the public at the on the SWRCB's Web site:

http://www.swrcb.ca.gov/waterrights/water_issues/programs/water_quality_cert/ceqa_projects.shtml#eagle and are available for viewing at the California EPA Building 1001 I Street, 2nd Floor, in the Water Rights File Room, in Sacramento, California.

Table ES-2- Summary of Project Impacts, Mitigation Program, and Residual Effect²

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|------------------------------|----------------------------|---|
| <i>Section 3.1 Geology and Soils</i> | | | |
| Impact 3.1-1 Earthquakes and Faults. On-site faults have been evaluated and found to be not active. Therefore, the risk of surface rupture at the site caused by faulting is very low. | <i>Less than significant</i> | No mitigation is required. | N/A |
| Impact 3.1-2 Ground Subsidence. Ground subsidence is not considered to be a potential hazard associated with this Project. | <i>Less than significant</i> | No mitigation is required. | N/A |
| Impact 3.1-3 Active and Inactive Mines. Ore reserves | <i>Less than significant</i> | No mitigation is required. | N/A |

² Project Design Features (PDFs) are design elements inherent to the Project that reduce or eliminate potential impacts. Because PDFs are incorporated into the Project, either in the Project design or by law as part of Project implementation, they do not constitute mitigation measures (MM), which are required to reduce or avoid a potentially significant impact. For clarity, PDFs are described within the mitigation program and are described within the analysis of each CEQA resource topic. Mitigation measures are intended to reduce all impacts from the proposed Project to below a level of significance, where applicable.

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|--|---|--|
| within the Project boundary, constituting a small percentage of the available iron ore on the site, will not be accessible for the life of the Project, including a portion of CSLC mineral reserves. Iron ore and other rock resources in the mine site outside the Project boundary will remain accessible for mining. | | | |
| Impact 3.1-4 Soil Erosion. There will be potential increases in soil erosion resulting from construction of this Project. | <i>Potentially significant and subject to the mitigation program</i> | MM GEO-1. Erosion Control Plan. Erosion and sediment control measures for each area type, including proposed Best Management Practices, are listed in the Erosion Control Plan in Section 12.2. The contractor shall limit impacts to soil erosion through implementation of an Erosion Control Plan limiting surface disturbance to only those areas necessary for construction. Where natural topsoil occurs, it would be salvaged and stockpiled prior to construction, and the soil piles would be | Less than significant |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>stabilized. Following construction, all areas where natural topsoils were removed that are not occupied by permanent Project facilities would be re-graded, have the topsoils replaced, and be seeded with native vegetation to reduce erosion potential. Additional soil stabilization BMPs will be undertaken as appropriate.</p> <p>The contractor shall utilize and implement the following best management principles for effective temporary and final soil stabilization during construction. Preserving existing vegetation where required and when feasible to prevent or minimize erosion. Once existing vegetation is cleared, construction will follow immediately behind to reduce unnecessary exposure of scarified soil to wind and water.</p> <ul style="list-style-type: none"> • Sloping roadways and excavations away from washes will prevent or minimize erosion into washes. Where haul roads cross surface washes, the ground will be cleared of loose soil and pre-existing sediments, as necessary. • The installation of riprap at the washes | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>which will prevent or minimize erosion.</p> <ul style="list-style-type: none"> • Small earthen embankments will be built within washes in order to slow or divert surface water to reduce erosion. • Silt fences will be installed when working around a wash to prevent sediment from entering washes during a rain storm and will be constructed as described in Attachment B of Section 12.2 (e.g., buried to a depth of at least 12 inches. • The construction contractor will be required to preserve and protect existing vegetation not required, or otherwise authorized, to be removed. Vegetation will be protected from damage or injury caused by construction operations, personnel, or equipment by the use of temporary fencing, protective barriers, or other similar methods. • Water will be applied to disturbed soil areas of the Project site to control wind erosion and dust. Water applications will be monitored to prevent excessive runoff. • Sediment controls, structural measures that are intended to complement and | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|---|--|--|
| | | <p>enhance the soil stabilization (erosion control) measures, will be implemented. Sediment controls are designed to intercept and filter out soil particles that have been detached and transported by the force of water.</p> <p><i>Implementation Timing:</i> Final engineering/pre-construction/construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Contractor/ Environmental Coordinator</p> <p><i>Responsible Agencies for verification and enforcement:</i> SWRCB and FERC</p> | |
| <p>Impact 3.1-5 Landslides and Mass Movements.</p> <p>Slope raveling and localized, surficial slope failures and/or rock falls are expected in areas where mining has exposed adversely oriented fracture sets on the pit walls.</p> | <p><i>Potentially significant and subject to the mitigation program</i></p> | <p>PDF GEO-1. Subsurface Investigations.</p> <p>Detailed investigations to support final engineering will be conducted in two stages, as detailed in Section 12.1. These generally include:</p> <p>Stage 1 Subsurface Investigations: Based on available information and the current Project configuration, conduct a limited field program designed to confirm that basic Project feature locations are appropriate and to provide basic design parameters for the</p> | <p>Less than significant</p> |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>final layout of the Project features. Phase 1 Subsurface investigations will be initiated within 60 days of licensing and receipt of site access, field work will be completed within 4 months of the start of field investigations, and results filed with the FERC 6 months after the start of field investigations.</p> <p>The Stage 1 subsurface site investigation program for the Project will commence as soon as site access is obtained. The Stage 1 program will provide the information needed to finalize Project features and to plan a second-stage program to support final design of the Project. Final design will be approved by the FERC and the DSOD (for dam design).</p> <p>The detailed scope of the Stage 1 program is discussed in a technical memorandum found in Section 12.1.</p> <p>Stage 2 Subsurface Investigations: Using the results of the Stage 1 work, and based on any design refinements developed during pre-design engineering, conduct additional</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>explorations that will support final design of the Project features and bids for construction of the Project.</p> <p>PDF GEO-2. Geologic Mapping. During site investigations, geologic mapping will be performed by Project Engineers to identify conditions of the overburden and bedrock exposed in the mine pits (reservoir areas) that may affect the stability of existing slopes during reservoir level fluctuations. Mapping will identify the degree and orientation of jointing and fracturing, faulting, weathering, and the dimensions of the benches excavated during mining. The stability of the cut slopes and benches will be assessed at this time.</p> <p>During construction, areas within the pits that exhibit unstable slopes because of adverse fracture sets exposed in the pit walls will be scaled of loose rock and unstable blocks. Material scaled from the side slopes will be removed and disposed of outside the pit, or pushed downslope and buried in the bottom of the pit. Rock slopes within the</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|------------------------------|--|--|
| | | East and Central Pits that lie below an elevation of 5 feet above the maximum water level will be scaled of loose and unstable rock during construction. Existing cut slopes that lie above these elevations will not be modified unless there is evidence of potential failure areas that could impact project facilities. Final project design will be approved by FERC. | |
| Impact 3.1-6 Liquefaction. The potential for liquefaction-induced settlements is very low to non-existent | <i>Less than significant</i> | No mitigation is required | N/A |
| Impact 3.1-7 Reservoir Triggered Seismicity. The potential of reservoir triggered seismicity at the site is remote | <i>Less than significant</i> | No mitigation is required. | N/A |
| Section 3.2 Surface Water | | | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|--|--|--|
| <p>Impact 3.2-1 Existing Surface Water. There are no perennial streams in the Project area. Springs are located outside of the Project area, and are not hydrologically connected to groundwater in the Chuckwalla Aquifer.</p> | <p><i>Potentially significant impact and subject to mitigation</i></p> | <p>MM GEO-1. Erosion Control Plan.</p> <p>Erosion and sediment control measures for each area type, including proposed Best Management Practices, are listed in the Erosion Control Plan in Section 12.2.</p> <p>The contractor shall limit impacts to soil erosion through implementation of an Erosion Control Plan limiting surface disturbance to only those areas necessary for construction. Where natural topsoil occurs, it would be salvaged and stockpiled prior to construction, and the soil piles would be stabilized. Following construction, all areas where natural topsoils were removed that are not occupied by permanent Project facilities would be re-graded, have the topsoils replaced, and be seeded with native vegetation to reduce erosion potential. Additional soil stabilization BMPs will be undertaken as appropriate.</p> <p>The contractor shall utilize and implement the following best management principles for effective temporary and final soil</p> | <p>Less than significant</p> |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>stabilization during construction. Preserving existing vegetation where required and when feasible to prevent or minimize erosion. Once existing vegetation is cleared, construction will follow immediately behind to reduce unnecessary exposure of scarified soil to wind and water.</p> <ul style="list-style-type: none"> • Sloping roadways and excavations away from washes will prevent or minimize erosion into washes. Where haul roads cross surface washes, the ground will be cleared of loose soil and pre-existing sediments, as necessary. • The installation of riprap at the washes which will prevent or minimize erosion. • Small earthen embankments will be built within washes in order to slow or divert surface water to reduce erosion. • Silt fences will be installed when working around a wash to prevent sediment from entering into a wash during a rain storm. They will be constructed as described in Attachment B of Section 12.2, including being buried to a depth of at least 12 inches. | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <ul style="list-style-type: none"> The construction contractor will be required to preserve and protect existing vegetation not required, or otherwise authorized, to be removed. Vegetation will be protected from damage or injury caused by construction operations, personnel, or equipment by the use of temporary fencing, protective barriers, or other similar methods. Water will be applied to disturbed soil areas of the Project site to control wind erosion and dust. Water applications will be monitored to prevent excessive runoff. Sediment controls, structural measures that are intended to complement and enhance the soil stabilization (erosion control) measures, will be implemented. Sediment controls are designed to intercept and filter out soil particles that have been detached and transported by the force of water. <p><i>Implementation Timing:</i> Final engineering/pre-construction/construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Contractor/Environmental Coordinator</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|--|---|--|
| | | <i>Responsible Agency for verification and enforcement: SWRCB and FERC</i> | |
| Impact 3.2-2 Eutrophication. The Project will not add nutrients to the environment. | <i>Less than significant</i> | No mitigation is required. | N/A |
| Impact 3.2-3 Water quality impacts to the project created surface waters. Potential impacts include sedimentation from erosion as a result of land disturbing activities during construction and increased metals as a result former mining activities on the Project site. | <i>Potentially significant and subject to the mitigation program</i> | MM SW-1. On-site studies of acid production potential. When access is granted to Eagle Crest Energy Company (ECE) for the purpose of collecting samples, field and analytical program will be undertaken as described in the Phase 1 Geotechnical Program detailed in Section 12.1. This program will: 1. Obtain samples from each pit (upper and lower) across the stratigraphic section (porphyritic quartz monzonite, upper quartzite, middle quartzite, schistose meta arkose, vitreous quartzite and the ore zones). 2. Perform analysis for total, pyrite and sulfate sulfur (ASTM Method 1915-97(2000) for total sulfur, and ASTM 1915-99 method E (2000) for sulfide sulfur. 3. Calculate acid production potential | Less than significant |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>(APP) by the method of Sobek et al. (1978) and calculate acid production by the method of Lawrence (1990).</p> <p>4. Determine the neutralization potential (NP) by the method of Sobek et al. (1978). Calculate the net neutralizing potential (NNP): $NNP = NP - APP$ expressed as kg calcium carbonate/ton.</p> <p>In the event that acid production potential is found, water treatment to neutralize acid will be added to the water treatment facility (PDF GW-2). The performance standard will be maintenance of water quality at a level comparable to the source water quality.</p> <p><i>Implementation Timing:</i> Pre-design geotechnical studies</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Applicant</p> <p><i>Responsible Agencies for verification and enforcement:</i> SWRCB and FERC</p> <p>PDF GW-2. Water Treatment Facility. In order to maintain TDS at a level consistent with existing groundwater quality, a water treatment plant using a RO desalination system and brine disposal lagoon will be</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>constructed as a part of the Project to remove salts and metals from reservoir water and maintain TDS concentrations equivalent to source water levels.</p> <p>Treated water will be returned to the lower reservoir while the concentrated brine from the RO process will be directed to brine ponds. In addition to removing salts from the water supply, other contaminants, nutrients, and minerals, if present, would be removed as well, preventing eutrophication from occurring.</p> <p>MM GW-6. Water Quality Sampling. Water quality sampling will be done at the source wells, and within the reservoirs, and in monitoring wells upgradient and downgradient of the reservoirs and brine disposal lagoon consistent with applicable portions of California Code of Regulations Title 27. Figure 3.3-18 shows the locations of these wells. Monitoring will be done on a quarterly basis for the first 4 years and may be reduced to biannually thereafter based on initial results. Results of the sampling will be</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>used to adjust water treatment volume, and to add or adjust treatment modules for TDS and other potential contaminants as needed to maintain groundwater quality under the direction of the State Board and FERC.</p> <p><i>Implementation Timing:</i> Final engineering</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Construction Contractor/Environmental Coordinator</p> <p><i>Responsible Agency for verification and enforcement:</i> SWRCB and FERC</p> <p>MM GEO-1. Erosion Control Plan. Erosion and sediment control measures for each area type, including proposed BMPs are listed in the Erosion Control Plan in Section 12.2.</p> <p>The contractor shall limit impacts to soil erosion through implementation of an Erosion Control Plan limiting surface disturbance to only those areas necessary for construction. Where natural topsoil occurs, it would be salvaged and stockpiled prior to construction, and the soil piles would be</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>stabilized. Following construction, all areas where natural topsoils were removed that are not occupied by permanent Project facilities would be re-graded, have the topsoils replaced, and be seeded with native vegetation to reduce erosion potential. Additional soil stabilization BMPs will be undertaken as appropriate.</p> <p>The contractor shall utilize and implement the following best management principles for effective temporary and final soil stabilization during construction. Preserving existing vegetation where required and when feasible to prevent or minimize erosion. Once existing vegetation is cleared, construction will follow immediately behind to reduce unnecessary exposure of scarified soil to wind and water.</p> <ul style="list-style-type: none"> • Sloping roadways and excavations away from washes will prevent or minimize erosion into washes. Where haul roads cross surface washes, the ground will be cleared of loose soil and pre-existing sediments, as necessary. • The installation of riprap at the washes | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>which will prevent or minimize erosion.</p> <ul style="list-style-type: none"> • Small earthen embankments will be built within washes in order to slow or divert surface water to reduce erosion. • Silt fences will be installed when working around a wash to prevent sediment from entering into a wash during a rain storm. They will be constructed as described in Attachment B of Section 12.2, including being buried to a depth of at least 12 inches. • The construction contractor will be required to preserve and protect existing vegetation not required, or otherwise authorized, to be removed. Vegetation will be protected from damage or injury caused by construction operations, personnel, or equipment by the use of temporary fencing, protective barriers, or other similar methods. • Water will be applied to disturbed soil areas of the Project site to control wind erosion and dust. Water applications will be monitored to prevent excessive runoff. • Sediment controls, structural measures that are intended to complement and | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|------------------------------|--|--|
| | | <p>enhance the soil stabilization (erosion control) measures, will be implemented. Sediment controls are designed to intercept and filter out soil particles that have been detached and transported by the force of water.</p> <p><i>Implementation Timing:</i> Final engineering/pre-construction/construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Contractor/ Environmental Coordinator</p> <p><i>Responsible Agency for verification and enforcement:</i> SWRCB and FERC</p> | |
| Section 3.3 Groundwater | | | |
| Impact 3.3-1 Perennial Yield and Regional Groundwater Level Effects. Pumping will exceed recharge for approximately 4 years of the 50-year Project life. During the remaining years, recharge will exceed pumping. By 2065, at the end of the 50- | <i>Less than significant</i> | -- | Less than significant for project-specific impact analysis. However, in combination with pumping for all reasonably foreseeable projects (cumulative impact), basin overdraft of about 9 feet is likely to occur over the life of the |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|--|--|---|
| year FERC Project license period, the aquifer storage (cumulative change) will have been increased by about 74,000 acre-feet. This will not result in depletion of groundwater supplies. | | | Project, in which case, this Project would contribute to a <i>significant adverse cumulative effect</i> . |
| Impact 3.3-2 Local Groundwater Level Effects. Although not significant Basin-wide, the modeling predicts initial Project water supply pumping will cause drawdown of the groundwater levels in the vicinity of the Project's wells. | <i>Potentially significant and subject to mitigation</i> | <p>MM GW-1. Groundwater Level Monitoring. A groundwater level monitoring network will be developed to confirm that Project pumping is maintained at levels that are in the range of historic pumping. The monitoring network will consist of both existing and new monitoring wells to assess changes in groundwater levels beneath the CRA, as well as in the Pinto Basin, and in areas east of the water supply wells. Table 3.3-10 lists the proposed monitoring network and Figure 3.3-17 shows their proposed locations. In addition to the proposed monitoring wells, groundwater levels, water quality, and production will be recorded at the Project pumping wells.</p> <p>If monitoring indicates that groundwater is</p> | Less than significant |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>being draw down at greater levels and faster rates than expected (exceeding the “Maximum Allowable Changes” identified in Table 3.3-9), pumping rates for the initial fill will be reduced to a level that meets the levels specified in Table 3.3-9. The initial fill period would therefore be extended to a maximum of 4.5 to 6 years.</p> <p><i>Implementation Timing:</i> Final Design, construction and life of the Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Construction Contractor/Environmental Coordinator</p> <p><i>Responsible Agencies for verification and enforcement:</i> SWRCB and FERC</p> <p>MM GW-2. Well Monitoring. Wells on neighboring properties whose water production may be impaired by Project groundwater pumping will be monitored during the initial fill pumping period. If it is determined that Project pumping is lower water levels in those wells by 5 feet or more, the Project will either replace or lower the pumps, deepen the existing well, construct a</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|--|---|--|
| | | <p>new well, and/or compensate the well owner for increased pumping costs to maintain water supply to those neighboring properties.</p> <p><i>Implementation Timing:</i> Pre-construction and initial fill pumping period</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Construction Contractor/Environmental Coordinator</p> <p><i>Responsible Agencies for verification and enforcement:</i> SWRCB and FERC</p> | |
| <p>Impact 3.3-3 Groundwater Flow Direction Effects. The short- and long-term pumping effects will not significantly change groundwater flow directions.</p> | <i>Less than significant</i> | No mitigation required. | N/A |
| <p>Impact 3.3-4 Subsidence and Hydrocompaction Potential. It is unlikely that lowering of water levels below their historic lows by up to additional 5 feet at the CRA will cause subsidence.</p> | <i>Potentially significant and subject to mitigation</i> | <p>MM GW-3. Extensionmeters. Two extensimeters shall be constructed to measure potential inelastic subsidence that could affect operation of the CRA; one in the upper Chuckwalla Valley near OW-3 and the other in the Orocopia Valley near OW15. Figures 3.3-17 and 18 shows the locations of</p> | Less than significant |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|-----------------------|--|--|
| Direct contact of seepage water with the CRA is unlikely because groundwater levels are about 135 feet below ground surface at the CRA. | | <p>the extensometers.</p> <p>In the unlikely event that the data shows inelastic subsidence is occurring due to Project groundwater pumping the Project will eliminate inelastic subsidence by:</p> <ul style="list-style-type: none"> • Redistributing pumping by constructing additional wells and modifying the pumping rates to reduce drawdown. • Reducing pumping or by artificially increasing recharge in order to better match the net annual groundwater withdrawal to the net annual recharge. <p>If structures are impacted, they will be mitigated through engineered solutions that may consist of re-leveling, placement of compacted fill, soil-cement, pressure grouting, installation of piles and grade-beams, or steel-reinforcement. As necessary, portions or all of the impacted structure will be repaired or replaced in consultation with MWD.</p> <p><i>Implementation Timing:</i> Pre-construction</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>and life of the Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Construction Contractor/Environmental Coordinator</p> <p><i>Responsible Agencies for verification and enforcement:</i> SWRCB and FERC</p> <p>MM GW-4. Seepage Recovery Wells. Seepage from the <u>Lower Reservoir</u> will be extracted through seepage recovery wells. The proposed recovery well locations are shown on Figure 3.3-18. Seepage from the Lower Reservoir will be maintained to prevent a significant rise in water levels beneath the CRA. Target levels have been assigned to the monitoring wells as shown in Table 3.3-10. Aquifer tests will be performed during final engineering design to confirm the seepage recovery well pumping rates and aquifer characteristics. The tests will be performed by constructing one of the seepage recovery wells and pumping the well while observing the drawdown in at least two seepage recovery or monitoring wells. Upon completion of this testing, the model will be re-run and the optimal locations of the</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>remainder of the seepage recovery wells will be determined to effectively capture water from the Lower Reservoir and maintain groundwater level changes at less than significant levels beneath the CRA. Groundwater monitoring will be performed on a quarterly basis for the first 4 years of Project pumping; as a performance standard this program may be extended to bi-annually or annually depending on the findings. Annual reports will be prepared and distributed to interested parties.</p> <p>If needed based upon monitoring results, and acceptable based upon water quality monitoring results, as an adaptive management measure Project pumping drawdown can be mitigated by allowing seepage from the reservoirs to occur without pump-back recovery. If seepage from the reservoirs is unimpeded, groundwater levels could rise beneath the CRA by up to 3 feet.</p> <p><i>Implementation Timing:</i> Final engineering and life of Project. Monitoring on a quarterly</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>basis for the first 4 years of Project pumping. As a performance standard, the program may be extended to bi-annually or annually depending on the findings for consistency and reliability of the program, and modified where necessary.</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Construction Contractor/Environmental Coordinator</p> <p><i>Responsible Agencies for verification and enforcement:</i> SWRCB and FERC</p> <p>MM GW-5. Seepage Recovery Wells. Seepage from the <u>Upper Reservoir</u> will be controlled through a separate set of seepage recovery wells, locations of which are shown on Figure 3. 3-18. Seepage from the upper reservoir will be maintained below the bottom elevation of the landfill liner. Target levels have been assigned to the monitoring wells as shown in Table 3.3-10. A testing program will also be employed for seepage recovery wells for the Upper Reservoir to assess the interconnectedness of the joints and fractures and the pumping extraction rate. Drawdown observations will be made in</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|--|--|--|
| | | <p>nearby observation wells to support final engineering design. Groundwater monitoring will be performed on a quarterly basis for the first 4 years of Project pumping; as a performance standard this program may be extended to bi-annually or annually depending on the findings. Annual reports will be prepared and distributed to interested parties.</p> <p><i>Implementation Timing:</i> Final engineering and life of Project; monitoring on a quarterly basis for the first 4 years of Project pumping; as a performance standard, the program may be extended to bi-annually or annually depending on the findings for consistency and reliability of the program, and modified where necessary.</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Construction Contractor/Environmental Coordinator</p> <p><i>Responsible Agencies for verification and enforcement:</i> SWRCB and FERC</p> | |
| Impact 3.3-5 Groundwater Quality. Seepage water could migrate into the | <i>Potentially significant and subject to mitigation</i> | MM GW-6. Water Quality Sampling. Water quality sampling will be done at the source wells, and within the reservoirs, and | Less than significant |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| Chuckwalla Valley Groundwater Basin and could affect water quality in the aquifer. | | <p>in monitoring wells upgradient and downgradient of the reservoirs and brine disposal lagoon consistent with applicable portions of California Code of Regulations Title 27. Figure 3.3-18 shows the locations of these wells. Monitoring will be done on a quarterly basis for the first 4 years and may be reduced to biannually thereafter based on initial results. Results of the sampling will be used to adjust water treatment volume, and to add or adjust treatment modules for TDS and other potential contaminants as needed to maintain groundwater quality under the direction of the State Board and FERC .</p> <p><i>Implementation Timing:</i> Final engineering</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Construction Contractor/Environmental Coordinator</p> <p><i>Responsible Agency for verification and enforcement:</i> SWRCB and FERC</p> <p>PDF GW-1. Groundwater Seepage. The Owner will limit seepage from the Project reservoirs to the extent feasible using specified grouting, seepage blankets, and</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>RCC or soil cement treatments. This includes the upper reservoir, lower reservoir, and the brine disposal ponds that will be part of the water quality management system for the Project. Final design for seepage control will be approved by FERC prior to construction. Seepage control from the Project reservoirs will be accomplished using systematic procedures such as design and construction control measures that will include the following:</p> <ul style="list-style-type: none"> During final engineering design, a detailed reconnaissance of the reservoir basins and pond areas will be conducted to identify zones where leakage and seepage would be expected to occur. These areas will include faults, fissures and cracks in the bedrock, and zones that may have direct connection to the alluvial deposits of the Chuckwalla Valley. During the reconnaissance, the effectiveness of various methods for seepage and leakage control to mitigate the effects of these particular features will be evaluated, including grouting, seepage blankets, and RCC or soil | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>cement treatments, and other methods if needed.</p> <ul style="list-style-type: none"> • Methods for seepage and leakage control will include curtain grouting of the foundation beneath the dam footprint and around the reservoir rim, as needed; backfill concrete placement and/or slush grouting of faults, fissures, and cracks detected in the field reconnaissance; placement of low permeability materials over zones too large to be grouted and over areas of alluvium within the lower reservoir; seepage and leakage collection systems positioned based upon the results of the hydrogeologic analyses; and clay or membrane lining of the brine ponds associated with the Project's water quality management system. The collection systems would recycle water into the Project reservoirs or the reverse osmosis system. • Design and construction of a Comprehensive Monitoring Program, consisting of observation wells and piezometers that will be used to assess the effectiveness of the seepage and leakage control measures. | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>Based on monitoring results, additional actions may be taken to further control leakage and seepage from the reservoirs and ponds. Such measures may include curtain grouting and the expansion of seepage and leakage collection systems.</p> <p>Other measures, such as use of stepped RCC or soil cement overlay on the eastern portion of the lower reservoir may also be used depending on results of final engineering design analyses.</p> <p>In addition, portions of the tunnels and shaft of the Project will experience very high water pressures; whereas, current plans are based on lining of the tunnels with concrete, and in some locations steel liners will be installed. These liners will also effectively block seepage from occurring.</p> <p>PDF GW-2. Water Treatment Facility. In order to maintain TDS at a level consistent with existing groundwater quality, a water treatment plant using a RO desalination system and brine disposal lagoon will be constructed as a part of the Project to remove salts and metals from reservoir water and maintain TDS concentrations equivalent to</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|--|--|--|
| | | <p>source water levels.</p> <p>Treated water will be returned to the lower reservoir while the concentrated brine from the RO process will be directed to brine ponds. In addition to removing salts from the water supply, other contaminants, nutrients, and minerals, if present, would be removed as well, preventing eutrophication from occurring.</p> | |
| Impact 3.3-6 Colorado River Effects. The groundwater levels in the area are around 500 feet msl, and will not deplete groundwater levels in a manner that could encounter the accounting surface elevations. | <i>No impact</i> | No mitigation is required. | N/A |
| Impact 3.3-7 Loss of Existing Wells. Existing wells located within the central and eastern mining pits would be destroyed by | <i>Potentially significant and subject to mitigation</i> | MM GW-7. Replacement Wells. Existing wells located within the central and eastern mining pits to be developed as Project reservoirs will be replaced at locations outside of the reservoirs as shown on Figure | Less than significant |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|------------------------------|---|--|
| development of the Project reservoirs. | | <p>3.3-18. Table 3.3-10 lists those wells scheduled for replacement.</p> <p><i>Implementation Timing:</i> Final engineering</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Construction Contractor/Environmental Coordinator</p> <p><i>Responsible Agencies for verification and enforcement:</i> SWRCB and FERC</p> | |
| Section 3.4 Agricultural & Forestry Resources | | | |
| Impact 3.4-1: Impacts to Agricultural Lands or Forestry Lands. None of the facilities or structures of the Project are anticipated to have a significant adverse effect on existing agricultural lands or forest. No currently active farmland or forest is proposed to be crossed by the water pipeline or transmission line corridor. | <i>Less than significant</i> | No mitigation is required. | N/A |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|--|--|--|
| The Central Project area is within mining pit and therefore does not have the ability to impact active farmland or forestry resources. | | | |
| Section 3.5 Biological Resources | | | |
| Impact 3.5-1 Construction Impacts on Plants. Pre-construction surveys and construction controls such as an employee awareness program, on-site Project Biologist, restricted areas, revegetation plan, and minimal surface disturbance plans will be employed avoid or reduce these impacts. | <i>Potentially significant and subject to the mitigation program</i> | MM BIO-1. Biological Mitigation and Monitoring Program. Concurrent with final engineering design a comprehensive site-specific biological mitigation and monitoring program shall be developed in consultation with the Biological Technical Advisory Team. The Technical Advisory Team shall be composed of the Owner's staff Environmental Coordinator and consultants, and staff from the resource managing agencies (BLM, USFWS, and CDFG). <i>Implementation Timing:</i> Final Engineering / Pre-Construction / Life Of Project <i>Party responsible for implementation, monitoring and reporting:</i> Environmental | Less than significant |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>Coordinator / Biological Technical Advisory Team / Project Biologist</p> <p><i>Responsible Agencies for verification and enforcement:</i> FERC / SWRCB / BLM / USFWS / CDFG</p> <p>MM BIO-2. Biological Reporting to Resource Agencies. As part of implementing protection measures, regular reports shall be submitted to the relevant resource agencies to document the Project activities, mitigation implemented and mitigation effectiveness. As a performance standard, adaptive management recommendations shall be updated as needed and in consultation with the coordinating agencies. Reporting shall include monthly reports during construction, annual comprehensive reports, and special-incident reports. The Project Biologist shall be responsible for reviewing and signing reports prior to submittal to the agencies.</p> <p><i>Implementation Timing:</i> Final Engineering / Pre-Construction / Life Of Project</p> <p><i>Party responsible for implementation,</i></p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p><i>monitoring and reporting:</i> Environmental Coordinator / Biological Technical Advisory Team / Project Biologist</p> <p><i>Agency for verification and enforcement:</i> FERC / SWRCB / BLM / USFWS / CDFG</p> <p>MM BIO-3. Designation of an Authorized Project Biologist. An Authorized Project Biologist shall be responsible for implementing and overseeing the biological compliance program. This person shall be sufficiently qualified to ensure approval by the USFWS and CDFG for all biological protection measures that may be implemented by the Project. The USFWS describes a single designation for biologists who can be approved to handle tortoises - “Authorized Biologist.” Such biologists have demonstrated to the USFWS that they possess sufficient desert tortoise knowledge and experience to handle and move tortoises appropriately. Authorized Biologists are permitted to then approve specific monitors to handle tortoises, at their discretion. The CDFG must also approve such biologists, potentially including</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>individual approvals for monitors approved by the Authorized Biologist.</p> <p><i>Implementation Timing:</i> final engineering/pre-construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator / Biological Technical Advisory Team/ Project Biologist</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/USFWS/CDFG</p> <p>MM BIO-4. Worker Environmental Awareness Program. A Worker Environmental Awareness Program (WEAP) (<i>see</i> Section 12.14) shall be implemented to ensure that Project construction and operation occur within a framework of safeguarding environmentally sensitive resources. Although facility construction has the greatest potential to harm environmental resources, the WEAP shall be designed to address those environmental issues that pertain to Project operations, such as general conduct, repairs and maintenance.</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>The WEAP shall include information on biological resources that may occur on the site, with emphasis on listed and special-status species. Education shall include, but not be limited to, ecology, natural history, endangerment factors, legal protection, site mitigation measures, and hierarchy of command. Site rules of conduct shall be identified, including but not limited to: speed limits, work areas that must be accompanied by a biological monitor, parking areas, looking under parked vehicles prior to moving them, trash deposition, off-site conduct in the area of the Project, and other employee response protocols. Willful non-compliance shall result in sufficiently severe penalties to the contractor that the contractor may dismiss the offending employee.</p> <p>The educational format will be a video, shown initially by the Project Biologist and ultimately by a limited staff of trained and approved personnel. The Project Biologist also may be videotaped giving the first program, for assistance to further instructors.</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>All workers completing the education program shall be given a wallet card with site “rules” and contact cell phone numbers, and an environmental training completion sticker to affix to their hard hat. Each shall sign a sheet attesting to completing the training program.</p> <p><i>Implementation Timing:</i> construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Contractor</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/SWRCB/BLM</p> <p><u>Plants</u></p> <p>MM BIO-5. Minimize Surface Disturbance. During construction in native habitats, all surface disturbance shall be restricted to the smallest area necessary to complete the construction. New spur roads and improvements to existing access roads shall be designed to preserve existing desert wash topography and flow patterns. The Northern and Eastern Colorado Desert</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>Coordinated Management (NECO) Plan requires the following mitigation measures for plants:</p> <ul style="list-style-type: none"> • Avoid plant populations during construction. Where avoidance is not practical, Project effects on the species and population must be assessed. • Require mitigation of project impacts in suitable habitat within the range of the impacted species, using commonly applied mitigation measures. <p><i>Implementation Timing:</i> construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Contractor</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/SWRCB/BLM</p> <p>MM BIO-6. California Desert Native Plants Act. In compliance with the California Desert Native Plants Act (CDNPA), the County Agricultural Commissioner shall be consulted for direction regarding disposal of plants</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>protected by the CDNPA. This may include salvage for subsequent revegetation of temporarily disturbed areas on site, salvage by an approved nursery, landscaper or other group, or other methods of disposal.</p> <p><i>Implementation Timing:</i> final engineering/construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Project Biologist/Contractor</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/County Agricultural Commissioner</p> <p>MM BIO-7. Revegetation Plan. A revegetation plan (<i>see</i> Section 12.14) shall be implemented for areas that are temporarily disturbed during construction. In order to accommodate the specific features of the desert that make revegetation difficult – namely lack of predictable rainfall, lack of an “A” soil horizon, and the difficulty of re-establishing a soil community of micro-organisms – a detailed Revegetation Plan shall address the following measures and</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>include:</p> <ul style="list-style-type: none"> • Quantitative identification of the baseline community, both annual, herbaceous perennial and woody perennial species. • Soil salvage and replacement on areas to be revegetated. • Final site preparation and grading to include features that enhance germination and growth of native species. This includes surface pitting for the accumulation of sediments, water and seed and the construction of small swales for such species as California ditaxis and desert unicorn plant, which are commonly found in road swales and shoulders. All disturbed washes shall be recontoured to eliminate erosion and encourage the reestablishment of the drainage to its pre-construction condition. • Vertical mulching and other techniques to promote a hospitable environment for germination and growth. • Seeding and/or planting of seedlings of colonizing species. | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <ul style="list-style-type: none"> • Development of a soil micro-community by inoculation of mycorrhizal fungi and planting species that develop a mycorrhizal net. • Weed control. • Initial irrigation, if necessary. • A realistic schedule of regrowth of native species, and remedial measures, if needed. • Monitoring and reporting. <p><i>Implementation Timing:</i> final engineering/construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Project Biologist/Contractor</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/SWRCB/BLM</p> <p>MM BIO-8. Invasive Species Monitoring and Control. To minimize the spread of invasive non-native vegetation a weed control program shall be implemented during construction. This program (<i>see</i> Section</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>12.14) includes:</p> <ul style="list-style-type: none"> • Baseline surveys for weed species that are present and/or are most likely to invade the Project site and surrounding area. • Methods quantifying weed invasion. • Methods for minimizing weed introduction and/or spread. • Triggers which prompt weed control. • Methods and a schedule for weed control and eradication. • Success standards. <p><i>Implementation Timing:</i> construction <i>Party responsible for implementation, monitoring and reporting:</i> Project Biologist/Contractor <i>Responsible Agency for verification and enforcement:</i> FERC/SWRCB/BLM/USFWS/CDFG</p> <p><u>Wildlife</u> MM BIO-9. Couch's Spadefoot. The</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>Northern and Eastern Colorado Desert Coordinated Management (NECO) Plan requirements shall be implemented to avoid disturbance of impoundments and restriction of surface flow to impoundments. Surveys on the Central Project Area shall elucidate the presence of any artificial impoundments that could subsidize Couch's spadefoot reproduction. Should those exist then surveys shall be conducted at the appropriate time to determine if larvae are present. If present, the impoundment will be avoided, if possible. If avoidance is not possible, then a new impoundment will be constructed as close as is feasible, to replicate and replace each lost impoundment with similar characteristics. All larvae shall be removed to the new impoundment.</p> <p>During construction on all Project facilities, should ephemeral pools develop in response to intense rainfall showers from early spring through fall these shall be examined for larvae of Couch's spadefoot. If larvae are present, the pools shall be flagged and avoided by construction activities. Where</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>pools cannot be avoided, new pools shall be constructed and larvae transplanted under the supervision of the Project Biologist.</p> <p><i>Implementation Timing:</i> construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Project Biologist/Contractor</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/SWRCB</p> <p>PDF BIO-1. Pre-Construction Special Species and Habitat Survey. Following licensing and access to the Central Project Area, surveys for special species and habitats that could support special species will be conducted. A thorough examination of the Central Project Area and local springs and seeps will provide information to determine if any avoidance or adaptive management is required. Simultaneously, the site will be assessed for use by other wildlife. Based on the results of these surveys, the biological mitigation and monitoring program will be modified in ongoing consultation with the USFWS and the CDFG. Reporting</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>requirements for the pre-construction surveys are specified in MM BIO-2.</p> <p>PDF BIO-2. Pre-construction Plant Survey. Preconstruction surveys will identify special-status plant populations and also species protected by the CDNPA. For annuals or herbaceous perennials that are dormant during certain seasons, data from 2008 and 2009 surveys will be used to assist in locating populations during dormant seasons. Based on these combined surveys, avoidance areas in construction zones will be established for special plant resources. The perimeters will be marked with wooden stakes, at least 3 feet high, and no more than 10 feet apart. Each stake will be flagged with red and white candy-striped flagging or other obvious barrier tape.</p> <p>Where avoidance is not feasible, and the species can be reasonably transplanted (e.g., foxtail cactus, Wiggins' cholla, other cacti and species protected by the CDNPA), plants will be salvaged and transplanted in areas approved in the Re-Vegetation Plan.</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|--|---|--|
| | | Transplantation will be part of the revegetation plan developed for the Project. Salvaging seed and replanting may also be an option considered for certain species (e.g., smoke tree, ironwood). | |
| Impact 3.5-2 Construction Impacts on Wildlife Species. Within in the Central Project Area, the baseline condition of the habitat is highly disturbed, with limited wildlife use. The transmission line and water pipeline will cross higher quality habitat areas and may impact species occupying those areas. | <i>Potentially significant and subject to the mitigation program</i> | MM BIO-1. Biological Mitigation and Monitoring Program. Concurrent with final engineering design a comprehensive site-specific biological mitigation and monitoring program shall be developed in consultation with the Biological Technical Advisory Team. The Technical Advisory Team shall be composed of the Owner's staff Environmental Coordinator and consultants, and staff from the resource managing agencies (BLM, USFWS, and CDFG). <i>Implementation Timing:</i> final engineering/pre-construction/life of Project <i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Biological Technical Advisory Team/Project Biologist <i>Responsible Agency(ies) for verification and enforcement:</i> FERC/SWRCB/BLM/ | Less than significant |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>USFWS/CDFG</p> <p>MM BIO-2. Biological Reporting to Resource Agencies. As part of implementing protection measures, regular reports shall be submitted to the relevant resource agencies to document the Project activities, mitigation implemented and mitigation effectiveness. As a performance standard, adaptive management recommendations shall be updated as needed and in consultation with the coordinating agencies. Reporting shall include monthly reports during construction, annual comprehensive reports, and special-incident reports. The Project Biologist shall be responsible for reviewing and signing reports prior to submittal to the agencies.</p> <p><i>Implementation Timing:</i> final engineering/pre-construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator /Biological Technical Advisory Team/Project Biologist</p> <p><i>Agency for verification and enforcement:</i></p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>FERC/SWRCB/BLM/ USFWS/CDFG</p> <p>MM BIO-3. Designation of an Authorized Project Biologist. An Authorized Project Biologist shall be responsible for implementing and overseeing the biological compliance program. This person shall be sufficiently qualified to ensure approval by the USFWS and CDFG for all biological protection measures that may be implemented by the Project. The USFWS describes a single designation for biologists who can be approved to handle tortoises - “Authorized Biologist.” Such biologists have demonstrated to the USFWS that they possess sufficient desert tortoise knowledge and experience to handle and move tortoises appropriately. Authorized Biologists are permitted to then approve specific monitors to handle tortoises, at their discretion. The CDFG must also approve such biologists, potentially including individual approvals for monitors approved by the Authorized Biologist.</p> <p><i>Implementation Timing:</i> final</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>engineering/pre-construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator / Biological Technical Advisory Team/ Project Biologist</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/USFWS/CDFG</p> <p>MM BIO-4. Worker Environmental Awareness Program. A Worker Environmental Awareness Program (WEAP) (<i>see</i> Section 12.14) shall be implemented to ensure that Project construction and operation occur within a framework of safeguarding environmentally sensitive resources. Although facility construction has the greatest potential to harm environmental resources, the WEAP shall be designed to address those environmental issues that pertain to Project operations, such as general conduct, repairs and maintenance.</p> <p>The WEAP shall include information on biological resources that may occur on the site, with emphasis on listed and special-status species. Education shall include, but</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>not be limited to, ecology, natural history, endangerment factors, legal protection, site mitigation measures, and hierarchy of command. Site rules of conduct shall be identified, including but not limited to: speed limits, work areas that must be accompanied by a biological monitor, parking areas, looking under parked vehicles prior to moving them, trash deposition, off-site conduct in the area of the Project, and other employee response protocols. Willful non-compliance may result in sufficiently severe penalties to the contractor that the contractor may dismiss the offending employee.</p> <p>The educational format will be a video, shown initially by the Project Biologist and ultimately by a limited staff of trained and approved personnel. The Project Biologist also may be videotaped giving the first program, for assistance to further instructors.</p> <p>All workers completing the education program shall be given a wallet card with site “rules” and contact cell phone numbers, and an environmental training completion sticker</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>to affix to their hard hat. Each shall sign a sheet attesting to completing the training program.</p> <p><i>Implementation Timing:</i> construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Contractor</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/SWRCB/BLM</p> <p>MM BIO-9. Couch's Spadefoot. The Northern and Eastern Colorado Desert Coordinated Management (NECO) Plan requirements shall be implemented to avoid disturbance of impoundments and restriction of surface flow to impoundments. Surveys on the Central Project Area shall elucidate the presence of any artificial impoundments that could subsidize Couch's spadefoot reproduction. Should those exist then surveys shall be conducted at the appropriate time to determine if larvae are present. If present, the impoundment will be avoided, if possible. If avoidance is not possible, then a new</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>impoundment will be constructed as close as is feasible, to replicate and replace each lost impoundment with similar characteristics. All larvae shall be removed to the new impoundment.</p> <p>During construction on all Project facilities, should ephemeral pools develop in response to intense rainfall showers from early spring through fall these shall be examined for larvae of Couch's spadefoot. If larvae are present, the pools shall be flagged and avoided by construction activities. Where pools cannot be avoided, new pools shall be constructed and larvae transplanted by the Project Biologist.</p> <p><i>Implementation Timing:</i> construction <i>Party responsible for implementation, monitoring and reporting:</i> Project Biologist/Contractor <i>Responsible Agency for verification and enforcement:</i> FERC/SWRCB</p> <p>MM BIO-10. Breeding Bird Surveys and Avoidance. For all construction activities in</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>vegetated habitat that are scheduled to occur between approximately February 15 and July 30, surveys shall be completed in all potential nesting sites for active bird nests. Unless otherwise directed by the CDFG, if an active bird nest is located, the nest site shall be flagged or staked a minimum of five yards in all directions. This flagged zone shall not be disturbed until the nest becomes inactive. Alternatively, grading and site preparation may occur prior to February 15 to preclude interference with nesting birds.</p> <p><i>Implementation Timing:</i> construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Project Biologist</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/CDFG</p> <p>MM BIO-11. Brine Ponds Management. Brine ponds shall be managed to minimize their attractiveness and access to migratory birds. This consists of making resources provided by the ponds less available (by designing the ponds to be unattractive to birds) and netting the ponds to prevent</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>access by birds (Figure 3.5-19).</p> <p><i>Implementation Timing:</i> final engineering/construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Project Biologist</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/SWRCB</p> <p>MM BIO-12. Burrowing Owls Phase III Survey. Based on the results of the 2009 surveys, a Phase III survey shall be completed to further assess bird use of the Project area and potential impacts if required by the CDFG (CBOC, 1993). This includes a nesting season survey, followed by a winter survey if no burrows or owls are observed during the nesting season. Each of these surveys shall span several visits and days.</p> <p>A pre-construction survey shall be conducted within 30 days of the start of Project construction to assess species presence on-site. Recommendations from the surveys shall be implemented as adaptive</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>management measures.</p> <p><i>Implementation Timing:</i> pre-construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Project Biologist</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/SWRCB</p> <p>MM BIO-13. Burrowing Owl Breeding Season. The Northern and Eastern Colorado Desert Coordinated Management (NECO) Plan limits the construction period to September 1 through February 1 if burrowing owls are present, to avoid disruption of breeding activities. CDFG (1995) has recommended several mitigation measures for resident owls. Disruption of burrowing owl nesting activities shall be avoided during construction. Active nests shall be avoided by a minimum of a 250-foot buffer until fledging has occurred (February 1 through August 31). Following fledging, owls may be passively relocated.</p> <p><i>Implementation Timing:</i> construction</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p><i>Party responsible for implementation, monitoring and reporting: Project Biologist/Contractor</i></p> <p><i>Responsible Agency for verification and enforcement: FERC/SWRCB</i></p> <p>MM BIO-14. Raptor Buffer. The Northern and Eastern Colorado Desert Coordinated Management (NECO) Plan identifies ¼-mile as an important buffer distance for prairie falcon or golden eagle aerie. No aeries or nests have been observed within a ¼ mile, but pre-construction surveys on the Central Project Area will confirm if a ¼-mile construction buffer will be required during the nesting seasons.</p> <p><i>Implementation Timing: pre-construction/construction/life of Project</i></p> <p><i>Party responsible for implementation, monitoring and reporting: Project Biologist/Contractor</i></p> <p><i>Responsible Agency for verification and enforcement: FERC/BLM</i></p> <p>MM BIO-15. Bat Survey. The following</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>applicable measures are required by the Northern and Eastern Colorado Desert Coordinated Management (NECO) Plan:</p> <ul style="list-style-type: none"> • Survey for bat roosts within 1 mile of a project, or within 5 miles of any permanent stream or riparian habitat on a project site. • Projects authorized within 1 mile of a significant bat roost site would have applicable mitigation measures, including, but not restricted to seasonal restrictions, light abatement, bat exclusion, and gating of alternative sites. Any exclusion must be performed at a non-critical time, by an authorized bat biologist. <p>Pre-construction bat surveys shall be completed by a qualified bat biologist to determine the existence, location and condition of bat roosts on the site. Because foraging areas used by resident bats may be critical to the functioning of those colonies, foraging habitat on the Project also will be identified, if possible. If needed based on the results of these surveys, a mitigation plan</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>shall be developed to avoid roosting and foraging impacts to resident bats, minimize that disturbance or, as an inescapable measure, evict bats. This plan shall include (as relevant):</p> <ul style="list-style-type: none"> • Designation of avoidance areas and associated measures. • Eviction of bats outside of the maternity season. • A monitoring program to determine impacts from the Project. • Extending the monitoring program for the brine ponds to include bats, as deemed necessary. <p><i>Implementation Timing:</i> pre-construction/construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Project Biologist/Contractor</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/SWRCB</p> <p>MM BIO-16. Wildlife Fencing. The Northern and Eastern Colorado Desert</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>Coordinated Management (NECO) Plan recommends fencing potential hazards to bighorn sheep. A security fence shall be constructed around portions of the Central Project Area to <i>exclude larger terrestrial wildlife</i> – bighorn sheep, deer, coyotes, foxes, badgers – from entering Project areas that could pose a hazard to these species (Figure 3.6-4). Such areas shall include the transmission switchyard and other structures that may be dangerous to wildlife. Where exclusion fencing is required, security gates will remain closed except during specific vehicle entry and may be electronically activated to open and close immediately after vehicle(s) have entered or exited.</p> <p>Permanent security fences will be installed around the upper and lower reservoirs, switchyard and brine ponds, for security, safety and general liability purposes, and will prevent wildlife access except at designated drinking points. Fences will contain “dips” where the fence will go below the high water mark so that wildlife can reach the water for drinking. These fences will also be equipped</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>with tortoise exclusion fencing. In addition, temporary tortoise exclusion fences will be installed around work zones during construction, and will be sufficiently low (3 feet) to permit passage by sheep. These temporary fences will be removed at the end of construction. Figure 3.6-4 shows the concept for the temporary construction fencing, if additional fencing is needed during construction to protect tortoises, this fencing will be installed and maintained during the construction period.</p> <p>All required exclusion fencing shall be maintained for the life of the Project. All fences will be inspected monthly and during/following all major rainfall events. Any damage to the fencing shall be temporarily repaired immediately, followed by permanent repair within one week.</p> <p><i>Implementation Timing:</i> final engineering/construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Project Biologist/Contractor</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p><i>Responsible Agency for verification and enforcement:</i> FERC/BLM</p> <p>MM BIO-17. Construction and Operation Restricted Areas. Construction and maintenance activities shall be restricted to minimize Project impacts. These restrictions shall include vehicle speed limits on both paved and dirt roads (the speed limit shall be based on County regulations); avoidance areas, work areas in which workers must be accompanied by a biological monitor, specified parking areas, trash deposition, repair, and refueling areas; looking under parked vehicles prior to movement; and the appropriate response upon finding a special-status species. For construction, this will include the entire construction period. For operations, this will apply to scheduled and unscheduled maintenance activities.</p> <p><i>Implementation Timing:</i> final engineering/construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Project Biologist/Contractor</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p><i>Responsible Agency for verification and enforcement:</i> BLM</p> <p>MM BIO-18. Construction during Daylight Hours. The Northern and Eastern Colorado Desert Coordinated Management (NECO) Plan requires that, in areas without wildlife exclusion fencing or those areas that have not been cleared of tortoises, construction activities will only take place during daylight hours. This permits avoidance of construction-related mortalities of fossorial, diurnal species such as the desert tortoise, or nocturnally active species, such as the desert rosy boa.</p> <p><i>Implementation Timing:</i> final engineering/construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Project Biologist/ Contractor</p> <p><i>Responsible Agency for verification and enforcement:</i> BLM</p> <p>MM BIO-19. Construction of Pipeline Trenches. The Northern and Eastern</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>Colorado Desert Coordinated Management (NECO) Plan identifies that pipeline trenches must be closed, covered, and/or inspected. Pipeline trenches shall be closed, temporarily fenced, or covered each day. Each day, any open trenches shall be inspected by an approved biological monitor, under the supervision of the Authorized Biologist, at first light, midday, and at the end of each day to ensure animal safety. Ramps shall be provided to encourage animals to escape on their own. The biological monitor shall be confirmed by the Approved Project Biologist.</p> <p><i>Implementation Timing:</i> final engineering/construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Project Biologist/ Contractor</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/BLM</p> <p>MM BIO-20. Minimize Nighttime Lighting Impacts. Facility lighting will be designed, installed, and maintained to prevent casting</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>of nighttime light into adjacent native habitat. <i>See also</i> MM AES-1.</p> <p><i>Implementation Timing:</i> final engineering/construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Contractor</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/SWRCB</p> <p>MM BIO-22. Habitat Compensation. CDFG standard off-site compensation for loss of occupied burrowing owl habitat consists of a minimum of 6.5 acres of lands, approved by CDFG and protected in perpetuity, for each pair of owls or unpaired resident bird. In addition, existing unsuitable burrows on the protected lands should be enhanced (i.e., cleared of debris or enlarged) or new burrows installed at a ratio of 2:1. Habitat compensation for burrowing owls, if needed, will be subsumed by compensation for lost desert tortoise habitat, which also constitutes burrowing owl habitat.</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>The Northern and Eastern Colorado Desert Coordinated Management (NECO) Plan requires compensation for disturbance of Desert Dry Wash Woodland in WHMAs at the rate of 3:1. The Project does not disturb any Desert Dry Woodland inside a WHMA. However, the compensation for desert tortoise habitat (148.9 acres of compensation habitat) that is lost to the Project will compensate for the loss of approximately 15.4 acres of Desert Dry Wash Woodland expected to be lost or disturbed during construction activities.</p> <p><i>Implementation Timing:</i> construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator / Biological Technical Advisory Team/Project Biologist</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/BLM/CDFG/ USFWS</p> <p>PDF BIO-1. Pre-Construction Special Species and Habitat Survey. Following licensing and access to the Central Project</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>Area, surveys for special species and habitats that could support special species will be conducted. A thorough examination of the Central Project Area and local springs and seeps will provide information to determine if any avoidance or adaptive management is required. Simultaneously, the site will be assessed for use by other wildlife. Based on the results of these surveys, the biological mitigation and monitoring program will be modified in ongoing consultation with the USFWS and the CDFG. Reporting requirements for the pre-construction surveys are specified in MM BIO-2.</p> <p>PDF BIO-3. Pre-construction Mammals Surveys. Prior to construction, surveys will be conducted for all burrows that might host a badger or kit fox. (These surveys can be simultaneous with those for desert tortoise burrows.) Active burrows and all fox natal dens will be avoided, where possible. The perimeters of all avoidance areas will be marked with wooden stakes, at least 3 feet high, and no more than 10 feet apart. Each stake will be flagged with red and white</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|---|---|--|
| | | <p>candy-striped flagging or other obvious barrier tape.</p> <p>Where avoidance is infeasible, occupancy of burrows will be determined through fiberoptics and/or night vision equipment. All occupants will be encouraged to leave their burrows using one-way doors, burrow excavation in the late afternoon/early evening (to encourage escape at night), or other approved methods. All burrows from which badgers or foxes have been removed will be fully excavated and collapsed to ensure that animals cannot return prior to or during construction.</p> | |
| <p>Impact 3.5-3 Operational Effects on Plant Species. Plant community structure and resulting fauna may be altered if non-native invasive species that are currently in the area spread during construction and/or maintenance activities increase both abundance and distribution of those species.</p> | <p><i>Potentially significant and subject to the mitigation program</i></p> | <p>MM BIO-1. Biological Mitigation and Monitoring Program. Concurrent with final engineering design a comprehensive site-specific biological mitigation and monitoring program shall be developed in consultation with the Biological Technical Advisory Team. The Technical Advisory Team shall be composed of the Owner's staff Environmental Coordinator and consultants, and staff from the resource managing</p> | <p>Less than significant</p> |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>agencies (BLM, USFWS, and CDFG).</p> <p><i>Implementation Timing:</i> final engineering/pre-construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Biological Technical Advisory Team/Project Biologist</p> <p><i>Responsible Agency(ies) for verification and enforcement:</i> FERC/SWRCB/BLM/USFWS/CDFG</p> <p>MM BIO-2. Biological Reporting to Resource Agencies. As part of implementing protection measures, regular reports shall be submitted to the relevant resource agencies to document the Project activities, mitigation implemented and mitigation effectiveness. As a performance standard, adaptive management recommendations shall be updated as needed and in consultation with the coordinating agencies. Reporting shall include monthly reports during construction, annual comprehensive reports, and special-incident reports. The Project Biologist shall be responsible for reviewing and signing</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>reports prior to submittal to the agencies.</p> <p><i>Implementation Timing:</i> final engineering/pre-construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator /Biological Technical Advisory Team/Project Biologist</p> <p><i>Agency for verification and enforcement:</i> FERC/SWRCB/BLM/ USFWS/CDFG</p> <p>MM BIO-3. Designation of an Authorized Project Biologist. An Authorized Project Biologist shall be responsible for implementing and overseeing the biological compliance program. This person shall be sufficiently qualified to ensure approval by the USFWS and CDFG for all biological protection measures that may be implemented by the Project. The USFWS describes a single designation for biologists who can be approved to handle tortoises - “Authorized Biologist.” Such biologists have demonstrated to the USFWS that they possess sufficient desert tortoise knowledge and experience to handle and</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>move tortoises appropriately. Authorized Biologists are permitted to then approve specific monitors to handle tortoises, at their discretion. The CDFG must also approve such biologists, potentially including individual approvals for monitors approved by the Authorized Biologist.</p> <p><i>Implementation Timing:</i> final engineering/pre-construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator / Biological Technical Advisory Team/ Project Biologist</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/USFWS/CDFG</p> <p>MM BIO-4. Worker Environmental Awareness Program. A Worker Environmental Awareness Program (WEAP) (<i>see</i> Section 12.14) shall be implemented to ensure that Project construction and operation occur within a framework of safeguarding environmentally sensitive resources. Although facility construction has the greatest potential to harm environmental</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>resources, the WEAP shall be designed to address those environmental issues that pertain to Project operations, such as general conduct, repairs and maintenance.</p> <p>The WEAP shall include information on biological resources that may occur on the site, with emphasis on listed and special-status species. Education shall include, but not be limited to, ecology, natural history, endangerment factors, legal protection, site mitigation measures, and hierarchy of command. Site rules of conduct shall be identified, including but not limited to: speed limits, work areas that must be accompanied by a biological monitor, parking areas, looking under parked vehicles prior to moving them, trash deposition, off-site conduct in the area of the Project, and other employee response protocols. Willful non-compliance shall result in sufficiently severe penalties to the contractor that the contractor may dismiss the offending employee.</p> <p>The educational format will be a video, shown initially by the Project Biologist and</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>ultimately by a limited staff of trained and approved personnel. The Project Biologist also may be videotaped giving the first program, for assistance to further instructors.</p> <p>All workers completing the education program shall be given a wallet card with site “rules” and contact cell phone numbers, and an environmental training completion sticker to affix to their hard hat. Each shall sign a sheet attesting to completing the training program.</p> <p><i>Implementation Timing:</i> construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Contractor</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/SWRCB/BLM</p> <p><u>Plants</u></p> <p>MM BIO-5. Minimize Surface Disturbance. During construction in native habitats, all surface disturbance shall be restricted to the smallest area necessary to</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>complete the construction. New spur roads and improvements to existing access roads shall be designed to preserve existing desert wash topography and flow patterns. The Northern and Eastern Colorado Desert Coordinated Management (NECO) Plan requires the following mitigation measures for plants:</p> <ul style="list-style-type: none"> • Avoid plant populations during construction. Where avoidance is not practical, Project effects on the species and population must be assessed. • Require mitigation of project impacts in suitable habitat within the range of the impacted species, using commonly applied mitigation measures. <p><i>Implementation Timing:</i> construction <i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Contractor <i>Responsible Agency for verification and enforcement:</i> FERC/SWRCB/BLM</p> <p>MM BIO-6. California Desert Native</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>Plants Act. In compliance with the California Desert Native Plants Act (CDNPA), the County Agricultural Commissioner shall be consulted for direction regarding disposal of plants protected by the CDNPA. This may include salvage for subsequent revegetation of temporarily disturbed areas on site, salvage by an approved nursery, landscaper or other group, or other methods of disposal.</p> <p><i>Implementation Timing:</i> final engineering/construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Project Biologist/Contractor</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/County Agricultural Commissioner</p> <p>MM BIO-7. Revegetation Plan. A revegetation plan (<i>see</i> Section 12.14) shall be implemented for areas that are temporarily disturbed during construction. In order to accommodate the specific features of the desert that make revegetation difficult –</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>namely lack of predictable rainfall, lack of an “A” soil horizon, and the difficulty of re-establishing a soil community of micro-organisms – a detailed Revegetation Plan shall address the following measures and include:</p> <ul style="list-style-type: none"> • Quantitative identification of the baseline community, both annual, herbaceous perennial and woody perennial species. • Soil salvage and replacement on areas to be revegetated. • Final site preparation and grading to include features that enhance germination and growth of native species. This includes surface pitting for the accumulation of sediments, water and seed and the construction of small swales for such species as California ditaxis and desert unicorn plant, which are commonly found in road swales and shoulders. All disturbed washes shall be recontoured to eliminate erosion and encourage the reestablishment of the drainage to its pre-construction condition. | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <ul style="list-style-type: none"> • Vertical mulching and other techniques to promote a hospitable environment for germination and growth. • Seeding and/or planting of seedlings of colonizing species. • Development of a soil micro-community by inoculation of mycorrhizal fungi and planting species that develop a mycorrhizal net. • Weed control. • Initial irrigation, if necessary. • A realistic schedule of regrowth of native species, and remedial measures, if needed. • Monitoring and reporting. <p><i>Implementation Timing:</i> final engineering/construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Project Biologist/Contractor</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/SWRCB/BLM</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>MM BIO-8. Invasive Species Monitoring and Control. To minimize the spread of invasive non-native vegetation a weed control program shall be implemented during construction. This program (<i>see</i> Section 12.14) includes:</p> <ul style="list-style-type: none"> • Baseline surveys for weed species that are present and/or are most likely to invade the Project site and surrounding area. • Methods quantifying weed invasion. • Methods for minimizing weed introduction and/or spread. • Triggers which prompt weed control. • Methods and a schedule for weed control and eradication. • Success standards. <p><i>Implementation Timing:</i> construction <i>Party responsible for implementation, monitoring and reporting:</i> Project Biologist/Contractor <i>Responsible Agency for verification and</i></p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p><i>enforcement:</i> FERC/SWRCB/BLM/USFWS/CDFG</p> <p>PDF BIO-1. Pre-Construction Special Species and Habitat Survey. Following licensing and access to the Central Project Area, surveys for special species and habitats that could support special species will be conducted. A thorough examination of the Central Project Area and local springs and seeps will provide information to determine if any avoidance or adaptive management is required. Simultaneously, the site will be assessed for use by other wildlife. Based on the results of these surveys, the biological mitigation and monitoring program will be modified in ongoing consultation with the USFWS and the CDFG. Reporting requirements for the pre-construction surveys are specified in MM BIO-2.</p> <p>PDF BIO-2. Pre-construction Plant Survey. Preconstruction surveys will identify special-status plant populations and also species protected by the CDNPA. For annuals or herbaceous perennials that are</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|---|---|--|
| | | <p>dormant during certain seasons, data from 2008 and 2009 surveys will be used to assist in locating populations during dormant seasons. Based on these combined surveys, avoidance areas in construction zones will be established for special plant resources. The perimeters will be marked with wooden stakes, at least 3 feet high, and no more than 10 feet apart. Each stake will be flagged with red and white candy-striped flagging or other obvious barrier tape.</p> <p>Where avoidance is not feasible, and the species can be reasonably transplanted (e.g., foxtail cactus, Wiggins' cholla, other cacti and species protected by the CDNPA), plants will be salvaged and transplanted in areas approved in the Re-Vegetation Plan. Transplantation will be part of the revegetation plan developed for the Project. Salvaging seed and replanting may also be an option considered for certain species (e.g., smoke tree, ironwood).</p> | |
| Impact 3.5-4 Operational Effects to Wildlife Species. | <i>Potentially significant and subject to the</i> | MM BIO-1. Biological Mitigation and Monitoring Program. Concurrent with final | Less than significant |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|---------------------------|---|--|
| Loss of resources to wildlife is expected to be functionally negligible for most species. The primary onsite impacts to species from operation of the Project are limited to loss of individuals that move onto the site, including during transmission line maintenance. Faunal community structure may be altered if predators are attracted to reservoirs due to available water or night lighting. | <i>mitigation program</i> | <p>engineering design a comprehensive site-specific biological mitigation and monitoring program shall be developed in consultation with the Biological Technical Advisory Team. The Technical Advisory Team shall be composed of the Owner's staff Environmental Coordinator and consultants, and staff from the resource managing agencies (BLM, USFWS, and CDFG).</p> <p><i>Implementation Timing:</i> final engineering/pre-construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Biological Technical Advisory Team/Project Biologist</p> <p><i>Responsible Agency(ies) for verification and enforcement:</i> FERC/SWRCB/BLM/USFWS/CDFG</p> <p>MM BIO-2. Biological Reporting to Resource Agencies. As part of implementing protection measures, regular reports shall be submitted to the relevant resource agencies to document the Project activities, mitigation implemented and</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>mitigation effectiveness. As a performance standard, adaptive management recommendations shall be updated as needed and in consultation with the coordinating agencies. Reporting shall include monthly reports during construction, annual comprehensive reports, and special-incident reports. The Project Biologist shall be responsible for reviewing and signing reports prior to submittal to the agencies.</p> <p><i>Implementation Timing:</i> final engineering/pre-construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator /Biological Technical Advisory Team/Project Biologist</p> <p><i>Agency for verification and enforcement:</i> FERC/SWRCB/BLM/ USFWS/CDFG</p> <p>MM BIO-3. Designation of an Authorized Project Biologist. An Authorized Project Biologist shall be responsible for implementing and overseeing the biological compliance program. This person shall be sufficiently qualified to</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>ensure approval by the USFWS and CDFG for all biological protection measures that may be implemented by the Project. The USFWS describes a single designation for biologists who can be approved to handle tortoises - "Authorized Biologist." Such biologists have demonstrated to the USFWS that they possess sufficient desert tortoise knowledge and experience to handle and move tortoises appropriately. Authorized Biologists are permitted to then approve specific monitors to handle tortoises, at their discretion. The CDFG must also approve such biologists, potentially including individual approvals for monitors approved by the Authorized Biologist.</p> <p><i>Implementation Timing:</i> final engineering/pre-construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator / Biological Technical Advisory Team/ Project Biologist</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/USFWS/CDFG</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>MM BIO-4. Worker Environmental Awareness Program. A Worker Environmental Awareness Program (WEAP) (<i>see</i> Section 12.14) shall be implemented to ensure that Project construction and operation occur within a framework of safeguarding environmentally sensitive resources. Although facility construction has the greatest potential to harm environmental resources, the WEAP shall be designed to address those environmental issues that pertain to Project operations, such as general conduct, repairs and maintenance.</p> <p>The WEAP shall include information on biological resources that may occur on the site, with emphasis on listed and special-status species. Education shall include, but not be limited to, ecology, natural history, endangerment factors, legal protection, site mitigation measures, and hierarchy of command. Site rules of conduct shall be identified, including but not limited to: speed limits, work areas that must be accompanied by a biological monitor, parking areas, looking under parked vehicles prior to</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>moving them, trash deposition, off-site conduct in the area of the Project, and other employee response protocols. Willful non-compliance shall result in sufficiently severe penalties to the contractor that the contractor may dismiss the offending employee.</p> <p>The educational format will be a video, shown initially by the Project Biologist and ultimately by a limited staff of trained and approved personnel. The Project Biologist also may be videotaped giving the first program, for assistance to further instructors.</p> <p>All workers completing the education program shall be given a wallet card with site “rules” and contact cell phone numbers, and an environmental training completion sticker to affix to their hard hat. Each shall sign a sheet attesting to completing the training program.</p> <p><i>Implementation Timing:</i> construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>Coordinator/Contractor</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/SWRCB/BLM</p> <p>MM BIO-9. Couch's Spadefoot. The Northern and Eastern Colorado Desert Coordinated Management (NECO) Plan requirements shall be implemented to avoid disturbance of impoundments and restriction of surface flow to impoundments. Surveys on the Central Project Area shall elucidate the presence of any artificial impoundments that could subsidize Couch's spadefoot reproduction. Should those exist then surveys shall be conducted at the appropriate time to determine if larvae are present. If present, the impoundment will be avoided, if possible. If avoidance is not possible, then a new impoundment will be constructed as close as is feasible, to replicate and replace each lost impoundment with similar characteristics. All larvae shall be removed to the new impoundment.</p> <p>During construction on all Project facilities, should ephemeral pools develop in response</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>to intense rainfall showers from early spring through fall these shall be examined for larvae of Couch's spadefoot. If larvae are present, the pools shall be flagged and avoided by construction activities. Where pools cannot be avoided, new pools shall be constructed and larvae transplanted by the Authorized Project Biologist.</p> <p><i>Implementation Timing:</i> construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Project Biologist/Contractor</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/SWRCB/CDFG</p> <p>MM BIO-10. Breeding Bird Surveys and Avoidance. For all construction activities in vegetated habitat that are scheduled to occur between approximately February 15 and July 30, surveys shall be completed in all potential nesting sites for active bird nests. Unless otherwise directed by the CDFG, if an active bird nest is located, the nest site shall be flagged or staked a minimum of five yards in all directions. This flagged zone</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>shall not be disturbed until the nest becomes inactive. Alternatively, grading and site preparation may occur prior to February 15 to preclude interference with nesting birds.</p> <p><i>Implementation Timing:</i> construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Project Biologist</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/CDFG</p> <p>MM BIO-11. Brine Ponds Management. Brine ponds shall be managed to minimize their attractiveness and access to migratory birds. This consists of making resources provided by the ponds less available (by designing the ponds to be unattractive to birds) and netting the ponds to prevent access by birds (Figure 3.5-19).</p> <p><i>Implementation Timing:</i> final engineering/construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Project Biologist</p> <p><i>Responsible Agency for verification and</i></p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p><i>enforcement:</i> FERC/SWRCB</p> <p>MM BIO-12. Burrowing Owls Phase III Survey. Based on the results of the 2009 surveys, a Phase III survey shall be completed to further assess bird use of the Project area and potential impacts (CBOC, 1993). This includes a nesting season survey, followed by a winter survey if no burrows or owls are observed during the nesting season. Each of these surveys shall span several visits and days.</p> <p>A pre-construction survey shall be conducted within 30 days of the start of Project construction to assess species presence on-site. Recommendations from the surveys shall be implemented as adaptive management measures. In consultation with CDFG, the pre-construction survey may obviate the need for the Phase III survey.</p> <p><i>Implementation Timing:</i> pre-construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Project Biologist</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p><i>Responsible Agency for verification and enforcement:</i> FERC/SWRCB</p> <p>MM BIO-13. Burrowing Owl Breeding Season. The Northern and Eastern Colorado Desert Coordinated Management (NECO) Plan limits the construction period to September 1 through February 1 if burrowing owls are present, to avoid disruption of breeding activities. CDFG (1995) has recommended several mitigation measures for resident owls. Disruption of burrowing owl nesting activities shall be avoided during construction. Active nests shall be avoided by a minimum of a 250-foot buffer until fledging has occurred (February 1 through August 31). Following fledging, owls may be passively relocated.</p> <p><i>Implementation Timing:</i> construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Project Biologist/Contractor</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/SWRCB</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>MM BIO-14. Raptor Buffer. The Northern and Eastern Colorado Desert Coordinated Management (NECO) Plan identifies ¼-mile as an important buffer distance for prairie falcon or golden eagle aerie. No aeries or nests have been observed within a ¼ mile, but pre-construction surveys on the Central Project Area will confirm if a ¼-mile construction buffer will be required during the nesting seasons.</p> <p><i>Implementation Timing:</i> pre-construction/construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Project Biologist/Contractor</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/BLM</p> <p>MM BIO-15. Bat Survey. The following applicable measures are required by the Northern and Eastern Colorado Desert Coordinated Management (NECO) Plan:</p> <ul style="list-style-type: none"> • Survey for bat roosts within 1 mile of a project, or within 5 miles of any | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>permanent stream or riparian habitat on a project site.</p> <ul style="list-style-type: none"> Projects authorized within 1 mile of a significant bat roost site would have applicable mitigation measures, including, but not restricted to seasonal restrictions, light abatement, bat exclusion, and gating of alternative sites. Any exclusion must be performed at a non-critical time, by an authorized bat biologist. <p>Pre-construction bat surveys shall be completed by a qualified bat biologist to determine the existence, location and condition of bat roosts on the site. Because foraging areas used by resident bats may be critical to the functioning of those colonies, foraging habitat on the Project also will be identified, if possible. If needed based on the results of these surveys, a mitigation plan shall be developed to avoid roosting and foraging impacts to resident bats, minimize that disturbance or, as an inescapable measure, evict bats. This plan shall include (as relevant):</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <ul style="list-style-type: none"> • Designation of avoidance areas and associated measures. • Eviction of bats outside of the maternity season. • A monitoring program to determine impacts from the Project. • Extending the monitoring program for the brine ponds to include bats, as deemed necessary. <p><i>Implementation Timing:</i> pre-construction/construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Project Biologist/Contractor</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/SWRCB</p> <p>MM BIO-16. Wildlife Fencing. The Northern and Eastern Colorado Desert Coordinated Management (NECO) Plan recommends fencing potential hazards to bighorn sheep. A security fence shall be constructed around portions of the Central Project Area to <i>exclude larger terrestrial wildlife</i> – bighorn sheep, deer, coyotes,</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>foxes, badgers – from entering Project areas that could pose a hazard to these species (Figure 3.6-4). Such areas shall include the transmission switchyard and other structures that may be dangerous to wildlife. Where exclusion fencing is required, security gates will be remain closed except during specific vehicle entry and may be electronically activated to open and close immediately after vehicle(s) have entered or exited.</p> <p>Permanent security fences will be installed around the upper and lower reservoirs, switchyard and brine ponds, for security, safety and general liability purposes, and will prevent wildlife access except at designated drinking points. Fences will contain “dips” where the fence will go below the high water mark so that wildlife can reach the water for drinking. These fences will also be equipped with tortoise exclusion fencing. In addition, temporary tortoise exclusion fences will be installed around work zones during construction, and will be sufficiently low (3 feet) to permit passage by sheep. These temporary fences will be removed at the end</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>of construction. Figure 3.6-4 shows the concept for the temporary construction fencing, if additional fencing is needed during construction to protect tortoises, this fencing will be installed and maintained during the construction period.</p> <p>All required exclusion fencing shall be maintained for the life of the Project. All fences will be inspected monthly and during/following all major rainfall events. Any damage to the fencing shall be temporarily repaired immediately, followed by permanent repair within one week.</p> <p><i>Implementation Timing:</i> final engineering/construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Project Biologist/Contractor</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/BLM</p> <p>MM BIO-20. Minimize Nighttime Lighting Impacts. Facility lighting will be designed, installed, and maintained to prevent casting</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>of nighttime light into adjacent native habitat. <i>See also</i> MM AES-1.</p> <p><i>Implementation Timing:</i> final engineering/construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Contractor</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/SWRCB</p> <p><u>Special Habitats</u></p> <p>MM BIO-22. Habitat Compensation. CDFG standard off-site compensation for loss of occupied burrowing owl habitat consists of a minimum of 6.5 acres of lands, approved by CDFG and protected in perpetuity, for each pair of owls or unpaired resident bird. In addition, existing unsuitable burrows on the protected lands should be enhanced (i.e., cleared of debris or enlarged) or new burrows installed at a ratio of 2:1. Habitat compensation for burrowing owls, if needed, will be subsumed by compensation for lost desert tortoise habitat, which also</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>constitutes burrowing owl habitat.</p> <p>The Northern and Eastern Colorado Desert Coordinated Management (NECO) Plan requires compensation for disturbance of Desert Dry Wash Woodland in WHMAs at the rate of 3:1. The Project does not disturb any Desert Dry Woodland inside a WHMA. However, the compensation for desert tortoise habitat (148.9 acres of compensation habitat) that is lost to the Project will compensate for the loss of approximately 15.4 acres of Desert Dry Wash Woodland expected to be lost or disturbed during construction activities.</p> <p><i>Implementation Timing:</i> construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator / Biological Technical Advisory Team/Project Biologist</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/BLM/CDFG/ USFWS</p> <p>PDF BIO-4. Raptor Protection of</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|------------------------------|--|--|
| | | Transmission Line. Eagle Crest Energy Company (ECE) will design and construct raptor-friendly transmission lines in strict accordance with the industry standard guidelines set forth in <i>Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 2006</i> , by Avian Power Line Interaction Committee, Edison Electric Institute, and Raptor Research Foundation. The design plan (filed for Commission approval) will include adequate separation of energized conductors, ground wires, and other metal hardware, adequate insulation, and any other measures necessary to protect raptors from electrocution hazards. | |
| Impact 3.5-5 Indirect Impacts of Operation and Maintenance. Neither the Central Project Area nor the transmission or pipeline corridors will experience greater disturbance than currently exists. The Project will not affect the normal movements of wildlife. It is | <i>Less than significant</i> | No mitigation is required. | N/A |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|--|---|--|
| not likely that there would be a measurable change in the density of predators, or, as a result, a significant change in impacts to local fauna. | | | |
| Impact 3.5-6 Impacts of Brine Ponds. Birds and bats may be affected by ingesting harmful elements and/or highly saline water in the brine ponds. | <i>Potentially significant and subject to the mitigation program</i> | <p>MM BIO-11. Brine Ponds Management. Brine ponds shall be managed to minimize their attractiveness and access to migratory birds. This consists of making resources provided by the ponds less available (by designing the ponds to be unattractive to birds) and netting the ponds to prevent access by birds (Figure 3.5-19).</p> <p><i>Implementation Timing:</i> final engineering/construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Project Biologist</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/SWRCB</p> | Less than significant |
| Impact 3.5-7 Transmission Impacts to Birds. Birds (including golden eagles) could be affected by collision | <i>Potentially significant and subject to the mitigation program</i> | PDF BIO-4. Raptor Protection of Transmission Line. Eagle Crest Energy Company (ECE) will design and construct raptor-friendly transmission lines in strict | Less than significant |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| with transmission lines or electrocution. | | accordance with the industry standard guidelines set forth in <i>Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 2006</i> , by Avian Power Line Interaction Committee, Edison Electric Institute, and Raptor Research Foundation. The design plan (filed for Commission approval) will include adequate separation of energized conductors, ground wires, and other metal hardware, adequate insulation, and any other measures necessary to protect raptors from electrocution hazards. | |
| Impact 3.5-8 Wetlands, Seeps, and Springs. Since there are no wetlands in the Project vicinity, there will be no impacts to wetlands. There will be no impact on seeps and springs in the Eagle Mountains. Available information indicates that these springs are not hydrologically connected to the Pinto or Chuckwalla Valley Basin aquifers since they are located in the | <i>No impact</i> | No mitigation is required. | N/A |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|--|--|--|
| mountains above the Pinto and Chuckwalla basins. | | | |
| Impact 3.5-9 Dry Desert Washes. There are many small washes crossed by the pipeline and transmission line that will be regulated by the CDFG under Section 1602 of the CDFG Code. This impact to local washes may include degradation or loss of wash habitat, which would be monitored and limited under standard terms of the Streambed Alteration Agreement; and which will identify the condition and location of all State jurisdictional waters, impacts, and mitigation measures. | <i>Potentially significant and subject to the mitigation program</i> | <p>MM BIO-21. Dry Desert Washes. There are many small washes crossed by the pipeline and transmission line that are regulated by the CDFG. A Streambed Alteration Agreement (Section 1602 of the CDFG Code) shall be obtained, which will identify the condition and location of all State jurisdictional waters, impacts, and mitigation measures. Mitigation includes the acreage assessment of washes that may be affected, construction requirements associated with working on or near the washes, and compensation for lost or damaged acreage. It is anticipated that this compensation will be included in the habitat compensation for special-status species (MM BIO-22 and MM TE-6).</p> <p><i>Implementation Timing:</i> pre-construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator /Biological Technical Advisory Team/Project Biologist</p> | Less than significant |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|--|--|--|
| | | <i>Responsible Agency for verification and enforcement: FERC/CDFG</i> | |
| Impact 3.5-10 Operational Effects to Fish Species. Project lands include no streams or ponds that could support any species of fish. | <i>No impact</i> | No mitigation is required. | N/A |
| Section 3.6 Threatened & Endangered Species | | | |
| Impact 3.6-1 Coachella Valley Milkvetch. Based on site reconnaissance and literature review, this species is not expected to be located on-site, or in areas that will be affected by the Project. Therefore, it is highly unlikely that there would be any Project effects on the milkvetch. However, pre-construction surveys will be conducted to insure that no | <i>Potentially significant and subject to the mitigation program</i> | PDF BIO-2. Pre-construction Plant Survey. Preconstruction surveys will identify special-status plant populations and also species protected by the CDNPA. For annuals or herbaceous perennials that are dormant during certain seasons, data from 2008 and 2009 surveys will be used to assist in locating populations during dormant seasons. Based on these combined surveys, avoidance areas in construction zones will be established for special plant resources. The perimeters will be marked with wooden stakes, at least 3 feet high, and no more than | Less than significant. |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|--|---|--|
| Coachella Valley Milkvetch will be disturbed. | | <p>10 feet apart. Each stake will be flagged with red and white candy-striped flagging or other obvious barrier tape.</p> <p>Where avoidance is not feasible, and the species can be reasonably transplanted (e.g., foxtail cactus, Wiggins' cholla, other cacti and species protected by the CDNPA), plants will be salvaged and transplanted in areas approved in the Re-Vegetation Plan. Transplantation will be part of the revegetation plan developed for the Project. Salvaging seed and replanting may also be an option considered for certain species (e.g., smoke tree, ironwood).</p> | |
| Impact 3.6-2 American Peregrine Falcon. Based on site reconnaissance and literature review, this species is not expected to be located on-site or in areas affected by the Project. This species is unknown to inhabit Riverside and Imperial counties, and has not been | <i>Potentially significant and subject to the mitigation program</i> | PDF BIO-1. Pre-Construction Special Species and Habitat Survey. Following licensing and access to the Central Project Area, surveys for special status species (endangered, rare or threatened) and habitats that could support special status species will be conducted. A thorough examination of the Central Project Area and local springs and seeps will provide information to determine if any avoidance or adaptive management is | Less than significant |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|--|--|--|
| found during previous surveys in the Project area, including the Central Project Area. Therefore it is highly unlikely that there would be any Project effects on peregrine falcon. However, pre-construction surveys will be conducted to insure that no American Peregrine Falcon will be disturbed. | | required. Simultaneously, the site will be assessed for use by other wildlife. Based on the results of these surveys, the biological mitigation and monitoring program will be modified in ongoing consultation with the USFWS and the CDFG. Reporting requirements for the pre-construction surveys are specified in MM BIO-2. | |
| Impact 3.6-3 Gila Woodpecker. Based on site reconnaissance and literature review, this species is not expected to be located on-site or in areas affected by the Project, nor residential areas. Between the small residential areas and the Project is a broad area of inhospitable habitat. However, pre-construction surveys will be conducted to insure that no Gila | <i>Potentially significant and subject to the mitigation program</i> | PDF BIO-1. Pre-Construction Special Species and Habitat Survey. Following licensing and access to the Central Project Area, surveys for special species and habitats that could support special species will be conducted. A thorough examination of the Central Project Area and local springs and seeps will provide information to determine if any avoidance or adaptive management is required. Simultaneously, the site will be assessed for use by other wildlife. Based on the results of these surveys, the biological mitigation and monitoring program will be modified in ongoing consultation with the | Less than significant |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|---|--|--|
| Woodpecker will be disturbed. | | USFWS and the CDFG. Reporting requirements for the pre-construction surveys are specified in MM BIO-2. | |
| Impact 3.6-4 Desert Tortoise. Desert tortoise may be affected by Project construction, particularly along the proposed transmission corridor. | <i>Potentially significant and subject to the mitigation program.</i> | MM TE-1. Desert Tortoise Pre-construction Surveys and Clearance Surveys. Desert tortoises shall be removed from construction areas by the Project Biologist. Such tortoises shall be processed (cataloged, photographed, and numbered) prior to placement outside the construction zones but on public or private land, or the Project ROW (<i>see</i> Appendix 12.14 Desert Tortoise Removal and Translocation Plan). . On the linear facilities, this is achieved by first surveying for all desert tortoises that might be within construction zones or are likely to enter construction zones, immediately prior to the start of construction. (These surveys can be simultaneous with those for badger and kit fox.). Active burrows will be identified, measured, and the entrance “gated” (a 3-inch twig inserted into the floor of the runway) for monitoring tortoise use. The locations of all desert tortoises will be mapped so that those | Less than significant |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>locations can be monitored for tortoise use during construction.</p> <p>On the Central Project Area, there is little likelihood of desert tortoises except along the southern and eastern edges because of the altered landscape and massive and abundant tailings piles. Surveys first will be conducted in the Central Project Area to determine the presence of desert tortoise. If there is any suggestion of tortoise presence, either due to the presence of tortoise habitat and/or tortoise sign, a clearance survey (<i>see</i> Appendix 12.14 Desert Tortoise Removal and Translocation Plan) will be completed in those areas after tortoise-proof fencing is installed (<i>see</i> MM TE-3: Desert Tortoise Exclusion Fencing). A minimum of two clearance passes will be completed. Surveys will coincide with heightened tortoise activity, from mid-March to mid-April and during October. This will maximize the probability of finding all tortoises. Any tortoises found will be removed per mitigation MM TE-3: Desert Tortoise</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>Translocation or Removal.</p> <p>Surveys and clearance on the substation will proceed identically to that on the Central Project Area, with the exception that a pre-construction survey prior to clearance surveys is not necessary.</p> <p><i>Implementation Timing:</i> pre-construction <i>Party responsible for implementation, monitoring and reporting:</i> Project Biologist <i>Responsible Agency for verification and enforcement:</i> FERC/USFWS/CDFG</p> <p>MM TE-2. Desert Tortoise Construction Monitoring. No construction in unfenced areas (<i>see</i> MM TE-3: Desert Tortoise Exclusion Fencing) on the linear facilities will occur without biological monitors. This includes both construction monitoring and maintenance activities that require surface disturbance. An adequate number of trained and experienced monitors must be present during all construction activities, depending on the various construction tasks, locations, and season. The</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>Northern and Eastern Colorado Desert Coordinated Management (NECO) Plan suggests that construction activities occur when tortoises are inactive – November 1 to March 15 – where possible. However, adequate monitoring will mitigate concerns about take due to heightened activity levels the remainder of the year.</p> <p>All desert tortoises will be removed from harm's way by a biologist approved by the Project Biologist (MM BIO-2). The Project Biologist must be sufficiently qualified to ensure approval by USFWS and CDFG for all tortoise protection measures that may be implemented by the Project. USFWS describes a single designation for biologists who can be approved to handle tortoises, "Authorized Biologist." Such biologists have demonstrated to USFWS that they possess sufficient desert tortoise knowledge and experience to handle and move tortoises appropriately. Authorized Biologists are permitted to then approve specific monitors to handle tortoises, at their discretion. The CDFG must also approve such biologists,</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>potentially including individual approvals for monitors approved by the Authorized Biologist.</p> <p>Active burrows and special-resource burrows will be avoided, where possible. Where avoidance of any burrow is infeasible, occupancy will first be determined through the use of fiberoptics, probes or mirrors. All burrows that could potentially host a tortoise will be excavated with hand tools in the method prescribed by the Desert Tortoise Council (1994, rev. 1999), <i>Guidelines for handling desert tortoises during construction projects</i>. Any tortoises found will be removed from the construction area per MM TE-4: Desert Tortoise Translocation or Removal Plan.</p> <p>Pipeline trenches will be closed, temporarily fenced, or covered each day. Each day, any open trenches will be inspected by an approved biological monitor at first light, midday, and at the end of each day to ensure tortoise safety.</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>If necessary, temporary fencing will be installed in the active work area to separate a tortoise from active construction, in order to maximize protection.</p> <p>If a tortoise is injured or killed, surface-disturbing activities must cease in the area of the killed or injured tortoise and the Project Biologist contacted. Injured tortoises will be taken to a qualified veterinarian if their survival is expected. USFWS will determine if the tortoise can be returned to the wild, should it recover.</p> <p>As a mitigation performance standard, following site clearance, a report will be prepared by the Project Biologist to document the clearance surveys, construction monitoring, the capture and release locations of all tortoises found, individual tortoise data, and other relevant data. This report will be submitted to the CDFG and USFWS.</p> <p><i>Implementation Timing:</i> construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Project Biologist</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p><i>Responsible Agency for verification and enforcement: FERC/USFWS/CDFG</i></p> <p>MM TE-3. Desert Tortoise Exclusion Fencing. The substation will be enclosed with a permanent tortoise exclusion fence to keep adjacent tortoises from entering the site. The fencing type will be one- by two-inch vertical mesh galvanized fence material, extending at least two feet above the ground and buried at least one foot. Where burial is impossible, the mesh will be bent at a right angle toward the outside of the fence and covered with dirt, rocks, or gravel to prevent the tortoise from digging under the fence. Tortoise-proof gates will be established at all site entry points. All fence construction will be monitored by qualified biologists to ensure that no tortoises are harmed. Following installation, the fencing will be inspected monthly and during all major rainfall events. Any damage to the fencing will be repaired immediately. Parking and storage will occur within the substation and disturbed, previously fenced areas.</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>Any areas on the Central Project Area that are determined through surveys to require fencing will be fenced as outlined above (Figure 3.6-4). Where a fence is discontinuous (between tailings piles for example), the fence ends will extend well up the slope of the piles, to ensure that tortoises cannot go around the end. Alternative methods may be explored to ensure that the fences are functional at excluding tortoises.</p> <p><i>Implementation Timing:</i> construction and life of the Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Project Biologist and contractor</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/USFWS/CDFG</p> <p>MM TE-4. Desert Tortoise Removal and Translocation Plan. The Desert Tortoise Removal and Translocation Plan is found in its entirety within Section 12.14.</p> <p>For both the Central Project Area and the linear facilities, it is anticipated that any</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>tortoises removed would not be “translocated” or “relocated” in the biological sense of putting an animal in a location outside its home range. Instead, any tortoise would simply be removed to another part of its home range. Because construction on the Central Project Area will occur on highly disturbed previously mined areas, any tortoise found there during clearance would likely be a transient or in a peripheral part of its home range, certainly outside its core use areas or parts of its home range that could support its survival. By moving such a tortoise to a location immediately adjacent to its capture site outside the fenced construction area, the Project would be maintaining the tortoise within its home range, not translocating it. The tortoise merely would be excluded from undesirable areas. For utility corridors and fence construction, tortoises would be removed a short distance from the construction zone. Tasks will include the following:</p> <ul style="list-style-type: none"> • Tortoise handling and temperature requirements | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <ul style="list-style-type: none"> • Data gathered on removed tortoises • Translocation site preparation (if any) and choice • Monitoring – All tortoises removed will be monitored sufficiently to ensure safety. <p><i>Implementation Timing:</i> construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Project Biologist and contractor</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/USFWS/CDFG</p> <p>MM TE-6. Habitat Compensation. The Northern and Eastern Colorado Desert Coordinated Management (NECO) Plan states that all lands within a DWMA will be designated as Category I Desert Tortoise Habitat³, with required compensation of 5 acres for every acre disturbed. All lands outside a DWMA are considered Category</p> | |

³ BLM habitat categories (BLM 1988), ranging in decreasing importance from Category I to Category III, were designed as management tools to ensure future protection and management of desert tortoise habitat and its populations. These designations were based on tortoise density, estimated local tortoise population trends, habitat quality, and other land-use conflicts. Category I habitat areas are considered essential to the maintenance of large, viable populations.

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>III habitat, with a 1:1 compensation ratio.</p> <p>The Project overlaps 16.7 acres of Category I Habitat and 65.4 acres of Category III Habitat. The habitat compensation is 148.9 acres (Figure 3.6-3).</p> <p>This land would need to be purchased in the same population of desert tortoises as occupy the site. In addition, the following features should apply to compensation lands:</p> <ul style="list-style-type: none"> • Be part of a larger block of lands that are currently protected or able to be protected • Are not subject to intensive habitat degradation (e.g., recreational use, grazing use, agriculture) • Have inherently moderate to good habitat that will naturally and ultimately regenerate when current disturbances are removed • Preferably are bordered by native habitat suitable for tortoises and/or • In part, may represent a buffer for a | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>block of good habitat</p> <p>Selection of compensation lands will be done in consultation with CDFG and USFWS.</p> <p><i>Implementation Timing:</i> final engineering/pre-construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Project Applicant</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/USFWS/CDFG</p> <p>MM TE-7. Operations and Maintenance. Tortoises observed during routine maintenance activities will be allowed to voluntarily move out of harm's way. Transmission line repair activities that will result in surface disturbance will require biological monitoring, per mitigation MM TE-2.</p> <p><i>Implementation Timing:</i> pre-construction/construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Project Biologist contractor</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p><i>Responsible Agency for verification and enforcement:</i> FERC/USFWS/CDFG</p> <p>MM BIO-1. Biological Mitigation and Monitoring Program. Concurrent with final engineering design a comprehensive site-specific biological mitigation and monitoring program shall be developed in consultation with the Biological Technical Advisory Team. The Technical Advisory Team shall be composed of the Owner's staff Environmental Coordinator and consultants, and staff from the resource managing agencies (BLM, USFWS, and CDFG).</p> <p><i>Implementation Timing:</i> final engineering/pre-construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Biological Technical Advisory Team/Project Biologist</p> <p><i>Responsible Agency(ies) for verification and enforcement:</i> FERC/SWRCB/BLM/USFWS/CDFG</p> <p>MM BIO-2. Biological Reporting to</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>Resource Agencies. As part of implementing protection measures, regular reports shall be submitted to the relevant resource agencies to document the Project activities, mitigation implemented and mitigation effectiveness. As a performance standard, adaptive management recommendations shall be updated as needed and in consultation with the coordinating agencies. Reporting shall include monthly reports during construction, annual comprehensive reports, and special-incident reports. The Project Biologist shall be responsible for reviewing and signing reports prior to submittal to the agencies.</p> <p><i>Implementation Timing:</i> final engineering/pre-construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator /Biological Technical Advisory Team/Project Biologist</p> <p><i>Agency for verification and enforcement:</i> FERC/SWRCB/BLM/ USFWS/CDFG</p> <p>MM BIO-3. Designation of an</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>Authorized Project Biologist. An Authorized Project Biologist shall be responsible for implementing and overseeing the biological compliance program. This person shall be sufficiently qualified to ensure approval by the USFWS and CDFG for all biological protection measures that may be implemented by the Project. The USFWS describes a single designation for biologists who can be approved to handle tortoises - “Authorized Biologist.” Such biologists have demonstrated to the USFWS that they possess sufficient desert tortoise knowledge and experience to handle and move tortoises appropriately. Authorized Biologists are permitted to then approve specific monitors to handle tortoises, at their discretion. The CDFG must also approve such biologists, potentially including individual approvals for monitors approved by the Authorized Biologist.</p> <p><i>Implementation Timing:</i> final engineering/pre-construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>Coordinator / Biological Technical Advisory Team/ Project Biologist</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/USFWS/CDFG</p> <p>MM BIO-4. Worker Environmental Awareness Program. A Worker Environmental Awareness Program (WEAP) (<i>see</i> Section 12.14) shall be implemented to ensure that Project construction and operation occur within a framework of safeguarding environmentally sensitive resources. Although facility construction has the greatest potential to harm environmental resources, the WEAP shall be designed to address those environmental issues that pertain to Project operations, such as general conduct, repairs and maintenance.</p> <p>The WEAP shall include information on biological resources that may occur on the site, with emphasis on listed and special-status species. Education shall include, but not be limited to, ecology, natural history, endangerment factors, legal protection, site mitigation measures, and hierarchy of</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>command. Site rules of conduct shall be identified, including but not limited to: speed limits, work areas that must be accompanied by a biological monitor, parking areas, looking under parked vehicles prior to moving them, trash deposition, off-site conduct in the area of the Project, and other employee response protocols. Willful non-compliance shall result in sufficiently severe penalties to the contractor that the contractor may dismiss the offending employee.</p> <p>The educational format will be a video, shown initially by the Project Biologist and ultimately by a limited staff of trained and approved personnel. The Project Biologist also may be videotaped giving the first program, for assistance to further instructors.</p> <p>All workers completing the education program shall be given a wallet card with site “rules” and contact cell phone numbers, and an environmental training completion sticker to affix to their hard hat. Each shall sign a sheet attesting to completing the training</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|---|---|--|
| | | <p>program.</p> <p><i>Implementation Timing:</i> construction/life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Contractor</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/SWRCB/BLM</p> | |
| <p>Impact 3.5-5 Increase to Raven Population. If ravens were to increase in response to additional water resources at the Project, these ravens could forage in the JTNP or disperse into the JTNP from enhanced reproductive opportunities at the Project.</p> | <p><i>Potentially significant and subject to the mitigation program</i></p> | <p>MM TE-5. Raven Monitoring and Control Program. The Raven Monitoring and Control Plan is found in its entirety within Section 12.14.</p> <p>Proposed projects on Federal lands that may result in increased raven populations must incorporate mitigation to reduce or eliminate the opportunity for raven proliferation. The USFWS has developed a program to monitor and manage raven populations in the California desert in an effort to enhance desert tortoise recovery. In order to integrate monitoring and management, the USFWS has agreed to an “in-lieu” fee to replace quantitative raven monitoring on new</p> | <p>Less than significant</p> |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>projects in the range of the desert tortoise. The Project owner will pay in-lieu fees to USFWS that will be directed toward a future quantitative regional monitoring program aimed at understanding the relationship between ongoing development in the desert region, raven population growth and expansion and raven impacts on desert tortoise populations. The vehicle for this program is a Memorandum of Understanding between the Project owner, CDFG and USFWS.</p> <p>The Raven Monitoring and Control Plan may include this in-lieu fee if it is determined that ravens may increase over current levels due to the Project. In addition to this in-lieu fee, the program will include, at a minimum:</p> <ul style="list-style-type: none"> • A suite of construction and operations measures to reduce food scavenging and drinking by ravens (e.g., trash containment, minimization of pooling water) • Roadkill removal • Qualitative monitoring of raven use of | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|--|--|--|
| | | <p>the site during operations, conducted on a pre-determined schedule by the onsite Project environmental compliance officer and</p> <ul style="list-style-type: none"> Breeding season nest surveys <p><i>Implementation Timing:</i> construction and life of Project</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Project Biologist</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC/USFWS/CDFG</p> | |
| Section 3.6 Aesthetics | | | |
| Impact 3.7-1 Central Project Area. Visual impacts associated with the development of the Project's central facility are largely short-term due to construction activity and have a low potential to impact scenic vistas within | <i>Potentially significant and subject to the mitigation program</i> | MM AES-1. Lighting. To minimize lighting effects and potential light pollution, the final engineering design shall incorporate directional lighting, light hoods, low pressure sodium bulbs or LED lighting, and operational devices to allow surface night-lighting in the central site to be turned on as-needed for safety. The Project operator shall fund night sky monitoring to be | Less than significant |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|--|---|--|
| the vicinity of the Project area. Visual impacts from the Central Project Area would be less than significant and no mitigation measures would be required. | | <p>conducted in collaboration with the National Park Service (NPS) during the post-licensing design period (to represent baseline conditions) and during construction and the initial operational period.</p> <p><i>Implementation Timing:</i> Final engineering/pre-construction/construction/operation</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Contractor/Environmental Coordinator</p> <p><i>Responsible Agencies for verification and enforcement:</i> SWRCB/FERC</p> | |
| Impact 3.7-2 Transmission Line Construction Activities. The Project's transmission line will create short-term visual impacts associated with construction activities including: visibility of Project vegetation disturbance, as well as from construction equipment, materials, personnel, and | <i>Potentially significant and subject to the mitigation program</i> | MM AES-4. Transmission Line. For construction of the transmission line, existing access roads and construction laydown areas shall be used to the extent feasible. The transmission line disturbed zones that will not be required for long term maintenance access will be revegetated with native vegetation immediately following completion of transmission line construction, consistent with the recommendations in the Biological Resources Revegetation Plan (<i>see</i> | Less than significant |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|------------------------------|---|--|
| construction staging areas. | | <p>Section 12.14).</p> <p><i>Implementation Timing:</i> Final engineering/pre-construction/construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Contractor/ Environmental Coordinator</p> <p><i>Responsible Agency for verification and enforcement:</i> SWRCB/ FERC</p> <p>PDF AES-1. Staging Areas. Staging areas and areas needed for equipment operation, material storage and assembly shall be combined with construction lands to the extent feasible, and organized to minimize the total footprint needed. Staging, storage, and temporary construction areas shall be reclaimed as soon as the use of each such area is completed.</p> | |
| Impact 3.7-3 Operation of Transmission Line from the Project Site to MWD Eagle Mountain Pump Station. No significant visual impacts would occur | <i>Less than significant</i> | No mitigation is required. | N/A |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|--|--|--|
| for this line segment. | | | |
| Impact 3.7-4 Operation of Transmission Line from the MWD Eagle Mountain Pump Station to Eagle Mountain Road Turnoff. Visual impacts would result from construction of this segment of the transmission line. The project would be designed consistent with VRM Class III management objectives (regulatory LORS). | <i>Potentially significant and subject to the mitigation program</i> | MM AES-3. Road Crossings. For design of the transmission line, road crossings shall be aligned perpendicular to the road to minimize views up and down ROW corridors, and towers should be placed at the maximum distance from the road ROW. Steel lattice structures with a dull, galvanized steel finish shall be utilized to reduce visual contrast. Conductors shall be selected to reduce glare and visual contrast. The corridor should be collocated with the existing MWD transmission corridor, and tower spacing at Victory Pass designed so that as few towers as possible are skylighted on the ridgeline. These considerations will be balanced with engineering constraints and concerns for minimizing impacts to other resources such a desert tortoise and cultural resources. Final design will be approved by FERC. <i>Implementation Timing:</i> Final engineering/pre-construction/construction <i>Party responsible for implementation,</i> | Less than significant |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p><i>monitoring and reporting:</i> Contractor/Environmental Coordinator</p> <p><i>Responsible Agencies for verification and enforcement:</i> SWRCB/FERC</p> <p>MM AES-4. Transmission Line. For construction of the transmission line, existing access roads and construction laydown areas shall be used to the extent feasible. The transmission line disturbed zones that will not be required for long term maintenance access will be revegetated with native vegetation immediately following completion of transmission line construction, consistent with the recommendations in the Biological Resources Revegetation Plan (<i>see</i> Section 12.14).</p> <p><i>Implementation Timing:</i> Final engineering/pre-construction/construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Contractor/Environmental Coordinator</p> <p><i>Responsible Agency for verification and enforcement:</i> SWRCB/ FERC</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|---|---|--|
| <p>Impact 3.7-5 Operation of Transmission Line from the Eagle Mountain Road Turnoff to the Interconnection Substation.</p> <p>The transmission line segment from the Eagle Mountain Road turnoff to the interconnection substation (2.5 miles) would constitute a new utility feature within the landscape, creating high visual contrast within foreground view zones, resulting in a significant and unavoidable impact.</p> | <p><i>Significant and unavoidable</i></p> | <p>MM AES-3. Road Crossings. For design of the transmission line, road crossings shall be aligned perpendicular to the road to minimize views up and down ROW corridors, and towers should be placed at the maximum distance from the road ROW. Steel lattice structures with a dull, galvanized steel finish shall be utilized to reduce visual contrast. Conductors shall be selected to reduce glare and visual contrast. The corridor should be collocated with the existing MWD transmission corridor, and tower spacing at Victory Pass designed so that as few towers as possible are skylighted on the ridgeline. These considerations will be balanced with engineering constraints and concerns for minimizing impacts to other resources such as a desert tortoise and cultural resources. Final design will be approved by FERC.</p> <p><i>Implementation Timing:</i> Final engineering/pre-construction/construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Contractor/Environmental Coordinator</p> | <p>Significant and unavoidable</p> |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|---|--|--|
| | | <p><i>Responsible Agencies for verification and enforcement: SWRCB/FERC</i></p> <p>MM AES-4. Transmission Line. For construction of the transmission line, existing access roads and construction laydown areas shall be used to the extent feasible. The transmission line disturbed zones that will not be required for long term maintenance access will be revegetated with native vegetation immediately following completion of transmission line construction, consistent with the recommendations in the Biological Resources Revegetation Plan (<i>see</i> Section 12.14).</p> <p><i>Implementation Timing: Final engineering/pre-construction/construction</i></p> <p><i>Party responsible for implementation, monitoring and reporting: Contractor/ Environmental Coordinator</i></p> <p><i>Responsible Agency for verification and enforcement: SWRCB/ FERC</i></p> | |
| Impact 3.7-6 Construction and Operation of the | <i>Potentially significant and subject to the</i> | MM AES-2. Water Pipeline. For construction of the water pipeline, reduce | Less than significant |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|---|---|--|
| Water Pipeline. Short-term construction impacts are anticipated due to the water pipeline's low profile and proximity to existing access roads, SR 177 and transmission utilities. | <i>mitigation program</i> | side cast disposal of soils from open cut construction (by replacing disturbed soil within the trench and limiting the width of the construction disturbance) to reduce color contrast and disturbance with surrounding landscape. The area disturbed during pipeline construction shall be backfilled and revegetated with native vegetation immediately following completion of pipeline construction. <i>Implementation Timing:</i> Final engineering/pre-construction/construction <i>Party responsible for implementation, monitoring and reporting:</i> Contractor/Environmental Coordinator <i>Responsible Agency for verification and enforcement:</i> SWRCB/FERC | |
| Section 3.8 Cultural Resources | | | |
| Impact 3.8-1 Transmission Line Route from the Crossing of the CRA to the Interconnector Substation. | <i>Potentially significant and subject to the mitigation program.</i> | MM CR-3. Implement a Historic Properties Management Plan for the Worker Environmental Awareness | Less than significant |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| Construction of the substation and transmission lines will not result in significant impacts on cultural resources related to the World War II DTC/CAMA. Historic sites are more likely to occur within the study corridor (which extends out 1 mile on each side of the Project area proper). | | <p>Program.</p> <p><u>Management Activity:</u> Implement project-specific education program.</p> <ul style="list-style-type: none"> • A qualified archaeologist will implement a cultural resources element for the Worker Environmental Awareness Program that is tailored to the Eagle Mountain Pumped Storage Project and workforce. This Program will focus on possible discovery and mitigation procedures during the construction phase of the Project as well as preservation obligations of Project staff. • The Program will include a printed handout for all Project personnel and a Power Point presentation or video that all Project personnel will be required to view. • The Program will present concepts of cultural resources management in a simple, understandable format, including a review of preservation laws and sanctions, examples of possible discoveries, and notification procedures in the event of discoveries. These are key elements of the HPMP including the | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>Unanticipated Discoveries Plan and the steps to follow in evaluating potential cultural resources needs that are triggered by proposed construction activities.</p> <ul style="list-style-type: none"> The Program will include a Monitoring Protocol and Provisions for Enforcement that may be presented to refresh personnel and introduce new staff to cultural resource concepts and Project-specific issues. Project equipment and vehicle operators will be educated on the importance of staying within Project boundaries and also the prohibitions of going off designated routes of travel such as Eagle Mountain Road or Kaiser Road. <p><i>Implementation Timing:</i> Pre-construction/construction/operation</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Contractor</p> <p><i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-4. Offer Opportunities for</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>Public Interpretation. Unlike other hydroelectric projects where public access and recreational opportunities may be afforded, safety concerns and proximity to a proposed landfill project preclude offering public access within the core of the Pumped Storage Project boundaries. Opportunities for public interpretation are therefore extremely limited. Some appropriate signage that interprets the history of the area already exists, including the 2009 E Clampus Vitus monument on Eagle Mountain Road for the 36th Evacuation Hospital associated with the World War II DTC and a Riverside County historical marker that acknowledges the Iron Chief, Eagle Mountain, and other mines of the area. The DTC/CAMA is also thoroughly and professionally interpreted at the General Patton Memorial Museum in Chiriaco Summit, located off of I-10 between Indio and Desert Center. The prehistory and Native American cultural traditions of the region are interpreted at the Agua Caliente Cultural Museum in Palm Springs, the Malki Museum on the Morongo Indian Reservation, the Palm Spring Desert</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>Museum, the Coachella Valley Museum and Cultural Center, and at Joshua Tree National Park.</p> <p><u>Management Activity:</u> Develop informative signage that will be available to the public.</p> <p>ECE will develop and install one weather-tolerant sign that will be placed outside the main gate of the facility. The sign will provide information about the prehistory and history of the general area, Native American groups who inhabited the area, and background on the functioning of the Project. Local museums and historical monuments will also be identified.</p> <p>The public interpretive sign will be developed in coordination with the development of the HPMP and will be installed within 1 year of completion of the boundary fence.</p> <p><i>Implementation Timing:</i> Pre-construction/construction/operation</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>Coordinator/ Contractor</p> <p><i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-5. Review Effectiveness of the Historic Properties Management Plan.</p> <p><u>Management Activity:</u> Every 6 years, ECE will determine if modifications will improve the effectiveness of the HPMP.</p> <p><u>Performance Standard:</u> Develop recommendations for changes to the HPMP that may be discussed with California SHPO, the BLM, Riverside County, interested Indian Tribes, FERC, and other consulting parties.</p> <p><i>Implementation Timing:</i> Pre-construction/construction/operation</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator /Contractor</p> <p><i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>MM CR-6. Consult with California SHPO, the BLM, Riverside County, interested Indian Tribes, and FERC.</p> <p><u>Management Activity:</u> Develop a HPMP Implementation Report. The HPMP Implementation Report will be distributed for review according to a 2-year cycle during the construction phase of the Project because cultural resource discoveries and treatments are most likely during that period. Thereafter, in the operation and maintenance phase, the HPMP Implementation Reports will be coordinated with the 6-year cycle of the Licensed Hydropower Recreation Development Report (FERC Form 80). The report will summarize, in table format, all ECE cultural resources consultations and/or surveys performed for Project modifications, activities related to the Erosion Control Plan, or any other activities that have been reviewed due to their potential to result in soil disturbance in areas not previously disturbed. The HPMP Implementation Report will:</p> <ul style="list-style-type: none"> Describe the proposed modifications, the | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>type of cultural survey or other activity performed, the results of the survey or other activity, and actions taken (e.g. SHPO consultation and/or other consultation, mitigation, no action determined appropriate, etc.).</p> <ul style="list-style-type: none"> • Summarize observations made of historic properties. • Include summaries of cultural resource treatments as an update to a HPMP implementation summary table. • Report the status of ECE's public interpretation projects. • Recommend modifications to the Project HPMP that will improve its implementation if appropriate. • Develop a format for the HPMP Implementation Report and its associated Summary Table that will present the cultural resources activities and considerations in which ECE participated over a 2-year reporting cycle during construction and the 6-year reporting cycle thereafter. The HPMP Implementation Report will be provided | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>to California SHPO, BLM, Riverside County, and interested Indian Tribes for a 30-day review and comment period every 6 years in coordination with FERC Form 80. Following a consideration of review comments, ECE will file the HPMP Implementation Report with FERC.</p> <p><i>Implementation Timing:</i> Pre-construction/construction/operation <i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Contractor <i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-7. Class I Investigation. In the event that Project activities would extend beyond the areas previously surveyed, then background literature will be reviewed to identify the location, character, and significance of known cultural resources in the area of a proposed action and the potential of the proposed action to affect historic properties. The Class I investigation</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>will rely on information contained within ECE's Project archives. Should these data not prove sufficient, the Project Environmental Coordinator may determine that additional documentation is necessary to address a particular action under consideration that extends beyond the 1-mile buffer of the already completed Class I investigation. The most important source of Class I literature review is the EIC at the University of California, Riverside.</p> <p><u>Management Activity:</u> compare proposed Project location with Cultural Resources Management Maps.</p> <ul style="list-style-type: none"> • Determine if the Project area is located within 100 feet of a potentially significant previously recorded archeological site. • Determine if Project area has been characterized as actively eroding or previously disturbed by other ground-disturbing activity (e.g., by machine excavation or underground utility line). • Determine if the area has been previously surveyed for cultural resources. | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p><u>Performance Standard:</u> based on the results of the above-noted Management Activity.</p> <ul style="list-style-type: none"> • Project area is located within 100 feet of a previously recorded potentially significant archeological site. Delay Project pending SHPO consultation and possible follow-up studies by a Secretary of the Interior-qualified professional archaeologist. • Previous ground-disturbing activity may be documented or observed therefore no Project effect on cultural resources expected. Project may proceed. ECE includes Project description and permit considerations in the HPMP Implementation Report that will be distributed to the California SHPO, the BLM, Riverside County, interested Indian Tribes and FERC on a 2-year cycle during the construction phase and on a 6-year review cycle thereafter in coordination with Form 80. <p><i>Implementation Timing:</i> Pre-construction/construction/operation <i>Party responsible for implementation,</i></p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p><i>monitoring and reporting:</i> Environmental Coordinator/Contractor</p> <p><i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-8. Class III Cultural Resources Field Investigation. Any modifications or additions to the APE in previously unsurveyed and undisturbed areas will require a Class III survey in compliance with Section 106 of the National Historic Preservation Act and according to 36 CFR 800. ECE will conduct an on-the-ground inventory of the APE for a proposed action that confirms the presence of known cultural resources and that may result in identification of previously unrecorded cultural resources. A Class III investigation may involve the excavation of shovel tests placed at 50-foot intervals within the APE or implementation of an alternative investigative strategy approved by ECE's Project Environmental Coordinator and the California SHPO. Any investigations on easements through BLM land require a Fieldwork Authorization to a BLM permit-</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>holding archaeologist in compliance with the Federal Land Policy and Management Act of 1976, as amended (PL 94-579).</p> <p><u>Management Activity:</u> Consult with BLM or other land holding agencies as to what Section 106 or Section 110 compliance needs may still be required and implement as specified. Engage services of a qualified archaeologist to brief the Project Environmental Coordinator on correct scoping and protocols and conduct Class III survey such as a walkover survey and/or systematic subsurface shovel testing (e.g. perform an identification level archeological field survey.) The actual scope of work will depend upon the proposed Project location and size of the proposed activity as well as BLM requirements on BLM land. The archaeologist will perform the Class III survey and prepare a report that describes the investigation and results. ECE will forward this report to the California SHPO, interested Indian Tribes and FERC. All new reports and site forms will be submitted to the EIC,</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>University of California, Riverside.</p> <p><u>Performance Standards:</u> Review results of the Class III Survey and the associated recommendations.</p> <ul style="list-style-type: none"> • If the Class III survey did not locate cultural resources, then the proposed action may proceed following consultation with BLM and SHPO. • If the Class III survey locates cultural resources that the archaeologist recommends as not potentially significant, then the ECE Project Environmental Coordinator consults with SHPO. If consensus is reached on the recommendation, then the action may proceed. If SHPO does not concur, then the resource is treated as potentially significant. • If the Class III survey locates cultural resources that the archaeologist recommends as potentially significant (i.e. demonstrates good integrity, identifiable limits, structure, function, research potential, and cultural/historical context – see definition under 4.2.3 below), then ECE's Project | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>Environmental Coordinator consults with SHPO. If SHPO concurs with evaluation, then a Testing Phase investigation is recommended unless action may be designed to avoid the resource. Alternative Project locations will be reviewed.</p> <p><i>Implementation Timing:</i> Pre-construction/construction/operation</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator /Contractor</p> <p><i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-9. Testing Phase Cultural Resources Field Investigation. Conduct limited archeological excavations and analyses, or other investigations such as documentation of structures, to assess the National Register eligibility of individual resources and an assessment of the Project effects on historic properties.</p> <p>The purpose of this measure is to determine if a cultural resource recommended as</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>potentially significant and that cannot be avoided by a proposed action, qualifies as significant.</p> <p>The criteria for sites eligible to the NRHP may be found at 36 CFR 60.4. A site is eligible to the NRHP if it contains qualities that are significant in American history, architecture, archaeology, engineering, and culture and possesses integrity of location, design, setting, materials, workmanship, feeling, and association and:</p> <ul style="list-style-type: none"> • is associated with events that have made a significant contribution to the broad patterns of history • is associated with the lives of persons significant in the past • embodies the distinctive characteristics of a type, period or method of construction; or represents a significant and distinguishable entity whose components may lack individual distinction or • has yielded, or may be likely to yield, information important in prehistory or | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>history</p> <p><u>Management Activity:</u> Engage services of a qualified archaeologist to collect data sufficient to determine if a cultural resource qualifies as significant. If the site is located on BLM land, an excavation permit is required for testing programs that remove more than one cubic meter of soil from an individual site, in compliance with the Archaeological Resources Protection Act of 1979, as Amended (PL 96-95). Archaeological Resources Protection Act permits require submittal of a Treatment Plan/Research Design for which BLM is required to consult with SHPO and interested Indian Tribes prior to approving field investigation. The archaeologist will perform a Testing Phase investigation and prepare a report that describes the Testing Phase investigation and results. ECE will forward this report to BLM for consultation with SHPO, interested Indian Tribes and FERC.</p> <p><u>Performance Standards:</u> Review results of the Testing Phase Report and the associated recommendations, and consult with BLM</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>and SHPO.</p> <ul style="list-style-type: none"> • If the Testing Phase investigation indicates that the cultural resource does not qualify as significant, Project may proceed following consultation with the California SHPO. • If the Testing Phase investigation indicates that the cultural resource qualifies as significant, ECE Manager consults with BLM and SHPO. If SHPO concurs with the recommendation that the cultural resource is potentially eligible for listing in the NRHP and if the Project is not amended to avoid the resource, consultation with SHPO will continue. A qualified archaeologist will develop the scope of work that will serve as mitigation of Project effects. ECE Manager will consult with the SHPO and gain consensus on the appropriate mitigation (may involve further Data Recovery field investigation, monitoring, or another alternative treatment measure). <p><i>Implementation Timing:</i> Pre-construction/construction/operation</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Contractor</p> <p><i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-10. Data Recovery or Alternative Mitigation. ECE will investigate activities designed to mitigate effects upon a historic property that an action will affect. This may include data recovery, documentation, restoration or other measures. Such investigations will be preceded by development of an action-specific Memorandum of Agreement that has been approved by ECE, SHPO, the BLM, the Advisory Council on Historic Preservation, FERC, and, as appropriate, interested Indian Tribes</p> <p><u>Management Activity:</u> ECE Project Environmental Coordinator works with Project proponent and qualified archaeologist and consults with the SHPO to avoid Project adverse impacts, minimize Project adverse effects through possible design modifications</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>and or through data recovery or an alternative mutually agreed-upon method. If NRHP-eligible resource may not be avoided, ECE's archaeologist develops a Memorandum of Agreement (MOA) and ECE consults with the California SHPO, the BLM, the Advisory Council on Historic Preservation, and interested Indian Tribes, as appropriate and files the MOA with FERC for approval. When an appropriate MOA is agreed upon, the archaeologist will perform the Data Recovery mitigation and prepare a report that describes the mitigation and the results. ECE will forward this report to the consulting parties.</p> <p><u>Performance Standard:</u> Review results of the data recovery or other mitigation and consult with SHPO, the BLM, the Advisory Council on Historic Preservation, interested Indian Tribes, and the FERC. When consulting parties concur that mitigation has been successfully achieved, the action may proceed.</p> <p><i>Implementation Timing:</i> Pre-</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>construction/construction/operation</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Contractor</p> <p><i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-11. Treatment of Unanticipated Discoveries of Cultural Resources and Human Remains. As with all development projects in the State, should unforeseen artifacts become uncovered during site grading, the Applicant is required to adhere to all State of California procedures, including Section 21083.2(i) of the CEQA Statutes and Section 15064.5 of the CEQA Guidelines regarding stoppage of work, handling of discovered materials, and notification of proper authorities to ensure that the construction/operation of the Project would not have an adverse effect on cultural resources. ECE is responsible for addressing action impacts to cultural sites and human remains should they be exposed as a result of ground disturbing activities by ECE or one of its Licensees; erosion control measures, or</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>erosion of any inventoried historic properties, or in the case that resources are exposed in the event of a Project operation emergency.</p> <p><u>Management Activities:</u> Steps that ECE shall follow in the event that unanticipated finds of cultural materials or human remains are made within the Project are contained within the project-specific Plan and Procedures Addressing Unanticipated Discoveries of Cultural Resources and Human Remains, found in Appendix A of the HPMP.</p> <p><u>Performance Standards:</u> ECE shall consult with the California SHPO, BLM, interested Indian Tribes, Riverside County Coroner, as appropriate and depending on the land jurisdiction on which any discoveries are made, and FERC, should human remains be discovered in a non-contemporary context. If ECE discovers contemporary contexts with human remains, local law enforcement agencies and the Riverside County Coroner</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|---|---|--|
| | | <p>shall be consulted.</p> <p><i>Implementation Timing:</i> Grading/earthwork/construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Contractor</p> <p><i>Responsible Agency for verification and enforcement:</i> Project Archeologist/Riverside County Coroner, as required</p> | |
| <p>Impact 3.8-2 Transmission Line and Water Pipeline Crossing of the CRA. This impact is considered <i>potentially significant and subject to the mitigation program</i>. The transmission and water pipelines cross over buried portions of the CRA, which is very likely eligible for the NRHP based on its historical and engineering significance. The CRA is not visible from the surface in this area,</p> | <p><i>Potentially significant and subject to the mitigation program</i></p> | <p>MM CR-1. Protect Known Historic Properties. Of the cultural resources recorded within the Project boundaries (<i>see</i> Table 3.8.4), only the CRA (P-33-6726) is evaluated as potentially eligible for listing under Criterion “A” – broad patterns of history; and Criterion “C” – embodies distinctive characteristics of a type, period, region, or method of construction. No formal determination of eligibility has been made, but the CRA will be treated as potentially eligible.</p> <p><u>Management Activity:</u> Design transmission line and water pipes to avoid direct or</p> | <p>Less than significant</p> |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| however, except for a road and flood control berm. | | <p>indirect impacts to the buried portion of the CRA. Inspect once every 2 years to observe if conditions are stable or if any disturbance or deterioration has occurred.</p> <p>ECE will design transmission tower locations, plan conductor installation procedures, and design water line placements to avoid impacts to this crucial element of southern California's water delivery infrastructure. Consultation with the MWD will occur for that purpose. The CRA is buried in the areas of the Project APE and no impacts to its integrity are anticipated.</p> <ul style="list-style-type: none"> • The inspections will be made by a ground surface level as appropriate. • Digital photographs will be taken and compared with photographs from the previous inspections. • The Project Environmental Coordinator or designee will summarize observations made during inspections every 2 years during construction. This summary will be included in the HPMP Implementation Summary Report (HPMP Implementation Report). ECE will | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>provide a HPMP Implementation Report on a 6-year review cycle after construction, in coordination with California SHPO.</p> <ul style="list-style-type: none"> Although none are presently identified, in the event that interested Indian Tribes identify TCPs in the future during the planning, construction, and/or operation of the Project within the APE, the Project Environmental Coordinator shall direct qualified individuals to conduct additional consultation with the Indian Tribes, BLM, and SHPO to evaluate and document the properties in accordance with National Register Bulletin 38 (Parker and King, 1998). If the properties are determined to be eligible for listing in the NRHP, appropriate measures will be developed to mitigate adverse effects through consultation with the Indian Tribes, BLM, and SHPO. Priority will be given to preservation in place when possible, followed by data recovery, documentation, restoration or other measures as approved by the Tribes, BLM and SHPO. <p><u>Performance Standards:</u> Inspect the CRA</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>in the area of the APE every 2 years during construction.</p> <ul style="list-style-type: none"> • Provide a summary of observations on a 2-year cycle during the construction phase and a 6-year reporting cycle thereafter. • If notable changes are observed in site conditions consult with SHPO to determine if further remedial actions are appropriate. • Conduct appropriate consultation and treatment if TCP are identified in the future. <p><i>Implementation Timing:</i> Engineering design/construction/operation</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator /Contractor</p> <p><i>Responsible Agency for verification and enforcement:</i> FERC</p> <p>MM CR-3. Implement a Historic Properties Management Plan for the Worker Environmental Awareness Program.</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p><u>Management Activity:</u> Implement project-specific education program.</p> <ul style="list-style-type: none"> • A qualified archaeologist will implement a cultural resources element for the Worker Environmental Awareness Program that is tailored to the Eagle Mountain Pumped Storage Project and workforce. This Program will focus on possible discovery and mitigation procedures during the construction phase of the Project as well as preservation obligations of Project staff. • The Program will include a printed handout for all Project personnel and a Power Point presentation or video that all Project personnel will be required to view. • The Program will present concepts of cultural resources management in a simple, understandable format, including a review of preservation laws and sanctions, examples of possible discoveries, and notification procedures in the event of discoveries. These are key elements of the HPMP including the Unanticipated Discoveries Plan and the | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>steps to follow in evaluating potential cultural resources needs that are triggered by proposed construction activities.</p> <ul style="list-style-type: none"> • The Program will include a Monitoring Protocol and Provisions for Enforcement that may be presented to refresh personnel and introduce new staff to cultural resource concepts and Project-specific issues. • Project equipment and vehicle operators will be educated on the importance of staying within Project boundaries and also the prohibitions of going off designated routes of travel such as Eagle Mountain Road or Kaiser Road. <p><i>Implementation Timing:</i> Pre-construction/construction/operation</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Contractor</p> <p><i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-5. Review Effectiveness of the</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>Historic Properties Management Plan.</p> <p><u>Management Activity:</u> Every 6 years, ECE will determine if modifications will improve the effectiveness of the HPMP.</p> <p><u>Performance Standard:</u> Develop recommendations for changes to the HPMP that may be discussed with California SHPO, the BLM, Riverside County, interested Indian Tribes, FERC, and other consulting parties.</p> <p><i>Implementation Timing:</i> Pre-construction/construction/operation</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator /Contractor</p> <p><i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-6. Consult with California SHPO, the BLM, Riverside County, interested Indian Tribes, and FERC.</p> <p><u>Management Activity:</u> Develop a HPMP Implementation Report. The HPMP</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>Implementation Report will be distributed for review according to a 2-year cycle during the construction phase of the Project because cultural resource discoveries and treatments are most likely during that period. Thereafter, in the operation and maintenance phase, the HPMP Implementation Reports will be coordinated with the 6-year cycle of the Licensed Hydropower Recreation Development Report (FERC Form 80). The report will summarize, in table format, all ECE cultural resources consultations and/or surveys performed for Project modifications, activities related to the Erosion Control Plan, or any other activities that have been reviewed due to their potential to result in soil disturbance in areas not previously disturbed. The HPMP Implementation Report will:</p> <ul style="list-style-type: none"> Describe the proposed modifications, the type of cultural survey or other activity performed, the results of the survey or other activity, and actions taken (e.g. SHPO consultation and/or other consultation, mitigation, no action determined appropriate, etc.). | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <ul style="list-style-type: none"> Summarize observations made of historic properties. Include summaries of cultural resource treatments as an update to a HPMP implementation summary table. Report the status of ECE's public interpretation projects. Recommend modifications to the Project HPMP that will improve its implementation if appropriate. Develop a format for the HPMP Implementation Report and its associated Summary Table that will present the cultural resources activities and considerations in which ECE participated over a 2-year reporting cycle during construction and the 6-year reporting cycle thereafter. The HPMP Implementation Report will be provided to California SHPO, BLM, Riverside County, and interested Indian Tribes for a 30-day review and comment period every 6 years in coordination with FERC Form 80. Following a consideration of review comments, ECE will file the HPMP Implementation Report with | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>FERC.</p> <p><i>Implementation Timing:</i> Pre-construction/construction/operation</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Contractor</p> <p><i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-11. Treatment of Unanticipated Discoveries of Cultural Resources and Human Remains. As with all development projects in the State, should unforeseen artifacts become uncovered during site grading, the Applicant is required to adhere to all State of California procedures, including Section 21083.2(i) of the CEQA Statutes and Section 15064.5 of the CEQA Guidelines regarding stoppage of work, handling of discovered materials, and notification of proper authorities to ensure that the construction/operation of the Project would not have an adverse effect on cultural resources. ECE is responsible for addressing action impacts to cultural sites and human</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>remains should they be exposed as a result of ground disturbing activities by ECE or one of its Licensees; erosion control measures, or erosion of any inventoried historic properties, or in the case that resources are exposed in the event of a Project operation emergency.</p> <p><u>Management Activities:</u> Steps that ECE shall follow in the event that unanticipated finds of cultural materials or human remains are made within the Project are contained within the project-specific Plan and Procedures Addressing Unanticipated Discoveries of Cultural Resources and Human Remains, found in Appendix A of the HPMP.</p> <p><u>Performance Standards:</u> ECE shall consult with the California SHPO, BLM, interested Indian Tribes, Riverside County Coroner, as appropriate and depending on the land jurisdiction on which any discoveries are made, and FERC, should human remains be discovered in a non-contemporary context. If ECE discovers contemporary contexts with human remains, local law enforcement</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|---|--|--|
| | | <p>agencies and the Riverside County Coroner shall be consulted.</p> <p><i>Implementation Timing:</i> Grading/earthwork/construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Contractor</p> <p><i>Responsible Agency for verification and enforcement:</i> Project Archeologist/Riverside County Coroner, as required</p> | |
| <p>Impact 3.8-3 Transmission Line Crossing of the Eagle Mountain Railroad. The transmission line crosses over the Eagle Mountain Railroad in two places. A formal significance determination of the rail line remains to be undertaken by the BLM but there have been substantial previous impacts to its integrity and it is unlikely to be found NRHP-eligible.</p> | <p><i>Potentially significant and subject to the mitigation program</i></p> | <p>MM CR-2. Inventory and Evaluate Cultural Resources Within the Kaiser Mine Property. An inventory of this portion of the APE will be undertaken in compliance with Section 106 of the National Historic Preservation Act and according to regulatory procedures provide in 36 CFR 800. The inventory will also include other accessible portions of the APE within the Kaiser property. The entire townsite and associated portions of the railroad will be re-recorded, and the various elements will be considered as contributors to a National Register district.</p> | <p>Less than significant</p> |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p><u>Management Activity:</u> A Work Plan will be developed and executed following issuance of the FERC license and upon gaining legal access to the subject lands. A phased approach will be taken in order to make prudent and well-informed decisions on Section 106 compliance within the Kaiser property. The first phase will be a scoping reconnaissance of the APE within the Kaiser property and the entirety of the Eagle Mountain townsite. Portions of the site have been re-used from 1988 until 2003 for a prison. A high school and residential community has occupied portions of the site until recent years. Today it exists as a mix of abandoned and re-occupied post-war minimal traditional style dwellings, Kaiser operations buildings, modern buildings, ruins, and foundations. Questions concerning what remains of the original townsite plan and integrity of the Eagle Mountain townsite will be assessed to determine whether a district is feasible or warranted and what the scope of a survey should include. This</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>information will be applied to the development of a Work Plan for the recording and evaluation of the site.</p> <ul style="list-style-type: none"> The Work Plan will include a draft historic context and historical information about the footprint and content of the original townsite and its development over time. The context will include a consideration of the Eagle Mountain as a late example of a company town in the American West. This information will be used to develop an approach to the documentation of the site and consideration of whether a potential district may exist. The draft Work Plan will be submitted to SHPO, BLM, and FERC for review, comment, and approval of the survey approach. Updates to DPR 523 forms will be developed for the townsite, mine, and railroad and will be used as the basis for formal evaluations of the townsite, mine, and railroad for listing in the NRHP will be made according to 36 CFR 800 and 36 CFR 60.4. Individual buildings or structures will be documented on DPRb forms. A District Record (DPR 523d) | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>will be completed, if appropriate. Any other resources discovered during survey also will be documented and evaluated. The results will be provided in California Archaeological Resource Management Report format and to the Secretary of the Interior's standards for archaeological reporting.</p> <p><u>Performance Measures:</u></p> <ul style="list-style-type: none"> • SHPO, BLM, and FERC concurrence will be obtained for the determination of NRHP-eligibility of the Eagle Mountain townsite, mine, railroad, and any other documented cultural resources within the Project APE, including consideration for the potential of any resources as contributing elements to a historic district, if evidence exists for one to be present. • If any resources are determined to be historic properties, recommendations will be developed to avoid or mitigate impacts through appropriate treatments in accordance with the Secretary of the Interior's standards. These include in order of preference: project design to | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>avoid direct impacts; moving of standing buildings or structures in the APE to other areas of the townsite or mine so that integrity of setting, feeling, and materials can be retained; or data recovery and documentation.</p> <p><i>Implementation Timing:</i> Pre-construction <i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator <i>Responsible Agencies for verification and enforcement:</i> SHPO/BLM/FERC</p> <p>MM CR-3. Implement a Historic Properties Management Plan for the Worker Environmental Awareness Program.</p> <p><u>Management Activity:</u> Implement project-specific education program.</p> <ul style="list-style-type: none"> • A qualified archaeologist will implement a cultural resources element for the Worker Environmental Awareness Program that is tailored to the Eagle Mountain Pumped Storage Project and workforce. This Program will focus on | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>possible discovery and mitigation procedures during the construction phase of the Project as well as preservation obligations of Project staff.</p> <ul style="list-style-type: none"> • The Program will include a printed handout for all Project personnel and a Power Point presentation or video that all Project personnel will be required to view. • The Program will present concepts of cultural resources management in a simple, understandable format, including a review of preservation laws and sanctions, examples of possible discoveries, and notification procedures in the event of discoveries. These are key elements of the HPMP including the Unanticipated Discoveries Plan and the steps to follow in evaluating potential cultural resources needs that are triggered by proposed construction activities. • The Program will include a Monitoring Protocol and Provisions for Enforcement that may be presented to refresh personnel and introduce new staff to cultural resource concepts and Project-specific issues. | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <ul style="list-style-type: none"> Project equipment and vehicle operators will be educated on the importance of staying within Project boundaries and also the prohibitions of going off designated routes of travel such as Eagle Mountain Road or Kaiser Road. <p><i>Implementation Timing:</i> Pre-construction/construction/operation</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Contractor</p> <p><i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-4. Offer Opportunities for Public Interpretation. Unlike other hydroelectric projects where public access and recreational opportunities may be afforded, safety concerns and proximity to a proposed landfill project preclude offering public access within the core of the Pumped Storage Project boundaries. Opportunities for public interpretation are therefore extremely limited. Some appropriate signage that interprets the history of the area already</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>exists, including the 2009 E Clampus Vitus monument on Eagle Mountain Road for the 36th Evacuation Hospital associated with the World War II DTC and a Riverside County historical marker that acknowledges the Iron Chief, Eagle Mountain, and other mines of the area. The DTC/CAMA is also thoroughly and professionally interpreted at the General Patton Memorial Museum in Chiriaco Summit, located off of I-10 between Indio and Desert Center. The prehistory and Native American cultural traditions of the region are interpreted at the Agua Caliente Cultural Museum in Palm Springs, the Malki Museum on the Morongo Indian Reservation, the Palm Spring Desert Museum, the Coachella Valley Museum and Cultural Center, and at Joshua Tree National Park.</p> <p><u>Management Activity:</u> Develop informative signage that will be available to the public.</p> <p>ECE will develop and install one weather-tolerant sign that will be placed outside the main gate of the facility. The sign will provide information about the prehistory and</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>history of the general area, Native American groups who inhabited the area, and background on the functioning of the Project. Local museums and historical monuments will also be identified.</p> <p>The public interpretive sign will be developed in coordination with the development of the HPMP and will be installed within 1 year of completion of the boundary fence.</p> <p><i>Implementation Timing:</i> Pre-construction/construction/operation</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/ Contractor</p> <p><i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-5. Review Effectiveness of the Historic Properties Management Plan.</p> <p><u>Management Activity:</u> Every 6 years, ECE will determine if modifications will improve the effectiveness of the HPMP.</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p><u>Performance Standard:</u> Develop recommendations for changes to the HPMP that may be discussed with California SHPO, the BLM, Riverside County, interested Indian Tribes, FERC, and other consulting parties.</p> <p><i>Implementation Timing:</i> Pre-construction/construction/operation</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator /Contractor</p> <p><i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-6. Consult with California SHPO, the BLM, Riverside County, interested Indian Tribes, and FERC.</p> <p><u>Management Activity:</u> Develop a HPMP Implementation Report. The HPMP Implementation Report will be distributed for review according to a 2-year cycle during the construction phase of the Project because cultural resource discoveries and treatments are most likely during that period. Thereafter,</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>in the operation and maintenance phase, the HPMP Implementation Reports will be coordinated with the 6-year cycle of the Licensed Hydropower Recreation Development Report (FERC Form 80). The report will summarize, in table format, all ECE cultural resources consultations and/or surveys performed for Project modifications, activities related to the Erosion Control Plan, or any other activities that have been reviewed due to their potential to result in soil disturbance in areas not previously disturbed. The HPMP Implementation Report will:</p> <ul style="list-style-type: none"> • Describe the proposed modifications, the type of cultural survey or other activity performed, the results of the survey or other activity, and actions taken (e.g. SHPO consultation and/or other consultation, mitigation, no action determined appropriate, etc.). • Summarize observations made of historic properties. • Include summaries of cultural resource treatments as an update to a HPMP | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>implementation summary table.</p> <ul style="list-style-type: none"> • Report the status of ECE's public interpretation projects. • Recommend modifications to the Project HPMP that will improve its implementation if appropriate. <p>Develop a format for the HPMP Implementation Report and its associated Summary Table that will present the cultural resources activities and considerations in which ECE participated over a 2-year reporting cycle during construction and the 6-year reporting cycle thereafter. The HPMP Implementation Report will be provided to California SHPO, BLM, Riverside County, and interested Indian Tribes for a 30-day review and comment period every 6 years in coordination with FERC Form 80. Following a consideration of review comments, ECE will file the HPMP Implementation Report with FERC.</p> <p><i>Implementation Timing: Pre-construction/construction/operation</i> <i>Party responsible for implementation,</i></p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p><i>monitoring and reporting:</i> Environmental Coordinator/Contractor</p> <p><i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-7. Class I Investigation. In the event that Project activities would extend beyond the areas previously surveyed, then background literature will be reviewed to identify the location, character, and significance of known cultural resources in the area of a proposed action and the potential of the proposed action to affect historic properties. The Class I investigation will rely on information contained within ECE's Project archives. Should these data not prove sufficient, the Project Environmental Coordinator may determine that additional documentation is necessary to address a particular action under consideration that extends beyond the 1-mile buffer of the already completed Class I investigation. The most important source of Class I literature review is the EIC at the University of California, Riverside.</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p><u>Management Activity:</u> compare proposed Project location with Cultural Resources Management Maps.</p> <ul style="list-style-type: none"> • Determine if the Project area is located within 100 feet of a potentially significant previously recorded archeological site. • Determine if Project area has been characterized as actively eroding or previously disturbed by other ground-disturbing activity (e.g., by machine excavation or underground utility line). • Determine if the area has been previously surveyed for cultural resources. <p><u>Performance Standard:</u> based on the results of the above-noted Management Activity.</p> <ul style="list-style-type: none"> • Project area is located within 100 feet of a previously recorded potentially significant archeological site. Delay Project pending SHPO consultation and possible follow-up studies by a Secretary of the Interior-qualified professional archaeologist. | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <ul style="list-style-type: none"> Previous ground-disturbing activity may be documented or observed therefore no Project effect on cultural resources expected. Project may proceed. ECE includes Project description and permit considerations in the HPMP Implementation Report that will be distributed to the California SHPO, the BLM, Riverside County, interested Indian Tribes and FERC on a 2-year cycle during the construction phase and on a 6-year review cycle thereafter in coordination with Form 80. <p><i>Implementation Timing:</i> Pre-construction/construction/operation <i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Contractor <i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-8. Class III Cultural Resources Field Investigation. Any modifications or additions to the APE in previously unsurveyed and undisturbed areas will require a Class III survey in compliance with Section 106 of the National Historic</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>Preservation Act and according to 36 CFR 800. ECE will conduct an on-the-ground inventory of the APE for a proposed action that confirms the presence of known cultural resources and that may result in identification of previously unrecorded cultural resources. A Class III investigation may involve the excavation of shovel tests placed at 50-foot intervals within the APE or implementation of an alternative investigative strategy approved by ECE's Project Environmental Coordinator and the California SHPO. Any investigations on easements through BLM land require a Fieldwork Authorization to a BLM permit-holding archaeologist in compliance with the Federal Land Policy and Management Act of 1976, as amended (PL 94-579).</p> <p><u>Management Activity:</u> Consult with BLM or other land holding agencies as to what Section 106 or Section 110 compliance needs may still be required and implement as specified. Engage services of a qualified archaeologist to brief the Project Environmental Coordinator on correct</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>scoping and protocols and conduct Class III survey such as a walkover survey and/or systematic subsurface shovel testing (e.g. perform an identification level archeological field survey.) The actual scope of work will depend upon the proposed Project location and size of the proposed activity as well as BLM requirements on BLM land. The archaeologist will perform the Class III survey and prepare a report that describes the investigation and results. ECE will forward this report to the California SHPO, interested Indian Tribes and FERC. All new reports and site forms will be submitted to the EIC, University of California, Riverside.</p> <p><u>Performance Standards:</u> Review results of the Class III Survey and the associated recommendations.</p> <ul style="list-style-type: none"> • If the Class III survey did not locate cultural resources, then the proposed action may proceed following consultation with BLM and SHPO. • If the Class III survey locates cultural resources that the archaeologist recommends as not potentially | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>significant, then the ECE Project Environmental Coordinator consults with SHPO. If consensus is reached on the recommendation, then the action may proceed. If SHPO does not concur, then the resource is treated as potentially significant.</p> <ul style="list-style-type: none"> • If the Class III survey locates cultural resources that the archaeologist recommends as potentially significant (i.e. demonstrates good integrity, identifiable limits, structure, function, research potential, and cultural/historical context – see definition under 4.2.3 below), then ECE's Project Environmental Coordinator consults with SHPO. If SHPO concurs with evaluation, then a Testing Phase investigation is recommended unless action may be designed to avoid the resource. Alternative Project locations will be reviewed. <p><i>Implementation Timing:</i> Pre-construction/construction/operation</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator /Contractor</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p><i>Responsible Agencies for verification and enforcement: FERC/SHPO</i></p> <p>MM CR-9. Testing Phase Cultural Resources Field Investigation. Conduct limited archeological excavations and analyses, or other investigations such as documentation of structures, to assess the National Register eligibility of individual resources and an assessment of the Project effects on historic properties.</p> <p>The purpose of this measure is to determine if a cultural resource recommended as potentially significant and that cannot be avoided by a proposed action, qualifies as significant.</p> <p>The criteria for sites eligible to the NRHP may be found at 36 CFR 60.4. A site is eligible to the NRHP if it contains qualities that are significant in American history, architecture, archaeology, engineering, and culture and possesses integrity of location, design, setting, materials, workmanship, feeling, and association and:</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <ul style="list-style-type: none"> • is associated with events that have made a significant contribution to the broad patterns of history • is associated with the lives of persons significant in the past • embodies the distinctive characteristics of a type, period or method of construction; or represents a significant and distinguishable entity whose components may lack individual distinction or • has yielded, or may be likely to yield, information important in prehistory or history <p><u>Management Activity:</u> Engage services of a qualified archaeologist to collect data sufficient to determine if a cultural resource qualifies as significant. If the site is located on BLM land, an excavation permit is required for testing programs that remove more than one cubic meter of soil from an individual site, in compliance with the Archaeological Resources Protection Act of 1979, as Amended (PL 96-95). Archaeological Resources Protection Act</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>permits require submittal of a Treatment Plan/Research Design for which BLM is required to consult with SHPO and interested Indian Tribes prior to approving field investigation. The archaeologist will perform a Testing Phase investigation and prepare a report that describes the Testing Phase investigation and results. ECE will forward this report to BLM for consultation with SHPO, interested Indian Tribes and FERC.</p> <p><u>Performance Standards:</u> Review results of the Testing Phase Report and the associated recommendations, and consult with BLM and SHPO.</p> <ul style="list-style-type: none"> • If the Testing Phase investigation indicates that the cultural resource does not qualify as significant, Project may proceed following consultation with the California SHPO. • If the Testing Phase investigation indicates that the cultural resource qualifies as significant, ECE Manager consults with BLM and SHPO. If SHPO concurs with the recommendation that the cultural resource is potentially | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>eligible for listing in the NRHP and if the Project is not amended to avoid the resource, consultation with SHPO will continue. A qualified archaeologist will develop the scope of work that will serve as mitigation of Project effects. ECE Manager will consult with the SHPO and gain consensus on the appropriate mitigation (may involve further Data Recovery field investigation, monitoring, or another alternative treatment measure).</p> <p><i>Implementation Timing:</i> Pre-construction/construction/operation</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Contractor</p> <p><i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-10. Data Recovery or Alternative Mitigation. ECE will investigate activities designed to mitigate effects upon a historic property that an action will affect. This may include data recovery, documentation, restoration or other measures. Such investigations will be</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>preceded by development of an action-specific Memorandum of Agreement that has been approved by ECE, SHPO, the BLM, the Advisory Council on Historic Preservation, FERC, and, as appropriate, interested Indian Tribes</p> <p><u>Management Activity:</u> ECE Project Environmental Coordinator works with Project proponent and qualified archaeologist and consults with the SHPO to avoid Project adverse impacts, minimize Project adverse effects through possible design modifications and or through data recovery or an alternative mutually agreed-upon method. If NRHP-eligible resource may not be avoided, ECE's archaeologist develops a Memorandum of Agreement (MOA) and ECE consults with the California SHPO, the BLM, the Advisory Council on Historic Preservation, and interested Indian Tribes, as appropriate and files the MOA with FERC for approval. When an appropriate MOA is agreed upon, the archaeologist will perform the Data Recovery mitigation and prepare a report that describes the mitigation and the results. ECE</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>will forward this report to the consulting parties.</p> <p><u>Performance Standard:</u> Review results of the data recovery or other mitigation and consult with SHPO, the BLM, the Advisory Council on Historic Preservation, interested Indian Tribes, and the FERC. When consulting parties concur that mitigation has been successfully achieved, the action may proceed.</p> <p><i>Implementation Timing:</i> Pre-construction/construction/operation</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Contractor</p> <p><i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-11. Treatment of Unanticipated Discoveries of Cultural Resources and Human Remains. As with all development projects in the State, should unforeseen artifacts become uncovered during site grading, the Applicant is required to adhere</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>to all State of California procedures, including Section 21083.2(i) of the CEQA Statutes and Section 15064.5 of the CEQA Guidelines regarding stoppage of work, handling of discovered materials, and notification of proper authorities to ensure that the construction/operation of the Project would not have an adverse effect on cultural resources. ECE is responsible for addressing action impacts to cultural sites and human remains should they be exposed as a result of ground disturbing activities by ECE or one of its Licensees; erosion control measures, or erosion of any inventoried historic properties, or in the case that resources are exposed in the event of a Project operation emergency.</p> <p><u>Management Activities:</u> Steps that ECE shall follow in the event that unanticipated finds of cultural materials or human remains are made within the Project are contained within the project-specific Plan and Procedures Addressing Unanticipated Discoveries of Cultural Resources and Human Remains, found in Appendix A of the</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|---|---|--|
| | | <p>HPMP.</p> <p>Performance Standards: ECE shall consult with the California SHPO, BLM, interested Indian Tribes, Riverside County Coroner, as appropriate and depending on the land jurisdiction on which any discoveries are made, and FERC, should human remains be discovered in a non-contemporary context. If ECE discovers contemporary contexts with human remains, local law enforcement agencies and the Riverside County Coroner shall be consulted.</p> <p><i>Implementation Timing:</i> Grading/earthwork/construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Contractor</p> <p><i>Responsible Agency for verification and enforcement:</i> Project Archeologist/Riverside County Coroner, as required</p> | |
| Impact 3.8-4 Central Project Site. Because of the large degree of disturbance | <i>Potentially significant and subject to the</i> | MM CR-2. Inventory and Evaluate Cultural Resources Within the Kaiser Mine Property. An inventory of this portion | Less than significant |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|---------------------------|--|--|
| on the site, it is unlikely that significant pre-historic cultural resources remaining on the site. However, there is the potential for historic resources | <i>mitigation program</i> | of the APE will be undertaken in compliance with Section 106 of the National Historic Preservation Act and according to regulatory procedures provide in 36 CFR 800. The inventory will also include other accessible portions of the APE within the Kaiser property. The entire townsite and associated portions of the railroad will be re-recorded, and the various elements will be considered as contributors to a National Register district. <u>Management Activity:</u> A Work Plan will be developed and executed following issuance of the FERC license and upon gaining legal access to the subject lands. A phased approach will be taken in order to make prudent and well-informed decisions on Section 106 compliance within the Kaiser property. The first phase will be a scoping reconnaissance of the APE within the Kaiser property and the entirety of the Eagle Mountain townsite. Portions of the site have been re-used from 1988 until 2003 for a prison. A high school and residential community has occupied portions of the site until recent years. Today it exists as a mix of | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>abandoned and re-occupied post-war minimal traditional style dwellings, Kaiser operations buildings, modern buildings, ruins, and foundations. Questions concerning what remains of the original townsite plan and integrity of the Eagle Mountain townsite will be assessed to determine whether a district is feasible or warranted and what the scope of a survey should include. This information will be applied to the development of a Work Plan for the recording and evaluation of the site.</p> <ul style="list-style-type: none"> • The Work Plan will include a draft historic context and historical information about the footprint and content of the original townsite and its development over time. The context will include a consideration of the Eagle Mountain as a late example of a company town in the American West. This information will be used to develop an approach to the documentation of the site and consideration of whether a potential district may exist. The draft Work Plan will be submitted to SHPO, BLM, and FERC for review, comment, and | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>approval of the survey approach.</p> <ul style="list-style-type: none"> Updates to DPR 523 forms will be developed for the townsite, mine, and railroad and will be used as the basis for formal evaluations of the townsite, mine, and railroad for listing in the NRHP will be made according to 36 CFR 800 and 36 CFR 60.4. Individual buildings or structures will be documented on DPRb forms. A District Record (DPR 523d) will be completed, if appropriate. Any other resources discovered during survey also will be documented and evaluated. The results will be provided in California Archaeological Resource Management Report format and to the Secretary of the Interior's standards for archaeological reporting. <p><u>Performance Measures:</u></p> <ul style="list-style-type: none"> SHPO, BLM, and FERC concurrence will be obtained for the determination of NRHP-eligibility of the Eagle Mountain townsite, mine, railroad, and any other documented cultural resources within the Project APE, including consideration for the potential of any resources as contributing elements to a historic | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>district, if evidence exists for one to be present.</p> <ul style="list-style-type: none"> If any resources are determined to be historic properties, recommendations will be developed to avoid or mitigate impacts through appropriate treatments in accordance with the Secretary of the Interior's standards. These include in order of preference: project design to avoid direct impacts; moving of standing buildings or structures in the APE to other areas of the townsite or mine so that integrity of setting, feeling, and materials can be retained; or data recovery and documentation. <p><i>Implementation Timing:</i> Pre-construction <i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator <i>Responsible Agencies for verification and enforcement:</i> SHPO/BLM/FERC</p> <p>MM CR-3. Implement a Historic Properties Management Plan for the Worker Environmental Awareness Program.</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p><u>Management Activity:</u> Implement project-specific education program.</p> <ul style="list-style-type: none"> • A qualified archaeologist will implement a cultural resources element for the Worker Environmental Awareness Program that is tailored to the Eagle Mountain Pumped Storage Project and workforce. This Program will focus on possible discovery and mitigation procedures during the construction phase of the Project as well as preservation obligations of Project staff. • The Program will include a printed handout for all Project personnel and a Power Point presentation or video that all Project personnel will be required to view. • The Program will present concepts of cultural resources management in a simple, understandable format, including a review of preservation laws and sanctions, examples of possible discoveries, and notification procedures in the event of discoveries. These are key elements of the HPMP including the Unanticipated Discoveries Plan and the | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>steps to follow in evaluating potential cultural resources needs that are triggered by proposed construction activities.</p> <ul style="list-style-type: none"> • The Program will include a Monitoring Protocol and Provisions for Enforcement that may be presented to refresh personnel and introduce new staff to cultural resource concepts and Project-specific issues. • Project equipment and vehicle operators will be educated on the importance of staying within Project boundaries and also the prohibitions of going off designated routes of travel such as Eagle Mountain Road or Kaiser Road. <p><i>Implementation Timing:</i> Pre-construction/construction/operation</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Contractor</p> <p><i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-4. Offer Opportunities for Public Interpretation. Unlike other</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | hydroelectric projects where public access and recreational opportunities may be afforded, safety concerns and proximity to a proposed landfill project preclude offering public access within the core of the Pumped Storage Project boundaries. Opportunities for public interpretation are therefore extremely limited. Some appropriate signage that interprets the history of the area already exists, including the 2009 E Clampus Vitus monument on Eagle Mountain Road for the 36 th Evacuation Hospital associated with the World War II DTC and a Riverside County historical marker that acknowledges the Iron Chief, Eagle Mountain, and other mines of the area. The DTC/CAMA is also thoroughly and professionally interpreted at the General Patton Memorial Museum in Chiriaco Summit, located off of I-10 between Indio and Desert Center. The prehistory and Native American cultural traditions of the region are interpreted at the Agua Caliente Cultural Museum in Palm Springs, the Malki Museum on the Morongo Indian Reservation, the Palm Spring Desert Museum, the Coachella Valley Museum and Cultural Center, and at | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>Joshua Tree National Park.</p> <p><u>Management Activity:</u> Develop informative signage that will be available to the public.</p> <p>ECE will develop and install one weather-tolerant sign that will be placed outside the main gate of the facility. The sign will provide information about the prehistory and history of the general area, Native American groups who inhabited the area, and background on the functioning of the Project. Local museums and historical monuments will also be identified.</p> <p>The public interpretive sign will be developed in coordination with the development of the HPMP and will be installed within 1 year of completion of the boundary fence.</p> <p><i>Implementation Timing:</i> Pre-construction/construction/operation</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/ Contractor</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p><i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-5. Review Effectiveness of the Historic Properties Management Plan.</p> <p><u>Management Activity:</u> Every 6 years, ECE will determine if modifications will improve the effectiveness of the HPMP.</p> <p><u>Performance Standard:</u> Develop recommendations for changes to the HPMP that may be discussed with California SHPO, the BLM, Riverside County, interested Indian Tribes, FERC, and other consulting parties.</p> <p><i>Implementation Timing:</i> Pre-construction/construction/operation</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator /Contractor</p> <p><i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-6. Consult with California SHPO, the BLM, Riverside County,</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>interested Indian Tribes, and FERC.</p> <p><u>Management Activity:</u> Develop a HPMP Implementation Report. The HPMP Implementation Report will be distributed for review according to a 2-year cycle during the construction phase of the Project because cultural resource discoveries and treatments are most likely during that period. Thereafter, in the operation and maintenance phase, the HPMP Implementation Reports will be coordinated with the 6-year cycle of the Licensed Hydropower Recreation Development Report (FERC Form 80). The report will summarize, in table format, all ECE cultural resources consultations and/or surveys performed for Project modifications, activities related to the Erosion Control Plan, or any other activities that have been reviewed due to their potential to result in soil disturbance in areas not previously disturbed. The HPMP Implementation Report will:</p> <ul style="list-style-type: none"> Describe the proposed modifications, the type of cultural survey or other activity performed, the results of the survey or | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>other activity, and actions taken (e.g. SHPO consultation and/or other consultation, mitigation, no action determined appropriate, etc.).</p> <ul style="list-style-type: none"> • Summarize observations made of historic properties. • Include summaries of cultural resource treatments as an update to a HPMP implementation summary table. • Report the status of ECE's public interpretation projects. • Recommend modifications to the Project HPMP that will improve its implementation if appropriate. • Develop a format for the HPMP Implementation Report and its associated Summary Table that will present the cultural resources activities and considerations in which ECE participated over a 2-year reporting cycle during construction and the 6-year reporting cycle thereafter. The HPMP Implementation Report will be provided to California SHPO, BLM, Riverside County, and interested Indian Tribes for | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>a 30-day review and comment period every 6 years in coordination with FERC Form 80. Following a consideration of review comments, ECE will file the HPMP Implementation Report with FERC.</p> <p><i>Implementation Timing:</i> Pre-construction/construction/operation <i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Contractor <i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-7. Class I Investigation. In the event that Project activities would extend beyond the areas previously surveyed, then background literature will be reviewed to identify the location, character, and significance of known cultural resources in the area of a proposed action and the potential of the proposed action to affect historic properties. The Class I investigation will rely on information contained within ECE's Project archives. Should these data</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>not prove sufficient, the Project Environmental Coordinator may determine that additional documentation is necessary to address a particular action under consideration that extends beyond the 1-mile buffer of the already completed Class I investigation. The most important source of Class I literature review is the EIC at the University of California, Riverside.</p> <p><u>Management Activity:</u> compare proposed Project location with Cultural Resources Management Maps.</p> <ul style="list-style-type: none"> • Determine if the Project area is located within 100 feet of a potentially significant previously recorded archeological site. • Determine if Project area has been characterized as actively eroding or previously disturbed by other ground-disturbing activity (e.g., by machine excavation or underground utility line). • Determine if the area has been previously surveyed for cultural resources. <p><u>Performance Standard:</u> based on the</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>results of the above-noted Management Activity.</p> <ul style="list-style-type: none"> • Project area is located within 100 feet of a previously recorded potentially significant archeological site. Delay Project pending SHPO consultation and possible follow-up studies by a Secretary of the Interior-qualified professional archaeologist. • Previous ground-disturbing activity may be documented or observed therefore no Project effect on cultural resources expected. Project may proceed. ECE includes Project description and permit considerations in the HPMP Implementation Report that will be distributed to the California SHPO, the BLM, Riverside County, interested Indian Tribes and FERC on a 2-year cycle during the construction phase and on a 6-year review cycle thereafter in coordination with Form 80. <p><i>Implementation Timing:</i> Pre-construction/construction/operation <i>Party responsible for implementation, monitoring and reporting:</i> Environmental</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>Coordinator/Contractor</p> <p><i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-8. Class III Cultural Resources Field Investigation. Any modifications or additions to the APE in previously unsurveyed and undisturbed areas will require a Class III survey in compliance with Section 106 of the National Historic Preservation Act and according to 36 CFR 800. ECE will conduct an on-the-ground inventory of the APE for a proposed action that confirms the presence of known cultural resources and that may result in identification of previously unrecorded cultural resources. A Class III investigation may involve the excavation of shovel tests placed at 50-foot intervals within the APE or implementation of an alternative investigative strategy approved by ECE's Project Environmental Coordinator and the California SHPO. Any investigations on easements through BLM land require a Fieldwork Authorization to a BLM permit-holding archaeologist in compliance with the Federal Land Policy and</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>Management Act of 1976, as amended (PL 94-579).</p> <p><u>Management Activity:</u> Consult with BLM or other land holding agencies as to what Section 106 or Section 110 compliance needs may still be required and implement as specified. Engage services of a qualified archaeologist to brief the Project Environmental Coordinator on correct scoping and protocols and conduct Class III survey such as a walkover survey and/or systematic subsurface shovel testing (e.g. perform an identification level archeological field survey.) The actual scope of work will depend upon the proposed Project location and size of the proposed activity as well as BLM requirements on BLM land. The archaeologist will perform the Class III survey and prepare a report that describes the investigation and results. ECE will forward this report to the California SHPO, interested Indian Tribes and FERC. All new reports and site forms will be submitted to the EIC, University of California, Riverside.</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p><u>Performance Standards:</u> Review results of the Class III Survey and the associated recommendations.</p> <ul style="list-style-type: none"> • If the Class III survey did not locate cultural resources, then the proposed action may proceed following consultation with BLM and SHPO. • If the Class III survey locates cultural resources that the archaeologist recommends as not potentially significant, then the ECE Project Environmental Coordinator consults with SHPO. If consensus is reached on the recommendation, then the action may proceed. If SHPO does not concur, then the resource is treated as potentially significant. • If the Class III survey locates cultural resources that the archaeologist recommends as potentially significant (i.e. demonstrates good integrity, identifiable limits, structure, function, research potential, and cultural/historical context – see definition under 4.2.3 below), then ECE's Project Environmental Coordinator consults with SHPO. If SHPO concurs with evaluation, | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>then a Testing Phase investigation is recommended unless action may be designed to avoid the resource. Alternative Project locations will be reviewed.</p> <p><i>Implementation Timing:</i> Pre-construction/construction/operation</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator /Contractor</p> <p><i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-9. Testing Phase Cultural Resources Field Investigation. Conduct limited archeological excavations and analyses, or other investigations such as documentation of structures, to assess the National Register eligibility of individual resources and an assessment of the Project effects on historic properties.</p> <p>The purpose of this measure is to determine if a cultural resource recommended as potentially significant and that cannot be avoided by a proposed action, qualifies as</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>significant.</p> <p>The criteria for sites eligible to the NRHP may be found at 36 CFR 60.4. A site is eligible to the NRHP if it contains qualities that are significant in American history, architecture, archaeology, engineering, and culture and possesses integrity of location, design, setting, materials, workmanship, feeling, and association and:</p> <ul style="list-style-type: none"> • is associated with events that have made a significant contribution to the broad patterns of history • is associated with the lives of persons significant in the past • embodies the distinctive characteristics of a type, period or method of construction; or represents a significant and distinguishable entity whose components may lack individual distinction or • has yielded, or may be likely to yield, information important in prehistory or history <p><u>Management Activity:</u> Engage services of a</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>qualified archaeologist to collect data sufficient to determine if a cultural resource qualifies as significant. If the site is located on BLM land, an excavation permit is required for testing programs that remove more than one cubic meter of soil from an individual site, in compliance with the Archaeological Resources Protection Act of 1979, as Amended (PL 96-95).</p> <p>Archaeological Resources Protection Act permits require submittal of a Treatment Plan/Research Design for which BLM is required to consult with SHPO and interested Indian Tribes prior to approving field investigation. The archaeologist will perform a Testing Phase investigation and prepare a report that describes the Testing Phase investigation and results. ECE will forward this report to BLM for consultation with SHPO, interested Indian Tribes and FERC.</p> <p><u>Performance Standards:</u> Review results of the Testing Phase Report and the associated recommendations, and consult with BLM and SHPO.</p> <ul style="list-style-type: none"> • If the Testing Phase investigation | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>indicates that the cultural resource does not qualify as significant, Project may proceed following consultation with the California SHPO.</p> <ul style="list-style-type: none"> If the Testing Phase investigation indicates that the cultural resource qualifies as significant, ECE Manager consults with BLM and SHPO. If SHPO concurs with the recommendation that the cultural resource is potentially eligible for listing in the NRHP and if the Project is not amended to avoid the resource, consultation with SHPO will continue. A qualified archaeologist will develop the scope of work that will serve as mitigation of Project effects. ECE Manager will consult with the SHPO and gain consensus on the appropriate mitigation (may involve further Data Recovery field investigation, monitoring, or another alternative treatment measure). <p><i>Implementation Timing:</i> Pre-construction/construction/operation</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Contractor</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p><i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-10. Data Recovery or Alternative Mitigation. ECE will investigate activities designed to mitigate effects upon a historic property that an action will affect. This may include data recovery, documentation, restoration or other measures. Such investigations will be preceded by development of an action-specific Memorandum of Agreement that has been approved by ECE, SHPO, the BLM, the Advisory Council on Historic Preservation, FERC, and, as appropriate, interested Indian Tribes</p> <p><u>Management Activity:</u> ECE Project Environmental Coordinator works with Project proponent and qualified archaeologist and consults with the SHPO to avoid Project adverse impacts, minimize Project adverse effects through possible design modifications and or through data recovery or an alternative mutually agreed-upon method. If NRHP-eligible resource may not be avoided, ECE's</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>archaeologist develops a Memorandum of Agreement (MOA) and ECE consults with the California SHPO, the BLM, the Advisory Council on Historic Preservation, and interested Indian Tribes, as appropriate and files the MOA with FERC for approval. When an appropriate MOA is agreed upon, the archaeologist will perform the Data Recovery mitigation and prepare a report that describes the mitigation and the results. ECE will forward this report to the consulting parties.</p> <p><u>Performance Standard:</u> Review results of the data recovery or other mitigation and consult with SHPO, the BLM, the Advisory Council on Historic Preservation, interested Indian Tribes, and the FERC. When consulting parties concur that mitigation has been successfully achieved, the action may proceed.</p> <p><i>Implementation Timing:</i> Pre-construction/construction/operation</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>Coordinator/Contractor</p> <p><i>Responsible Agencies for verification and enforcement: FERC/SHPO</i></p> <p>MM CR-11. Treatment of Unanticipated Discoveries of Cultural Resources and Human Remains. As with all development projects in the State, should unforeseen artifacts become uncovered during site grading, the Applicant is required to adhere to all State of California procedures, including Section 21083.2(i) of the CEQA Statutes and Section 15064.5 of the CEQA Guidelines regarding stoppage of work, handling of discovered materials, and notification of proper authorities to ensure that the construction/operation of the Project would not have an adverse effect on cultural resources. ECE is responsible for addressing action impacts to cultural sites and human remains should they be exposed as a result of ground disturbing activities by ECE or one of its Licensees; erosion control measures, or erosion of any inventoried historic properties, or in the case that resources are exposed in</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>the event of a Project operation emergency.</p> <p><u>Management Activities:</u> Steps that ECE shall follow in the event that unanticipated finds of cultural materials or human remains are made within the Project are contained within the project-specific Plan and Procedures Addressing Unanticipated Discoveries of Cultural Resources and Human Remains, found in Appendix A of the HPMP.</p> <p><u>Performance Standards:</u> ECE shall consult with the California SHPO, BLM, interested Indian Tribes, Riverside County Coroner, as appropriate and depending on the land jurisdiction on which any discoveries are made, and FERC, should human remains be discovered in a non-contemporary context. If ECE discovers contemporary contexts with human remains, local law enforcement agencies and the Riverside County Coroner shall be consulted.</p> <p><i>Implementation Timing:</i> Grading/earthwork/construction</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|---|---|--|
| | | <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Contractor</p> <p><i>Responsible Agency for verification and enforcement:</i> Project Archeologist/Riverside County Coroner, as required</p> | |
| <p>Impact 3.8-5 Unknown / Buried Cultural Resources. The only substantial prehistoric and historic sites identified in either the Class I inventory or Class III survey within the study corridor are located outside of the Project boundaries or APE. The Project involves grading and excavation for several Project features. In the event that any unknown (remaining) cultural resources are found, the mitigation program would be triggered.</p> | <p><i>Potentially significant and subject to the mitigation program</i></p> | <p>MM CR-2. Inventory and Evaluate Cultural Resources Within the Kaiser Mine Property. An inventory of this portion of the APE will be undertaken in compliance with Section 106 of the National Historic Preservation Act and according to regulatory procedures provide in 36 CFR 800. The inventory will also include other accessible portions of the APE within the Kaiser property. The entire townsite and associated portions of the railroad will be re-recorded, and the various elements will be considered as contributors to a National Register district.</p> <p><u>Management Activity:</u> A Work Plan will be developed and executed following issuance of the FERC license and upon gaining legal access to the subject lands. A phased approach will be taken in order to make</p> | <p>Less than significant</p> |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>prudent and well-informed decisions on Section 106 compliance within the Kaiser property. The first phase will be a scoping reconnaissance of the APE within the Kaiser property and the entirety of the Eagle Mountain townsite. Portions of the site have been re-used from 1988 until 2003 for a prison. A high school and residential community has occupied portions of the site until recent years. Today it exists as a mix of abandoned and re-occupied post-war minimal traditional style dwellings, Kaiser operations buildings, modern buildings, ruins, and foundations. Questions concerning what remains of the original townsite plan and integrity of the Eagle Mountain townsite will be assessed to determine whether a district is feasible or warranted and what the scope of a survey should include. This information will be applied to the development of a Work Plan for the recording and evaluation of the site.</p> <ul style="list-style-type: none"> The Work Plan will include a draft historic context and historical information about the footprint and content of the original townsite and its | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>development over time. The context will include a consideration of the Eagle Mountain as a late example of a company town in the American West. This information will be used to develop an approach to the documentation of the site and consideration of whether a potential district may exist. The draft Work Plan will be submitted to SHPO, BLM, and FERC for review, comment, and approval of the survey approach.</p> <ul style="list-style-type: none"> • Updates to DPR 523 forms will be developed for the townsite, mine, and railroad and will be used as the basis for formal evaluations of the townsite, mine, and railroad for listing in the NRHP will be made according to 36 CFR 800 and 36 CFR 60.4. Individual buildings or structures will be documented on DPRb forms. A District Record (DPR 523d) will be completed, if appropriate. Any other resources discovered during survey also will be documented and evaluated. The results will be provided in California Archaeological Resource Management Report format and to the Secretary of the Interior's standards for archaeological reporting. | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p><u>Performance Measures:</u></p> <ul style="list-style-type: none"> • SHPO, BLM, and FERC concurrence will be obtained for the determination of NRHP-eligibility of the Eagle Mountain townsite, mine, railroad, and any other documented cultural resources within the Project APE, including consideration for the potential of any resources as contributing elements to a historic district, if evidence exists for one to be present. • If any resources are determined to be historic properties, recommendations will be developed to avoid or mitigate impacts through appropriate treatments in accordance with the Secretary of the Interior's standards. These include in order of preference: project design to avoid direct impacts; moving of standing buildings or structures in the APE to other areas of the townsite or mine so that integrity of setting, feeling, and materials can be retained; or data recovery and documentation. <p><i>Implementation Timing:</i> Pre-construction <i>Party responsible for implementation,</i> <i>monitoring and reporting:</i> Environmental</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>Coordinator</p> <p><i>Responsible Agencies for verification and enforcement: SHPO/BLM/FERC</i></p> <p>MM CR-3. Implement a Historic Properties Management Plan for the Worker Environmental Awareness Program.</p> <p><u>Management Activity:</u> Implement project-specific education program.</p> <ul style="list-style-type: none"> • A qualified archaeologist will implement a cultural resources element for the Worker Environmental Awareness Program that is tailored to the Eagle Mountain Pumped Storage Project and workforce. This Program will focus on possible discovery and mitigation procedures during the construction phase of the Project as well as preservation obligations of Project staff. • The Program will include a printed handout for all Project personnel and a Power Point presentation or video that all Project personnel will be required to view. | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <ul style="list-style-type: none"> The Program will present concepts of cultural resources management in a simple, understandable format, including a review of preservation laws and sanctions, examples of possible discoveries, and notification procedures in the event of discoveries. These are key elements of the HPMP including the Unanticipated Discoveries Plan and the steps to follow in evaluating potential cultural resources needs that are triggered by proposed construction activities. The Program will include a Monitoring Protocol and Provisions for Enforcement that may be presented to refresh personnel and introduce new staff to cultural resource concepts and Project-specific issues. Project equipment and vehicle operators will be educated on the importance of staying within Project boundaries and also the prohibitions of going off designated routes of travel such as Eagle Mountain Road or Kaiser Road. <p><i>Implementation Timing: Pre-construction/construction/operation</i></p> <p><i>Party responsible for implementation,</i></p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p><i>monitoring and reporting:</i> Environmental Coordinator/Contractor</p> <p><i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-4. Offer Opportunities for Public Interpretation. Unlike other hydroelectric projects where public access and recreational opportunities may be afforded, safety concerns and proximity to a proposed landfill project preclude offering public access within the core of the Pumped Storage Project boundaries. Opportunities for public interpretation are therefore extremely limited. Some appropriate signage that interprets the history of the area already exists, including the 2009 E Clampus Vitus monument on Eagle Mountain Road for the 36th Evacuation Hospital associated with the World War II DTC and a Riverside County historical marker that acknowledges the Iron Chief, Eagle Mountain, and other mines of the area. The DTC/CAMA is also thoroughly and professionally interpreted at the General Patton Memorial Museum in Chiriaco Summit, located off of I-10 between Indio</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>and Desert Center. The prehistory and Native American cultural traditions of the region are interpreted at the Agua Caliente Cultural Museum in Palm Springs, the Malki Museum on the Morongo Indian Reservation, the Palm Spring Desert Museum, the Coachella Valley Museum and Cultural Center, and at Joshua Tree National Park.</p> <p><u>Management Activity:</u> Develop informative signage that will be available to the public.</p> <p>ECE will develop and install one weather-tolerant sign that will be placed outside the main gate of the facility. The sign will provide information about the prehistory and history of the general area, Native American groups who inhabited the area, and background on the functioning of the Project. Local museums and historical monuments will also be identified.</p> <p>The public interpretive sign will be developed in coordination with the development of the HPMP and will be installed within 1 year of completion of the</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>boundary fence.</p> <p><i>Implementation Timing:</i> Pre-construction/construction/operation</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/ Contractor</p> <p><i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-5. Review Effectiveness of the Historical Properties management Plan.</p> <p><u>Management Activity:</u> Every 6 years, ECE will determine if modifications will improve the effectiveness of the HPMP.</p> <p><u>Performance Standard:</u> Develop recommendations for changes to the HPMP that may be discussed with California SHPO, the BLM, Riverside County, interested Indian Tribes, FERC, and other consulting parties.</p> <p><i>Implementation Timing:</i> Pre-construction/construction/operation</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator /Contractor</p> <p><i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-6. Consult with California SHPO, the BLM, Riverside County, interested Indian Tribes, and FERC.</p> <p><u>Management Activity:</u> Develop a HPMP Implementation Report. The HPMP Implementation Report will be distributed for review according to a 2-year cycle during the construction phase of the Project because cultural resource discoveries and treatments are most likely during that period. Thereafter, in the operation and maintenance phase, the HPMP Implementation Reports will be coordinated with the 6-year cycle of the Licensed Hydropower Recreation Development Report (FERC Form 80). The report will summarize, in table format, all ECE cultural resources consultations and/or surveys performed for Project modifications, activities related to the Erosion Control Plan,</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>or any other activities that have been reviewed due to their potential to result in soil disturbance in areas not previously disturbed. The HPMP Implementation Report will:</p> <ul style="list-style-type: none"> • Describe the proposed modifications, the type of cultural survey or other activity performed, the results of the survey or other activity, and actions taken (e.g. SHPO consultation and/or other consultation, mitigation, no action determined appropriate, etc.). • Summarize observations made of historic properties. • Include summaries of cultural resource treatments as an update to a HPMP implementation summary table. • Report the status of ECE's public interpretation projects. • Recommend modifications to the Project HPMP that will improve its implementation if appropriate. • Develop a format for the HPMP Implementation Report and its associated Summary Table that will present the | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>cultural resources activities and considerations in which ECE participated over a 2-year reporting cycle during construction and the 6-year reporting cycle thereafter. The HPMP Implementation Report will be provided to California SHPO, BLM, Riverside County, and interested Indian Tribes for a 30-day review and comment period every 6 years in coordination with FERC Form 80. Following a consideration of review comments, ECE will file the HPMP Implementation Report with FERC.</p> <p><i>Implementation Timing:</i> Pre-construction/construction/operation <i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Contractor <i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-7. Class I Investigation. In the event that Project activities would extend beyond the areas previously surveyed, then background literature will be reviewed to identify the location, character, and</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>significance of known cultural resources in the area of a proposed action and the potential of the proposed action to affect historic properties. The Class I investigation will rely on information contained within ECE's Project archives. Should these data not prove sufficient, the Project Environmental Coordinator may determine that additional documentation is necessary to address a particular action under consideration that extends beyond the 1-mile buffer of the already completed Class I investigation. The most important source of Class I literature review is the EIC at the University of California, Riverside.</p> <p><u>Management Activity:</u> compare proposed Project location with Cultural Resources Management Maps.</p> <ul style="list-style-type: none"> • Determine if the Project area is located within 100 feet of a potentially significant previously recorded archeological site. • Determine if Project area has been characterized as actively eroding or previously disturbed by other ground- | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>disturbing activity (e.g., by machine excavation or underground utility line).</p> <ul style="list-style-type: none"> Determine if the area has been previously surveyed for cultural resources. <p><u>Performance Standard:</u> based on the results of the above-noted Management Activity.</p> <ul style="list-style-type: none"> Project area is located within 100 feet of a previously recorded potentially significant archeological site. Delay Project pending SHPO consultation and possible follow-up studies by a Secretary of the Interior-qualified professional archaeologist. Previous ground-disturbing activity may be documented or observed therefore no Project effect on cultural resources expected. Project may proceed. ECE includes Project description and permit considerations in the HPMP Implementation Report that will be distributed to the California SHPO, the BLM, Riverside County, interested Indian Tribes and FERC on a 2-year cycle during the construction phase and | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>on a 6-year review cycle thereafter in coordination with Form 80.</p> <p><i>Implementation Timing:</i> Pre-construction/construction/operation <i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Contractor <i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-8. Class III Cultural Resources Field Investigation. Any modifications or additions to the APE in previously unsurveyed and undisturbed areas will require a Class III survey in compliance with Section 106 of the National Historic Preservation Act and according to 36 CFR 800. ECE will conduct an on-the-ground inventory of the APE for a proposed action that confirms the presence of known cultural resources and that may result in identification of previously unrecorded cultural resources. A Class III investigation may involve the excavation of shovel tests placed at 50-foot intervals within the APE or implementation</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>of an alternative investigative strategy approved by ECE's Project Environmental Coordinator and the California SHPO. Any investigations on easements through BLM land require a Fieldwork Authorization to a BLM permit-holding archaeologist in compliance with the Federal Land Policy and Management Act of 1976, as amended (PL 94-579).</p> <p><u>Management Activity:</u> Consult with BLM or other land holding agencies as to what Section 106 or Section 110 compliance needs may still be required and implement as specified. Engage services of a qualified archaeologist to brief the Project Environmental Coordinator on correct scoping and protocols and conduct Class III survey such as a walkover survey and/or systematic subsurface shovel testing (e.g. perform an identification level archeological field survey.) The actual scope of work will depend upon the proposed Project location and size of the proposed activity as well as BLM requirements on BLM land. The archaeologist will perform the Class III</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>survey and prepare a report that describes the investigation and results. ECE will forward this report to the California SHPO, interested Indian Tribes and FERC. All new reports and site forms will be submitted to the EIC, University of California, Riverside.</p> <p><u>Performance Standards:</u> Review results of the Class III Survey and the associated recommendations.</p> <ul style="list-style-type: none"> • If the Class III survey did not locate cultural resources, then the proposed action may proceed following consultation with BLM and SHPO. • If the Class III survey locates cultural resources that the archaeologist recommends as not potentially significant, then the ECE Project Environmental Coordinator consults with SHPO. If consensus is reached on the recommendation, then the action may proceed. If SHPO does not concur, then the resource is treated as potentially significant. • If the Class III survey locates cultural resources that the archaeologist | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>recommends as potentially significant (i.e. demonstrates good integrity, identifiable limits, structure, function, research potential, and cultural/historical context – see definition under 4.2.3 below), then ECE's Project Environmental Coordinator consults with SHPO. If SHPO concurs with evaluation, then a Testing Phase investigation is recommended unless action may be designed to avoid the resource. Alternative Project locations will be reviewed.</p> <p><i>Implementation Timing:</i> Pre-construction/construction/operation</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator /Contractor</p> <p><i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-9. Testing Phase Cultural Resources Field Investigation. Conduct limited archeological excavations and analyses, or other investigations such as documentation of structures, to assess the National Register eligibility of individual</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>resources and an assessment of the Project effects on historic properties.</p> <p>The purpose of this measure is to determine if a cultural resource recommended as potentially significant and that cannot be avoided by a proposed action, qualifies as significant.</p> <p>The criteria for sites eligible to the NRHP may be found at 36 CFR 60.4. A site is eligible to the NRHP if it contains qualities that are significant in American history, architecture, archaeology, engineering, and culture and possesses integrity of location, design, setting, materials, workmanship, feeling, and association and:</p> <ul style="list-style-type: none"> • is associated with events that have made a significant contribution to the broad patterns of history • is associated with the lives of persons significant in the past • embodies the distinctive characteristics of a type, period or method of construction; or represents a significant and distinguishable entity whose | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>components may lack individual distinction or</p> <ul style="list-style-type: none"> has yielded, or may be likely to yield, information important in prehistory or history <p><u>Management Activity:</u> Engage services of a qualified archaeologist to collect data sufficient to determine if a cultural resource qualifies as significant. If the site is located on BLM land, an excavation permit is required for testing programs that remove more than one cubic meter of soil from an individual site, in compliance with the Archaeological Resources Protection Act of 1979, as Amended (PL 96-95). Archaeological Resources Protection Act permits require submittal of a Treatment Plan/Research Design for which BLM is required to consult with SHPO and interested Indian Tribes prior to approving field investigation. The archaeologist will perform a Testing Phase investigation and prepare a report that describes the Testing Phase investigation and results. ECE will forward this report to BLM for consultation with</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>SHPO, interested Indian Tribes and FERC.</p> <p><u>Performance Standards:</u> Review results of the Testing Phase Report and the associated recommendations, and consult with BLM and SHPO.</p> <ul style="list-style-type: none"> • If the Testing Phase investigation indicates that the cultural resource does not qualify as significant, Project may proceed following consultation with the California SHPO. • If the Testing Phase investigation indicates that the cultural resource qualifies as significant, ECE Manager consults with BLM and SHPO. If SHPO concurs with the recommendation that the cultural resource is potentially eligible for listing in the NRHP and if the Project is not amended to avoid the resource, consultation with SHPO will continue. A qualified archaeologist will develop the scope of work that will serve as mitigation of Project effects. ECE Manager will consult with the SHPO and gain consensus on the appropriate mitigation (may involve further Data Recovery field investigation, monitoring, | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>or another alternative treatment measure).</p> <p><i>Implementation Timing:</i> Pre-construction/construction/operation</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Contractor</p> <p><i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-10. Data Recovery or Alternative Mitigation. ECE will investigate activities designed to mitigate effects upon a historic property that an action will affect. This may include data recovery, documentation, restoration or other measures. Such investigations will be preceded by development of an action-specific Memorandum of Agreement that has been approved by ECE, SHPO, the BLM, the Advisory Council on Historic Preservation, FERC, and, as appropriate, interested Indian Tribes</p> <p><u>Management Activity:</u> ECE Project Environmental Coordinator works with</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>Project proponent and qualified archaeologist and consults with the SHPO to avoid Project adverse impacts, minimize Project adverse effects through possible design modifications and or through data recovery or an alternative mutually agreed-upon method. If NRHP-eligible resource may not be avoided, ECE's archaeologist develops a Memorandum of Agreement (MOA) and ECE consults with the California SHPO, the BLM, the Advisory Council on Historic Preservation, and interested Indian Tribes, as appropriate and files the MOA with FERC for approval. When an appropriate MOA is agreed upon, the archaeologist will perform the Data Recovery mitigation and prepare a report that describes the mitigation and the results. ECE will forward this report to the consulting parties.</p> <p><u>Performance Standard:</u> Review results of the data recovery or other mitigation and consult with SHPO, the BLM, the Advisory Council on Historic Preservation, interested Indian Tribes, and the FERC. When consulting parties concur that mitigation has</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>been successfully achieved, the action may proceed.</p> <p><i>Implementation Timing:</i> Pre-construction/construction/operation</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Contractor</p> <p><i>Responsible Agencies for verification and enforcement:</i> FERC/SHPO</p> <p>MM CR-11. Treatment of Unanticipated Discoveries of Cultural Resources and Human Remains. As with all development projects in the State, should unforeseen artifacts become uncovered during site grading, the Applicant is required to adhere to all State of California procedures, including Section 21083.2(i) of the CEQA Statutes and Section 15064.5 of the CEQA Guidelines regarding stoppage of work, handling of discovered materials, and notification of proper authorities to ensure that the construction/operation of the Project would not have an adverse effect on cultural resources. ECE is responsible for addressing</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>action impacts to cultural sites and human remains should they be exposed as a result of ground disturbing activities by ECE or one of its Licensees; erosion control measures, or erosion of any inventoried historic properties, or in the case that resources are exposed in the event of a Project operation emergency.</p> <p><u>Management Activities:</u> Steps that ECE shall follow in the event that unanticipated finds of cultural materials or human remains are made within the Project are contained within the project-specific Plan and Procedures Addressing Unanticipated Discoveries of Cultural Resources and Human Remains, found in Appendix A of the HPMP.</p> <p><u>Performance Standards:</u> ECE shall consult with the California SHPO, BLM, interested Indian Tribes, Riverside County Coroner, as appropriate and depending on the land jurisdiction on which any discoveries are made, and FERC, should human remains be discovered in a non-contemporary context. If ECE discovers contemporary contexts with</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|--|--|--|
| | | <p>human remains, local law enforcement agencies and the Riverside County Coroner shall be consulted.</p> <p><i>Implementation Timing:</i> Grading/earthwork/construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Contractor</p> <p><i>Responsible Agency for verification and enforcement:</i> Project Archeologist/Riverside County Coroner, as required</p> | |
| Section 3.9 Land Use / Public Services | | | |
| Impact 3.9-1 Short-term Construction Impact from Transmission Line and Interconnection to Substation. The proposed transmission line and substation will cause short-term land use impacts as a result of construction activity. | <i>Potentially significant and subject to the mitigation program</i> | <p>PDF LU-1. Construction Access. Construction access to/from the substation site will be from the Eagle Mountain Road exit and follow the Frontage Road east to the site. The Contractor will be responsible for monitoring construction access points.</p> <p>PDF LU-2. Construction Notice. Two weeks prior to beginning construction, notices shall be posted locally stating hours</p> | Less than significant |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|--|---|--|
| | | of operation for construction near the Desert Center community and along SR 177. The Contractor will be responsible for monitoring construction sites for authorized personal. | |
| Impact 3.9-2 Operational Impact from Transmission Line and Interconnection to Substation. Long-term land use-related impacts associated with the transmission line/substation construction will be the permanent change from undeveloped desert to lands reserved for utilities. | <i>Less than significant</i> | No mitigation is required. | N/A |
| Impact 3.9-3 Short-term Construction Impacts from the Water Pipeline Corridor. Construction of the water pipeline will cause short-term impacts as a result of construction activity. | <i>Potentially significant and subject to the mitigation program</i> | <p>PDF LU-1. Construction Access. Construction access to/from the substation site will be from the Eagle Mountain Road exit and follow the Frontage Road east to the site. The Contractor will be responsible for monitoring construction access points.</p> <p>PDF LU-2. Construction Notice. Two weeks prior to beginning construction, notices shall be posted locally stating hours</p> | Less than significant |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|------------------------------|--|--|
| | | <p>of operation for construction near the Desert Center community and along SR 177. The Contractor will be responsible for monitoring construction sites for authorized personal.</p> <p>PDF LU-3. Pipeline Construction. Impacts from water pipeline construction will be minimized or avoided by (1) grading out the sidecast to meet existing grades; (2) minimizing disturbance, construction timing to avoid seasonal rain, and maintaining surface contours and natural function of washes crossed; and (3) use of existing access roads, when feasible, thereby avoiding new ground disturbance.</p> | |
| <p>Impact 3.9-4 Operational Impacts from the Water Pipeline Corridor. Long-term land use-related impacts associated with the water pipeline corridor construction will be the permanent change from undeveloped desert to lands reserved for utilities.</p> | <i>Less than significant</i> | No mitigation is required. | N/A |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|---|--|--|
| Impact 3.9-5 Local Land Use Policies. The proposed Project would not conflict with any land use plan of an agency having jurisdiction over the Project. Local land use policies and zoning codes do not apply to the Project site, due to the overriding Federal Power Reserve land designation. | <i>Less than significant</i> | No mitigation is required. | N/A |
| Impact 3.9-6 CDCA Plan Amendment for Utility Right-of-Way. Based upon review of BLM's CDCA plan amendment criteria and required determinations, it appears that the Project is consistent with all criteria, and that a determination in favor of adopting a plan amendment can be made. | <i>Less than significant</i> | No mitigation is required. | N/A |
| Impact 3.9-7 Existing and Proposed Land Uses in the | <i>Potentially significant and subject to the</i> | PDF LU-4. Construction Staging Area. The Project layout has been modified to | Less than significant |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|----------------------------------|---|--|
| <p>Central Project Site. Implementation of the proposed Project will result in a change in the use of land within the Central Project Area from an inactive iron mine to a pumped storage hydroelectric facility. Additionally, this Project could be operating in conjunction with the proposed Eagle Mountain landfill. The Project layout has been modified to eliminate conflicts with existing and proposed land uses.</p> | <p><i>mitigation program</i></p> | <p>eliminate conflicts with existing and proposed land uses. Construction staging and lay-down areas have been relocated to a parcel southwest of the lower reservoir and outside of the proposed landfill to eliminate conflict with the proposed landfill truck marshalling and railyard facilities. Low voltage cables from the underground powerhouse have been routed through the underground powerhouse access tunnel to avoid conflicts with landfill Phase 3. Water treatment facilities have been relocated further from the CRA to address concerns of the MWD regarding the proximity of the brine ponds to the CRA.</p> <p>MM LU-2. Coordinate with MWD. Engineering designs of crossings of MWD facilities will be submitted to MWD for their review and approval. <i>Implementation Timing:</i> Pre-construction <i>Party responsible for implementation, monitoring and reporting:</i> Applicant <i>Responsible agency for verification and enforcement:</i> MWD and FERC</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|------------------------------|----------------------------|--|
| Impact 3.9-8 Landfill Construction Timing. The pumped storage Project is likely to be built and operational prior to initiation of landfill construction at Eagle Mountain. Construction periods for the two projects are not likely to overlap or create any conflicts | <i>Less than significant</i> | No mitigation is required. | N/A |
| Impact 3.9-9 Landfill Operations. The proposed Eagle Mountain Pumped Storage Project will use the Central and East Pits to store water, areas that are not proposed to be used during Phases 1-4 of the landfill. The powerhouse and water conveyance tunnels will be underground and will not affect landfill construction or operations. | <i>Less than significant</i> | No mitigation is required. | Less than significant |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|--|--|--|
| Impact 3.9-10 Landfill Use of the East Pit. The Eagle Mountain Pumped Storage Project's use of the East Pit does not exclude the East Pit's use as a landfill in perpetuity. In the event that, at some future date many decades from now, decision-makers determine that the landfill use of the East Pit has greater social or economic value than the proposed Project's use of the East Pit, the water could be drained and the East Pit used as a component of the landfill. | <i>Less than significant</i> | No mitigation is required. | N/A |
| Impact 3.9-11 Potential Impacts to the Landfill Liner. Seepage from the upper reservoir could potentially encounter the lining of the landfill. | <i>Potentially significant and subject to the mitigation program</i> | PDF GW-1. Groundwater Seepage. The Owner will limit seepage from the Project reservoirs to the extent feasible using specified grouting, seepage blankets, and RCC or soil cement treatments. This includes the upper reservoir, lower reservoir, and the brine disposal ponds that will be part of the | Less than significant |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>water quality management system for the Project. Final design for seepage control will be approved by FERC prior to construction. Seepage control from the Project reservoirs will be accomplished using systematic procedures such as design and construction control measures that will include the following:</p> <ul style="list-style-type: none"> • During final engineering design, a detailed reconnaissance of the reservoir basins and pond areas will be conducted to identify zones where leakage and seepage would be expected to occur. These areas will include faults, fissures and cracks in the bedrock, and zones that may have direct connection to the alluvial deposits of the Chuckwalla Valley. During the reconnaissance, the effectiveness of various methods for seepage and leakage control to mitigate the effects of these particular features will be evaluated, including grouting, seepage blankets, and RCC or soil cement treatments, and other methods if needed. • Curtain grouting of the foundation | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>beneath the dam footprint and around the reservoir rim, as needed; backfill concrete placement and/or slush grouting of faults, fissures, and cracks detected in the field reconnaissance; placement of low permeability materials over zones too large to be grouted and over areas of alluvium within the lower reservoir; seepage and leakage collection systems positioned based upon the results of the hydrogeologic analyses; and clay or membrane lining of the brine ponds associated with the Project's water quality management system. The collection systems would recycle water into the Project reservoirs or the reverse osmosis system.</p> <ul style="list-style-type: none"> • Design and construction of a Comprehensive Monitoring Program, consisting of observation wells and piezometers that will be used to assess the effectiveness of the seepage and leakage control measures. <p>Based on monitoring results, additional actions may be taken to further control leakage and seepage from the reservoirs and ponds. Such measures may include curtain grouting and the expansion of seepage and</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>leakage collection systems.</p> <p>Other measures, such as use of stepped RCC or soil cement overlay on the eastern portion of the lower reservoir may also be used depending on results of final engineering design analyses.</p> <p>In addition, portions of the tunnels and shaft of the Project will experience very high water pressures; whereas, current plans are based on lining of the tunnels with concrete, and in some locations steel liners will be installed. These liners will also effectively block seepage from occurring.</p> <p>MM GW-5. Seepage Recovery Wells. Seepage from the <u>Upper Reservoir</u> will be controlled through a separate set of seepage recovery wells, locations of which are shown on Figure 3. 3.3-18. Seepage from the upper reservoir will be maintained below the bottom elevation of the landfill liner. Target levels have been assigned to the monitoring wells as shown in Table 3.3-10. A testing program will also be employed for seepage recovery wells for the Upper Reservoir to</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>assess the interconnectedness of the joints and fractures and the pumping extraction rate. Drawdown observations will be made in nearby observation wells to support final engineering design. Groundwater monitoring will be performed on a quarterly basis for the first 4 years of Project pumping; as a performance standard this program may be extended to bi-annually or annually depending on the findings. Annual reports will be prepared and distributed to interested parties.</p> <p><i>Implementation Timing:</i> Final engineering and life of Project; monitoring on a quarterly basis for the first 4 years of Project pumping; as a performance standard, the program may be extended to bi-annually or annually depending on the findings for consistency and reliability of the program, and modified where necessary.</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Construction Contractor/Environmental Coordinator</p> <p><i>Responsible Agencies for verification and enforcement:</i> SWRCB and FERC</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|--|---|--|
| Impact 3.9-12 Compatibility of Specific Features and Ancillary Facilities Interferences. Design adjustments have been made to avoid interference with proposed landfill components, so that the proposed pumped storage Project does not conflict with construction or long-term operation of the proposed landfill project's specific features and ancillary facilities. | <i>Potentially significant and subject to the mitigation program</i> | PDF LU-4. Construction Staging Area. The Project layout has been modified to eliminate conflicts with existing and proposed land uses. Construction staging and lay-down areas have been relocated to a parcel southwest of the lower reservoir and outside of the proposed landfill to eliminate conflict with the proposed landfill truck marshalling and railyard facilities. Low voltage cables from the underground powerhouse have been routed through the underground powerhouse access tunnel to avoid conflicts with landfill Phase 3. Water treatment facilities have been relocated further from the CRA to address concerns of the MWD regarding the proximity of the brine ponds to the CRA. | Less than significant |
| Impact 3.9-13 Potential Conflicts with Other Landfill Facilities and Rock Resources. On the basis of the analysis presented, it is concluded that the proposed pumped storage Project does not | <i>Less than significant</i> | No mitigation is required. | Less than significant |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|--|---|--|
| conflict with construction roads, other operational components, or use of rock and fine-tailings resources at the mine site. | | | |
| Impact 3.9-14 Methane Gas from Eagle Mountain Landfill. Based upon the analysis presented, it is concluded that methane gas produced by the proposed landfill will not be affected in any way by the proposed pumped storage Project. | <i>Less than significant</i> | No mitigation is required. | Less than significant |
| Impact 3.9-15 Impact to Public Services. To insure that there is no impact to public facilities, the Project will pay Development Impact Fees. The payment of these fees will insure that acceptable response times and service ratios are maintained for public | <i>Potentially significant and subject to the mitigation program</i> | MM LU-1. Development Impact Fee. Prior to the start of commercial operation the Applicant shall pay to Riverside County the required Development Impact Fee for the Project area in accordance with Riverside County Ordinance 659, as amended through 659.7 and Chapter 4.60 of the Riverside County Code (Development Impact Fees). <i>Implementation Timing:</i> Prior to start of Commercial Operations | Less than significant |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|------------------------------|---|--|
| services. | | <i>Party responsible for implementation, monitoring and reporting:</i> Operator / Environmental Coordinator <i>Responsible agency for verification and enforcement:</i> SWRCB and FERC | |
| Section 3.10 Recreation | | | |
| Impact 3.10-1 Recreational Use. The proposed transmission line and water pipeline corridors cross lands, in part, managed by the BLM, which are available for dispersed recreational use. Access to some OHV tracks may be impeded temporarily during construction of the linear facilities. | <i>Less than significant</i> | No mitigation required. | N/A |
| Impact 3.10-2 Wilderness Area. The Project would not directly or indirectly disrupt activities in an established federal, state, or local | <i>Less than significant</i> | No mitigation required. | N/A |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|------------------------------|----------------------------|--|
| recreation and/or wilderness area. The Project area is not located in a designated federal wilderness area. | | | |
| Section 3.11 Population and Housing | | | |
| Impact 3.11-1 Residential or Business Displacement During Construction. Implementation of the Project will not displace significant number of people, affect existing housing or business establishments, or require replacement housing elsewhere. | <i>Less than significant</i> | No mitigation is required. | N/A |
| Impact 3.11-2 Impacts on Community Infrastructure and Services. Because of the available infrastructure capacity within the region, the Project would not require construction of significant additional infrastructure. | <i>Less than significant</i> | No mitigation is required. | N/A |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|--|---|--|
| Impact 3.11-3 Impacts on Local Government Finances. Payment of Riverside County Development Impact fees is required. In addition, purchase of construction materials and equipment required to construct the Project would increase local and regional tax bases. The substantial sales tax revenues would be considered beneficial impact as a direct result of Project implementation. | <i>Less than significant</i> | No additional mitigation is required. <i>See</i> MM LU-1. | N/A |
| Section 3.12 Transportation | | | |
| Impact 3.12-1 Construction-related Traffic. The Project will cause an increase in traffic that is not substantial in relation to the existing traffic | <i>Potentially significant and subject to the mitigation program</i> | MM AQ-6 Transportation Management Plan. The Construction Contractor shall be responsible to develop and implement a Transportation Management Plan (TMP) for employees, including provisions for ridesharing, use of shuttle transit for Project | Less than significant |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| load and capacity of the street system. The Project will not decrease a level of service standard established by the County. | | <p>employees, and provision of on-site food service to reduce vehicle trips, where feasible. The TMP shall also consider availability of local housing that can be secured for use by a voluntary portion of the employees throughout the construction period.</p> <p><i>Implementation Timing:</i> Construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Construction Contractor/Environmental Coordinator</p> <p><i>Responsible Agencies for verification and enforcement:</i> SWRCB and FERC</p> <p>PDF LU-1. Construction Access. Construction access to/from the substation site will be from the Eagle Mountain Road exit and follow the Frontage Road east to the site. The Contractor will be responsible for monitoring construction access points.</p> <p>PDF LU-2. Construction Notice. Two weeks prior to beginning construction, notices shall be posted locally stating hours of operation for construction near the Desert</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|--|---|--|
| | | Center community and along SR 177. The Contractor will be responsible for monitoring construction sites for authorized personal. | |
| Impact 3.12-2 Operational Traffic. Daily traffic, including service and delivery trucks, will be approximately 64 one-way trips. | <i>Less than significant</i> | No mitigation is required. | N/A |
| Section 3.13 Air Quality | | | |
| Impact 3.13-1 Annual Emissions during Construction. The proposed Project represents less than 0.07 percent of the forecasted annual NOx emissions within the Mojave Desert Air Basin. | <i>Less than significant</i> | No mitigation is required. | N/A |
| Impact 3.13-2 Daily Emissions during Construction. These | <i>Potentially significant and subject to the mitigation program</i> | MM AQ-1. Fugitive Dust. Periodic watering or application of suitable surfactant will be conducted for short-term stabilization | Significant and unavoidable |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| emissions are less than the SCAQMD CEQA thresholds for all pollutants except NO _x where the threshold is 100 ppd. | | <p>of disturbed surface areas and storage piles as needed to minimize visible fugitive dust emissions. For dirt roads, watering, with complete coverage, shall occur at least twice daily, preferably in the late morning and after work is done for the day.</p> <p><i>Implementation Timing:</i> Construction <i>Party responsible for implementation, monitoring and reporting:</i> Construction Contractor/Environmental Coordinator <i>Responsible Agencies for verification and enforcement:</i> SWRCB and FERC</p> <p>MM AQ-2. Trackout. To prevent Project-related trackout onto paved surfaces, the following measures will be undertaken through the construction period:</p> <ul style="list-style-type: none"> • Prevention and clean up of Project-related trackout or spills on publicly maintained paved surfaces within 24 hours. • Covering loaded haul vehicles operating on public paved roads. • Material transported off-site shall be | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>either sufficiently watered or securely covered to prevent excessive amounts of dust.</p> <ul style="list-style-type: none"> • Paving, gravel covering, or chemically stabilizing on-site roads as soon as feasible. • Limiting onsite vehicle speeds on unpaved surfaces to 25 mph. • Operating a wash rack for drivers to wet down material before leaving the facility. • Operate a wheel washer (or equivalent) to remove soil from vehicle tires as needed. <p><i>Implementation Timing:</i> Construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Construction Contractor/Environmental Coordinator</p> <p><i>Responsible Agencies for verification and enforcement:</i> SWRCB and FERC</p> <p>MM AQ-3. Grading. Graded site surfaces will be stabilized upon completion of grading when subsequent development is delayed or expected to be delayed more than 30 days,</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p>except when such a delay is due to precipitation that dampens the disturbed surface sufficiently to eliminate visible fugitive dust emissions.</p> <p><i>Implementation Timing:</i> Construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Construction Contractor/Environmental Coordinator</p> <p><i>Responsible Agencies for verification and enforcement:</i> SWRCB and FERC</p> <p>MM AQ-4. Surface Disturbance. Areas of active surface disturbance (such as grading) will be limited to no more than 15 acres per day.</p> <p><i>Implementation Timing:</i> Construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Construction Contractor/Environmental Coordinator</p> <p><i>Responsible Agencies for verification and enforcement:</i> SWRCB and FERC</p> <p>MM AQ-5. Earth-moving Activities. Non-essential earth-moving activities will be reduced during windy conditions; i.e., when</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>visible dusting occurs from moist and dry surfaces due to wind erosion. Clearing, grading, earth-moving, or excavation activities will cease if winds exceed 25 mph averaged over 1-hour duration.</p> <p><i>Implementation Timing:</i> Construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Construction Contractor/Environmental Coordinator</p> <p><i>Responsible Agencies for verification and enforcement:</i> SWRCB and FERC</p> <p>In addition, compliance with the following mitigation measures AQ-6 through AQ-12 would further reduce impacts from engine exhaust and NOx and other criteria pollutant emissions.</p> <p>MM AQ-6. Transportation Management Plan. The Construction Contractor shall be responsible to develop and implement a Transportation Management Plan (TMP) for employees, including provisions for ridesharing, use of shuttle transit for Project employees, and provision</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p>of on-site food service to reduce vehicle trips, where feasible. The TMP shall also consider availability of local housing that can be secured for use by a voluntary portion of the employees throughout the construction period.</p> <p><i>Implementation Timing:</i> Construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Construction Contractor/Environmental Coordinator</p> <p><i>Responsible Agencies for verification and enforcement:</i> SWRCB and FERC</p> <p>MM AQ-7. Diesel Trucks. All diesel truck operators shall strictly abide by the applicable State law requirements for idling, as described in the airborne toxic control measure (CCR, Title 13, section 2485), which limits vehicles with gross vehicular weight ratings of more than 10,000 pounds to no more than 5 minutes in a 60-minute period of idling of the primary engine or the diesel-fueled auxiliary power system at any location.</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|--|--|
| | | <p><i>Implementation Timing:</i> Construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Construction Contractor/Environmental Coordinator</p> <p><i>Responsible Agencies for verification and enforcement:</i> SWRCB and FERC</p> <p>MM AQ-8. Equipment. Use electrical drops in place of temporary electrical generators, and substitute low- and zero emitting construction equipment and/or alternative fueled or catalyst equipped diesel construction equipment wherever economically feasible.</p> <p><i>Implementation Timing:</i> Construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Construction Contractor/Environmental Coordinator</p> <p><i>Responsible Agencies for verification and enforcement:</i> SWRCB and FERC</p> <p>MM AQ-9. Generators. Electrical generators must be properly permitted with the SCAQMD.</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p><i>Implementation Timing:</i> Construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Construction Contractor/Environmental Coordinator</p> <p><i>Responsible Agencies for verification and enforcement:</i> SWRCB and FERC</p> <p>MM AQ-10. Heavy-duty Diesel Trucks. Heavy-duty diesel trucks shall be properly tuned and maintained to manufacturers' specifications to ensure minimum emissions under normal operations.</p> <p><i>Implementation Timing:</i> Construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Construction Contractor/Environmental Coordinator</p> <p><i>Responsible Agencies for verification and enforcement:</i> SWRCB and FERC</p> <p>MM AQ-11. Construction Equipment. At least 50 percent diesel fleet hours will utilize 2002 or later year diesel construction equipment,</p> <p><i>Implementation Timing:</i> Construction</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|-----------------------|---|--|
| | | <p><i>Party responsible for implementation, monitoring and reporting:</i> Construction Contractor/Environmental Coordinator</p> <p><i>Responsible Agencies for verification and enforcement:</i> SWRCB and FERC</p> <p>MM AQ-12. Off-road Construction Equipment. Older off-road construction equipment shall be retrofitted with appropriate emission control devices prior to onsite use, where feasible.</p> <p><i>Implementation Timing:</i> Construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Construction Contractor/Environmental Coordinator</p> <p><i>Responsible Agencies for verification and enforcement:</i> SWRCB and FERC</p> <p>MM AQ-13. Air Quality Study Design. The Project applicant/owner (Eagle Crest Energy Company [ECE]) shall work collaboratively with the National Park Service (NPS) to establish an air quality study design for 2 years of ozone monitoring to be conducted upon completion of</p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|------------------------------|--|--|
| | | <p>construction and Project operations beginning. ECE will fund the annual expenses as a cost-share with the NPS and other transmission operators. The funding contribution for this study will be based on a percentage of total miles of transmission line. If the proposed Project is found to have a significant impact on ozone levels within Joshua Tree National Park, the Project owner will develop a transmission management plan to reduce ozone emissions.</p> <p><i>Implementation Timing:</i> Final design/pre-construction/construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Construction Contractor/Environmental Coordinator</p> <p><i>Responsible Agencies for verification and enforcement:</i> SWRCB and FERC</p> | |
| Impact 3.13-3 Emissions during Operation. Air pollutant emissions associated with operations and maintenance activities (employee, delivery vehicle) | <i>Less than significant</i> | No mitigation is required. | N/A |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|---|--|--|
| trips and miscellaneous area sources) would be minimal and would not exceed SCAQMD significance thresholds for operation. | | | |
| Section 3.14 Noise | | | |
| Impact 3.14-1 Construction Noise, Central Project Site. The maximum construction noise coming from the Central Project Site would likely not be audible at the school or nearby residences. The same construction activities would generate noise levels at the boundary of JTNP that would be up to 43 dBA temporarily. | <i>Less than significant</i> | No mitigation is required. | N/A |
| Impact 3.14-2 Construction Noise, Linear Features. The maximum construction noise at the nearest sensitive | <i>Potentially significant impact and subject to the mitigation program</i> | MM N-1. Construction Equipment. The Contractor shall utilize construction equipment with properly operating and maintained noise mufflers and intake | Less than significant |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|------------------------------|--|--|
| receptors attributed to the transmission line and water pipeline would be adverse for up to several weeks during construction, but due to the nature of linear facilities, only for several days at any one location. About 20 residences would be affected by noise from increased traffic along Kaiser Road during construction. | | <p>silencers, consistent with manufacturers' standards in order to reduce or avoid construction noise levels.</p> <p><i>Implementation Timing: Construction</i></p> <p><i>Party responsible for implementation, monitoring and reporting: Contractor/ Environmental Coordinator</i></p> <p><i>Responsible Agency for verification and enforcement: SWRCB</i></p> | |
| Impact 3.14-3 Operational Noise. The operation of the proposed Project would result in a minimal increase in road traffic and would not substantially increase ambient noise levels along Kaiser Road. The proposed powerhouse would be located underground and would not affect noise levels aboveground. Noise from operation of the transmission | <i>Less than significant</i> | No mitigation is required. | N/A |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|------------------------------|----------------------------|--|
| line (low level hissing or crackling), could be adverse but would only be noticeable in wet weather conditions in close proximity to the transmission line. | | | |
| Section 3.15 Greenhouse Gas Emissions | | | |
| Impact 3.15-1 Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. The proposed Project will offset CO ₂ e production and enhance integration of reliable of wind and solar power to meet the State's RPS, thus having a beneficial impact on GHG production. | <i>Less than significant</i> | No mitigation is required. | N/A |
| Impact 3.15-2 Conflict with an applicable plan, policy or regulation adopted for | <i>Less than significant</i> | No mitigation is required. | N/A |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|--|---|---|--|
| <p>the purpose of reducing the emissions of GHGs. The State Water Resources Control Board currently does not have an adopted climate action plan or general plan policies related to GHG emissions. In addition, the Project would not conflict with the State's ability to reach the overall goals of AB 32. Therefore, the Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.</p> | | | |
| <p>Section 3.16 Hazards and Hazardous Materials</p> | | | |
| <p>Impact 3.16-1 Hazardous Materials during Construction. Due to the proximity of the transmission</p> | <p><i>Potentially significant and subject to the mitigation program</i></p> | <p>MM HM-1. UXO Plan. The Contractor, in consultation with the Project owner's Environmental Coordinator, shall implement a UXO Identification, Training</p> | <p>Less than significant</p> |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|-----------------------|--|--|
| line to the World War II-era camps, and the recent history of military training on the Central Project site, any unexploded ordnance (UXO) found on-site could be hazardous to workers on-site. | | <p>and Reporting Plan (UXO Plan) to properly train all site workers in the recognition, avoidance and reporting of military waste debris and ordnance. Implementation shall include: (1) a description of the training program outline and materials, and the qualifications of the trainers; (2) identification of available trained experts that will respond to notification of discovery of any ordnance (unexploded or not); (3) a work plan to recover and remove discovered ordnance; and (4) work stoppage until site is determined clear by the Environmental Coordinator.</p> <p>Verification: The UXO Plan shall be implemented no less than 60 days prior to the initiation of construction activities at the site.</p> <p><i>Implementation Timing:</i> Final engineering/pre-construction/construction</p> <p><i>Party responsible for implementation, monitoring and reporting:</i> Environmental Coordinator/Contractor</p> <p><i>Responsible Agency for verification and</i></p> | |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|------------------------------|--------------------------------|--|
| | | <i>enforcement: SWRCB/FERC</i> | |
| Impact 3.16-2 Hazardous Materials during Operation. Hazardous material usage in the vicinity would mainly be limited to the Project site. The Project site is not located within one-quarter mile of a school. | <i>Less than significant</i> | No mitigation is required. | N/A |
| Impact 3.16-3 Located on a Hazardous Materials Site per Government Code Section 65962.5. The site is not on a list of hazardous materials sites pursuant to Government Code Section 65962.5 | <i>Less than significant</i> | No mitigation is required. | N/A |
| Section 3.17 Environmental Justice | | | |
| The Project will not result in a disproportionate effect on minority populations, low | <i>No impact</i> | No mitigation required. | N/A |

| Potential Environmental Impact Summary | Level of Significance | Mitigation Program | Level of Significance after Implementation of Mitigation Program |
|---|------------------------------|---------------------------|---|
| income populations, or Native Americans, and the Project does not pose any substantial effects relative to environmental justice. | | | |