Initial Study
and
Mitigated Negative Declaration

Coyote Electrode Cable Replacement Project

Los Angeles Department of Water and Power
Environmental Affairs
111 North Hope Street, Room 1050
Los Angeles, CA 90012

September 2011

CITY OF LOS ANGELES

OFFICE OF THE CITY CLERK
ROOM 395, CITY HALL
LOS ANGELES, CALIFORNIA 90012

CALIFORNIA ENVIRONMENTAL QUALITY ACT

PROPOSED MITIGATED NEGATIVE DECLARATION

(Article I, City CEQA Guidelines)

LEAD CITY AGENCY AND ADDRESS:	**COUNCIL DISTRICT**
Los Angeles Department of Water and Power 111 N. Hope Street, Room 1050 Los Angeles, CA 90012	N/A
PROJECT TITLE: Coyote Electrode Cable Replacement Project	**LOG REFERENCE** N/A

PROJECT LOCATION:
The proposed project is located within San Bernardino County, on land administered by the Bureau of Land Management. The project is in a remote open desert area traversed by dirt roads east of the Coyote Dry Lake bed in Yermo California, and approximately 20 miles northeast of the City Barstow.

DESCRIPTION:
The Coyote Electrode Cable Replacement Project would replace approximately 10,000 feet of Direct Current (DC) electrode cables in the Mojave Desert in an existing right-of-way on federal land under the jurisdiction of the U.S. Department of the Interior Bureau of Land Management (BLM). The Project would improve the operation of the underground electrode facility, thereby reducing the need for system maintenance, testing, and repair, and reducing exposure of the system to hazardous conditions and materials.

NAME AND ADDRESS OF APPLICANT IF OTHER THAN CITY AGENCY: N/A

FINDING:

See the attached Initial Study.

SEE IS/MND FOR MITIGATION MEASURES IMPOSED.

THE INITIAL STUDY PREPARED FOR THIS PROJECT IS ATTACHED.

PERSON PREPARING THIS FORM	**ADDRESS**	**TELEPHONE NUMBER**
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SIGNATURE (Official)	**DATE**
Charles C. Holloway Charles C. Holloway, Manager of Environmental Assessment and Planning	9/16/2011

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CEQA Initial Study

Coyote Electrode Cable Replacement Project

September 2011

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Los Angeles Department of Water and Power

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Section 1
Project and Agency Information

1.1 PROJECT TITLE AND LEAD AGENCY

Project Title:	Coyote Electrode Cable Replacement Project
Lead Agency Name:	Los Angeles Department of Water and Power
Lead Agency Address:	111 North Hope Street, Room 1050 Los Angeles, California 90012
Contact Person:	Ms. Nancy Chung
Contact Phone Number:	(213) 367-0404
Project Sponsor:	Los Angeles Department of Water and Power

1.2 PROJECT BACKGROUND

The City of Los Angeles Department of Water and Power (LADWP) has prepared this Initial Study (IS) to address the impacts of construction and operation of the Coyote Electrode Cable Replacement Project (proposed Project). The Project would replace approximately 10,000 feet of Direct Current electrode cables in the Mojave Desert in an existing right-of-way on federal land under the jurisdiction of the U.S. Department of the Interior, Bureau of Land Management.

The Project would allow for continued operation of the 489-mile, ±500 kilovolt (kV) direct current (DC) Southern Transmission System (STS) on an infrequent basis when disturbances occur on other parts of the STS. Periodic testing of the buried Coyote electrode cables has shown a substantial decrease in insulation resistance since the cables were installed more than 25 years ago.

The IS has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et seq., and the State CEQA Guidelines, Title 14 California Code of Regulations (CCR) Section 15000 et seq. The IS serves to identify the site-specific impacts, evaluate their potential significance, and determine the appropriate document needed to comply with CEQA. For this project, LADWP has determined, based on the information reviewed and contained herein, that the proposed Project could potentially have a significant environmental impact, but that mitigation measures can be implemented to alleviate the impacts to a level of less than significant. Based on this IS, a Mitigated Negative Declaration (MND) is the appropriate CEQA document. Staff recommends that the City of Los Angeles Board of Water and Power Commissioners adopt this IS/MND for the proposed Project.

1.2.1 Electric Power Transmission

Regional electric power transmission line systems are frequently referred to as a "grid." A grid provides redundant power transmission paths to ensure that electricity can be routed from any power generating station to any load center within a given service area through a variety of routes.

To prevent system-wide failures and power outages from overload conditions and other system disturbances, the ability to re-route electricity within a grid is critical.

When power is transferred over very long distances, it can be more efficient and economical to use DC transmission instead of alternating current (AC) transmission, which is commonly used for electric power delivery to homes and businesses. As such, DC transmission results in lower power losses during transfer than AC transmission lines.

DC systems are sometimes designed with a ground return path which consists of conductors and electrodes. The conductors are referred to as the electrode line, which connects the DC system converter station to the electrode itself. In the atypical event of a loss of one converter at the converter station or the loss of a high-voltage direct current (HVDC) line conductor between converter stations, this ground return configuration prevents immediate and complete shutdown of all transmitted power. More specifically, the electrical current is automatically re-routed through the electrode line and electrode to maintain overall system operation for short periods to allow for corrective action and system restoration.

1.2.2 Existing Electrode Line System

The existing Adelanto to Coyote Dry Lake electrode line system was constructed in 1986 and is approximately 60 miles in length. The existing system extends from the Intermountain Converter Station near Lynndyl, Utah, to the Adelanto Converter Station located near Victorville, California. The Adelanto to Coyote Dry Lake electrode line system is part of the Intermountain Power Project (IPP), which is owned by the Intermountain Power Agency (IPA). [LADWP is a purchaser of electric power from the IPA.] A similar electrode line system is connected to the Intermountain Converter Station. These two systems electrically connect the two DC converter stations. The IPP is used to provide electric power for residents of Utah, Nevada, and California.

The original electrode system consisted of overhead lines only; a 2-mile segment was undergrounded over 25 years ago at the request of the U.S. Air Force, due to fighter jets flying at a low altitude over the area. The overhead portion consists of two conductors supported by steel towers and steel poles. The underground portion comprises six underground cables, with a copper conductor that is 1,000 kilo-circular mils (Kcmil) in area (approximately 1 inch diameter). The cables are insulated with Cross-Linked Polyethylene (XLPE) and enclosed in a black polyethylene jacket.

The cables are direct-buried in two backfilled trenches that are 5 feet deep by 2 feet wide. The facility generally runs parallel to a dirt road, and extends from a Terminal Pole to a Terminal Building approximately 10,000 feet north.

The Terminal Pole is steel and approximately 45 feet in height, with a 4-foot-diameter concrete base. The top of the pole receives the two overhead lines from adjacent poles and towers in the series and transitions them to the six underground cables. The Terminal Building is in the center of a 3,000-foot-diameter circle of vertical electrodes that are buried in 235 feet deep wells. The Terminal Building is a one-story, one-room, concrete-block structure surrounded by chain-link fencing topped with barbed wire. The Terminal Building houses the main bus for distributing the

DC current to feeder cables connecting to the electrode wells, switches, and other related electrical equipment. The existing equipment will remain after the Project is complete.

The existing cables are placed in service for approximately 20 hours per year. The total number of hours in service per year does not occur over a single period; operation is sporadic and as needed for reliable operation of the STS. The cables are designed to operate either individually or in parallel. When the cables are operated simultaneously, they are designed to carry 1,920 amperes.

In addition, the cables are periodically tested. Testing for the land cables is typically conducted twice per year to determine the integrity of cable insulation. A DC voltage of 2 to 5 kV is applied to the conductor for approximately 10 minutes. During the DC voltage application, insulation resistance and leakage current readings are taken at intervals of 30 seconds for approximately 10 minutes. The readings are displayed on a measuring device known as a "Megger." Any significant decrease in resistance or increase in leakage current is an indication of insulation degradation.

1.2.3 Existing Electrode Location and Environmental Setting

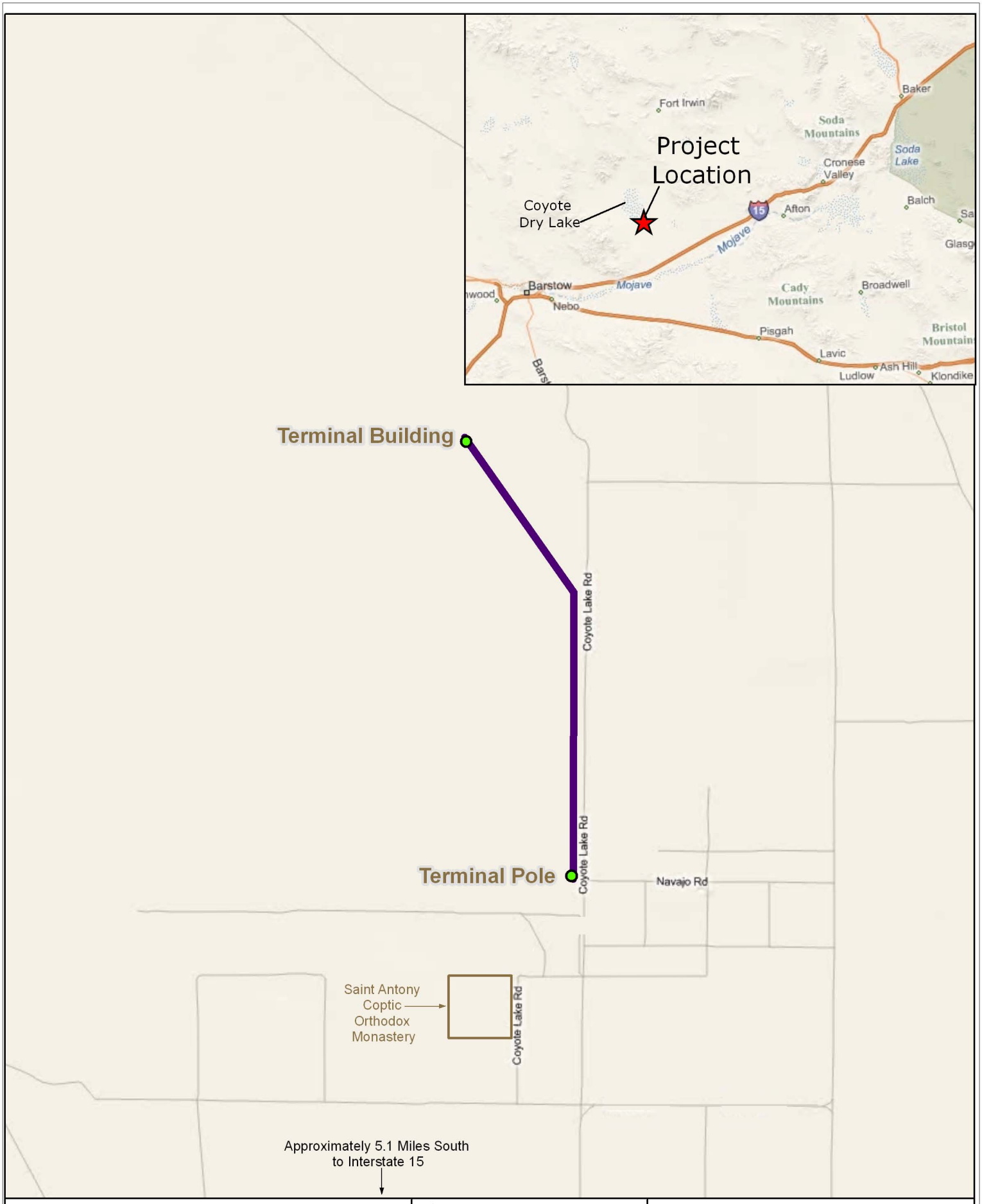
The proposed Project would be located within the County of San Bernardino, California, on land administered by the Bureau of Land Management (BLM). The existing underground cables are located approximately 1 mile east of the Coyote Dry Lake bed in Yermo, California, in a remote location approximately 20 miles northeast of Barstow. The Project area is open desert traversed by dirt roads. **Figure 1-1** shows the location of the Project site. **Figures 1-2** and **1-3** are photographs of existing site conditions.

1.2.4 Operational Deficiencies of the Existing Electrode

As discussed above, the existing cables are 1,000 Kcmil copper with XLPE insulation. Periodic testing of the cables has shown a significant decrease in insulation resistance over the years. The deteriorating insulation, which could be caused by moisture absorption, can lead to electrical breakdowns or failures that can jeopardize operations of the electrode, hence impacting the reliability of the system.

1.3 PROJECT OBJECTIVES

The objectives of the proposed Project are to modify the design and improve the operation of the underground electrode facility to minimize potential failures and the operational risks associated with the loss of cables due to insulation breakdown. The enhanced engineering design of the system will reduce the need for system maintenance, inspections, testing, and repair.



Project Location

Figure 1-1

MWH

Figure 1-2
Existing Site Conditions – Terminal Building

Source: MWH, 2010.

Figure 1-3
Existing Site Conditions – Terminal Pole

Source: MWH, 2010.

1.4 PROJECT DESCRIPTION

LADWP proposes to replace the underground portion of the electrode system. Approximately 10,000 feet of cable would be replaced in up to two trenches, 2 feet wide and 5 feet deep, installed adjacent to an existing dirt road. The new cables would be designed to carry 2,400 amperes, due to a 480 megawatt (MW) uprate in the capacity of the STS. Under the Project, LADWP proposes to install from one to six new cables from the Terminal Pole to the Terminal Building and abandon in place the existing underground cables upon activation of the new cables.

The new replacement cables will have DC-XLPE insulation and a smooth or corrugated metal sheath for physical protection and to prevent moisture absorption. The cables would be direct buried and backfilled with either all native soil or with native soil and approximately 12 inches of slurry (mixture of sand and cement).

1.4.1 Project Construction

Construction of the proposed Project would involve site preparation, minor vegetation clearing, trench excavation, laying the cables in the trenches, splicing the cables, backfilling the bottom portion of the trenches with native soil or a mixture of sand and cement, backfilling the remainder of the trenches with native soil, connecting the cables to the Terminal Pole and Terminal Building, and testing and start-up of the system.

Total soil excavation for the Project is estimated at up to 7,500 cubic yards (cu yd). Maximum trench top width would be 2 feet and maximum trench depth would be 5 feet. If slurry is used, approximately 80 percent of the excavated soils would be redeposited within the trench following installation of the cables. The remaining excess soil (estimated to require approximately 170 truck trips at 9 cu yd per truck), would be hauled to the nearest landfill.

It is assumed that construction equipment would move onto the site when needed and remain on site until work was completed. It is anticipated that only one staging area would be required during construction. Staging, laydown, and parking areas would be along the dirt road or at the Terminal Building. The area of potential disturbance includes trenching for installation of the replacement cables and construction vehicle movement adjacent to the trenches. LADWP anticipates that only one side of the length of the alignment would undergo disturbance related to the movement of construction vehicles and equipment, to the extent practicable.

Workers would commute to the site daily; the closest freeway to the Project site is Interstate 15, approximately 6 miles to the south. Anticipated, maximum construction equipment and vehicles are listed below:

- Excavator (6 hours/day, 2 months)
- Front End Loader (6 hours/day, 2 months)
- Roller (6 hours/day, 2 months)
- Crane (6 hours/day, 2 months)
- Water Truck (6 hours/day, 2 months)
- Haul Truck (6 hours/day, 2 months)

- Dump Truck (6 hours/day, 2 months)
- Workers' Vehicles (2 months)
- Ready-Mix Concrete Truck (6 hours/day, 2 months)
- Cable Reel Carrier (6 hours/day, 1 month)
- Winch Truck (6 hours/day, 1 month)
- Splicing Truck (6 hours/day, 1 month)

1.4.2 Construction Timeframes

An estimated maximum crew of five workers would move along the alignment at approximately 250 feet per day. Construction would begin as early as Spring 2012, and continue for approximately two months (approximately 40 working days). No nighttime construction activities are proposed. Inspections for quality control would occur throughout Project construction and would not add to the timeframes outlined above.

1.5 PROJECT OPERATION

The completed electrode line would operate in the same manner as the existing facility. Periodic inspection and maintenance of the electrode cables would be conducted by LADWP staff. More frequent visits would occur in response to special conditions, such as brush fires or earthquakes. Emergency repairs would be addressed as required at any time.

1.6 RELATIONSHIP OF PROJECT TO OTHER PLANNING

1.6.1 Water Quality Control Plan

The Project area is located within the Lahontan Region of the California Regional Water Quality Control Board. The Water Quality Control Plan (Basin Plan) for the region shows beneficial uses for local receiving waters (RWQCB, 2005). The operation of the Project would have no impact on any designated beneficial uses, since it would have no discharge to any surface or ground water. Potential temporary impacts to stormwater quality during Project construction are described in Section 2.3.9, Hydrology, of this IS. The proposed Project does not involve groundwater extraction and would not impact groundwater. Therefore, the Project would be consistent with the Basin Plan.

1.6.2 Regional Transportation Plan

The Southern California Association of Governments (SCAG) develops the Regional Transportation Plan (RTP) for the area that includes the Project area (SCAG, 2008). The proposed Project would be in compliance with the RTP once construction was completed, since the cables would be installed adjacent to an existing dirt road on open land and require infrequent monitoring. No significant changes in roadway use would result from the proposed Project once constructed, and no new roadways or other transportation methods would be required. Therefore, the Project would be in compliance with the RTP.

1.6.3 Regional Housing Allocation Plans

The proposed Project includes no housing, and proposes to replace existing buried cables on open land. Therefore, demonstrating consistency with Regional Housing Allocation Plans is not applicable to the proposed Project.

1.6.4 Air Quality Management Plan

The proposed Project is located in the Mojave Desert Air Basin, under the jurisdiction of the Mojave Desert Air Quality Management District (MDAQMD). Consistency of the proposed Project with the Air Quality Management Plan (AQMP) is described in Section 2.3.3, Air Quality, of this IS.

1.6.5 Habitat Conservation Plans

There is no adopted habitat conservation plan in place that covers the proposed Project area. The Project's conformity with the West Mojave Plan is discussed in Section 2.3.4, Biological Resources, of this IS.

1.6.6 Regional Land Use Plans

The Project site is located in San Bernardino County on federal land administered by BLM. The San Bernardino County General Plan Land Use Element does not provide specific zoning or land use designations for federal lands administered by BLM (County of San Bernardino, 2007). The proposed cables would be constructed within desert open land, roughly parallel to an existing dirt road. Therefore, there would be no effects on zoning or land use from the construction or operation of the Project, and no need for change in zoning or land use designation would be created by the Project. Accordingly, the Project does not conflict with the regional land use plan for this area.

1.7 PROJECT APPROVALS

Planning and regulatory agencies that have potential permit or review authority over the proposed Project are the following:

Agency	Permit or Review Authority
State Water Resources Control Board (SWRCB)	General Permit for Discharges of Stormwater Associated with Construction Activities
California Department of Fish and Game (CDFG)	CEQA Review; California Endangered Species Act (CESA) coordination
California Department of Transportation (Caltrans), Transportation Permits Branch	CEQA Review; Permit for Oversize/ Overweight Loads
Mojave Desert Air Quality Management District (MDAQMD)	Rule 403 (fugitive dust) compliance
U.S. Fish and Wildlife Service (USFWS)	Federal Endangered Species Act (ESA) coordination
U.S. Bureau of Land Management (BLM)	Right-of-Way (ROW) Grant, Land Use Permit, West Mojave Plan mitigation coordination

Section 2
Environmental Analysis

2.1 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Greenhouse Gas Emissions	☐ Population and Housing
☐ Agricultural Resources	☐ Hazards and Hazardous Materials	☐ Public Services
☐ Air Quality	☐ Hydrology and Water Quality	☐ Recreation
☐ Biological Resources	☐ Land Use and Planning	☐ Transportation and Traffic
☐ Cultural Resources	☐ Mineral Resources	☐ Utilities and Service Systems
☐ Geology and Soils	☐ Noise	☐ Mandatory Findings of Significance

2.2 AGENCY DETERMINATION

On the basis of this initial evaluation:

☐ I find that the project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the applicant. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the project, nothing further is required.

Signature: Nancy Chung for

Title: Manager of Environmental Assessment and Planning

Printed Name: Charles C. Holloway

Date: 9/16/2011

2.3 ENVIRONMENTAL CHECKLIST

2.3.1 Aesthetics

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

Discussion:

a) and c) **Less Than Significant Impact.** Scenic vistas are those that offer high-quality – and often panoramic – views of the natural environment. Existing views at the site consist of open desert and power poles; there are no scenic vistas within or in the immediate vicinity of the site. During construction, minor temporary effects on visual quality may occur from earth moving activities and the presence of construction equipment and vehicles. Once construction is complete, cables would be buried and therefore would have no impact on the visual character or quality of the site and its surroundings. Therefore, since no substantial adverse effect on a scenic vista would occur and given that the visual quality of the site and its surroundings would not be degraded by Project implementation, impacts would be less than significant.

b) **No Impact**. The Project site is not located in the vicinity of any officially designated state scenic highway or highway that is eligible for designation (Caltrans, 2007). The Project would not result in damage to trees or rock outcroppings since these features are not present on or adjacent to the Project site. The Project would have no impact on historic buildings (see **Section 2.3.5, Cultural Resources**). Therefore, since the Project would not damage scenic resources including trees, rock outcroppings, and historic buildings within a state scenic highway, no impact would occur.

d) **No Impact.** Project-related construction activities would not require lighting because activities would be scheduled to take place during daytime hours. Construction of buried cables would not create a source of glare. Therefore, there would be no new source of light or glare and no Project-related impacts related to light and glare.

2.3.2 Agriculture and Forest Resources

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Discussion:

a) **No Impact.** The proposed facilities would be located on federal land, and therefore would not be on state-designated Farmlands or Unique Farmland on the maps prepared by the California Resources Agency Department of Conservation Farmland Mapping and Monitoring Program (California Department of Conservation, 2008). Therefore, the proposed Project would have no impact on state-designated Farmland.

b) **No Impact.** The proposed alignment does not coincide with sites designated as agricultural preserves under the provisions of a Williamson Act contract (California Department of Conservation, 2004). The Project site is not located on land zoned for agricultural use. Therefore, since the proposed Project would not conflict with existing zoning for agricultural use, or a Williamson Act contract, no impacts would occur.

c) and d) **No Impact.** The Project does not propose any zoning changes; the electrode cables would be installed along an existing ROW. In addition, the Project site is not located in areas mapped as forest or woodland (California Department of Forestry and Fire Protection, 2000). As such, the Project would not conflict with existing zoning or result in rezoning of forest or timberland, or result in the loss of forest land or conversion of forest land to non-forest use. Therefore, no impact would occur to forest land, timberland, and timberland zoned Timberland Production.

e) **No Impact.** Construction and operation of the proposed electrode cables would not provide any facilities or services that could induce growth or otherwise change an existing land use that could directly or indirectly result in the conversion of farmland to non-agricultural use or conversion of forest land to non-forest use. No permanent cessation of farming activities would result from Project implementation, and no conversion of farmland to non-agricultural use or conversion of forest land to non-forest use would occur. As such, no impact to farmland and forest land would occur.

2.3.3 Air Quality

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Discussion:

The climate of the Project area is desert, with hot, dry summers and brief rainstorms in winter. Annual precipitation averages approximately 4.17 inches. Average high temperature in July is ranges from 71.3 to 104.5 degrees F; January average low temperature ranges from 34.9 to 61.0 degrees F (Property Maps, 2009).

The Project area is located within the Mojave Desert Air Basin. The San Bernardino County portion of the basin is regulated by the Mojave Desert Air Quality Management District (MDAQMD) and is designated as a non-attainment area for particulate matter 10 microns or less in diameter (PM10), and as a non-attainment area for particulate matter 2.5 microns or less in diameter (PM2.5) (MDAQMD, 2009).

MDAQMD has established thresholds for significance for air quality impacts, as presented in **Table 2-1**.

Table 2-1
MDAQMD Air Quality Significance Thresholds

Pollutant	Annual Threshold (Tons)	Daily Threshold (Pounds)*
NOx	25	137
VOC	25	137
PM10	15	82
PM2.5	15	82
SOx	25	137
CO	100	548

NOx = Nitrogen oxide, VOC = Volatile Organic Compounds, PM10 = Particulate matter 10 microns or less in diameter, PM 2.5 = Particulate matter 2.5 microns or less in diameter, SOx = Sulfur oxides, CO = Carbon monoxide
Source: MDAQMD, 2009.

a) **Less than Significant Impact.** The applicable air quality plans for the Project area are the 1995 Mojave Desert Planning Area (MDPA) Federal PM10 Attainment Plan, the Triennial Revision to the 1991 Air Quality Attainment Plan (adopted in 1996), and the 2004 Ozone Attainment Plan (MDAQMD, 2009). The plans outline strategies and measures to achieve federal and state standards for healthful air quality for areas under MDAQMD's jurisdiction.

Currently, the MDAQMD has three rules addressing PM10 emissions; most relevant to the Project is Rule 403 – Fugitive Dust (MDAQMD, 1995). The Project would be required to adhere to Rule 403 dust control measures, as applicable. Additionally, the MDPA PM10 Attainment Plan suggests control strategies to reduce fugitive dust emissions, including those located on BLM land. Under the Plan, projects that are 0.5 acres in area or more are required to implement dust control measures for construction and demolition activities to the extent feasible (MDAQMD, 1995). Therefore, since the total area of Project disturbance is 4 acres, the Project would be required to adhere to measures contained in the MDPA PM10 Attainment Plan. Incorporation of control measures as required by Rule 403 and the MDPA PM10 Attainment Plan would reduce impacts to a level of less than significant, such that the Project would neither conflict with nor obstruct implementation of the applicable air quality plan.

Furthermore, according to the MDAQMD CEQA and Federal Conformity Guidelines, a project "is non-conforming if it conflicts with or delays implementation of any applicable attainment or maintenance plan. A project is conforming if it complies with all applicable District rules and regulations, complies with all proposed control measures that are not yet adopted from the applicable plan(s), and is consistent with the growth forecasts in the applicable plan(s) (or is directly included in the applicable plan). Conformity with growth forecasts can be established by demonstrating that the project is consistent with the land use plan that was used to generate the growth forecast. An example of a non-conforming project would be one that increases the gross number of dwelling units, increases the number of trips, and/or increases the overall vehicle miles traveled in an affected area (relative to the applicable land use plan)."

The Project does not include development of housing or employment centers and would not result in any population or employment growth (see also **Section 2.3.13(a)**). Accordingly, while construction of the Project would temporarily result in additional trips to the site by commuting construction employees, Project implementation would not permanently increase the number of trips or overall vehicle miles traveled during Project operation. Therefore, since the proposed Project would not conflict with or obstruct the implementation of the aforementioned air quality plans, impacts would be less than significant.

b) and c) **Less than Significant Impact.** Construction of the proposed Project would involve excavation, and use of construction equipment and vehicles. Project construction would result in short-term air pollutant emissions from use of construction equipment, earth-moving activities (e.g., trench excavation and backfilling), construction workers' commutes, and earth hauling. Air emissions calculations and subsequent impact analyses are based on estimated maximum day emissions during construction. It is assumed that trucks and workers' vehicles would originate from the Barstow, CA area, approximately 20 miles west of the Project site.

MDAQMD provides daily air quality significance thresholds – contained in its CEQA and Federal Conformity Guidelines and presented in **Table 2-1** of this IS – and requires emissions quantification for projects applying its emissions-based significance thresholds. However, the agency has not established its own emissions factors or quantification methodology. As such, emission factors from the South Coast Air Quality Management District (SCAQMD) for CO, VOC, NOx, SOx, PM10 and PM2.5 peak day air emissions associated with Project construction were calculated. The assumed construction year is 2012.

Based on the anticipated extent of peak day construction of the proposed Project, estimated air pollutant emissions would not exceed the daily significance thresholds established by MDAQMD (see **Table 2-2**). Therefore, air quality impacts from Project construction would be less than significant.

Following construction, cables would be buried, and only infrequent maintenance vehicles and personnel would visit the site (at a level similar to or less than existing conditions). Therefore, operation of the Project would not produce significant air pollutant emissions. Accordingly, the Project will have no impact on air quality during Project operation.

Table 2-2
Estimated Air Pollutant Emissions During Project Construction

Emissions Source (on-road vehicles and ATVs)	Vehicle Type	No.	Est Max miles per day	Emission Factor (lbs/mi) [1]						Estimated Peak Day Emissions (lbs/day)					
				CO	VOC	NOx	SOx	PM10	PM2.5	CO	VOC	NOx	SOx	PM10	PM2.5
Haul Truck	HHDT	1	80	0.0102	0.0025	0.0309	0.00004	0.0015	0.0013	0.817	0.202	2.474	0.003	0.120	0.103
Dump Truck	HHDT	1	40	0.0102	0.0025	0.0309	0.00004	0.0015	0.0013	0.409	0.101	1.237	0.002	0.060	0.052
Concrete Truck	HHDT	1	40	0.0102	0.0025	0.0309	0.00004	0.0015	0.0013	0.409	0.101	1.237	0.002	0.060	0.052
Cable Reel Carrier	HHDT	1	40	0.0102	0.0025	0.0309	0.00004	0.0015	0.0013	0.409	0.101	1.237	0.002	0.060	0.052
Winch Truck	HHDT	1	4	0.0102	0.0025	0.0309	0.00004	0.0015	0.0013	0.041	0.010	0.124	0.000	0.006	0.005
Splicing Truck	DT	1	4	0.0155	0.0022	0.0173	0.00003	0.0006	0.0005	0.062	0.009	0.069	0.000	0.003	0.002
Worker Vehicle	PV	5	40	0.0077	0.0008	0.0008	0.00001	0.0001	0.0001	1.531	0.159	0.155	0.002	0.018	0.011
Emissions Source (construction equipment)	**No.**	**Est Max hrs of use per day**		**Emissions Factor (lbs/hr) [2]**						**Estimated Peak Day Emissions (lbs/day)**					
				CO	VOC	NOx	SOx	PM10	PM2.5 [3]	CO	VOC	NOx	SOx	PM10	PM 2.5
Excavator	1	6		0.5401	0.1300	0.9817	0.0013	0.0536	0.0477	3.241	0.780	5.890	0.008	0.322	0.286
Front End Loader	1	6		0.3824	0.0862	0.5816	0.0008	0.0435	0.0387	2.294	0.517	3.490	0.005	0.261	0.232
Roller	1	6		0.4107	0.1038	0.6936	0.0008	0.0488	0.0434	2.464	0.623	4.162	0.005	0.293	0.261
Crane	1	6		0.4946	0.1425	1.2753	0.0014	0.0553	0.0492	2.968	0.855	7.652	0.008	0.332	0.295
Water Truck	1	6		0.6635	0.2241	2.0158	0.0027	0.0715	0.0636	3.981	1.345	12.095	0.016	0.429	0.382
Grading (fugitive dust - assuming maximum of 1 acre disturbed per day)														20	4.2
Total										**18.6**	**4.8**	**39.8**	**0.1**	**22.0**	**5.9**
Significance Thresholds [4]										**548**	**137**	**137**	**137**	**82**	**82**

Notes: HHDT: heavy-heavy-duty trucks; DT: Delivery trucks; PV: passenger vehicles

Sources:

1 SCAQMD. 2007a. EMFAC2007 version 2.3 Emission Factors for On-Road Passenger Vehicles & Delivery Trucks. Scenario Year 2012.

2 SCAQMD 2007b. SCAB Fleet Average Emission Factors (Diesel). Scenario year 2012.

3 SCAQMD. 2006. Final–Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 Significance.

4 MDAQMD Thresholds, CEQA and Federal Conformity Guidelines, February 2009.

d) **Less than Significant Impact.** MDAQMD's CEQA and Federal Conformity Guidelines identify residences, schools, daycare centers, playgrounds, and medical facilities as sensitive receptor land uses. The closest sensitive receptor to the Project site is St. Antony's Coptic Monastery, located 0.5 miles to the south.

The Guidelines indicate specific project types that must be evaluated for their potential to result in significant impacts to sensitive receptors within a specified distance, including industrial projects within 1,000 feet; distribution centers within 1,000 feet; major transportation projects within 1,000 feet; dry cleaners within 500 feet; and gas stations within 300 feet. Since the proposed Project is an electrode cable replacement and since the nearest sensitive receptor is more than 2,000 feet from the site, the Project would not expose sensitive receptors to substantial pollutant concentrations. Moreover, construction emissions would be temporary and operation of the proposed facilities would not result in air pollutant emissions, since the cables would be buried. Accordingly, Project-related air quality impacts on sensitive receptors would be less than significant.

e) **Less than Significant Impact.** Construction of the proposed Project facilities would involve the use of heavy equipment that would generate exhaust pollutants and may create nuisance odors. However, these construction-related odor impacts would be temporary and confined to the immediate vicinity of the equipment. The Project involves the operation of buried cables; as such, Project operation would not create objectionable odors affecting a substantial number of people. Therefore, odor impacts during Project construction and operation would be less than significant.

2.3.4 Biological Resources

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c) Have a substantial adverse effect on federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒

	Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	☐	☒	☐	☐
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☒	☐

Discussion:

A Biological Resources Assessment was completed for the proposed Project by Garcia and Associates (GANDA, 2010) and is on file with LADWP.

Background research of special-status plant and animal species known to potentially occur in the Project vicinity was conducted. Known occurrences of special-status species within 5 miles of the Project area were identified by searching the California Natural Diversity Database (CNDDB). Other sources reviewed included the San Bernardino county list on the U.S. Fish and Wildlife Service (USFWS) Ventura Office website, the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants, and the BLM Sensitive Species List. The search area for this background research included the Alvord Mountain West USGS 7.5 quadrangle that includes the Project area and the five surrounding quadrangles (Harvard Hill, Yermo, Coyote Lake, Alvord Mountain East, and Manix) within 5 miles of the Project area.

Field surveys of the area of potential disturbance for the Project were conducted on foot on May 17 and 18, 2010 to: 1) identify and describe the onsite habitat conditions; and 2) assess habitat and the potential presence of special-status species. The total area of construction disturbance for the Project would be approximately 4 acres, which includes the excavated trenches and an estimated 15 feet of laydown area on a single side of the trenches. Potential special-status plant species include taxa that are designated as follows: federally threatened, endangered, or candidate for listing; threatened, endangered, or rare by the state of California; on the CNPS list, or BLM sensitive. Potential special-status animal species include the following: federally threatened, endangered, or candidate for listing; threatened or endangered by the state of California; California Species of Concern; or BLM sensitive.

An active common raven nest and fledglings were observed during the field survey; no other nests or birds were observed. Vegetation in the Project area is primarily characterized by Mojave Creosote Bush Scrub and Desert Saltbush Scrub. There are no trees located in the immediate vicinity of the Project site. Project construction would include minor vegetation clearing of approximately 0.5 acres and additional disturbance by construction vehicles, equipment, and personnel of approximately 3.5 acres, for a total of 4 acres of disturbance.

Special Status Plants

Review of existing information identified 14 special-status plant species known or with the potential to occur in the Project vicinity, including one federally listed species: Lane Mountain milk-vetch (*Astragalus jaegerianus*) (see **Table 2-3**). However, this species was not found during surveys of the Project area conducted during the flowering season. Thirteen plant species considered sensitive by BLM or the CNPS (but not federal or state-listed) with potential to occur within the Project vicinity were also identified. However, after conducting focused surveys, all 13 species were determined to be either absent or have a low to very low probability of occurrence within the Project site.

Special Status Animals

Review of existing information identified 17 special-status animal species known, or with the potential to occur, in the Project vicinity, including 10 federally and/or state-listed species (**Table 2-4**). However, due to the absence of suitable habitat, eight of the 10 listed species are absent from the Project survey area. Suitable habitat was observed for two listed animal species, desert tortoise and Mohave ground squirrel. Critical habitat has been designated within the Project survey area for desert tortoise.

Background research identified seven additional sensitive animal species with potential to occur within the Project vicinity. All seven of those species are California Species of Concern; five of those seven are also BLM-Sensitive. Four non-listed animal species are not present at the Project survey area due to the absence of suitable habitat. However, there is potential suitable habitat for the other three non-listed species: burrowing owl (*Athene cunicularia*), Le Conte's thrasher (*Toxostoma lecontei*), and Mojave fringed-toed lizard (*Uma scoparia*). Of these three species, only burrowing owl and Le Conte's thrasher have moderate to high potential to occur in the Project survey area.

West Mojave Plan

The Project site is within the planning area of the West Mojave Plan (BLM, 2008). The West Mojave Plan is an amendment to the California Desert Conservation Area (CDCA) Plan originally adopted in 1980. The West Mojave Plan protects nearly 100 sensitive plant and animal species, including the desert tortoise and Mojave ground squirrel, and their natural environments. The West Mojave Plan also provides a more efficient, streamlined, and predictable permitting process for development projects. More specifically, the Plan allows the USFWS and the CDFG to permit projects that contain standardized mitigation and compensation requirements pre-authorized by USFWS and CDFG as having complied with the California and federal endangered species acts.

The West Mojave planning area comprises 9.4 million acres, which includes eleven cities and portions of four counties, including San Bernardino County, in which the Project site is located. Approximately one-third of the land within the planning area is privately owned, one-third is within military bases, and one-third comprises public land managed by BLM.

Table 2-3
Special Status Plant Species with Potential to Occur in the Project Vicinity

Scientific/ Common Name	Rank or Status [1]				Distribution [2]	Habitat Types [3]	Elevational Range and Habitat Preferences	Flowering Period/ Color	Potential for Occurrence
	ESA	CESA	BLM	CNPS					
Amaranthus watsonii Watson's amaranth	-	-	-	4.3	Mojave and Sonoran deserts, and elsewhere; IMP, LAX, SBD; Baja CA, Sonora MX.	MDScr SDScr	Mojave desert scrub, Sonoran desert scrub. 65-5,580 ft (20 -1,700 m)	Apr-Sept green	**Very low**. Widespread. Distribution poorly known. Nearest known location near Kramer Junction, approx. 30 mi. W of the project area.
Astragalus jaegerianus Lane Mountain milkvetch	E	-	S	1B.1	Mojave Desert endemic. Fort Irwin area. SBD.	MDScr JTWdld	Mojave desert scrub, Joshua tree woodland; granitic, sandy or gravelly. 2,950-3,940 ft (900-1200 m)	Apr-Jun pink	**Absent.** The species was not observed in surveys conducted during the flowering period.
Castela emoryi crucifixion thorn	-	-	-	2.3	Mojave and Sonoran deserts; IMP, INY, RIV, SBD; AZ, Sonora MX.	MDScr SDScr/ gravelly Playas	Gravelly washes and slopes, or depressions where water may accumulate. <2,100 ft (<700 m)	(Apr) June-July yellow	**Absent.** The species is a conspicuous shrub and was not observed in the project area.
Chorizanthe spinosa Mojave spineflower	-	-	-	4.2	W Mojave Desert: Kern, LAX, RIV, SBD.	ChScr MDScr	Semi-alkaline flats within desert scrub. 20-4,264 ft (6 – 1,300 m)	March-July white	**Absent.** The species was not observed in surveys conducted during the flowering period.
Cryptantha clokeyi Clokey's cryptantha	-	-	S	1B.1	W Mojave Desert endemic; LAX, SBD.	MDScr	Mojave desert scrub; sandy or gravelly soils. 2,625-4,200 ft (800 – 1,280 m)	April white	**Very low**. Nearest known location at Ft. Irwin, about 20 mi. N of the project area.
Cymopterus deserticola desert Cymopterus	-	-	S	1B.2	Mojave Desert endemic. KRN, LAX, SBD.	MDScr, JTWdld, sandy.	Mojave Desert scrub, Joshua Tree woodland; sandy flats, slopes. 2,070-4,920 ft (630-1,500m)	Mar-May purple	**Very low.** Nearest known location near Harper Dry Lake, approx. 30 mi. W of project area.

Scientific/ Common Name	Rank or Status [1]				Distribution [2]	Habitat Types [3]	Elevational Range and Habitat Preferences	Flowering Period/ Color	Potential for Occurrence
	ESA	CESA	BLM	CNPS					
Cynanchum utahense Utah vine milkweed	-	-	-	. 43	Mojave Desert; 29 Palms region, Joshua Tree, Old Woman Springs, Ivanpah mtns., SBD; Colorado Desert; Blythe, RIV; Anza-Borrego area, SDG, Ocotillo Wells, IMP; to NV, AZ, UT.	MDScr, SDScr	Sandy or gravelly soils, often in washes climbing up through shrubs. 1,150-4,700 ft (350-1,435 m)	Apr-June yellow and red	**Absent.** The species was not observed in surveys conducted during the flowering period.
Eriophyllum mohavense Barstow woolly sunflower	-	-	S	1B.2	W Mojave Desert and a few outlying sites; KRN, LAX, SBD. Endemic to CA.	ChScr MDScr playas	Semi-alkaline flats in desert scrub; 1,640-3,150 ft (500 – 960 m)	Apr-May yellow	**Absent.** The species was not observed in surveys conducted during the flowering period.
Mentzelia tridentata creamy blazing star	-	-	S	1B.3	Mojave and Sonoran deserts; IMP, INY, KRN, RIV, SBD, SDG. Endemic to CA.	MDScr rocky, gravelly, sandy	Rocky, gravelly and sandy areas within Mojave creosote bush scrub. 2,100-3,480 ft (700-1,160 m)	Mar-May creamy white, shiny	**Absent.** The species was not observed in surveys conducted during the flowering period.
Mimulus mohavensis Mojave monkeyflower	-	-	S	1B.2	W & C Mohave Desert; SBD. Endemic to CA.	JTWld MDScr sandy gravelly	Creosote bush scrub, Joshua tree woodland; often in washes. 1,970-3,940 ft (600- 1,200m)	Apr-Jun pink & white	**Absent.** The species was not observed in surveys conducted during the flowering period.
Muilla coronata crowned Muilla	-	-	-	4.2	Mojave Desert; esp. N and W. INY, KRN, LAX, SBD, TUL; NV.	ChScr, MDScr, JTWdld, PJWdld.	Chenopod scrub, Mojave Desert scrub, Joshua Tree woodland, pinyon-juniper woodland; sandy/gravelly flats and slopes. 2,510-6,430 ft (765-1,960m)	Feb-Apr white	**Low.** Nearest known location is on bluffs of Mojave River, approx. 20 mi. SW of the project area.
Phacelia parishii Parish's phacelia	-	-	S	1B.1	Mojave Desert, near Lucerne, Calico, and Coyote dry lakes, SBD; southern NV.	Plyas, MDScr (MCBS)	Barren clay or alkaline soils on playa margins; in NV also on barren alkali knolls in MDScr and JTWld. 1,775-6,000 ft (550-1,825m)	Apr-Jul lavender with yellow tube	**Absent.** The species was not observed in surveys conducted during the flowering period. Only *Phacelia pachyphylla* was observed.

Scientific/ Common Name	Rank or Status [1]				Distribution [2]	Habitat Types [3]	Elevational Range and Habitat Preferences	Flowering Period/ Color	Potential for Occurrence
	ESA	CESA	BLM	CNPS					
Psorothamnus arborescens var. *arborescens* Mojave indigo-bush	-	-	-	4.3	W Mojave Desert and Death Valley area; INY, KRN, SBD,	MDScr RpScr	Creosote bush scrub, riparian scrub; hillsides and stony flats on granitic bedrock. 1,310-3,890 ft (400 -1,185 m)	Apr-May deep purple	**Absent.** The species was not observed in surveys conducted during the flowering period.
Wislizenia refracta ssp. Refracta jackass-clover	-	-	-	2.2	Mojave and Sonoran deserts. RIV, SBD; AZ, NM, TX.	MDScr, SDScr, DeDns, Plyas.	Sandy washes, roadsides, alkaline flats. 1,970-2,625 ft (600-800m)	Apr-Nov yellow	**Absent.** The species was not observed in surveys conducted during the flowering period.

[1] Conservation status abbreviations:

U.S. Fish and Wildlife Service (ESA) designations:

- E Endangered: Any species in danger of extinction throughout all or a significant portion of its range.
- T Threatened: Any species likely to become endangered within the foreseeable future.

California Department of Fish and Game (CESA) designations:

- E Endangered: Any species in danger of extinction throughout all or a significant portion of its range.
- T Threatened: Any species likely to become endangered within the foreseeable future.
- R Rare: Any species not currently threatened with extinction, but in such small numbers throughout its range that it may become endangered if its present environment worsens.

Bureau of Land Management (BLM) designation:

- S Sensitive: species that are not federally or state listed, but are designated by the BLM State Director for special management consideration; includes all taxa designated CNPS 1B found on BLM lands.

California Native Plant Society (CNPS) designations:

- 1B Plants rare, threatened or endangered in California and elsewhere.
- 2 Plants rare, threatened or endangered in California, but more common elsewhere.
- 3 Plants for which more information is needed – a review list.
- 4 Plants of limited distribution – a watch list.

CNPS threat categories:

- .1 Seriously endangered in California.
- .2 Fairly endangered in California.
- .3 Not very endangered in California.

[2] Abbreviations used under distribution are: AZ=Arizona; CA=California; CO=Colorado; ID= Idaho; IMP=Imperial Co., CA; INY=Inyo Co., CA; KRN=Kern Co., CA; MNO=Mono Co., CA; NM=New Mexico; NV=Nevada; OR=Oregon; RIV=Riverside Co., CA; SBD=San Bernardino Co., CA; SDG – San Diego Co., CA; SO=Sonora, Mexico; TX=Texas; UT=Utah; WA=Washington; and WY=Wyoming.

[3] Habitat types: Designations largely follow the nomenclature developed by the California Natural Diversity Data Base (Holland, 1986) and abbreviations used in the CNPS Inventory (2009). They include: ChScr – chenopod scrub; DeDns – desert dunes; JTWld – Joshua tree woodland; MDScr – Mojavean Desert scrub; Plyas – playas; PJWld – pinyon-juniper woodland; RpFrs – riparian forest; and SDScr – Sonoran desert scrub.

Table 2-4
Special Status Animal Species with Potential to Occur in the Project Vicinity

Common Name *Scientific Name*	Status[1]				Habitat	Potential for Occurrence in Project Survey Area
	ESA	CESA	CDFG	BLM		
Fishes						
Mohave tui chub *Gila bicolor mohavensis*	E	E	-	-	Endemic to the Mojave River basin, needs deep pools, ponds, or slough-like areas.	**Absent.** No aquatic habitat in/near the Project survey area.
Amphibians						
Arroyo toad *Bufo californicus*	E	-	CSC	S	Semi-arid regions near washes or intermittent streams, including desert riparian, desert wash. Needs rivers with sandy banks, willows, cottonwoods, and sycamores.	**Absent.** No aquatic habitat in/near the Project survey area.
Reptiles						
Western pond turtle *Emys marmorata*	-	-	CSC	S	Thoroughly aquatic of ponds, streams, and irrigation ditches. Needs basking sites.	**Absent.** No aquatic habitat in/near the Project survey area.
Desert tortoise *Gopherus agassizzi*	T	T	-	-	Most common in desert scrub, desert wash, and Joshua tree habitats; creosote bush habitat with large annual wildflower blooms preferred. Requires friable soil for burrow construction.	**Presence determined.** Indirect sign –one Class 3 burrow- of desert tortoise observed in the Project survey area.
Mojave fringed-toed lizard *Uma scoparia*	-	-	CSC	S	Fine, loose, wind-blown sand in sand dunes, dry lakebeds, riverbanks, desert washes, sparse alkali scrub, and desert scrub.	**Low.** Marginal habitat in Project survey area; loose soil mostly stabilized. No recorded occurrence within five miles of Project.
Birds						
Burrowing owl *Athene cunicularia*	-	-	CSC	S	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation.	**Moderate.** Suitable habitat present throughout Project survey area. No recorded occurrence within five miles of Project.
Western yellow-billed cuckoo *Coccyzus americanus occidentalis*	C	E	-	-	Nests in riparian jungles of willow along broad, lower flood-bottoms of larger river systems.	**Absent.** No aquatic habitat in/near the Project survey area.
Southwestern willow flycatcher *Empidonax trallii extimus*	E	E	-	-	Riparian woodlands in southern California.	**Absent.** No aquatic habitat in/near the Project survey area.
Yellow-breasted chat *Icteria virens*	-	-	CSC	-	Summer resident. Inhabits riparian thickets of willow and other brushy vegetation near watercourses.	**Absent.** No aquatic habitat in/near the Project survey area.

Common Name *Scientific Name*	Status[1]				Habitat	Potential for Occurrence in Project Survey Area
Vermillion flycatcher *Pyrocephalus rubinus*	-	-	CSC	-	During nesting season, inhabits desert riparian adjacent to irrigated fields, irrigation ditches, pastures, and other open mesic habitats.	**Absent.** No aquatic habitat in/near the Project survey area.
Yuma clapper rail *Rallus longirostris yumanensis*	E	T	-	-	Nests in freshwater marshes along the Colorado River and along the south and east ends of the Salton Sea.	**Absent.** No aquatic habitat in/near the Project survey area.
Le Conte's thrasher *Toxostoma lecontei*	-	-	CSC	S	Desert resident; primarily of open desert wash, desert scrub, alkali desert scrub, and desert succulent scrub habitats.	**Moderate.** Suitable habitat present throughout Project survey area. No recorded occurrence within five miles of Project.
Least Bell's vireo *Vireo bellii pusillus*	E	E	-	-	Summer resident in low riparian in vicinity of water or in dry river bottoms.	**Absent.** No aquatic habitat in/near the Project survey area.
Mammals						
Townsend's big-eared bat *Corynorhinus townsendii*	-	-	CSC	S	Found in a wide variety of habitats; most common in mesic sites. Roosts in the open, hanging from walls and ceilings.	**Absent.** No roosting habitat for this species exists in the Project survey area.
Mohave ground squirrel *Spermophilus mohavensis*	-	T	-	-	Open desert scrub, alkali scrub, and Joshua tree woodland. Prefers sandy to gravelly soils. Uses burrows at base of shrubs for cover and nesting.	**High.** Suitable habitat present throughout Project survey area. Nearest recorded occurrence is 8.5 miles west of the Project.

[1] Conservation status abbreviations:

Endangered Species Act (ESA) designations:

- E Listed as endangered under federal Endangered Species Act by USFWS
- T Listed as threatened under federal Endangered Species Act by USFWS
- C Listed as candidate under federal Endangered Species Act by USFWS

California Endangered Species Act (CESA) designations:

- E Listed as endangered under California Endangered Species Act by CDFG
- T Listed as threatened under federal Endangered Species Act by CDFG

California Department of Fish and Game (CDFG) non-listed designations:

- CSC California Species of Concern

Bureau of Land Management (BLM) designation:

- S Sensitive species that are not federally or state listed, but are designated by the BLM for special management consideration.

Under the West Mojave Plan, a mitigation fee program has been established to compensate for habitat disturbance within the West Mojave planning area. Fees are used to purchase habitat. Fees apply to new, ground-disturbing activities located on public and private lands under the jurisdiction of agencies participating in the West Mojave Plan, including BLM and 27 other entities including other federal agencies, Caltrans, and other state agencies, cities, counties and special districts. The mitigation fee is applicable to development and/or loss of habitat on both private land, as well as land administered by BLM. On land administered by BLM, the mitigation fee applies to all new projects subject to federal permits, and is collected by the BLM at the time the permit is issued. Where multiple species exist or where conservation areas for species overlap, only a single mitigation fee applies (BLM, 2005).

a) and b) **Less Than Significant Impact with Mitigation Incorporated.** As discussed above, a review of existing information identified 14 special-status plant species and 17 special-status animal species known or with the potential to occur in the Project vicinity.

No federal- and/or state-listed plant species, or BLM-sensitive plant species, were observed in the Project survey area.

Indirect signs of desert tortoise were observed in the Project survey area. As discussed above, critical habitat has been designated within the Project survey area for desert tortoise. Also, suitable habitat was observed in the Project survey area for the state-listed Mohave ground squirrel.

No direct or indirect signs of non-listed, CDFG- or BLM-status animal species were observed in the Project survey area; however, suitable habitat was observed for burrowing owl and Le Conte's thrasher.

Since individual desert tortoise or Mohave ground squirrel or their burrows could be disturbed by earthwork required for Project construction, the Project would have a potentially significant impact on two federal- and/or state-listed species. Since the Biological Resources Assessment found that burrowing owl and Le Conte's thrasher had moderate to high potential to occur in the Project survey area, Project construction could also have a potentially significant impact on burrows and nests for those species, respectively.

Therefore, mitigation measures relative to both sensitive and non-listed species shall be implemented to reduce potential impacts to below a level of significance. More specifically, Mitigation Measures **BIO-1** through **BIO-9** provide for measures – both prior to and during construction activity – that would reduce or eliminate the potential to adversely affect listed species and their habitats. **BIO-10** through **BIO-13** specify measures to be taken to reduce impacts to desert tortoise, Mohave ground squirrel, nesting birds and burrowing owls. With implementation of Mitigation Measures **BIO-1** through **BIO-13**, Project-related impacts on biological resources would be less than significant.

c) **No Impact**. There are no wetlands directly along the proposed cable alignment that would be impacted by Project construction or operation. Therefore, there would be no impact on wetlands.

d) **Less Than Significant Impact with Mitigation Incorporated.** Construction of the proposed cables could temporarily affect the movement of wildlife during the estimated two months in which the Project would be built. Implementation of Mitigation Measure **BIO-1**, which would confine construction vehicles and equipment to the Project area of potential disturbance, and **BIO-4**, which requires unattended open trenches or excavations to be fenced and/or covered to prevent wildlife entrapment, would reduce potential impacts affecting the movement of wildlife to a less than significant level. Furthermore, implementation of Mitigation Measures **BIO-12** and **BIO-13** would require that as much work as possible be completed at the Project site outside of the breeding season for birds and burrowing owls, respectively. Therefore, with implementation of **BIO-12** and **BIO-13**, potential impacts to wildlife movement would be reduced to a less than significant level.

During Project operation, electrode system components would be buried. Therefore, no impacts to biological resources would occur.

e) **No Impact.** There are no trees present at the Project site; therefore, the Project would not conflict with any local tree preservation policy since no trees would be affected by Project construction.

f) **Less Than Significant Impact.** As discussed above, the proposed Project site is located within the boundaries of the West Mojave Plan and a mitigation fee program has been established to compensate for habitat disturbance within the West Mojave planning area. Proceeds from the fee are used to purchase habitat. Since the Project would be considered new based on the criteria in the Plan, and since the Project would be subject to a federal permit (BLM Land Use Permit), the Project would be required to pay a West Mojave Plan mitigation fee at the time of permit issuance. With coordination with BLM and with payment of the West Mojave Plan mitigation fee leading to the purchase of additional habitat, the proposed Project would not conflict with an adopted or approved habitat conservation plan and impacts would be less than significant.

Mitigation Measures:

BIO-1: While at the Project site, equipment and vehicles shall remain confined to the Project area of potential disturbance (i.e., existing access roads, road shoulders, and previously disturbed areas).

BIO-2: All construction equipment shall be maintained to prevent leaks of fuels, lubricants, or other fluids.

BIO-3: Erosion, sediment, material stockpile, and dust control Best Management Practices (BMPs) shall be employed on site during project construction.

BIO-4: Unattended open trenches or excavations shall be properly fenced and/or covered to prevent wildlife entrapment. If wildlife is discovered in open trenches, wildlife shall be removed prior to filling in trench. Nets or ramps are effective removal methods.

BIO-5: All trash and waste items generated by construction or crew activities shall be properly contained and removed from the Project site.

BIO-6: To the extent practicable, work areas shall be returned to approximately pre-existing contours upon completion of work.

BIO-7: No pets, campfires, or firearms shall be permitted on the Project site.

BIO-8: In accordance with federal and California State Endangered Species Acts, all observations of listed species shall be reported immediately to LADWP Environmental Services and care shall be taken not to take or harass the species. An LADWP Environmental Service representative shall inform appropriate federal and state resource agency personnel of the sighting.

BIO-9: Prior to the start of construction, a qualified biologist shall provide environmental awareness training to all construction personnel. The training shall include species descriptions, legal status, protection measures, and relevant fines. Awareness training shall also include avoidance measures to protect nesting birds. A written description of the proposed awareness training program shall be submittal to BLM prior to the start of construction. BLM approval of the environmental awareness training is required prior to conducting the training.

BIO-10: Preconstruction clearance surveys for desert tortoise shall be conducted throughout the Project immediately prior (approximately 24 hours) to Project construction activities. After the area has been cleared of desert tortoise, exclusion fencing shall be constructed around the perimeter of the Project or a U.S. Fish and Wildlife Service–approved biological monitor shall be present during Project construction activities; this shall be at the discretion of the Project proponent. Ground disturbance shall be kept to the minimum necessary to safely complete Project activities.

BIO-11: Presence of Mohave ground squirrel shall be assumed at the Project site. Appropriate mitigation measures for the Mohave ground squirrel shall include a negotiated payment into a mitigation bank; guidance for mitigation costs is provided in the West Mohave Plan. Additional measures are preconstruction surveys and trapping immediately prior to construction. These measures would be discussed with CDFG during consultation.

BIO-12: As much work as possible shall be completed at the Project site during the non-breeding bird season (September to March). Bird nesting surveys shall be conducted prior to construction if Project construction activities occur between March and August (nesting season). Additionally, if construction activity halts or ceases for at least two weeks during the breeding season, then nesting bird surveys shall be conducted prior to recommencing construction activity. If nesting birds are observed during these surveys, avoidance measures shall be implemented to avoid disturbance to nesting birds. These measures include relocating construction activities or establishing a no-disturbance buffer around the nest location until after birds have fledged. Buffer zones vary according to species and circumstance and therefore shall be determined by a qualified biologist prior to the commencing of construction activities. Notwithstanding, the buffer distance but must be sufficient, such that nesting activities remain undisturbed.

BIO-13: Pre-construction surveys for burrowing owls shall be conducted no more than 30 days prior to ground disturbing activities. As much work as possible shall be completed at the Project site outside of the breeding season (February 1 to August 31). If an occupied burrow is found in the Project site, no disturbance shall occur within 160 feet of occupied burrows during the non-breeding season (September 1 to January 31), or within 250 feet during the breeding season.

2.3.5 Cultural Resources

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Discussion:

The Project Area of Potential Effect (APE) comprises all areas in which ground disturbing activities are proposed to occur. GANDA archaeologists performed a pedestrian survey on May 19, 2010, and returned to the Project site to complete a more detailed recordation on August 24, 2010. A paleontological survey and recordation occurred on August 3, 2010. During the fieldwork, no artifacts or fossils were collected, and no excavations were undertaken. The reports of the Cultural Resources Investigation (2010) and the Paleontological Identification and Evaluation (2010) for the proposed Project are on file with LADWP.

A records search by staff at the San Bernardino Archaeological Information Center (SBAIC) of the California Historical Resources Information System (CHRIS) was conducted in March 2010 using a 1-mile radius of the Project area for both studies and sites. During the records search, the following sources were consulted:

- SBAIC base maps: United States Geological Survey (USGS) 7.5-minute series topographic quadrangles for the Project area; Government Land Ownership Maps

- Pertinent survey reports and archaeological site records on file which were examined to identify recorded archaeological sites and historic-period built-environment resources (such as buildings, structures, and objects) within or immediately adjacent to the Project areas

- The California Department of Parks and Recreation's California Inventory of Historic Resources (1976) and the Office of Historic Preservation's Historic Properties Directory

(2007), which combines cultural resources listed on the California Historical Landmarks, California Points of Historic Interest, and those that are listed in or determined eligible for listing in the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR)

According to the records search completed at the SBAIC in March 2010, eight prior cultural resource studies have been conducted within 1 mile of the Project. Fourteen prehistoric and/or historic resources are recorded within 1 mile of the Project area. They comprise nine prehistoric sites, four prehistoric isolates, and one historic trash dump. Of particular relevance to this study is CA-SBR-848, a very large, light density site. The entire Project APE lies within the site boundaries. CA-SBR-848 was reported in 1958 to represent a lithic industry site described as a very large, sparse scatter of lithic material, with a sequence ranging from Paleo-Indian to protohistoric populations. In 1985, prior to installation of the original underground electrode cables, archaeologists performed several studies at CA-SBR-848 within the Project APE. No cultural materials or subsurface features were recovered from the trench excavations, and this portion of the site does not appear to contain significant deposits. However, previous archaeological studies conducted within CA-SBR-848 have found the site NRHP-eligible under Criterion D (properties that have yielded or may be likely to yield information important to prehistory or history).

During the 2010 pedestrian survey of the APE, 20 loci of cultural resources were recorded, including six prehistoric clusters of lithic material, 12 prehistoric isolates, and two paleontological mineralized bone scatters. Each of the recorded resources is within the boundaries of CA-SBR-848 and is considered individual loci. The 20 loci are located within the existing corridor for the underground cables installed in 1986.

The results of background research, previous studies, field survey, and recordation determined the portions of CA-SBR-848 within the Project APE are not eligible for listing on the NRHP. Additionally, that the 20 loci are present within a disturbed context implies there is little to no potential for subsurface deposits. Accordingly, the 20 loci do not contribute to the overall eligibility of CA-SBR-848 and no further work is recommended on these sites.

Background paleontological research conducted for the Project consisted of a literature and map review as well as a fossil locality search. This research identified previous paleontological studies, fossil localities (i.e., locations at which paleontological resources have been documented), and types of fossils in geologic units that may be within or adjacent to the Project area.

More specifically, an online fossil locality search was conducted on August 6, 2010 using the Berkeley Natural History Museum (BNHM) online database, which includes data from the University of California, Museum of Paleontology. Additionally, during the August 2010 field survey, geologic units exposed within and adjacent to the Project area were examined and several fossils fragments of the genus Anodonta (fresh water clam) were tentatively identified at multiple localities and slightly elevated positions. Also several fragments of fossil teeth at one locality, most likely of the genus Equus (horse), could be identified. All fossils were GPS-

recorded and photographed. The field survey, background research and records search suggests that all geological units within the Project area have a high paleontological sensitivity.

The Native American Heritage Commission (NAHC) was contacted on May 11, 2010 with a request for information about sacred lands that may be located within the Project area. A search of the Sacred Lands file housed at the NAHC did not result in the identification of Native American cultural resources within a 0.50-mile radius of the Project; however, the NAHC did indicate Native American cultural resources are present in close proximity to the APE. On May 17, 2010, the NAHC provided a list of local groups and individuals to contact for further information regarding local knowledge of sacred lands.

On May 21, 2010, letters were sent to each of the 10 Native American groups and individuals on the list. Each group or individual was asked to provide pertinent information or to express any concerns they may have about the proposed Project. Only one response was received, which was from John Valenzuela, Chairperson of the San Fernando Band of Mission Indians, who requested to be informed of any cultural findings in the area.

a) and b) **Less Than Significant with Mitigation Incorporated.** Given the density of cultural materials recorded in the Project area, excavation of the trenches during Project construction could potentially unearth additional resources, resulting in a potentially significant impact. Therefore, to avoid impacts to intact subsurface features possibly present but not previously identified in the APE, cultural resources monitoring is recommended during all ground disturbing activities associated with Project construction. Accordingly, the mitigation measures below shall be implemented to reduce potential impacts to cultural resources to a less than significant level. With the incorporation of these mitigation measures, impacts to historic and archaeological resources would be less than significant.

c) **Less Than Significant with Mitigation Incorporated.** Since fossils are known for the Project area and since the geological units present have a high paleontological sensitivity, earth work for cable installation has the potential to disturb paleontological resources, a potentially significant impact. Accordingly, paleontological resources monitoring is recommended to protect potential resources during earthwork necessary for Project implementation. With incorporation of mitigation measures listed below, impacts to paleontological resources would be less than significant.

d) **Less Than Significant with Mitigation Incorporated.** Human remains are not known for the Project site. In the unexpected event that human remains are discovered, the County Coroner would be contacted, the area of the find would be protected, and provisions of State CEQA Guidelines Section 15064.5 would be followed. With implementation of the mitigation measures below, Project-related impacts on human remains potentially present in the Project area would be less than significant.

Mitigation Measures:

CR-1: A qualified archeologist and paleontologist shall be retained to monitor for archaeological and paleontological resources during ground-disturbing activities associated

with Project construction. Monitoring shall continue at the Project site until the archaeologist and the paleontologist determine that no artifacts are present or that significant archaeological and paleontological resources are not likely to be discovered. The archaeological and paleontological monitors shall be able to (1) recognize and appropriately handle artifacts and archaeological and paleontological resources; (2) take accurate and detailed field notes, photographs, and locality coordinates; and (3) document Project-related, ground-disturbing activities, their location, and other relevant information including a photographic record. These data shall be compiled as a comprehensive database for use in preparation of the data recovery report if significant resources are discovered during monitoring.

LADWP shall immediately bring to the attention of the Barstow Field Manager (or his designated representative) any cultural resources (prehistoric/historic sites or objects) and/or paleontological resources (fossils) encountered during permitted operations and maintain the integrity of such resources pending subsequent investigation. All construction shall be suspended in the immediate area of the discovery until written authorization to proceed is issued by BLM.

CR-2: Inadvertent Discovery of Human Remains. Upon discovery of human remains, all work in the area must cease immediately, with nothing disturbed, and the area shall be secured. The San Bernardino County Coroner's Office shall be called. The Coroner has two working days to examine the remains after notification. Since the Project site is located on land administered by the U.S. Bureau of Land Management (BLM), BLM land managers, federal law enforcement, and a BLM archaeologist shall be informed. Suspected remains and the area around them shall remain undisturbed and the proper authorities shall be called to the scene as soon as possible. The Coroner will determine if the bones are historic/archaeological or a modern legal case.

Modern Remains. If the Coroner's Office determines the remains are of modern origin, the appropriate law enforcement officials will be called by the Coroner and will conduct the required procedures. Work shall not resume until law enforcement has released the area.

Archaeological Remains Discovered on Federally Owned/Managed Lands. If the Coroner has determined the remains are archaeological or historic and there is no legal question, the appropriate Field Office Archaeologist shall be called. The archaeologist will initiate the proper procedures under the Archaeological Resources Protection Act (ARPA) and/or Native American Graves Protection and Repatriation Act (NAGPRA). If the remains can be determined to be Native American, the steps as outlined in NAGPRA, 43 CFR 10.6 Inadvertent Discoveries, must be followed.

CR-3: A representative sample shall be recovered of any invertebrate and/or plant fossil material encountered during Project construction.

CR-4: In the event a paleontological resource has been recovered, a data recovery report shall be prepared that documents the methods and results of paleontological monitoring, and that provides an analysis of the nature and significance of fossils recovered. Final copies of

the report shall be distributed to LADWP, BLM, any supervising agencies, and the repository to which the fossil material is accessioned. At a minimum, this report shall include the following:

- A brief introduction to the background of the Project from which they were recovered
- An account of the legislative context under which the fossils were recovered and accessioned
- A description of the Project area and location
- A methods section detailing any background research conducted, monitoring procedures, and fossil recovery techniques
- A description of the geological and paleontological setting in the Project area
- The results of monitoring activities, including an account of all fossil specimens recovered
- A discussion of the significance of the paleontological resources recovered

CR-5: After the Project data recovery report is prepared (in the event a paleontological resource has been recovered), fossil material recovered during Project monitoring activities shall be accessioned for curation to a recognized paleontological repository, such as the University of California, Museum of Paleontology.

Fossils recovered during monitoring shall be prepared for curation prior to accession (Conformable Mitigation Committee 1996). Preparation of fossil specimens for accession shall be done according to specifications provided by the repository that shall receive the specimens. Preparation and accession requirements vary with each repository and shall be met before fossil material can be accessioned. Arrangements to accession fossil material shall be made with such a repository before monitoring begins so that the repository can inform the qualified monitoring paleontologist of requirements necessary to accession the fossil material (Conformable Mitigation Committee 1996). The data recovery report shall also be submitted to the repository at which the fossils are curated.

2.3.6 Geology and Soils

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994) creating substantial risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems, where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

Discussion:

a)-i) **Less than Significant Impact.** The Project is located on the USGS 7.5 Alvord Mountain West quadrangle. The Project area, like all of southern California, is seismically active. According to the California Geological Survey (2007), the proposed Project site is not located within an area identified as an Alquist-Priolo Earthquake Fault Zone. However, there is an Alquist-Priolo Zone located on the Yermo quadrangle to the southwest. Since the proposed cables would be located in a seismically active area, they would be subject to ground shaking and potential damage during a seismic event. However, Project design plans and specifications will incorporate applicable Uniform Building Code (UBC) seismic standards. Therefore, impacts related to fault rupture would be less than significant.

a)-ii) **Less than Significant Impact.** As discussed above, the proposed cables would be located in a seismically active area and therefore would be subject to ground shaking and potential damage during a seismic event. However, the Project does not involve construction of

habitable structures, and the proposed cables would be designed to withstand seismic ground shaking. Therefore, Project impacts related to seismic ground shaking would be less than significant.

a)-iii) **Less than Significant Impact.** Seismic-related ground failures such as liquefaction, lurching, lateral spreading, and differential settlement can result from strong ground shaking. Liquefaction-related phenomena occur when seismic shaking of loose, saturated sand deposits temporarily lose strength and behave as a liquid. Liquefaction-related phenomena generally occur in areas of shallow groundwater (depths of 50 feet or less).

The State of California Seismic Hazard Zones maps (California Geological Survey, 2007) identify certain areas as potential liquefaction and landslide hazard zones. Areas considered at risk for liquefaction-related ground failure during a seismic event are mapped based on surficial deposits and the presence of a relatively shallow water table. The State of California Seismic Hazard Zones maps do not include the Alvord Mountain West quadrangle; therefore, there are no known liquefaction hazards located in the Project area. Therefore, a less than significant impact related to liquefaction would occur.

a)-iv) **No Impact.** The State of California Seismic Hazard Zones maps (California Geological Survey, 2007) identify certain areas as potential landslide hazard zones. The Project site is flat and not located in an area with known landslides. Therefore, no Project impacts would occur relative to landslides.

b) **Less than Significant Impact.** During Project construction, onsite soils would be temporarily prone to erosion, especially during wind and rain. However, BMPs implemented as part of the required SWPPP (see **Section 2.3.9**), as well as measures to control dust during construction, would limit soil erosion. Therefore, effects on soil erosion would be limited to temporary construction impacts, and would be less than significant with implementation of standard BMPs.

c) and d) **Less Than Significant Impact.** As described above in a-iii and a)-iv), respectively, liquefaction and landslides are not considered to be a significant potential hazard for the Project site. Expansive soils are soils, typically clayey, that expand and contract with changes in moisture content. The expansion and contraction of soils can result in differential movement beneath building foundations and can cause structural damage, including cracking in walls or foundations, uneven floors, and destabilization. However, Project design plans and specifications will incorporate applicable Uniform Building Code (UBC) seismic standards. Furthermore, the proposed Project does not involve construction of habitable structures. Therefore, impacts related to unstable and expansive soils would be less than significant.

e) **No Impact.** No septic tanks or alternative wastewater disposal systems would be required for the proposed Project. Therefore, no impacts would occur.

2.3.7 Greenhouse Gas Emissions

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Discussion:

The majority of LADWP's emissions results from power generation. LADWP has instituted various methods for reducing greenhouse gas (GHG) emissions, such as providing rebates to encourage use of energy efficient equipment, reducing GHG from vehicles by pursuing electric fleet vehicles, retrofitting City-owned facilities for increased energy efficiency, and promoting the installation of solar and renewable power.

Conservative construction assumptions were determined for the Project so that GHG construction emissions could be calculated. As such, construction assumptions are listed in **Table 2-5**, below, and emissions are calculated in **Table 2-6**. Note that it is assumed that in addition to worker vehicles, the haul truck, dump truck, concrete truck and cable-reel carrier would be traveling to and from Barstow, which is located approximately 20 miles from the Project site (40-mile round trip per vehicle).

Table 2-5
Project Construction Assumptions for Greenhouse Gas Emissions Calculations

Vehicle	Maximum Trips Within the 40-Day Construction Period
Haul truck	10 trips to carry construction-related equipment to and from the site
Dump Truck	170 trips to remove the approximately 1,500 cubic yards of excavated soil and debris from the trenches that would not be reused, assuming 9 cubic yards per truck
Concrete Truck	185 trips to deliver approximately 1,850 cubic yards of concrete to be used to encase the conduits, assuming 10 cubic yards per truck
Cable-Reel Carrier	30 trips to bring cable to the project site
Winch Truck / Splicing Truck	1 trip, with a maximum of 10 miles anticipated on site

Table 2-6
Greenhouse Gas Emissions Resulting from Project Construction

Emissions Source (on-road vehicles and ATVs)	Vehicle Type	Est max miles for 2-month construction period	Emission Factor (lbs/mi) [1]			Estimated Emissions (lbs/2-month construction period)		
			CO2	CH4	NOx	CO2	CH4	NOx
Haul Truck	HHDT	400	4.21590774	0.00011651	0.03092379	1686.4	0.0	12.4
Dump Truck	HHDT	6800	4.21590774	0.00011651	0.03092379	28668.2	0.8	210.3
Concrete Truck	HHDT	7400	4.21590774	0.00011651	0.03092379	31197.7	0.9	228.8
Cable-Reel Carrier	HHDT	1200	4.21590774	0.00011651	0.03092379	5059.1	0.1	37.1
Winch Truck	HHDT	50	4.21590774	0.00011651	0.03092379	210.8	0.0	1.5
Splicing Truck	DT	50	2.76628414	0.00010668	0.01732423	138.3	0.0	0.9
Worker Vehicles	PV	8000	1.10152540	0.00007169	0.00077583	8812.2	0.6	6.2

Emissions Source (construction equipment)	Est max hours of use per 2-month construction period	Emissions Factor (lbs/hr) [2]			Estimated Emissions (lbs/2-month construction period)		
		CO2	CH4	NOx	CO2	CH4	NOx
Excavator	240	120.0000	0.0117	0.9817	28800.0	2.8	235.6
Front End Loader	240	66.8000	0.0078	0.5816	16032.0	1.9	139.6
Roller	240	67.1000	0.0094	0.6936	16104.0	2.3	166.5
Crane	240	129.0000	0.0129	1.2753	30960.0	3.1	306.1
Water Truck	240	260.0000	0.0202	2.0158	62400.0	4.8	483.8
Total (all emission sources)	**lbs/2-month construction period**				**230069**	**17**	**1829**
	CO2 equivalents (lbs/2-month construction period)[3]				**230069**	**363**	**53856**
	CO2 equivalents (metric tons/year)				**4**		

Notes: PV: passenger vehicles, DT: Delivery Trucks, HHDT: heavy-heavy-duty trucks

1 SCAQMD. 2007a. EMFAC2007 version 2.3 Emission Factors for On-Road Passenger Vehicles & Delivery Trucks. Scenario Year 2012.

2 SCAQMD 2007b. SCAB Fleet Average Emission Factors (Diesel). Scenario year 2012.

3 Global Warming Potential conversion to CO2e per U.S. EPA. 2010. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2008. U.S. EPA #430-R-10-006.

a) **Less Than Significant Impact.** Greenhouse gases include, but are not limited to, carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. Project-related emissions of greenhouse gases will be limited to air pollutants generated during the temporary construction activities. Currently, MDAQMD has not adopted significance thresholds for GHG emissions, nor a quantification methodology. Therefore, to determine potential impacts of the Project relative to GHG, emission factors from the South Coast Air Quality Management District (SCAQMD) for CO2, CH4, and NOx were used to calculate GHG emissions.

Construction impacts for GHG emissions are amortized over 30 years since a project is generally considered to have an economic life of 30 years. As shown in **Table 2-6**, with construction emissions amortized over 30 years, the proposed Project would generate approximately 4 MT CO2e per year.

While there is no adopted MDAQMD significance threshold for GHG, nor specific construction thresholds from SCAQMD, estimated Project emissions can be compared to SCAQMD's interim GHG significance threshold of 10,000 metric tons (MT)/year CO2e for industrial (stationary source) projects where SCAQMD is the lead agency. The Project would temporarily produce GHG emissions during construction at a level substantially less than the established SCAQMD threshold for industrial projects of 10,000 MT/year CO2e. Therefore, the impact on emissions of greenhouse gases, and thus climate change, would be less than significant for construction.

Operations-related air pollutant emissions would result from infrequent vehicle trips to the Project site – the same as under existing conditions. Since operation of the Project would not increase air pollutant emissions over existing conditions, Project operation will have no significant impact on climate change.

b) Less Than Significant Impact. The following policies and regulations are relevant to climate change in California:

- **State of California Executive Order S-3-05** – The Governor of California signed Executive Order S-3-05 on June 1, 2005. To address potential impacts of climate change, the Order mandates GHG emission reduction targets. More specifically, by 2010, greenhouse gas emissions are expected to be reduced to 2000 levels; by 2020, emissions are expected to reach 1990 levels; and by 2050, emissions are expected to be 80 percent below 1990 levels.

- **State of California Assembly Bill 32** – California Global Warming Solutions Act - Assembly Bill (AB) 32, *California Global Warming Solutions Act of 2006*, was signed into law on September 27, 2006. AB 32 requires the California Air Resources Board (CARB), in coordination with State agencies as well as members of the private and academic communities, to adopt regulations to require the reporting and verification of statewide GHG emissions and to monitor and enforce compliance with this program. Similar to Executive Order S-3-05, under the provisions of the bill, by 2020, statewide GHG emissions will be limited to the equivalent emission levels in 1990. On December

12, 2008, CARB adopted its Climate Change Scoping Plan pursuant to AB 32 (CARB, 2008).

- **State of California Senate Bill 375 –** On September 30, 2008, Governor Arnold Schwarzenegger signed Senate Bill (SB) 375, which seeks to reduce GHG emissions by discouraging sprawl development and dependence on car travel. SB 375 helps implement the AB 32 GHG reduction goals by integrating land use, regional transportation and housing planning.

The proposed Project is an upgrade of an existing electrode system that has no housing or transportation components. Construction of the Project would result in the temporary emission of GHGs. Project operation would have no impact on climate change. Therefore, the Project would have a less than significant impact on GHG policies and regulations.

2.3.8 Hazards and Hazardous Materials

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
h) Expose people or structures to the risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

Discussion:

a) and b) **Less than Significant Impact.** The proposed Project includes construction and operation of buried cables. Except for fuels for vehicles and heavy equipment (during construction and maintenance), the Project does not involve use, transport or disposal of hazardous materials. Since the Project would not create a significant hazard to the public or the environment from use, transport, or disposal of hazardous materials, impacts would be less than significant.

c) **No Impact.** The proposed Project site is not located within one-quarter mile of existing or proposed schools. Therefore, no impacts to schools would occur.

d) **No Impact.** Section 65962.5 of the California Government Code requires the California Environmental Protection Agency (CalEPA) to update a list of known hazardous materials sites, which is also called the "Cortese List." The sites on the Cortese List are designated by the State Water Resources Control Board, the Integrated Waste Management Board, and the Department of Toxic Substances Control (DTSC).

Based on a search of hazardous waste and substances sites listed in the Department of Toxic Substances Control (DTSC) "EnviroStor" database; a search of leaking underground storage tank (LUST) sites listed in the State Water Resources Control Board (SWRCB) "GeoTracker" database; and a search of solid waste disposal sites identified by the SWRCB with waste constituents above hazardous waste levels outside the waste management unit, there were no sites located in the vicinity of the Project site. Therefore, no impact relative to hazardous sites would occur.

e) and f) **No Impact.** The proposed Project is not located within an airport land use plan, and is not located within 2 miles of a public or public use airport or a private airstrip; therefore, no impacts would occur. Implementation of the proposed Project would therefore have no impact related to airport land use plans or public/public use airports.

g) **Less Than Significant Impact.** Project construction is not anticipated to substantially impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan since the proposed cables would be constructed along a remote dirt access road. No road closures are anticipated and there would be no construction at night. Trenches would be covered at the end of each workday or immediately in case of emergency. While it is likely that in the event of an emergency Project-related trucks and worker vehicles traveling to and from the Barstow area would share the freeway with potential emergency response vehicles, not all construction vehicles would travel together at

once (which could result in slowed traffic). Therefore, the impact would be less than significant.

h) **No Impact.** The proposed Project involves construction and operation of cables in an undeveloped area that is not adjacent to or intermixed with wildland fire areas (California Department of Forestry and Fire Protection, 2000). Additionally, the proposed Project would not involve construction of housing or other habitable structures. Therefore, the proposed Project would have no impact related to an increase in the risk of damage from wildland fires.

2.3.9 Hydrology and Water Quality

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
g) Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒

	Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
j)	Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Discussion:

Aside from Coyote Dry Lake located approximately 1 mile to the northwest of the Project site, there are no surface water resources in the immediate Project vicinity; the Mojave River is located more than 5 miles south of the Terminal Pole at the Project site.

The Project site is within the jurisdiction of the California Regional Water Quality Control Board, Lahontan Region (6) (Regional Board). The Regional Board has a Water Quality Control Plan for the Lahontan Region (Basin Plan, 1995). According to the Basin Plan, the Coyote Lake sub-unit of the Coyote Lake Hydrologic Unit has several Beneficial Uses for surface waters, including municipal and domestic supply, groundwater recharge, freshwater replenishment, water recreation, commercial and sports fishing, warm freshwater habitat and wildlife habitat.

a) and f) **Less than Significant Impact.** No construction site dewatering is anticipated. In compliance with the State Water Resources Control Board (SWRCB) General Permit for Stormwater Discharges Associated with Construction Activity (Water Quality Order 2009-0009-DWQ, NPDES No. CAS000002), a Stormwater Pollution Prevention Plan (SWPPP) is required for all projects that disturb more than 1 acre. The total area of construction disturbance for the Project would be approximately 4 acres, which includes the excavated trenches and an estimated 15 feet of laydown area on a single side of the trenches. Therefore a SWPPP would be required.

Accordingly, during construction of the proposed facilities, stormwater would be managed in accordance with BMPs identified in the SWPPP. These BMPs would include measures to minimize erosion and sedimentation and general good housekeeping practices to limit the potential discharge to surface waters during construction of pollutants associated with construction vehicle and equipment use. With implementation of BMPs per the SWPPP, potential impacts on water quality associated with stormwater discharges during Project construction would be less than significant. Therefore, the impact on water quality would be less than significant.

b) **No Impact.** The proposed Project does not involve groundwater extraction or recharge. Construction of the proposed cables would not result in an increase in impermeable surfaces and therefore the Project would have no impact on the groundwater recharge.

c), d), e), **Less than Significant Impact.** Currently, site runoff flows in a northwesterly direction. Project construction would involve short-term earthwork to install the proposed cables. Existing drainage patterns would not be permanently affected, since no storm drains or berms would be built under the Project. Excess soil would be hauled off-site, and trenched areas would be re-contoured to approximate existing conditions. Additionally, the

Project would not increase the amount of impervious surfaces over existing conditions. Therefore, Project implementation would not change drainage patterns, result in substantial erosion or siltation, flooding, or provide additional sources of polluted runoff. Impacts to drainage and runoff would be less than significant.

g), h) and i) **No Impact.** The proposed Project does not include housing, and no above ground structures would be built as part of the Project. Therefore, there would be no Project-related impacts on housing or structures within the 100-year flood hazard area and no structures would impede or redirect water flows (San Bernardino County, 2007). Additionally, since Project facilities (i.e., cables) would be buried, there would be no impacts related to exposure of people or structures to risk of loss, injury or death involving flooding. Accordingly, no impacts would occur.

j) **No Impact.** The Project site is inland and therefore not subject to damage from a tsunami (seismic sea wave). Furthermore, the proposed Project does not involve construction of housing or other habitable structures, or the creation of open water in which seismic movement could create standing waves (seiches). Therefore, the proposed Project would not expose people or structures to a significant risk of loss, injury or death involving inundation by seiche. Mudflows are not known for the Project area. Therefore, no impact would occur.

2.3.10 Land Use and Planning

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☒	☐

Discussion:

The effects of the proposed Project on land use are temporary; once constructed, there would be no long-term effect on existing or proposed land uses. The Project site is on federal land and would not result in population or employment growth.

a) **No Impact.** The proposed Project is the construction and operation of buried cables in an existing LADWP easement on federal land. Existing surrounding land uses are open desert habitat and a Coptic monastery 0.5 miles to the south. Construction would not cause the physical division of an established community, and therefore no impacts would occur.

b) and c) **Less Than Significant Impact.** The proposed Project comprises 10,000 feet of buried cables within an existing LADWP easement on federal land. No permanent changes in land use would occur as a result of Project implementation. The zoning and land use designations of the proposed site would not be affected by construction of the Project. As discussed in Section 2.3.4, the Project would be subject to the West Mojave Plan, and coordination with BLM would be required with regard to potential payment of mitigation fees. Therefore, with anticipated BLM coordination, as well as the biological resources and cultural resources mitigation incorporated as discussed in **Sections 2.3.4 and 2.3.5**, respectively, a less than significant impact would occur.

2.3.11 Mineral Resources

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

Discussion:

a) and b) **No Impact.** While there are aggregate production operations in the Barstow area (Department of Conservation, 2006), there are no mining activities occurring on the Project site, which is an existing LADWP easement on BLM land. No Project-related facilities would be constructed on or in the immediate vicinity of mining activities; the proposed Project involves construction of buried cables on federal land. Therefore, the proposed Project would not result in the loss of availability of mineral resources and no impact would occur.

2.3.12 Noise

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐

	Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c)	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Discussion:

a) and d) **Less than Significant Impact.** Construction of the proposed Project would result in noise generated by equipment and vehicles. Section 83.01.080 of the San Bernardino County Code of Ordinances regulates Noise by establishing standards for acceptable noise levels for noise-sensitive land uses and noise-generating land uses. Under this ordinance, temporary construction activities occurring between 7:00 a.m. and 7:00 p.m. Monday through Saturday, Sundays, and Federal holidays, are exempt from the regulations of Section 83.01.080. Since construction of the Project would occur over a two-month period, such activities would be considered temporary, and therefore would be exempt from Section 83.01.080 of the San Bernardino County Code of Ordinances. Notwithstanding, since short-term construction activities would result in the generation of noise from construction-related equipment, the following discussion addresses construction-related noise impacts on the only sensitive receptor in the Project area, St. Antony's Coptic Monastery.

Noise levels generated by earth-moving equipment range from 73 to 95 dBA (decibels, A-weighted scale) at 50 feet from the source (Bolt, Beranek, and Newman, 1971). Based on a characterization of composite construction noise by Bolt, Beranek, and Newman, it is anticipated that Project-related construction activities would generate noise levels of approximately 88 dBA Leq at 50 feet [Leq stands for equivalent noise level, which is a measurement of the sound energy level averaged over a specified time period (usually one hour)].

The following equation is used to estimate the attenuation of noise with distance from its source to the nearest receptor:
SL2 = SL1 – 20 log10 (r2/r1)
Where:
SL1 = sound level at 50 feet, in dB
SL2 = sound level at the boundary of the nearest noise sensitive receptor's property, in dB
r1 = 50 feet
r2 = distance to the boundary of the nearest noise sensitive receptor's property, in feet
(Source: Canter, 1977)

Based on this equation, noise level drops by approximately 6 dB for every doubling of distance. The noise levels estimated using the above equation represent the worst-case scenario, since the equation does not take into account noise attenuation due to site topography (i.e., difference in elevation between the noise source and the receiver), presence of natural or man-made sound barriers, and ground conditions (hard vs. soft surfaces). Based on the above equation, a piece of construction equipment emitting 88 dB at 50 feet would be attenuated to 53.5 dB at 2,640 feet – which is slightly greater than the distance to the boundary of St. Antony's Coptic Monastery.

Construction noise would be intermittent and experienced only in the daytime. Additionally, construction would progress at a rate of approximately 250 feet per day, and is anticipated to be completed within two months. Therefore, construction-related noise impacts to the Coptic Monastery would be short term and less than significant. Nonetheless, implementation of Mitigation Measure **NOI-1** would further reduce impacts.

Operation of the cables would not create noise, since these Project components would be buried. Also, as under existing conditions, maintenance activities would be conducted during normal daytime hours and on weekdays, except in emergencies. Therefore, noise generated during Project operation would be less than significant.

b) **Less than Significant Impact.** Project construction would not involve the use of equipment that would generate groundborne vibration or groundborne noise levels, such as pile drivers or jack hammers. Therefore, impacts would be less than significant.

c) **Less than Significant Impact.** Operation of the cables would not create noise except for infrequent maintenance activities. Therefore, operational noise impacts would be less than significant.

e) and f) **No Impact**. The proposed Project sites are not located within an airport land use plan, and are not located within 2 miles of a public/public-use airport or a private airstrip. Therefore, no impacts would occur.

Mitigation Measure:

NOI-1: Saint Antony's Coptic Monastery shall be notified two weeks prior to the beginning of construction regarding construction timing and duration. An LADWP contact name and number shall be provided.

2.3.13 Population and Housing

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Discussion:

a) through c) **No Impact.** The Project is the upgrade of an existing DC electrode present at the side; no extension of the existing electricity grid or an increase in electricity supply is proposed. No habitable structures would be constructed and no housing or persons would be displaced by Project construction or operation. As such, since the Project is neither growth-inducing nor growth-accommodating, no impact relative to the displacement of housing or people that would necessitate the construction of replacement housing elsewhere would occur.

2.3.14 Public Services

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire protection?	☐	☐	☐	☒
ii) Police protection?	☐	☐	☐	☒
iii) Schools?	☐	☐	☐	☒
iv) Parks?	☐	☐	☐	☒
v) Other public facilities?	☐	☐	☐	☒

Discussion:

a)-i) through a)-v). **No Impact.** The Project includes installation of buried cables in an existing right-of-way on undeveloped federal land. The Project would upgrade the existing DC electrode present at the site and does not include habitable structures. Therefore, the Project is neither growth-inducing nor growth-accommodating, and as such would have no impact on the need for new or expanded fire, police, school, park or other public facilities or services. Therefore, the Project would have no impact on public services.

2.3.15 Recreation

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Discussion:

a) and b) **No Impact.** The proposed Project does not involve construction of housing or other facilities that would result in an increase in the use of existing parks or other recreational facilities or that would require the expansion of existing recreational facilities. The Project does not include construction of recreational facilities. Therefore, no impacts related to recreation would occur.

2.3.16 Transportation and Traffic

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

Discussion:

a) and b) **Less than Significant Impact.** Level of Service (LOS) is an indicator of the operating conditions of a roadway or an intersection, and is used to represent various degrees of congestion and delay. It is measured from LOS A (excellent conditions) to LOS F (extreme congestion). LOS E is the acceptable limit of service established for San Bernardino County in the Congestion Management Program (2007), which is implemented by the San Bernardino Associated Governments (SANBAG).

Truck trips would be required to import and export equipment and materials to and from the Project site, and to haul away excess soils (after initially brought to the site, equipment is anticipated to remain onsite until the Project is operational). Workers would commute to the site on a daily basis. It is anticipated that both trucks and workers' vehicles would originate from the Barstow area.

Based on traffic counts of I-15, between the junctions SR-247 South and SR-40 East, the northbound I-15 operates at LOS B and D, respectively, during morning and evening peak traffic hours. The southbound I-15 operates at LOS D and B, respectively, during morning and evening peak traffic hours between those junctions. Access to the Project site would be from the I-15, using the Minneola Street off-ramp. No LOS values were available along I-15 in the immediate Project vicinity (County of San Bernardino, 2003).

The dump truck, haul truck, concrete truck, cable reel carrier truck, and workers' vehicles would contribute to additional trips on I-15 within the two-month construction period; however, no substantial changes in roadway use would result from the proposed Project once constructed and no new roadways or other transportation methods would be required. Additionally, since I-15 in the Barstow area is operating at LOS D or better during peak traffic hours, the temporary addition of Project vehicles is not anticipated to result in a

substantial increase in traffic congestion, such that the freeway's LOS would be significantly degraded.

Accordingly, since the Project would not conflict with regional transportation planning, construction impacts would be less than significant. With regard to Project operation, maintenance visits would be similar to or less frequent than current conditions. Therefore, operational traffic impacts would be minor and less than significant.

c) **No Impact.** The Project site is not located within an airport land use plan, and is not located within 2 miles of a public/public-use airport or a private airstrip. Therefore, since the proposed Project would not affect air traffic levels or patterns, no impact would occur.

d) **No Impact.** The proposed Project does not involve any changes to a design feature of a roadway. Trenching would occur adjacent to an existing dirt road; however, no alterations to the road are proposed. Therefore, no impact would occur.

e) **No Impact.** The proposed Project does not involve modifications to public roadways, and no road closures would occur during Project construction or operation. Therefore, no impact would occur.

f) **No Impact.** The proposed Project site is not immediately located in an area that supports public transit, bicycle or pedestrian facilities; there are no commercial, office, or residential uses in the Project area. As an electrode upgrade Project that would be a buried facility, the Project would not conflict with adopted policies, plans, or programs regarding alternative transportation or the safety of such facilities. Therefore, no impacts would occur.

2.3.17 Utilities and Service Systems

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐

	Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e)	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g)	Comply with federal, state, and local statues and regulations related to solid waste?	☐	☐	☐	☒

Discussion:

a) **No Impact.** The proposed Project would not require any new connections to an existing sewer system. Therefore, no impacts would occur relative to the ability of any wastewater treatment plant to meet Regional Board requirements.

b) **No Impact**. The Project involves no construction of new water or wastewater treatment facilities or expansion of existing facilities. Therefore, there would be no impact.

c) **No Impact.** The Project involves no construction of new stormwater drainage facilities or expansion of existing facilities. The proposed replacement cables would be buried and therefore would not affect drainage. There are no storm drains in the vicinity. Therefore, no impacts on storm drains would occur.

d) **Less than Significant Impact.** The Project requires no new or expanded water entitlements. Water use for the Project would be limited to the volume needed for dust suppression during the 40-day construction period. Since this volume is minor and water use would be temporary, impacts on water supplies would be less than significant.

e) **No Impact.** The proposed Project would not require any new connections to the existing sewer system, and therefore would not affect wastewater treatment services. Therefore, no impacts on wastewater treatment capacity would occur.

f) **Less than Significant Impact.** The Project involves the installation of cables that would be buried. Construction would involve some land clearing and earthwork for trenching to bury the cables. It is anticipated that soil excavated would be hauled by truck approximately 20 miles from the Project site to the closest solid waste facility, the Class III Barstow Sanitary Landfill, located at 32553 Barstow Road in Barstow. The Barstow Sanitary Landfill would be able to accept clean soil from the construction site (CalRecycle, 2010). The Barstow Sanitary Landfill can receive a maximum of 1,550 tons/day, has permitted capacity of more than 80 million cu yd and a remaining capacity of 924,401 cu yd. The Project's 1,500 cu yd of excess soil would have a less than significant impact on the landfill's remaining capacity.

The proposed Project, once constructed, would not result in solid waste requiring offsite disposal. Therefore, operation of the proposed Project would have no impact on landfill capacity.

g) **No Impact.** During construction, excess soil would be hauled offsite, likely to the closest municipal solid waste facility, the Barstow Sanitary Landfill. This landfill is authorized to take uncontaminated material and disposal at that location would therefore comply with applicable statues and regulations. Therefore, no impacts would occur. If any contaminated soil were encountered during trench excavation, the contaminated soils would be disposed of at a permitted hazardous waste disposal site in accordance with relevant statutes. Therefore, the Project would comply with federal, state and local statutes and no impact would occur.

2.3.18 Mandatory Findings of Significance

	Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a)	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b)	Does the project have impacts that are individually limited, but cumulatively considerable ("cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, effects of other current projects, and the effects of probable future projects.)?	☐	☐	☒	☐
c)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Discussion:

a) **Less than Significant Impact with Mitigation Incorporated**. As discussed in Section 2.3.4, Biological Resources, earthwork required for Project construction has the potential to disturb listed species and their habitat. Also, as discussed in Section 2.3.5, Cultural Resources, excavation of the trenches during Project construction has the potential to disturb previously unearthed cultural and paleontological resources. Accordingly, Mitigation Measures BIO-1 through BIO-13 and CR-1 through CR-5 would be implemented to reduce potential impacts to biological resources and cultural resources, respectively. With the incorporation of these mitigation measures, impacts to biological and cultural resources would be less than significant.

b) **Less than Significant Impact.** The potential site-specific impacts of the proposed Project would occur during Project construction, which is anticipated to be completed within a two-

month period. There are no other known construction projects planned for the Project vicinity that could result in significant cumulative impacts during construction. Therefore, the Project will have less than significant cumulative impacts.

c) **Less than Significant Impact.** Short-term construction activities would result in the generation of temporary noise from construction-related equipment, which could impact the only sensitive receptor in the Project area, St. Antony's Coptic Monastery. However, construction noise would be intermittent and experienced only in the daytime. Additionally, construction would progress at a rate of approximately 250 feet per day, and is anticipated to be completed within two months. Therefore, as discussed in Section 2.3.12, Noise, construction-related noise impacts to the Coptic Monastery would be short term and less than significant. Nonetheless, implementation of mitigation measure NOI-1 would further reduce impacts.

Operation of the cables would not create noise, as these Project components would be buried. As under existing conditions, maintenance activities would be conducted during normal daytime hours and on weekdays, except in emergencies. Therefore, noise generated during Project operation would be less than significant.

Additionally, during construction, slow-moving Project-related vehicles could affect traffic on I-15; however, construction-related vehicles are likely to be spaced by time and distance, and therefore would not contribute substantially to traffic congestion on I-15 such that the freeway's LOS would be significantly degraded.

Therefore, there would be no substantial direct or indirect adverse impacts on human beings from Project construction or operation; therefore, Project impacts would be less than significant.

Section 3
References, Abbreviations and Report Preparation

3.1 REFERENCES AND BIBLIOGRAPHY

Bolt, Beranek, and Newman. 1971. Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, prepared for U.S. Environmental Protection Agency.

California Department of Conservation. 2004. Williamson Act Program. Map of San Bernardino County, Barstow/Yermo Region – Parcels Under Agricultural Contract. Available: ftp://ftp.consrv.ca.gov/pub/dlrp/wa/Map%20and%20PDF/San%20Bernardino/San%20Bernardino%20Barstow%20Ag%20Contracts-2005-2.pdf

-----. 2006. Aggregate Availability in California. Map Sheet 52 (updated 2006).

-----. 2008. Farmland Mapping and Monitoring Program Maps, San Bernardino County North. Available: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2008/sbd08_no.pdf

California Department of Forestry and Fire Protection. 2000. South West San Bernardino County – Natural Hazard Disclosure (Fire).

California Department of Toxic Substances and Control (DTSC). 2009. Hazardous waste and substances sites (EnviroStor) database. Available: http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm

California Department of Transportation (Caltrans). 2007. Officially Designated State Scenic Highways and Historic Parkways. Available: http://www.dot.ca.gov/hq/LandArch/scenic_highways/

California Environmental Protection Agency (CalEPA), 2010. Sites identified with waste constituents above hazardous waste levels outside the waste management unit. Available: http://www.calepa.ca.gov/SiteCleanup/CorteseList/CurrentList.pdf

CalEPA. Unified Program. Available: http://www.calepa.ca.gov/CUPA/Directory/default.aspx

California Geological Survey. 2007. Alquist-Priolo Earthquake Fault Zone Maps. Available: http://www.quake.ca.gov/gmaps/ap/ap_maps.htm

California Regional Water Quality Control Board, Lahontan Region (6). Order No. 88-107.

----. 1994. Amended through 2008. Water Quality Control Plan (Basin Plan).

California State Water Resources Control Board. 2009. Leaking Underground Storage Tank Sites Database (Geotracker). Available: https://geotracker.waterboards.ca.gov/sites_by_county.asp

Canter, L. 1977. Environmental Impact Assessment. University of Oklahoma.

County of San Bernardino. 2007. General Plan. Land Use Zoning Districts Map for Yermo Available: http://www.sbcounty.gov/landuseservices/General%20Plan%20Update/Mapping/1-Land%20Use%20Zoning%20Districts%20Maps/EI02A.pdf

-----. 2007. Hazard Overlay Map for Yermo. Available: http://www.sbcounty.gov/sbcountygeneralplan/media/General%20Plan%20Update/Mapping/2-Hazard%20Overlays%20Maps/EI02B.pdf

-----. 2011. Code of Ordinances, Section 83.01.080, Noise.

Garcia and Associates. 2010. Biological Resources Assessment for the Los Angeles Department of Water and Power's Coyote Electrode Cable Replacement Project, San Bernardino, California. Prepared for Los Angeles Department of Water and Power. August 2010.

Lahontan Regional Water Quality Control Board (Regional Board). 2005. Water Quality Control Plan for the Lahontan Region (Basin Plan). Amended through December 2005.

Mojave Desert Air Quality Management District. 2009. CEQA and Federal Conformity Guidelines. February 2009. Available: http://www.mdaqmd.ca.gov/Modules/ShowDocument.aspx?documentid=1456

-----. 2010. Rules and Plans. Available: http://www.mdaqmd.ca.gov/index.aspx?page=13

Property Maps. 2009. Climate for Yermo, CA. Available: http://www.propertymaps.com/location/mls/usa/california/yermo/92398#community_demos

South Coast Air Quality Management District (SCAQMD). 1993. SCAQMD CEQA Handbook, revised 2006.

-----. 2006. Final –Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 Significance.

-----. 2007a. EMFAC2007 version 2.3 Emission Factors for On-Road Passenger Vehicles & Delivery Trucks. Scenario Year 2012.

-----. 2007b. SCAB Fleet Average Emission Factors (Diesel). Scenario year 2012.

Southern California Association of Governments (SCAG). 2008. Regional Transportation Plan. Available: http://www.scag.ca.gov/rtp2008/final.htm

U.S. Department of the Interior, Bureau of Land Management (BLM), California Desert District. 2008. West Mojave Plan. Available: http://www.blm.gov/ca/st/en/fo/cdd/wemo.html

-----. California Desert District. March 2006. Record of Decision, West Mojave Plan, Amendment to the California Desert Conservation Area Plan. Available: http ://www.blm.gov/pgdata/etc/medialib//blm/ca/pdf/pdfs/cdd_pdfs/wemo_pdfs.Par.4dfb777f.File.pdf/wemo_rod_3-06.pdf

-----. California Desert District. 2005. Final Environmental Impact Report and Statement for the West Mojave Plan. Available: http ://www.blm.gov/ca/pdfs/cdd_pdfs/wemo_pdfs/plan/wemo/Vol-1-Chapter1_Bookmarks.pdf

3.2 ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
AC	Alternating Current
ACSR	aluminum conductor steel reinforced
Amps	Amperes
APE	Area of Potential Effect
AQMP	Air Quality Management Plan
ARPA	Archaeological Resources Protection Act
BLM	(U.S.) Bureau of Land Management
BMPs	Best management practices
BNHM	Berkeley Natural History Museum
CalEPA	California Environmental Protection Agency
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCR	California Code of Regulations
CDCA	California Desert Conservation Area
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CHRIS	California Historical Resources Information System

CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRHR	California Register of Historical Resources
cu ft	cubic feet
cu yd	cubic yard
DC	Direct Current
DC-XLPE	Direct Current Cross Linked Polyethylene
DOC	California Department of Conservation
DS	Distributing Station
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
EPR	Ethylene Propylene Rubber
ESA	Federal Endangered Species Act
Farmland	Prime Farmland, Unique Farmland, or Farmland of Statewide Importance
FEMA	Federal Emergency Management Agency
FMMP	Farmland Mapping and Monitoring Program
GHG	Greenhouse gas
HDPE	high-density polyethylene
HVDC	high-voltage direct current
IPA	Intermountain Power Agency
IPP	Intermountain Power Project
IS	Initial Study
Kcmil	kilo-circular mils
kV	kilovolt
LADWP	(City of) Los Angeles Department of Water and Power
LOS	Level of Service
LUST	leaking underground storage tank
MDAQMD	Mojave Desert Air Quality Management District
MDPA	Mojave Desert Planning Area
MND	Mitigated Negative Declaration
msl	mean sea level
MT	metric tons

MW	megawatts
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NCCP	Natural Communities Conservation Plan
NPDES	National Pollution Discharge Elimination System
NRHP	National Register of Historic Places
PM2.5	particulate matter 2.5 microns or less in diameter
PM10	particulate matter 10 microns or less in diameter
psig	per square inch gauge
PVC	polyvinyl chloride
ROW	Right-of-way
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SANBAG	San Bernardino Associated Governments
SBAIC	San Bernardino Archaeological Information Center
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
STS	Southern Transmission System
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
UBC	Uniform Building Code
USEPA	U.S. Environmental Protection Agency
USGS	United States Geological Survey
USFWS	U.S. Fish and Wildlife Service
XLPE	Cross-Linked Polyethylene

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