INITIAL STUDY/
MITIGATED NEGATIVE DECLARATION

Path 46 Transmission Line Clearance Project

PREPARED BY

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Environmental Affairs

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ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
AB	Assembly Bill
ACEC	Area of Critical Environmental Concern
AGL	above ground level
APE	area of potential effects
BLM	Bureau of Land Management
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CDCA	California Desert Conservation Area
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CH_4	methane
CMP	congestion management program
CNDDB	California Natural Diversity Database
CNRA	California Natural Resource Agency
CO	carbon monoxide
CO_2	carbon dioxide
CO_2E	carbon dioxide equivalent
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
dBA	A-weighted decibel
DRECP	Desert Renewable Energy Conservation Plan
EPA	U.S. Environmental Protection Agency
ESA	Environmental Science Associates
FAA	Federal Aviation Administration
FLPMA	Federal Land Policy and Management Act
GHG	greenhouse gas
GWP	global warming potential
I	Interstate
kV	kilovolt
LADWP	Los Angeles Department of Water and Power
MCV1	McCullough-Victorville Line 1
MCV2	McCullough-Victorville Line 2
MDAB	Mojave Desert Air Basin
MDAQMD	Mojave Desert Air Quality Management District

Acronym/Abbreviation	Definition
MM	mitigation measure
MND	mitigated negative declaration
MNP	Mohave National Preserve
MT	metric ton
MUC	Multiple Use Classification
MVL1	Mead-Victorville Line 1
mya	million years ago
N_2O	nitrous oxide
NCL	California Desert National Conservation Land
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NERC	North American Electric Reliability Corporation
NO_x	oxides of nitrogen
NRHP	National Register of Historic Places
O_3	ozone
OHV	off-highway vehicle
PFYC	Potential Fossil Yield Classification
PM_{10}	particulate matter with a diameter less than or equal to 10 microns (coarse particulate matter)
$PM_{2.5}$	particulate matter with a diameter less than or equal to 2.5 microns (fine particulate matter)
QSD	Qualified Storm Water Developer
QSP	Qualified Storm Water Practitioner
ROW	right-of-way
RWQCB	Regional Water Quality Control Board
SBAIC	San Bernardino Archaeological Information Center
SO_x	oxides of sulfur
SR	State Route
SWRCB	State Water Resources Control Board
SWPPP	Storm Water Pollution Prevention Plan
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VOC	volatile organic compound
VRM	visual resource management

1 INTRODUCTION

1.1 Project Overview

The Los Angeles Department of Water and Power (LADWP) is proposing the Path 46 Transmission Line Clearance Project (proposed project) to restore ground-to-conductor clearances that are out of compliance with transmission line safety and reliability standards. The location of the proposed project is along three existing overhead transmission lines located in San Bernardino County near Victorville, Barstow, and Baker, California: the 500 kilovolt (kV) McCullough-Victorville Lines 1 and 2 (MCV1 and MCV2) and the 287 kV Mead-Victorville Line 1 (MVL1). These transmission lines were installed in the 1930s to transmit power from Hoover Dam to Los Angeles.

The proposed project would be undertaken to comply with the California Public Utilities Commission's (CPUC) General Order 95 Clearance Code Requirements as mandated by the North American Electric Reliability Corporation (NERC). The specific clearance requirements set by General Order 95 are included in Appendix A. Achieving this height consistency is necessary to ensure the distance between the transmission line conductors and the ground or road surface below is sufficient to meet code requirements guiding the safe and reliable operation of transmission lines. LADWP proposes to comply with the code clearances by grading the ground surface of the area underneath the transmission lines at 68 work areas to achieve height consistency per NERC requirements. Additionally, LADWP has identified two locations where grading is infeasible due to topography. In these locations, LADWP proposes to raise existing transmission line towers to achieve height consistency. Two additional locations will involve the installation of compacted soil barricades or other similar barrier system to eliminate vehicle access to areas underneath a conductor where a clearance issue exists. Total acreage of grading would be approximately 7.8 acres, and total acreage of tower raising activities would be approximately 3.7 acres. The project, as proposed, would also involve improvements to portions of existing access roads to be used for site access, equipment staging and storage, and distribution of excavated soils. The project would primarily be located on federal land, but some work sites would be located within LADWP property or on private property. Figure 1 shows an overview of the project location, and Figures 2 through 8 show the proposed work areas divided into seven segments.

LADWP has submitted an Application for Transportation and Utility Systems and Facilities on Federal Lands (Standard Form 299) to the Bureau of Land Management (BLM) to amend its existing right-of-way (ROW) grants for the MCV1, MCV2, and MVL1 transmission lines in order to accommodate the clearance remediation work. These transmission lines were constructed under ROW grant CALA-052174, originally granted to the City of Los Angeles on September 20, 1935. The application to amend this ROW has been assigned BLM serial number CACA-055592. An Environmental Assessment is being prepared by BLM to comply with the National Environmental Policy Act (NEPA). Upon completion of the NEPA process, the BLM will decide whether to authorize a ROW grant amendment to allow LADWP to conduct clearance work along the MCV1, MCV2, and MVL1 ROWs on public lands.

1.2 California Environmental Quality Act

As the lead local agency for the proposed project under CEQA, LADWP must complete an environmental review in accordance with CEQA to determine if implementation of the proposed project would result in significant adverse environmental impacts. (CEQA applies to proposed projects initiated by, funded by, or requiring discretionary approvals from state or local government agencies. The proposed project constitutes a project as defined by CEQA. CEQA Guidelines Section 15367 states that a "Lead Agency" is "the public agency which has the principal responsibility for carrying out or approving a project." Therefore, the LADWP is the lead agency responsible for compliance with CEQA for the proposed project.) To fulfill the purpose of CEQA, an Initial Study has been prepared to assist in making that determination.

An Initial Study has been prepared by LADWP as the lead agency in accordance with the CEQA Guidelines to evaluate potential environmental impacts and to determine whether an Environmental Impact Report (EIR) or a Negative Declaration or Mitigated Negative Declaration (MND) should be prepared for the proposed project. The Initial Study has also been prepared to satisfy CEQA requirements of agencies that would provide sources of funding for the proposed project or that would otherwise have discretionary approval authority over the project. An MND is prepared for a project when an Initial Study has identified potentially significant impacts on the environment, but (1) revisions in the project plans or proposals made by, or agreed to by, the applicant before the proposed Negative Declaration and Initial Study are released for public review would avoid the impacts or mitigate the impacts to a point where clearly no significant effect on the environment would occur; and (2) there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment.

The Initial Study (IS) determined that the implementation of the proposed project could cause some potentially significant impacts on the environment but, as shown in the environmental analysis contained in this IS/MND, all of the project's potentially significant impacts would be reduced to less than significant levels through the implementation of mitigation measures. Consequently, the analysis contained herein concludes that an MND shall be prepared for the proposed project.

Revisions to the CEQA Guidelines

The state has recently adopted updates to the CEQA Guidelines to add efficiency and clarity to aspects of the guidelines and to incorporate recent case law and legislation that had not yet been reflected in the text of the guidelines. The recently adopted updates also include revisions to Appendix G of the CEQA Guidelines, which consists of environmental checklist questions that are used by many lead agencies as the framework for environmental documents prepared pursuant to CEQA.

Section 15007(d) of the CEQA Guidelines specifies that new requirements shall be in effect 120 days after the effective date of the Guideline amendments. Because the Guideline amendments were adopted on December 28, 2018, the revised guidelines are now in effect. Per Section 15007(c), draft documents issued for public review after that date shall comply with new content requirements. The legislation and court decisions that are reflected in the updates were already in effect during the preparation of this IS/MND. As such, this IS/MND is in compliance with the content requirements

of the 2018 CEQA Guidelines revisions. Notably, new CEQA Guidelines Section 15064.3, which requires the use of vehicle miles traveled to assess the significance of transportation impacts, does not go into effect until July 1, 2020, well after the anticipated adopted of this IS/MND.

As further discussed below, the environmental checklist questions used in this IS/MND have not been revised to reflect the format of the 2018 CEQA Guidelines revisions. As Appendix G is a recommended checklist, such conformance is not required to comply with the requirements of the CEQA statute and Guidelines. Furthermore, use of the updated environmental checklist would not change the environmental conclusions in this IS/MND or the content of the analysis, and use of the threshold questions in Appendix G is not a CEQA requirement. (Rather, Appendix G contains sample questions that can help guide a lead agency in the environmental analysis process.)

The recent updates to Appendix G can be summarized as follows: narrowing the scope of aesthetic impacts; moving the topic of paleontology from the cultural resources section to the geology section; adding threshold questions to address the topic of energy; expanding wildfire issues; combining airport safety and noise into one threshold question; deleting the reference to private airstrips; incorporating Vehicle Miles Traveled analysis into the transportation section; making the hydrology and utilities questions more concise and applicable to modern issues; clarifying that land use conflicts must relate to a physical impact; and adding "unplanned" to the population growth question, so that the question now focuses only on unplanned growth. While this EIR does not follow the new organization of the updated Appendix G, the necessary and applicable information is presented throughout Chapter 3 of this IS/MND, with the exception of energy and the expanded wildfire thresholds, which are discussed below. The topic of paleontology is addressed in Section 3.5; the topic of wildfires is addressed in Section 3.8 of this IS/MND; both airport safety and noise have been addressed (see Section 3.8 and Section 3.12), and impacts were determined to be below a level of significance; and, the topics of hydrology, utilities, land use, and population growth were all addressed, and impacts were determined to be below a level of significance (with the exception of land use, where mitigation measures are required to reduce effects to applicable conservation plans to below a level of significance).

A discussion of energy impacts and the expanded wildfire threshold questions are included below, to ensure that this IS/MND discloses and addresses all impacts covered in the updated Appendix G checklist.

Energy

The energy threshold questions that are included in the updated Appendix G checklist ask whether a project would "result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation" and whether a project would "conflict with or obstruct a state or local plan for renewable energy or energy efficiency."

The proposed project would involve construction activities only, which would last for approximately 18 months. Construction would involve grading underneath sagging power lines at 72 work areas situated along approximately 120 miles of transmission lines. The project would also involve raising two transmission towers. The total amount of grading

required would be approximately 11.5 acres. As such, activities at each individual work area would be minimal. During construction, energy would be primarily used in the form of petroleum, which would be used by construction equipment and construction worker vehicle trips. Use of natural gas is not expected, since fuels would consist primarily of diesel and gasoline. Use of electricity would be limited to electrically powered hand tools. Petroleum use required for construction and vehicle trips would be minor and temporary relative to regional demands. The number of workers required would be minimal (approximately 6 to 24 workers), and the amount of equipment and duration of use would also be minimal (approximately 6 pieces of equipment per work area).

The proposed project would not change the routine inspection and maintenance of the existing transmission lines or result in increased energy use during operation. The proposed project would have no change in the amount of energy that is transmitted along the power lines. Rather, the project is being undertaken due to code compliance issues and safety concerns associated with sagging power lines. As such, the proposed project would consume increased energy during the 18-month construction period only. Once construction activities cease, the additional petroleum use associated with the proposed project would cease. Due to the short-term nature of construction and relevantly small scale of the project, impacts would be less than significant.

The proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The project's energy use would be limited to the construction period only and would be minimal to negligible relative to regional demands. Furthermore, the project would be required to follow applicable energy standards and regulations during construction. No long-term changes in energy use would occur as a result of the project. Impacts related to the project's potential to conflict with plans for renewable energy and energy efficiency would be less than significant. As such, while there are new guidelines for the evaluation of energy impacts, the proposed project would not result in significant effects under the new guidelines.

Wildfire

Wildland fire hazards are discussed in Section 3.8 of this IS/MND. As stated in that section, the project is located in primarily undeveloped areas of the Mojave Desert, and desert vegetation is typically characterized by low fire frequency. Due to the project location and the fact that the project does not proposed habitable structures, the analysis concluded that effects involving wildland fires would be less than significant. The updated Appendix G checklist involves a more extensive wildfire analysis for projects located in or near state responsibility areas for firefighting or lands classified as very high fire hazard severity zones. The project is not located in a state responsibility area or in a very high fire hazard severity zone. The nearest state responsibility areas and very high fire hazard severity zones are located at the base of the San Gabriel Mountains and San Bernardino Mountains, approximately 20 miles south of the western terminus of the project alignment (CAL FIRE 2019). Furthermore, as described in Section 3.8, the project is not located within a San Bernardino County–designated fire safety area. As such, while there are new guidelines for the evaluation of wildfire risk, the proposed project would not result in significant effects under the new guidelines, as it is not located within or near a very high fire hazard severity zone or state responsibility area. Impacts would be less than significant.

As such, all required environmental topics and issues have been addressed in this IS/MND. While the organization of this IS/MND does not reflect the updated Appendix G checklist, these updates have not affected the analysis or substantive information in this IS/MND.

Organization of the IS/MND

This document consists of both the Initial Study for the project and the MND (IS/MND). This IS/MND is composed of four sections. Section 1 provides the introduction for the proposed project, general information about the contents of the IS/MND, information about the lead agency, the project location, and the environmental setting. Section 2 provides a description of the proposed project components and information about their construction and operation. Section 3 consists of the CEQA Initial Study checklist, which provides the assessment of potential environmental impacts and the applicability of mitigation measures to reduce potentially significant impacts to less than significant. Section 4 provides a list of the lead agency staff and consultants involved in preparing the environmental review documents for the proposed project. This document also includes several appendices that contain technical resource reports related to air quality and greenhouse gas (GHG) emissions, biological resources, cultural resources, and noise.

1.3 Project Location

The project includes grading areas of various sizes that would be located underneath sagging power lines, as well as improvements to portions of Powerline Road and existing spur roads that will be used for site access, equipment staging and storage, and distribution of excavated soils. The 72 work areas have been grouped into seven segments, which contain similar physical and biological characteristics (Figures 2 through 8). The sites are all located along the MCV1, MCV2, and MVL1 transmission line corridor, which extends in a southwest to northeast direction parallel to Interstate (I) 15 through the Mojave Desert. The southwestern end of the corridor begins in Stoddard Valley (just northeast of Victorville) and extends east through Daggett (east of Barstow) and northeast into the Mojave Valley to the edge of the California–Nevada border. The project would be located primarily on land administered by the BLM, although some work sites would be located within LADWP property or on private property. The project area extends through the following sixteen 7.5-minute U.S. Geological Survey (USGS) topographic quadrangles: Alvord Mountain East, Bitter Spring, Clark Mountain, Cronese Lakes, Daggett, Dunn, East of Kingston Spring, Harvard Hill, Kingston Spring, Minneola, North of Baker, Turquoise Mountain, Turtle Valley, Red Pass Lake, Stoddard Well, and West of Baker. Table 1-1 lists the seven segments and the USGS quadrangle(s) traversed by each segment.

Table 1-1
USGS Quadrangles

Segment	Quadrangle(s)
1	Turtle Valley; Stoddard Well
2	Daggett; Minneola
3	Minneola; Harvard Hill
4	Alvord Mountain East; Dunn; Bitter Spring; Cronese Lakes
5	Red Pass Lake; West of Baker; North of Baker

Table 1-1
USGS Quadrangles

Segment	Quadrangle(s)
6	Turquoise Mountain; Kingston Spring; East of Kingston Spring
7	Clark Mountain

Right of Way

Grading activities would be carried out within the existing ROWs granted to LADWP by BLM. The ROW width of the transmission corridor containing MCV1, MCV2, and MVL1 is approximately 800 feet. The legal description for the locations of each of the work areas are provided in Appendix B.

Surrounding Land Uses

The land surrounding the proposed work areas consists primarily of undeveloped open space areas in the Mojave Desert. Some development occurs within the vicinity, generally consisting of small sections of I-15 and I-40, scattered rural residences, and agricultural land. The alignment of the work areas approximately follows the alignment of I-15, with Segments 1, 2, and 3 located south of I-15 and Segments 4, 5, 6, and 7 located north of I-15. I-40 crosses the alignment between Segment 2 and Segment 3. The overall topography of the area is composed of relatively flat valleys bounded by sloping hills ranging in elevation from 1,280 feet above mean sea level (valleys) to 3,670 feet above mean sea level (foothills). Mountains within the vicinity include Bell Mountain, Turtle Mountain, Stoddard Mountain, Stoddard Ridge, Quartzite Mountain, and Silver Mountain, as well as several unnamed rolling hills. Segments 1, 2, 3, 4, and part of Segment 5 are located within the West Mojave Recovery Plan Area, one of several desert tortoise recovery areas established by the U.S. Fish and Wildlife Service (USFWS). Segments 4 and 5 extend along the southeastern boundary of the Fort Irwin Military Reservation. The Mojave National Preserve is located generally to the south and east of Segments 5, 6, and 7. A portion of Segment 7 extends through the Clark Mountain Allotment, which is an active ephemeral/perennial allotment approved for yearlong cattle grazing.

Land Ownership

The land ownership details for each of the 72 work areas are provided in Table 2-2. A total of 60 work areas are proposed on public land administered by the BLM; 6 work areas are proposed on land owned by LADWP; 1 work area is proposed on land (or an easement) owned by Southern California Edison; 2 work areas are proposed on lands that are privately owned, through which LADWP has an easement; 2 work areas occupy land owned by LADWP and public lands administered by the BLM; and 1 work area is proposed on land owned by LADWP and private landholders.

1.5 References

CAL FIRE (California Department of Forestry and Fire Protection). 2019. Fire Hazard Severity Zone Viewer. Accessed July 18, 2019. http://egis.fire.ca.gov/FHSZ/.

2 PROJECT DESCRIPTION

LADWP is proposing the Path 46 Transmission Line Clearance Project (proposed project) to restore ground-to-conductor clearances that are out of compliance with transmission line safety and reliability standards. The location of the proposed project is along three existing overhead transmission lines located in San Bernardino County near Victorville, Barstow, and Baker, California: MCV1, MCV2, and MVL1. These transmission lines were installed in the 1930s to transmit power from Hoover Dam to Los Angeles. The proposed project would be undertaken to comply with the CPUC General Order 95 Clearance Code Requirements as mandated by the NERC. The specific clearance requirements set by General Order 95 are included in Appendix A. Achieving this height consistency is necessary to ensure the distance between the transmission line conductors and the ground or road surface below is sufficient to meet code requirements guiding the safe and reliable operation of transmission lines.

2.1 Proposed Project

The proposed project involves grading activities at 72 work areas, barricade installation activities at two work areas, and tower raising activities at two work areas along the existing MCV1, MCV2, and MVL1 transmission lines (for a total of 72 work areas). The proposed project also entails improvements to portions of existing access roads to be used for site access, equipment staging and storage, and distribution of excavated soils. Access to MCV2 and MVL1 would be provided via the existing Powerline Road and associated spur roads, and access to MCV1 would be provided via an existing unnamed access road that runs parallel to the lines. Table 2-1 summarizes the activities involved with the proposed project, and Table 2-2 details the amount of grading that would occur at each work area. The work areas are categorized in Table 2-2 based on the number of the nearest transmission tower located to the northeast of the work area along the transmission line where the clearance issue exists.

An overview of the project location is shown in Figure 1. Construction would occur sequentially along the transmission line corridor and is anticipated to take up to 18 months, depending on weather conditions, site access, and the availability of personnel and equipment. Once construction is complete, operation activities would be minimal.

Table 2-1
Summary of Proposed project

Lines Affected	McCullough-Victorville 1, McCullough-Victorville 2, Mead-Victorville 1
Number of Work Areas	10 areas: Mead-Victorville 1 54 areas: McCullough-Victorville 1 8 areas: McCullough-Victorville 2 **Total: 72 areas**
Total Acres of Grading	approximately 7.8 acres
Total Acres of Tower Raising Work Areas	approximately 3.7 acres
Average Depth of Excavation	2.18 feet
Total Volume of Excavated Soils	10,838 cubic yards

Table 2-2
Estimated Limits of Grading (Work Areas)

Tower Number	BLM Field Office	Max. Width (ft.)	Max. Length (ft.)	Max. Depth (ft.)	Area (sq. ft.)	Cubic Yards	Land Ownership
MCV2 152-1	Barstow	35	70	3.25	1,685	91	BLM/P6483
MCV1 151-4	Barstow	25	60	2.8	1,525	77	LADWP/P28329
MCV1 149-2	Barstow	90	115	9	7,060	1080	LADWP/P29813-Xuong Chang/P9735/P9736
MVL1 168-3	Barstow	216	66	3	4,840	253	BLM/P6483
MCV1 145-3	Barstow	70	160	2.5	4,236	201	BLM/P6483
MVL1 159-1	Barstow	42	62	2.3	1,490	68	LADWP/P28187/P28345
MVL1 158-6	Barstow	76	247	3.8	5,155	280	LADWP/P28187
MVL1 155-5	Barstow	114	247	5.4	7,987	731	LADWP/P27361
MCV1 138-1	Barstow	30	440	1	11,530	41	LADWP/P28137
MVL1 150-4	Barstow	90	59	2	3,081	121	BLM/P6483
MVL1 150-3	Barstow	27	240	3	5,240	242	BLM/P6483
MVL1 147-4	Barstow	(Barricade installation)	-	-	-	9	SCE
MCV1 129-1	Barstow	38	420	3.7	10,641	580	BLM/P6483
MCV1 125-5	Barstow (Tower raising)	400	200	-	80,000	-	Van Dam Donald D Trust/P9173-P9175/P11138-P11140
MCV1 125-6	Barstow (Tower raising)	400	200	-	80,000	-	Van Dam Donald D Trust/P9173-P9175/P11138-P11140
MCV1 120-1	Barstow	(Barricade installation)	-	-	0	-	BLM/P6483
MVL1 129-4	Barstow	32	90	2.5	445	15	BLM/P6483
MCV2 104-5	Barstow	12	21	3	210	8	BLM/P6483
MCV2 103-3	Barstow	55	316	3.2	8,030	271	BLM/P6483
MCV2 100-5	Barstow	20	77	1.75	1,125	27	BLM/P6483
MCV2 97-5	Barstow	26	181	1.7	2,674	82	LADWP/P28535
MCV2 97-1	Barstow	25	200	2.25	1,522	73	BLM/P6483
MCV2 93-4	Barstow	89	162	4.8	5,877	456	BLM/P6483
MCV1 92-4	Barstow	18	120	2	1,840	62	BLM/P6483
MCV2 90-4	Barstow	45	365	4	11,900	320	BLM/P6483

Table 2-2
Estimated Limits of Grading (Work Areas)

Tower Number	BLM Field Office	Max. Width (ft.)	Max. Length (ft.)	Max. Depth (ft.)	Area (sq. ft.)	Cubic Yards	Land Ownership
MVL1 111-1	Barstow	115	270	3.5	9,000	314	BLM/P6483
MVL1 110-5	Barstow	19	140	2	2,300	71	BLM/P6483
MCV1 88-5	Barstow	16.4/17/24	154/156/281	1.5/1/2.2	2,188/ 2,301/ 5,440	285	BLM/P6483
MCV1 88-3	Barstow	40	428	1.1	6,903	34	BLM/P6483
MCV1 88-2	Barstow	33/35	213/382	1.9/0.65	4,843/ 7,150	147/57.5	BLM/P6483
MCV1 88-1	Barstow	28.3	216	1.6	4,800	120	BLM/P6483
MCV1 87-5	Barstow	20/15	275/202	3/2	3,940/ 2,260	204/71	BLM/P6483
MCV1 87-4	Barstow	30	450	1.1	5,870	58.3	BLM/P6483
MCV1 87-3	Barstow	25	408	1	5,470	52.1	BLM/P6483
MCV1 87-2	Barstow	15/9	190/160	2.3/1	2,060/1,161	68.9/17.1	BLM/P6483
MCV1 87-1	Barstow	31	385	0.6	4,770	51.9	BLM/P6483
MCV1 86-5	Barstow	15/10	236.3/190	2.4/1.5	2,755/1,580	97.4/34.8	BLM/P6483
MCV1 86-4	Barstow	30	350	2	7,708	96	BLM/P6483
MCV1 86-3	Barstow	15	420	1.3	4,425	15	BLM/P6483
MCV1 86-2	Barstow	15	320	1.3	3,511	14	BLM/P6483
MCV1 86-1	Barstow	15	285	1.3	3,222	18	BLM/P6483
MCV1 85-5	Barstow	15	310	1.3	3,300	19	BLM/P6483
MCV1 85-4	Barstow	15	240	1.5	2,740	25	BLM/P6483
MCV1 85-3	Barstow	15	310	1.3	3,322	14	LADWP/P9357/P29688-BLM/P6483
MCV1 85-2	Barstow	57	85	7	3,356	382	LADWP/P9357/P29688-BLM/P6483
MCV1 84-5	Barstow	36	107	4	2,736	230	BLM/P6483
MCV1 82-1	Barstow	16.5	147	1.3	1,996	40	BLM/P6483
MCV1 78-4	Barstow	22	141	1.6	1,976	34	BLM/P6483
MCV1 77-6	Barstow	50	560	1	17,000	10	BLM/P6483
MCV1 77-5	Barstow	50	900	1	21,000	10	BLM/P6483
MCV1 77-4	Barstow	40	340	1	6,300	10	BLM/P6483
MCV1 77-1	Barstow	15	300	1.3	3,436	29	BLM/P6483-Eastment/P6790/P9356

Table 2-2
Estimated Limits of Grading (Work Areas)

Tower Number	BLM Field Office	Max. Width (ft.)	Max. Length (ft.)	Max. Depth (ft.)	Area (sq. ft.)	Cubic Yards	Land Ownership
MCV1 76-5	Barstow	13	300	1.3	3,300	16	BLM/P6483
MCV1 76-4	Barstow	15	300	1.3	3,300	21	BLM/P6483
MCV1 75-3	Barstow	29	240	2.3	3,617	102	BLM/P6483
MCV1 73-6	Barstow	25	190	2	5,000	79	BLM/P6483
MCV1 66-5	Barstow	25	275	3.5	9,025	179	BLM/P6483
MCV1 62-3	Barstow	60	93	3.5	4,740	295	BLM/P6483
MCV1 61-2	Barstow	23/32	70/95	2.2/0.8	3,160	63	BLM/P6483
MCV1 61-1	Needles	160.2	76	1.1	5,973	63	BLM/P6483
MCV1 60-5	Needles	40	46	5	290	207	BLM/P6483
MCV1 59-4	Needles	25	280	3	8,700	446	BLM/P6483
MCV1 57-5	Needles	20	160	2.5	3,000	116	BLM/P6483
MCV1 56-4	Needles	35	170	5.2	4,300	420	BLM/P6483
MCV1 55-2	Needles	45	151	1.9	4,620	76	BLM/P6483
MCV1 38-5	Needles	13	130	1.5	1,398	31	BLM/P6483
MCV1 38-3	Needles	35	85	1.5	1,948	48	BLM/P6483
MCV1 37-6	Needles	40	100	4	3,246	240	BLM/P6483
MCV1 37-2	Needles	25	130	3	2,514	150	BLM/P6483
MCV1 36-6	Needles	27	75	3.1	1,528	59	BLM/P6483
MCV1 36-4	Needles	30	123	2.7	2,577	107	BLM/P6483
MCV1 36-2	Needles	32	175	2	3,653	115	BLM/P6483

Facility Design Factors

All grading areas would occur within the existing ROW grants for MCV1, MCV2, and MVL1 and all excavated soils generated from grading activities would be disbursed on existing access roads. Access to the proposed work areas will be limited to the existing main Powerline Road and associated spur roads to the extent feasible. Additional construction details related to access roads, grading, disposal of excavated soils, and tower raising are discussed below. Detailed engineering drawings for the grading sites are provided in Appendix C.

2.2 Construction

Construction activities would occur sequentially along the transmission line corridor and would take up to 18 months to complete. Assuming 23 to 25 workdays per month, construction at each individual site would last an average of 1.5 to 3 workdays, with some sites requiring less than 1 day and some sites requiring up to 9 days, depending on the amount of grading and the conditions at the site. The estimated work force for grading operations is between 6 to 10 workers

per day. When feasible, this work force would be split into two crews of 3 to 5 workers each to allow for work to occur on two grading sites simultaneously. Tower raising activities are expected to require a larger workforce, which is estimated at 12 to 24 workers per site. Tower raising activities would take approximately 45 days per tower, for a total of 90 days of tower raising activities.

Details regarding the access roads, grading process, tower raising process, and work force requirements are provided below. BMPs would be used to minimize the risk of potential impacts during construction and would be communicated to employees prior to the start of work. Safety requirements and procedures to be followed during construction are provided in the LADWP Power Distribution safety rulebook.

Access Roads

Access to the proposed work areas for the MVL1 and MCV2 lines would be limited to Powerline Road and associated spur roads to the extent feasible. For the MCV1 lines, access would be limited to the existing unnamed access road that runs parallel to the lines. Where access to the proposed work areas is not possible via the existing roads, overland travel would be limited to areas within the defined project limits as well as in select previously disturbed areas identified as non-sensitive by LADWP's biological and cultural resources specialists. Overland travel would be required on approximately 30 of the 72 work sites and would total approximately 5,000 linear feet. Where appropriate, access to the ROW would be controlled through the use of proper signage and flagging.

Grading Process

Grading activities would be carried out within the LADWP ROW to achieve height consistency and would include the staking of grading limits, grading, and site restoration. As an example of this process, Figure 9 shows existing conditions, a post-construction simulation, and a post-restoration simulation for proposed grading activities near MVL1_150-3. Prior to the start of grading, each site would have cut and fill stakes and construction perimeter stakes set. Construction equipment to be used for grading would include motor graders, bulldozers, excavators, compact skid-steer loaders, dump trucks, water trucks, wheel/track loaders, backhoe loaders, jackhammers, and various small utility vehicles. The construction equipment would be staged within the confines of existing roadways and turnouts. Temporary storage of excavated soils would occur within the project limits in select previously disturbed areas identified in coordination amongst LADWP and its Qualified Storm Water Developer (QSD), Qualified Storm Water Practitioner (QSP), and biological and cultural resources specialists and in accordance with any Storm Water Pollution Prevention Plan (SWPPP) requirements and NEPA/CEQA mitigation requirements. Excavated soils accumulated during grading activities would then be spread within the existing access road for the MVL1 and MCV2 lines known as Powerline Road. For the MCV1 lines, which are not located adjacent to Powerline Road, the excavated soils would be spread within the unnamed access road that runs parallel to the lines. The excavated soils would be spread along the access roads at a maximum depth of 8 inches and would be spread along areas of the road that are within 500 feet to either side of the work area. The excavated soils would be used to repair ruts and potholes and to improve the overall state of the access roads. Spreading activities for excavated soils occurring outside of existing roads or work areas would occur in previously disturbed areas to the extent feasible and

would be implemented in accordance with all relevant SWPPP requirements and NEPA/CEQA mitigation requirements for biological and archaeological resources. It is not anticipated that any excavated soils would be hauled offsite. For grading areas located within the Clark Mountain Allotment, LADWP in coordination with BLM would notify lessees of temporary construction activities prior to start of construction within the allotments.

Tower Raising Process

Tower raising would be carried out at two locations where grading is infeasible due to topographic limitations. The towers that are proposed for raising are labeled MCV1_125-5 and MCV1_125-6 and are located approximately 4 miles east of Daggett, within an agricultural field. To achieve the required conductor-to-ground clearances, the existing free-standing lattice steel towers would be reinstalled in a manner that increases clearance distances. The existing towers are 110 feet tall, as measured from the ground wire peaks to grade. Figure 10 shows the existing MCV1_125-6 tower and a simulation of the raised tower.

Tower raising activities would consist of preparing pads for construction equipment, conductor offset adjustments, and site cleanup and restoration. Tower raising activities would begin with the establishment of construction pads of approximately 80,000 square feet at each of the two sites, which would accommodate the cranes, forklifts, and man lifts needed to raise the towers. Other equipment involved would include backhoe loaders, water trucks, and various small utility vehicles. The total area of disturbance for tower raising would therefore be approximately 3.7 acres. Because the transmission towers proposed for raising are located on agricultural land, LADWP would salvage any topsoil that would be removed for the construction pads. This soil would be replaced upon completion of construction, in coordination with the property owner. LADWP would also notify the property owner of temporary construction activities prior to the start of the tower raising processes.

The tower raising would be accomplished by repositioning towers onto new footings that are necessary to accommodate the tower extension and by inserting vertical extensions at the base of the towers and/or within the body of the towers. Four new tower footings would be installed at each tower raising site. Standard footings are 4 feet in diameter and 30 feet in depth, for a total of approximately 50 square feet of footing area per tower site. Towers and tower footings would be installed on or slightly offset from the existing footprint of the tower prior to tower raising activities and would be on the centerline of the existing conductors. The actual tower raising would begin with the removal of conductors and ground wires, followed by the lifting of the tower body, which would be held in place by a large crane while vertical extensions are inserted. The raised towers would be approximately 128 feet to 130 feet tall. After the tower has been raised, conductor offset adjustments may be required and would entail small adjustments to the conductor lengths which would be carried out by technicians in large man lifts. Cleanup would include the chipping of the old concrete footings 1 foot below the topsoil and the cutting of stub angles using a cutting torch. The construction pads would also be returned to the sites' original condition to the extent feasible. This process would take approximately 45 days per site and would require approximately 12 to 24 workers.

Post-Construction Activities

Stabilization, Rehabilitation, and Restoration

Site restoration activities would be undertaken to return the construction areas to their original condition. A restoration plan would be prepared by a qualified restoration ecologist with experience restoring California desert ecosystems. Restoration efforts would be performed by LADWP and/or its contractors with guidance from a qualified desert restoration specialist and would be monitored by a qualified biologist. The final grading plan would be prepared by the QSD. Prior to grading or site disturbance, vegetation and topsoil (including desert crust/varnish) within the impact areas would be salvaged. The upper layer of desert varnish (cobble and soil crust), consisting of approximately 2–6 inches, would be stockpiled. Any excavated soils that would be stored in excess of 48 hours would be covered by an anchored tarp and/or watered down until the site is ready for the soil to be replaced. Native vegetation would be salvaged and stored. To minimize mortality, native plants would be stored by burying the root and lower stems of the salvaged plants in native soil and watering once per week, if feasible (e.g., by water truck). Following construction, the desert varnish material and salvaged plant materials would be replanted within the impact areas. Prior to installing the top layer of desert crust, a commercially obtained native seed mix adapted to local site conditions may be applied using the imprinting method. Only native plant materials and a native seed mix approved by BLM would be used. Soil dominated by non-native plants would not be salvaged or re-applied. Water would be supplied as necessary for plant establishment only. Desert vegetation would not require long-term irrigation. Note that initial restoration efforts, such as replacing the top layer of desert crust, would occur as part of the construction periods identified above at each work site. However, follow-up work may occur at each site after construction to complete any necessary restoration work.

Operations and Maintenance

MCV1, MCV2, and MVL1 are regularly inspected via helicopter and by ground using existing access roads. These inspections provide an opportunity to assess the state of the transmission line conductors, towers, and access roads. Occasionally, severe weather events such as flash flooding caused by heavy rains will prompt an inspection of sections of the transmission line that may have been impacted.

Termination and Restoration

Certain portions of existing spur roads that directly conflict with clearance requirements would be demolished. This work would involve either scarifying the road surface or constructing compacted soil barricades to eliminate vehicle access to the road section in question. Following the removal of these road sections, access to each transmission line tower would not be interrupted and would be possible through other existing spur roads or through deviated road segments constructed immediately adjacent to the demolished road. These road segments would not establish new access routes, but would instead replace the road segments where clearance issues currently exist.

2.3 Approvals Required for the Project

As previously stated, the proposed project would be undertaken to comply with CPUC General Order 95 Clearance Code Requirements as mandated by the NERC. The following federal, state, and local permits are anticipated to be required for the project:

- Bureau of Land Management: FLPMA Title V Right-of-Way Grant (Amendment)
- California Department of Fish and Wildlife Streambed Alteration Agreement
- San Bernardino County Grading Permit (where applicable)
- State Water Resources Control Board Section 402 Storm Water Permit Associated with Construction Activities
- Regional Water Quality Control Board Section 401 Water Quality Certification and Waste Discharge Requirements
- U.S. Army Corps of Engineers Section 404 Nationwide Permit

As noted above, a separate Environmental Assessment is being prepared by BLM to comply with NEPA.

3 INITIAL STUDY CHECKLIST

The following discussion of potential environmental impacts was completed in accordance with Section 15063(d)(3) of the CEQA Guidelines (2018) to determine if the proposed project may have a significant effect on the environment.

1. Project title:

Path 46 Transmission Line Clearance Project

2. Lead agency name and address:

Los Angeles Department of Water and Power
Environmental Planning and Assessment
111 North Hope Street, Room 1044
Los Angeles, California 90012

3. Contact person and phone number:

Brian Gonzalez
Environmental Planning and Assessment
Los Angeles Department of Water and Power
213.367.6376

4. Project location:

The project would be located within the County of San Bernardino, California, near Victorville, Barstow, and Baker. The project would be located within an existing utility corridor that extends through the Mojave Desert. The project would primarily be located on federal land that is administered by the Bureau of Land Management.

5. Project sponsor's name and address:

Los Angeles Department of Water and Power
111 North Hope Street
Los Angeles, California 90012

6. General plan designation:

Resource Conservation and Regional Industrial

7. Zoning:

Resource Conservation and Regional Industrial

8. Description of project:

The Path 46 Transmission Clearance Project would correct insufficient ground-to-conductor clearances along three existing overhead transmission lines located in San Bernardino County near Victorville, Barstow, and Baker, California: the 500 kV McCullough-Victorville Lines 1 and 2 and the 287 kV Mead-Victorville Line 1. The project is being undertaken to comply with the California Public Utilities Commission's General Order 95 Clearance Code Requirements, which set forth regulations for the amount of space that must be maintained between transmission lines and the ground. In order to correct the existing insufficient ground-to-conductor clearances, the Los Angeles Department of Water and Power would grade the ground surface of the area underneath the transmission lines at 68 work areas along the utility corridor to achieve height consistency. At two locations, existing transmission towers would be raised by approximately 20 feet. Two additional locations would involve the installation of barricades to prevent access to clearance discrepancy sites. The total amount of grading would be approximately 7 acres, and the excavated soils would be spread along existing access roads. The work sites would be primarily accessed via existing access roads.

9. Surrounding land uses and setting:

The land surrounding the proposed work areas consists primarily of undeveloped open space areas in the Mojave Desert. Some development occurs within the vicinity, generally consisting of small sections of I-15 and I-40, scattered rural residences, and agricultural land.

10. Other public agencies whose approval is required:

Responsible/Trustee Agencies:

- Bureau of Land Management (FLPMA Title V Right-of-Way Grant Amendment)

Reviewing Agencies:

- State Water Resources Control Board (Section 402 Storm Water Permit Associated with Construction Activities)
- Regional Water Quality Control Board (Section 401 Water Quality Certification and Waste Discharge Requirements)
- County of San Bernardino (grading permit, if required)
- U.S. Army Corps of Engineers (Section 404 Nationwide Permit)
- California Department of Fish and Wildlife (Streambed Alteration Agreement)

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?

No consultation has been requested to date. See Section 3.7.3(e) for details.

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

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 checklists on the following pages.

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

DETERMINATION

On the basis of this initial evaluation:

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

☒ I find that although the proposed 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 project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

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

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

Charles C. Holloway — Signature

9/20/2019 — Date

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an Environmental Impact Report (EIR) is required.
4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
    a. Earlier Analysis Used. Identify and state where they are available for review.
    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
    a. The significance criteria or threshold, if any, used to evaluate each question; and
    b. The mitigation measure identified, if any, to reduce the impact to less than significance.

3.1 Aesthetics

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☒	☐

Existing Setting

The regional setting consists of the high desert and occasionally mountainous landscape of the western and central Mojave Desert. Within the more populated western Mojave Desert, the area to the north and south of the proposed project consists of desert valleys and mountain ranges and the proposed project would pass south of the City of Barstow and communities of Daggett and Yermo. East of Yermo, the desert and mountain landscape is generally undeveloped (with exception given to transmission lines and occasional transmission line access roads) and the proposed project passes near the southeastern boundary of Fort Irwin Military Reservation lands and the northern boundary of the Mojave National Preserve.

The project area is located along the existing MCV1, MCV2, and MVL1 transmission line corridor that extends in a southwest to northeast direction parallel to I-15 through the Mojave Desert. The corridor supports four parallel high-voltage transmission lines supported by tall steel lattice structures accessible via a network of relatively straight dirt access road and numerous spur roads. The southwestern end of the corridor begins in Stoddard Valley (just northeast of Victorville) and extends east through Daggett (east of Barstow) and northeast into the Mojave Valley, passing along the northernmost portion of the MNP (i.e., the Clark Mountain Range) to the edge of the California–Nevada border.

In addition to the existing MCV1, MCV2, and MVL1 transmission lines, portions of the surrounding viewshed have been modified by I-15, SR-247, and SR-127 infrastructure, and limited rural residential and agricultural development located near the communities of Daggett and Yermo. However, segments of the utility corridor also pass through open and sparsely developed desert valleys and the foothills of local mountains ranges including the Soda Mountains and the Clark Range.

Visual resource management (VRM) is a process established by the BLM to manage the scenic quality of public lands and minimize potential impacts resulting from development activities. Management classes are identified by the BLM and denote permissible levels of landscape alteration while protecting the overall visual quality of a public lands. VRM classes are assigned through the use of visual resource inventory during the BLM's land use process and in 2011, a visual resource inventory was conducted for the Barstow and Needles BLM districts. Within the project area, the existing MCV1, MCV2, and MVL1 transmission line corridor traverses public lands managed by the BLM and is assigned either visual resource inventory Class II, Class III, or Class IV designation. The management objectives of Class I, Class II, Class III, and Class IV designated lands are identified below in Table 3.1-1.

Table 3.1-1
VRM Objectives

VRM Class	Objective
I[1]	To preserve the existing character of the landscape. The level of change to the characteristic landscape should be very low and must not attract attention.
II	To retain the existing character of the landscape. The level of change to the characteristic landscape should be low.
III	To partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate.
IV	To provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high.

1 There are no activities associated with the proposed project that would occur on VRM Class I designated lands.

a) Would the project have a substantial adverse effect on a scenic vista?

Less than Significant Impact. While there are no known and designated scenic vistas in the project area, the existing MCV1, MCV2, and MVL1 transmission line corridor traverses a primarily flat desert landscape with occasional rugged, mountainous terrain. As such, the project area provides opportunities for particularly long and broad views of the western and central Mojave Desert. Primary receptors afforded views of the project area desert landscape include interstate, highway, and local roadway motorists and dispersed, trail-based recreationists on public lands managed by the BLM. Trail-based recreationists within the northernmost portion of the MNP encompassing the southern extent of the Clark Mountain Range are also afforded views of the project area landscape.

As proposed, the project involves grading activities at 68 work areas, barricade installations at two work areas, and tower raising activities at two work areas along the existing MCV1, MCV2, and MVL1 transmission line

corridor. Existing access and spur roads, transmission towers and transmission line infrastructure are visible from segments of I-40, I-15, state highways, local roadways, and from public lands manage by the BLM and the National Park Service. However, because the line and color contrast of access and spur roads are currently evident in the existing landscape, proposed grading activities within the existing LADWP ROW would not substantially effect existing views in the project area. When viewed from elevated vantage points such as hiking trails on rising terrain in the surrounding area or mountain peaks, grading activities could result in additional smooth-texture and linear bands of discoloration in the desert landscape. However, due to the existing presence of access and spur roads along the MCV1, MCV2, and MVL1 corridor and given the broad, sweeping nature of views from elevated vantage points in the desert landscape, grading activities would not have substantial adverse effect on scenic views. Furthermore, the tall, geometric form of steel lattice structures currently dots the project area landscape. Tower raising activities would entail the insertion of vertical extensions onto two existing tower bodies within the MCV1, MCV2, and MVL1 transmission line corridor. As a result of tower raising activities, the towers would be approximately 20 feet taller when compared to existing conditions. As such and following construction, views containing the slightly taller steel lattice towers (i.e., MCV1_125-5 and MCV1_125-6) would not be substantially altered. Therefore, the project would not have a substantial adverse effect on a scenic vista and impacts would be less than significant.

b) Would the project substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Less Than Significant Impact. There are no formally designated state scenic highways in the project area. A segment of the Rim of the World Scenic Byway in southeastern San Bernardino County has been formally designated by the state legislature as a state scenic highway; however, the closest segment of the scenic byway is located nearly 40 miles south of Segment 1 of the proposed project. Furthermore, the Rim of the World Scenic Byway is generally lined by tall pine trees, and mountainous terrain to the north tends to limit the extent of available views to the foreground-middleground (i.e., less than 5 miles) distance zone. Therefore, due to distance and the presence of intervening vertical features between the highway and the project area, the proposed project would not damage scenic resources within a state scenic highway.

In addition to officially designated state scenic highways, the California Department of Transportation (Caltrans) identifies eligible state scenic highways. Unlike officially designate scenic highways, eligible highways have not yet been submitted to Caltrans for scenic highway approval and Corridor Protection Programs, which among other required elements, regulate land use and the density of development adjacent to the highway, have not been adopted by the local governing body. Eligible state scenic highways in San Bernardino County and in the project area include SR-247 (from SR-62 north to SR-40), I-40 (from SR-247 east to the California-Arizona state border), I-15 (from Barstow east to SR-127), and SR-127 (from SR-15 north to the San Bernardino County-Inyo County border) (Caltrans 2015). The proposed project may be briefly visible from segments of the roadways; however, given that proposed grading would be located along the MCV1, MCV2, and MVL1

transmission line corridor where access and spur roads (and their resulting line, color, and texture contrast) are relatively commonplace, grading activities would not substantially damage existing views of the high desert and mountainous landscape. Tower raising activities at MCV1_125-5 and MCV1_125-6 may be visible to I-40 and I-15 motorists near the community of Daggett; however, even with the proposed insertion of vertical extensions to the tower body that would increase the overall height of the structure by approximately 20 feet, the towers would present a similar form and line in the landscape and would display a similar steel lattice character as nearby towers within the transmission line corridor. Furthermore, the taller towers would be located within a desert landscape that has been visibly modified by the existing transmission line corridor, solar plant and agricultural development, and the Barstow-Daggett County Airport. Because tower raising activities would entail the insertion of vertical extensions onto existing towers and the MCV1_125-5 and MCV1_125-6 towers would be viewed in line with existing energy, agriculture, and transportation development that has altered the characteristic desert landscape, tower raising activities would not substantially damage existing views of the landscape. Therefore, impacts to scenic resources within the viewshed of state scenic highways would be less than significant.

c) Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

Less Than Significant Impact. The project area encompasses portions of western and central Mojave Desert. More specifically, proposed grading and tower raising activities would occur along the existing MCV1, MCV2, and MVL1 transmission line corridor that traverses flat and arid desert valleys and the foothills of local mountain ranges. While much of the area surrounding the transmission corridor is sparsely developed, the desert landscape has been noticeably altered by the electrical transmission infrastructure, I-15, SR-247, and SR-127 infrastructure, and limited rural residential and agricultural development located near the communities of Daggett and Yermo.

During construction activities associated with the proposed project, project activities, material deliveries, equipment, trucks, and vehicles within the MCV1, MCV2, and MVL1 transmission line corridor may be visible to motorists on I-15, I-40, SR-247, SR-127, and local roads due to the flat, relatively open viewing conditions surrounding the project area. Dispersed trail-based recreationists on public lands surrounding the transmission line corridor may also be afforded views of construction activities. However, construction activities would occur for up to 18 months along an existing utility corridor marked by tall, steel lattice transmission line towers, multiple transmission lines, and linear discoloration and disturbance associated with access and spur roads. Once construction activities cease, the visual effects of grading activities would be scattered throughout the existing high-voltage transmission line corridor and would create similar line, color, and texture contrast as nearby existing access and spur roads. For example, existing access and spur roads display relatively straight and smooth textured lines in the landscape and proposed grading activities would display similar visual characteristics. In several instances, proposed grading activities would simply expand the width of existing

access and spur roads and as a result would not be overly distinguishable from existing linear, ground level visual disturbance in the transmission line corridor. Therefore, the level of noticeable change to the corridor is anticipated to be low, and additional line and texture contrasts would not dominate the setting. Grading activities would not substantially alter the existing character of the transmission line corridor or the existing high desert landscape.

Regarding tower raising activities, the insertion of vertical extensions onto two existing tower bodies (i.e., MCV1_125-5 and MCV1_125-6) within the MCV1, MCV2, and MVL1 transmission line corridor would produce negligible visual change in the landscape. As proposed, vertical extensions would raise the two towers by approximately 20 feet; however, the towers would continue to display a tall, geometric form, angular steel lattice lines, and a greyish color. Therefore, because the visual character of the elevated towers would be similar to that of existing towers, the level of perceptible change to the landscape would be extremely low.

Indirect impacts associated with the proposed project may include temporary visual impacts associated with the generation of fugitive dust and the presence of heavy equipment. Construction activities would occur sequentially along an existing utility corridor and as such, visible dust emissions would not be produced in any one location for an extended period of time. Similarly, construction vehicles, equipment, and workers would not remain in any one location for an extended period of time. In addition, construction activities would comply with all applicable air quality regulations and may require the regular application of water or other materials to suppress fugitive dust emissions.

Overall, the proposed project would occur along an existing high-voltage transmission line corridor and the raised towers (i.e., MCV1_125-5 and MCV1_125-6) would display a scale, form, line, color, and texture similar to that of existing towers, impacts would be less than significant.

d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less Than Significant Impact. Construction activities would occur sequentially along the transmission line corridor and would take up to 18 months to complete. Both grading and tower raising activities are anticipated to occur during daytime hours and as such, the use of temporary outdoor lighting during evening and nighttime hours to illuminate construction work areas would not be required. New lighting would not be installed along access roads or grading areas and as such, grading activities would not create a new source of substantial light during project operations. Similar to the existing steel lattice towers, the slightly taller steel lattice towers at MCV1_125-5 and MCV1_125-6 would not require the installation of FAA obstruction lighting. New tower footings would be installed at the tower raising sites and following the insertion of vertical extensions within the tower bodies, the towers would be approximately 20 taller than under existing conditions. The slightly taller structures would be approximately 130 feet AGL and would not be anticipated to exceed the 200 feet AGL height standard established by the FAA (FAA 2007) to determine whether marking and/or lighting is required

on temporary or permanent structures. Therefore, operation of slightly taller transmission line towers at MCV1_125-5 and MCV1_125-6 would not create a new source of substantial light that would adversely affect nighttime views in the area.

The temporary influx of construction vehicles and equipment to the generally flat desert and rugged mountainous landscape of the western and central Mojave Desert would not create substantial daytime glare that would affect day views. During grading operations, the estimated work force would be between 6 to 10 workers per day and would increase to 12 to 24 workers per site during tower raising activities. The relatively small construction work force necessitated by the project would not require a large fleet of construction vehicles and equipment. Furthermore, project activities would be carried out within the existing LADWP ROW and the MCV1, MCV2, and MVL1 transmission line corridor in which maintenance vehicles can occasionally be seen by passing motorists. Lastly, with the exception of glass, construction vehicles and equipment contain limited amount of potentially reflective materials capable of generating daytime glare. With regard to the tower raising activities, vertical extensions would be inserted within tower bodies and these components would be constructed of a similar material (steel) as the existing tower. Therefore, the new structures would not constitute a new source of potential glare that would adversely affect existing day views. Impacts would be less than significant.

References

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3.2 Agriculture and Forestry Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☒	☐

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☒	☐

a) Would the project 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?

Less Than Significant Impact. The County of San Bernardino contains numerous areas that have been designated as Prime Farmland, Farmland of Statewide Importance, or Unique Farmland. The majority of the proposed work areas would be located on BLM land. Per the California Desert Conservation Area (CDCA) Plan, agricultural uses (excluding livestock grazing) are not allowed on public land managed by the BLM (BLM 1980). However, several work areas located outside of BLM land are within or adjacent to Prime Farmland or Farmland of Statewide Importance (specifically, the work areas located near MVL1_147-4, MVL1_147-5, MCV1_125-5, and MCV1_125-6) (FMMP 2015a). The work that would be conducted near MVL1_147-4 and MVL1_147-5 consists of two compacted soil barricades that would be installed to decommission an access road extending beneath transmission lines. The installation of two compacted soil barricades to decommission an access road extending within an existing utility corridor would not convert Farmland to non-agricultural use. While Farmland is located nearby, it would not be adversely affected by minor construction activities associated with creating the compacted soil barricades, which would involve approximately 9 cubic yards of grading within the existing utility corridor.

Tower raising activities would occur at MCV1_125-5 and MCV1_125-6. The activities at MCV1_125-5 would take place within Prime Farmland, and the activities at MCV1_125-6 would take place within Farmland of

Statewide Importance. While the tower raising activities would occur within an existing utility corridor, agricultural fields surround both of these towers and pass beneath the transmission lines. Construction activities would have the potential to temporarily interrupt or preclude farming within and surrounding the construction pads for approximately 45 days, the duration of construction at each of the two sites. Construction would involve preparation of a pad for construction equipment, which would be approximately 80,000 square feet per tower raising site. Four new footings would be installed at each tower raising site. Tower footings would be installed on or slightly offset from the existing footings and would be slightly larger than the existing footings. Assuming a standard footing size of 4 feet in diameter and 30 feet in depth, these footings would result in a total permanent impact area of 100 square feet (approximately 50 square feet per work site and 13 square feet per footing). Site cleanup and restoration would occur subsequent to construction. Cleanup would include chipping the old concrete footings 1 foot below the topsoil and cutting stub angles using a cutting torch. Site restoration activities would return the sites to their original conditions.

The area of disturbance involved with the construction process for tower raising would temporarily preclude farming activities at the tower raising sites and in the 80,000–square foot construction pad. However, as described in Section 2.1, topsoil that is removed from each of the construction pads would be salvaged and replaced upon completion of construction, in coordination with the property owner. Construction at each of the two sites would only last for 45 days, and the property owner would be notified of these temporary construction activities prior to the start of construction at each site. At the end of this construction period, each site would be restored and returned to its original condition to the extent feasible. As such, agricultural activities would be precluded for a short period of time. While the new tower footings may be slightly offset from those that currently exist, the presence of these footings (totaling 15 square feet per footing, equating to 50 square feet per site) and the partially demolished existing footings would not substantially hinder agricultural activities relative to existing conditions. This is because the new footings would not occupy a substantial amount of farmland to the extent that farmland is converted to a non-agricultural uses and would not preclude farming activities. As such, no Farmland would be converted to non-agricultural uses, and impacts would be less than significant.

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. Lands within Williamson Act Contracts in the County of San Bernardino are minimal, and the proposed project would not be located on any of these lands (Department of Conservation 2013). As such, the project would not conflict with a Williamson Act contract. Additionally, none of the proposed work areas would be located on agriculturally zoned land (County of San Bernardino 2015). However, as described in item (a) above, the tower raising activities would temporarily preclude agricultural activities in an approximately 80,000-square-foot area around two transmission towers (for a total temporary impact area of approximately 3.7 acres). The two raised transmission towers would be located in essentially the same location as the existing towers; therefore, conditions would not change to the extent that the agricultural use of the land would be

affected relative to existing conditions. For these reasons, impacts related to conflicts with agricultural zoning and Williamson Act contracts would be less than significant.

c) Would the project 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))?

No Impact. The project area is within land zoned for Resource Conservation by the County of San Bernardino and is located along an existing utility corridor in the arid Mojave Desert. Forest land, timberland, or Timberland Production zones do not exist in the project area. No impact would occur.

d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. As described under item (c) above, the project area does not include forest land. As such, no forest land would be lost or converted on a non-forest use by the proposed project.

e) Would the project 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?

Less Than Significant Impact. The majority of the proposed work areas are located on BLM land, in which agricultural uses (except grazing) are not allowed. Under the proposed project, no impacts would occur to grazing within the Cronese Lake Allotment because the allotment was closed under the DRECP. Five work sites within Segment 1 would occur within Stoddard Mountain Allotment, between I-15 and State Route (SR) 247. This portion of the allotment overlaps the Stoddard Valley OHV use area. However, the portion of the allotment in which the proposed project would occur was closed to ephemeral sheep grazing under the 2006 West Mojave Plan. As such, no impacts would occur to grazing within the Stoddard Mountain Allotment. Five work sites within Segment 7 would occur within the southern portion of the Clark Mountain Allotment, north of the detached portion of the MNP. While a portion of the Clark Mountain Allotment has been relinquished, the portion through which Segment 7 traverses is un-relinquished by the grazing lessee.

During times of active construction (grading) within the ROW, temporary nuisance impacts associated with the generation of fugitive dust, presence of heavy equipment, and noise would occur. Work in Segment 7 is anticipated to be phased over the course of approximately 4 weeks, assuming that work at each of the 7 grading sites within Segment 7 takes an average of 3 days. Due to short duration of construction at each site, nuisance impacts would be temporary in nature and would not preclude grazing activities. During construction activity, LADWP would implement public safety measures in work areas, such as installation of flagging around heavy equipment during operation, during which grazing could be temporarily precluded in these areas; however,

grazing access along the entirety of the ROW or proposed project area within the Clark Mountain Allotment would not be precluded all at once. LADWP, in coordination with BLM, would notify the grazing lessee of temporary construction activities prior to start of construction within the Clark Mountain Allotment.

Furthermore, construction activities would be generally confined to the 80,000-square-foot pad area around each tower raising site and such indirect impacts would not result in the conversion of agricultural uses to a non-agricultural use. As such, areas subject to indirect impacts would be limited and would not be permanently converted on a non-agricultural use. The proposed project would not result in changes to the infrastructure of the area affecting the agricultural economy and would not result in other indirect impacts leading to conversion of agricultural land uses. As such, impacts would be less than significant.

References

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County of San Bernardino. 2015. "Land Use Services Zoning Look-up." Accessed August 19, 2015. http://sbcounty.maps.arcgis.com/apps/OnePane/basicviewer/index.html?appid=b3a8d3286a6b41d7ad2b80e871a4e048.

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3.3 Air Quality

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☒	☐

Existing Setting

The proposed project is located within the Mojave Desert Air Basin (MDAB), which includes portions of San Bernardino County, Kern County, Riverside County, and Los Angeles County. The proposed project work sites are located within the boundaries of the San Bernardino County portion of the MDAB. The Mojave Desert Air Quality Management District (MDAQMD) has jurisdiction over the desert portion of San Bernardino County and the far eastern end of Riverside County. Prevailing winds in the MDAB are out of the west and southwest, due to the proximity of the MDAB to coastal and central regions and the blocking nature of the Sierra Nevada Mountains to the north; air masses pushed onshore in Southern California by differential heating are channeled through the MDAB.

The work sites of the proposed project are all located along the MCV1, MCV2, and MVL1 transmission line corridor, which extends in a southwest to northeast direction parallel to I-15 through the Mojave Desert. Table 3.3-1, Project Area Attainment Status, presents the attainment status of the project area with respect to the California Ambient Air Quality Standard (CAAQS).

Table 3.3-1
Project Area Attainment Status

Pollutant	Designation/Classification
	State Standards
Ozone – one hour	Nonattainment/Moderate
Ozone – eight hour – WMDONA	Nonattainment
Ozone – eight hour – Remainder of MDAB	Nonattainment
PM_{10}	Nonattainment
$PM_{2.5}$ – WMDONA	Nonattainment
$PM_{2.5}$ – Remainder of MDAB	Unclassified
Carbon Monoxide	Attainment
Nitrogen Dioxide	Attainment
Sulfur Dioxide	Attainment
Lead	Attainment
Hydrogen Sulfide	Unclassified
Sulfates	Attainment
Vinyl Chloride	No designation
Visibility Reducing Particles	Unclassified

Sources: California Air Resources Board (CARB) 2014
Notes: PM_{10} = particulate matter that is 10 microns or less in diameter; $PM_{2.5}$ = particulate matter that is 2.5 microns or less in diameter; WMDONA = Western Mojave Desert ozone nonattainment area; Attainment = meets the standards; Nonattainment = does not meet the standards; Unclassified = insufficient data to classify; Unclassified/Attainment = meets the standard or is expected to be meet the standard despite a lack of monitoring data.

In summary, the entire project area is currently in nonattainment for the state 1-hour and 8-hour ozone (O_3) standards, as well as state standards for particulate matter with a diameter less than or equal to 10 microns (PM_{10}). Portions of the project area within the Western Mojave Desert ozone nonattainment area are also designated nonattainment for particulate matter with a diameter less than or equal to 2.5 microns ($PM_{2.5}$) standards. The project area is unclassified or in attainment for the other CAAQS.

MDAQMD attains and maintains air quality conditions for the desert portion of San Bernardino County and the far eastern end of Riverside County through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean-air strategy of MDAQMD includes preparing plans and programs for the attainment of ambient air-quality standards, adopting and enforcing the rules and regulations concerning sources of air pollution, and issuing permits for stationary sources of air pollution. MDAQMD also inspects stationary sources of air pollution, responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements programs and regulations aimed at bringing the region into compliance with the CAAQS. Air quality plans applicable to the proposed project are summarized in Table 3.3-2, Summary of MDAQMD Air Quality Plans.

Table 3.3-2
Summary of MDAQMD Air Quality Plans

Pollutant	Plan Title	Date	Status
Ozone	*2004 Ozone Attainment Plan* (State and Federal)	April 26, 2004	Adopted by MDAQMD and CARB in April 26, 2004.
	Federal 8-Hour Ozone Attainment Plan (Western Mojave Desert Nonattainment Area)	June 9, 2008	Adopted by MDAQMD and CARB in June 9, 2008.
Nitrogen dioxide (NO_X) and volatile organic compounds (VOC)	*1991 Air Quality Attainment Plan*	August 26, 1991	Adopted by MDAQMD and CARB in August 26, 1991.
	Reasonable Further Progress Rate-Of-Progress Plan	October 26, 1994	Adopted by MDAQMD and CARB in October 26, 1994.
	Post 1996 Attainment Demonstration and Reasonable Further Progress Plan	October 26, 1994	Adopted by MDAQMD and CARB in October 26, 1994.
	Triennial Revision to the 1991 Air Quality Attainment Plan	January 22, 1996	Adopted by MDAQMD and CARB in January 22, 1996.
Respirable and fine particulate matter (PM_{10} and $PM_{2.5}$)	*Mojave Desert Planning Area Federal Particulate Matter Attainment Plan*	July 25, 1995	Adopted by MDAQMD and CARB in July 25, 1995.

Source: MDAQMD 2011

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. A project is non-conforming with an air quality plan if it conflicts with or delays implementation of any applicable attainment or maintenance plan. A project is conforming if it complies with all applicable MDAQMD 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). Zoning changes, specific plans, general plan amendments and similar land use plan changes which do not increase dwelling unit density, do not increase vehicle trips, and do not increase vehicle miles traveled are also deemed to comply with the applicable air quality plan (MDAQMD 2011).

The proposed project would comply with all applicable MDAQMD rules and regulations, such as Rule 401 (Visible Emissions) and Rule 403.2 (Fugitive Dust Control for the Mojave Desert Planning Area). The proposed project would not conflict with or propose to change existing land uses or result in population growth. In addition, the proposed project would not result in a long-term increase in the number of trips or increase the overall vehicle miles traveled in the area. Haul truck, vendor truck, and worker vehicle trips would be generated during the proposed grading and construction activities, but would cease after construction is completed. In regards to long-term operations, the proposed project would not change the routine inspection and maintenance of the existing transmission lines or result in a net increase in emissions. The proposed project would not conflict with or delay the implementation of the MDAQMD Federal 8-hour Ozone Attainment Plan. Based on these considerations, the proposed project would result in a less-than-significant impact.

b) Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less Than Significant Impact. Construction of the proposed project would result in emissions of criteria air pollutants for which the California Air Resources Board (CARB) have adopted ambient air quality standards (i.e., CAAQS, respectively). Projects that emit these pollutants have the potential to cause or contribute to violations of these standards. The MDAQMD has adopted significance thresholds, which, if exceeded, would indicate the potential to contribute to violations of the CAAQS.

The MDAQMD *CEQA Air and Federal Conformity Guidelines* (MDAQMD 2011), sets forth quantitative emission significance thresholds for criteria air pollutants below which a project would not have a significant impact on ambient air quality. Proposed project-related air quality emissions estimated in this environmental analysis would be considered significant if any of the applicable significance thresholds presented in Table 3.3-3, MDAQMD Air Quality Significance Thresholds, are exceeded. The emission-based thresholds for O_3 precursors are intended to serve as a surrogate for an "ozone significance threshold" (i.e., the potential for adverse O_3 impacts to occur) because O_3 itself is not emitted directly, and the impacts of an individual project's emissions of O_3 precursors (VOC and NO_x) on O_3 levels in ambient air cannot be determined through air quality models or other quantitative methods. MDAQMD recommends that its quantitative air pollution thresholds be used to determine the significance of project emissions.

Table 3.3-3
MDAQMD Air Quality Significance Thresholds

Pollutant	Annual Threshold (tons per year)	Daily Threshold (pounds per day)
VOC	25	137
NO_x	25	137
CO	100	548
SO_x	25	137
PM_{10}	15	82
$PM_{2.5}$	15	82
Hydrogen Sulfide[a]	10	54
Lead[a]	0.6	3

Source: MDAQMD 2011

[a] The proposed project includes typical construction equipment and on-road vehicles, which result in negligible (if any) emissions of hydrogen sulfide and lead. Therefore, these pollutants are not discussed in this analysis.

Construction of the proposed project would result in a temporary addition of pollutants to the local airshed caused by soil disturbance, dust emissions, and combustion pollutants from on-site construction equipment, as well as from employee vehicles and off-site trucks hauling construction materials. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and

for dust, the prevailing weather conditions. Therefore, such emission levels can only be approximately estimated with a corresponding uncertainty in precise ambient air quality impacts.

Pollutant emissions associated with temporary construction activity were quantified using the California Emissions Estimator Model (CalEEMod), Version 2013.2.2, available online (www.caleemod.com). Construction activities, major construction equipment, and quantities of excavated soils were provided by the applicant. Default values provided by CalEEMod were used where detailed project information was not available.

It is anticipated that construction of the proposed project would commence in 2019 and would last up to 18 months, depending on weather conditions, site access, and the availability of personnel and equipment. A conservative scenario was developed whereby all construction activities would occur during the same year. The estimated annual construction emissions were based on the following assumptions (duration of phases is approximate):

- Concurrent Site Grading – 5 weeks
- Individual Site Grading – 19 weeks
- Tower Raising – 18 weeks

The construction equipment mix included in the model for the proposed project are shown in Table 3.3-4, Anticipated Construction Equipment. The equipment mix anticipated for construction activity is based on applicant input and typical construction practices. The equipment mix is meant to represent a reasonably conservative estimate of construction activity. For most of the equipment, it was assumed that a "typical" equipment fleet (such as horsepower and load factor, as implemented by CalEEMod) would be used for construction. For the analysis, it is generally assumed that heavy construction equipment would operate for approximately 8 hours per day, 5 days per week.

Table 3.3-4
Anticipated Construction Equipment

Construction Phase	Equipment	Quantity
Concurrent Site Grading	Excavators	2
	Graders	2
	Bulldozer	2
	Skid-steer loader	2
	Wheel/track loader	2
	Backhoe loader	2

Table 3.3-4
Anticipated Construction Equipment

Construction Phase	Equipment	Quantity
Individual Site Grading	Excavators	1
	Graders	1
	Bulldozer	1
	Skid-steer loader	1
	Wheel/track loader	1
	Backhoe loader	1
Tower Raising	Cranes	4
	Manlifts	3
	Wheel/track loader	1
	Backhoe loader	1
	All-terrain forklift	1
	Air compressor	1

Table 3.3-5, Estimated Construction Emissions, depicts the daily emissions for the following two worse-case construction scenarios: (1) simultaneous tower raising and grading activities; and (2) concurrent grading activities at two sites. Annual emissions are also included in Table 3.3-5 to account for all grading and tower raising activities of the proposed project.

Table 3.3-5
Estimated Construction Emissions

	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Annual Emissions (tons per year)	0.48	4.89	3.80	0.01	0.56	0.37
MDAQMD Annual Threshold	*25*	*25*	*100*	*25*	*15*	*15*
Threshold Exceeded?	No	No	No	No	No	No
Daily Emissions (pounds per day) – Tower Raising + Grading Scenario	9.28	89.28	74.68	0.10	9.84	6.40
MDAQMD Daily Threshold	*137*	*137*	*548*	*137*	*82*	*82*
Threshold Exceeded?	No	No	No	No	No	No
Daily Emissions (pounds per day) – Concurrent Grading Scenario	8.49	77.42	74.43	0.07	10.85	7.04
MDAQMD Daily Threshold	*137*	*137*	*548*	*137*	*82*	*82*
Threshold Exceeded?	No	No	No	No	No	No

NA = Not Applicable. VOC = ROG (in CalEEMod Output)
See Appendix E for detailed results. These estimates reflect control of fugitive dust required by MDAQMD Rule 403.2.

As shown in Table 3.3-5, annual and daily construction emissions would not exceed the MDAQMD significance thresholds for VOC, NO_x, carbon monoxide (CO), oxides of sulfur (SO_x), PM_{10}, or $PM_{2.5}$. Regardless, the proposed project would be required to comply with MDAQMD Rule 403.2 to control fugitive dust emissions generated during grading activities. Standard construction practices that would be employed to reduce fugitive dust emissions include the following:

- Short-term dust control by a water truck and/or available water source on or near the drilling rig;
- Minimize and cleanup trackout onto paved roads;
- Cover haul trucks;
- Stabilize (chemical or vegetation) site upon completion of grading when subsequent development is delayed;
- Rapid cleanup of project-related trackout or spills on paved roads; and
- Minimize grading and soil movement when winds exceed 30 miles per hour.

In regards to long-term operations, the proposed project would not change the routine inspection and maintenance of the existing transmission lines or result in a net increase in emissions. Overall, the proposed project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. This impact would be less than significant.

c) Would the project 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)?

Less Than Significant Impact. The MDAB is a nonattainment area for O_3, PM_{10}, and $PM_{2.5}$ under the CAAQS. The poor air quality in the MDAB is the result of cumulative emissions from motor vehicles, off-road equipment, commercial and industrial facilities, and other emission sources. Projects that emit these pollutants or their precursors (i.e., VOC and NO_x for O_3) potentially contribute to poor air quality. As indicated in Table 3.3-5, daily and annual construction emissions associated with the proposed project would not exceed the MDAQMD significance thresholds. The proposed project would not generate a long-term increase in operational emissions. Furthermore, the proposed project would not conflict with the MDAQMD 2004 or 2008 Ozone Attainment Plans, which address the cumulative emissions in the MDAB and account for emissions associated with construction activity in the MDAB. Accordingly, the proposed project would not result in a cumulatively considerable increase in emissions of nonattainment pollutants. This impact would be less than significant.

d) Would the project expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. The MDAQMD considers residences, schools, daycare centers, playgrounds and medical facilities to be sensitive receptor land uses (MDAQMD 2011). Land uses surrounding the proposed work areas consists primarily of undeveloped open space areas in the Mojave Desert. There is some development within the vicinity, generally consisting of scattered rural residences. Construction of the proposed project would result in the temporary (18 months or less) generation of emissions associated with on-site equipment operation and off-site trucks and worker vehicles; however, emissions would be below the MDAQMD thresholds and would not result in substantial criteria air pollutant emissions. In addition, the construction activities would move along the transmission line corridor and would not result in extended exposure of individual residences to criteria air pollutants or toxic air contaminants (such as diesel particulate matter). Therefore, although rural residential land uses are located in the vicinity of the project area, the proposed project would not expose residents to long-term substantial air pollutant or toxic air contaminant concentrations. Accordingly, the proposed project would result in a less than less-than-significant impact.

e) Would the project create objectionable odors affecting a substantial number of people?

Less Than Significant Impact. Odors are a form of air pollution that is most obvious to the general public and can present problems for both the source and surrounding community. Although offensive odors seldom cause physical harm, they can be considered an annoyance and cause concern. Odors would be potentially generated from vehicles and equipment exhaust emissions during construction of the proposed project. Odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment. Such odors are temporary and generally occur at magnitudes that would not affect substantial numbers of people. In regards to long-term operations, the proposed project would not change the routine inspection and maintenance of the existing transmission lines and would not result in any sources of substantial odors. Therefore, impacts associated with odors would be considered less than significant.

References

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United States Environmental Protection Agency (EPA). 2015. *Green Book – Current Nonattainment Counties for All Criteria Pollutants*. http://www3.epa.gov/airquality/greenbook/ancl.html#CALIFORNIA. Accessed November 23, 2015.

3.4 Biological Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 Wildlife 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, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
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 native 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?	☐	☒	☐	☐

Existing Setting

Area of Potential Effect for Biological Resources

For the purposes of the biological resources assessment, the area of potential effects (APE) is defined as the geographic area or areas within which the proposed project may directly or indirectly impact biological resources, consistent with the

terminology used in the Biological Resources Report. The horizontal APE includes the proposed grading areas and the existing access roads where excavated soils would be redistributed, plus a 100-foot buffer to account for any changes in the limits of disturbance (e.g., contouring of grading areas to avoid entrapment of wildlife), changes in access routes, movement/storage of equipment, and/or potential indirect impacts to biological resources that may be generated from project activities, such as dust, noise, and vibrations. The proposed grading areas and the existing access roads where excavated soils would be redistributed make up the area of direct impact for biological resources. The vertical APE includes the maximum limits of grading, which is not anticipated to exceed 9 feet in depth at any grading site (Appendix D1).

Special Designations

Portions of BLM land are often given special designations to set aside land for a special purpose, such as wilderness study and conservation. Special designations that are relevant for biological resources assessment specific to wildlife include Recovery Areas, ACECs, NCLs, and critical habitat.

Areas of Critical Environmental Concern

ACECs are special management areas established by the BLM to protect and prevent irreparable damage to important historical, cultural, and scenic values; fish or wildlife resources, or other natural systems or processes; or to protect human life and safety from natural hazards. Areas protected based on their importance for fish and wildlife resources include habitat for endangered, threatened, or sensitive species, or habitat essential for maintaining species diversity. Areas protected based on their importance for natural processes or systems may be habitat for endangered, sensitive, or threatened plant species; rare, endemic, or relic plants or plant communities that are terrestrial, aquatic, or riparian; or rare geological features. The project area extends through six ACECs: Daggett Ridge Monkey Flower, Ivanpah, Northern Lucerne Wildlife Linkage, Ord-Rodman, Shadow Valley, and Superior-Cronese.

Critical Habitat

Section 4(a)(3) and (b)(2) of the Federal Endangered Species Act requires the designation of Critical Habitat for federally listed species to the maximum extent possible and prudent based on the best available scientific data and after considering the economic impacts of any designations. Critical Habitat is defined in Section 3(5)(A) of the Federal Endangered Species Act as follows: (1) areas within the geographic range of a species that are occupied by individuals of that species and contain the primary constituent elements (physical and biological features) essential to the conservation of the species, thus warranting special management consideration or protection, and (2) areas outside of the geographic range of a species at the time of listing but that are considered essential to the conservation of the species.

There is USFWS-designated Critical Habitat for desert tortoise within the project region. The majority of the APE is outside of USFWS-designated Critical Habitat; however, the following work areas, located within Segments 2, 3, and 4, occur within Critical Habitat for desert tortoise (USFWS 2014, as cited in Appendix D1):

- MVL1 159-1
- MVL1 129-4 and MVL1 129-5

- MCV1 138-1
- MVL1 158-6
- MVL1 150-5
- MVL1 150-4
- MVL1 150-3
- MCV1 129-1
- MCV2 104-5 and MCV2 105-1
- MCV2 103-3 and MCV2 103-4
- MCV2 100-5 and MCV2 101-5
- MCV2 97-5 and MCV2 98-1
- MCV2 97-1 and MCV2 98-2
- MCV2 93-4 and MCV2 93-5

No other Critical Habitat occurs within the APE. Impacts within Critical Habitat require consultation with USFWS and subsequent mitigation, such as habitat restoration and/or land acquisition/deeded easement for inclusion in a wildlife conservation area.

California Desert National Conservation Lands

Phase I of the DRECP designated 4.2 million acres as part of the California Desert National Conservation Lands. The proposed project extends through three areas of California Desert National Conservation Lands: Kingston – Amargosa, Mojave and Silurian Valley, and Pinto Lucerne Valley and Eastern Slopes.

Biological Resources by Segment

ESA conducted a literature review, a database review, and biological surveys in 2013 and 2014 to identify plant species, vegetation communities, special-status wildlife species, and other sensitive biological resources in the project area. Their results are summarized below. A full description of their results is contained in Appendix D1.

Based on the database review and habitat survey, a total of 21 special-status plant species[1] were determined to have the potential to occur within the APE. See Appendix D1 for a list of these species and for figures showing known recorded occurrences of special-status plant species in the project area and vicinity. Seventeen of these special-status plant species were determined to have a low potential to occur in the project area based on the results of the biological surveys, species distribution, and habitat types found within the APE. The remaining four species were observed on site during the biological surveys, specifically within Segments 1, 6, and 7.

Native succulents that are protected under the California Desert Native Plants Act were also observed within the project area during the biological surveys. Such species included buckhorn cholla (*Cylindropuntia acanthocarpa* var. *acanthocarpa*),

[1] For the purposes of the Biological Resources Report, the term "special-status plant species" refers to species that are protected by the Federal Endangered Species Act or the California Endangered Species Act; species that are designated as Protected or Fully Protected by the California Department of Fish and Wildlife; species that are given a California Rare Plant Rank of 1A, 1B, 2A, or 2B by the California Native Plant Society; species designated as sensitive by city, county, or regional planning documents; or species recognized as "sensitive" by the BLM, USWFS, or other regulatory agency.

silver cholla (*Cylindropuntia echinocarpa*), pencil cholla (*Cylindropuntia ramosissima*), hedgehog cactus (*Echinocereus engelmannii*), cottontop barrel cactus (*Echinocactus polycephalus*), California barrel cactus (*Ferocactus cylindraceus),* fish hook cactus (*Mammillaria tetrancistra*), and beavertail cactus (*Opuntia basilaris*) (Appendix D1). The vegetation and plant species identified in the project area are characterized by segment in the paragraphs below.

Fifteen wildlife species were determined to have some potential to occur within the APE, including five mammal species, six bird species, three reptile species, and one fish species. Two special-status wildlife species were determined to be in the APE: desert tortoise (*Gopherus agassizii*), a federal and state threatened species, was determined to be present within the project area in Segments 2, 3, 4, and 6, and loggerhead shrike (*Toxostoma lecontei*), a California Species of Special Concern, was observed in Segment 5. One species, the golden eagle (*Aquila chrysaetos*), was determined to have a high potential to occur in Segments 1, 2, and 5, and in areas outside of the APE proper, though close enough that they may be affected by project activities. Additional details regarding presence of golden eagles in the vicinity of individual project components and potential impacts are provided in the site-specific discussions that follow. Four special-status wildlife species were determined to have a moderate potential to occur: American badger (*Taxidea taxus*), desert kit fox (*Vulpes macrotis arsipus*), pallid bat (*Antrozous pallidus*), and burrowing owl. The remaining seven special-status species were determined to have a low or negligible potential to occur based on results of biological surveys, known species distribution, and poor habitat suitability found within the APE (Appendix D1).

Segment 1

Plant Species and Vegetation Communities

The APE within Segment 1 is moderately disturbed from previous construction and development associated with installation of the existing transmission towers, Powerline Road, and associated access and spur roads. Vegetation within Segment 1 consists of a moderate quality Mojave creosote bush scrub habitat dominated by native shrubs, such as creosote (*Larrea tridentata*) and cheesebush (*Ambrosia salsola*). Other common native species observed within Segment 1 include Mohave yucca (*Yucca schidigera*), eastern Mojave buckwheat (*Eriogonum fasciculatum* var. *polifolium*), California ephedra (*Ephedra californica*), burrobush (*Ambrosia dumosa*), Acton encelia (*Encelia actoni*), sweetbush (*Bebbia juncea*), and desert trumpet (*Eriogonum inflatum*). The Mojave creosote scrub community contains a disturbed understory dominated by annual nonnative grasses such as red brome (*Bromus madritensis*) and cheat grass (*Bromus tectorum*), and forbs, such as fiddleneck (*Amsinckia tessellata*), red-stemmed filaree (*Erodium cicutarium*), Asian mustard (*Brassica tournefortii*), and short-pod mustard (*Hirschfeldia incana*) (Appendix D1).

Sensitive Resources

No sensitive vegetation communities were identified in the APE for Segment 1. One special-status plant species (Barstow woolly sunflower (*Eriophyllum mohavense*) was recorded within 1 mile of the APE. However, this single recorded occurrence was in 1914 and no additional occurrences have been recorded since. Two native succulents protected under the California Desert Native Plants Act (teddy bear chollas (*Cylindopuntia bigelovii*) and one pencil cholla) were mapped near the grading site between towers MCV1_145-3 and MCV1_145-4 (Appendix D1).

Common Wildlife

The APE within Segment 1 provides suitable habitat for a number of common wildlife species known to occur within desert scrub and creosote scrub habitats. Reptile species observed within this APE include Great Basin collared lizard (*Crotaphytus bicinctores*), western side-blotched lizard (*Uta stansburiana elegans*), and western whiptail (*Aspidoscelis tigris tigris*); avian species observed or detected include ash-throated flycatcher (*Myiarchus cinerascens*), loggerhead shrike (*Lanius ludovicianus*), common raven (*Corvus corax*), horned lark (*Eremophila alpestris*), verdin (*Auriparus flaviceps*), bushtit (*Psaltriparus minimus*), rock wren (*Salpinctes obsoletus*), cactus wren (*Campylorhynchus brunneicapillus*), European starling (*Sturnus vulgaris*), lark sparrow (*Chondestes grammacus*), black-throated sparrow (*Amphispiza bilineata*), and house finch (*Haemorhous mexicanus*); and mammal species observed during the survey include desert cottontail (*Sylvilagus audubonii*),white-tailed antelope ground squirrel (*Ammospermophilus leucurus*), kangaroo rat (*Dipodomys* sp.), and desert woodrat (*Neotoma lepida*). In addition, a potentially active coyote (*Canis latrans*) den was observed near tower MVL1_147-5 but no live coyotes were observed. Avian species were observed or detected within the desert scrub habitat surrounding the work area and perched on transmission lines and towers; however, no nests or nesting behavior were observed (Appendix D1).

Sensitive Wildlife Species

The California Natural Diversity Database (CNDDB) documents the occurrence of three species within 5 miles of the APE within Segment 1: golden eagle, desert tortoise, and prairie falcon (*Falco mexicanus*). The habitat within Segment 1 provides high-quality habitat for the federal and state threatened desert tortoise. The APE contains desert scrub habitat, friable soils for burrowing, and open vegetation allowing movement throughout the work area; however, no desert tortoise or signs of desert tortoise (e.g., burrows, scat, tracks, shell fragments) were found in the APE in Segment 1. Although no desert tortoises were observed in Segment 1 during the biological surveys, there is a moderate to high potential for the species to enter or occupy the work area prior to ground disturbance based on the presence of suitable habitat known occurrences within the region (CNDDB 2014, as cited in Appendix D1).

The habitat within Segment 1 provides moderately suitable habitat for several species that are listed as California Species of Special Concern, including burrowing mammals, such as desert kit fox and American badger. None of these species were observed within the APE during the biological surveys; however, one inactive kit fox den site was observed near tower MCV1 145-3, south of the access road.

The APE within Segment 1 provides suitable nesting habitat for a number of shrub and ground-nesting avian species, including horned lark, loggerhead shrike, and burrowing owl. This area also provides suitable foraging habitat and nesting opportunities for golden eagle and the BLM reports that there is an active golden eagle nest on a tower in this segment. In addition, there are several golden eagle nests in the vicinity of Stoddard Mountain. Additionally, although not considered natural nesting habitat, the transmission towers located within the APE provide suitable nesting habitat for larger avian species including common raven and red-tailed hawk (*Buteo jamaicensis*). The following California Species of Special Concern were observed within Segment 1: loggerhead shrike, horned lark, and lark sparrow. No other active

or inactive nests were observed within transmission towers or within the habitat throughout the Segment 1 APE; however, focused surveys were not conducted and additional nests may be present (Appendix D1).

Segment 2

Plant Species and Vegetation Communities

The APE within Segment 2 is moderately disturbed from previous construction and development associated with installation of the transmission towers, Powerline Road, and associated access and spur roads. Vegetation within Segment 2 generally consists of a moderate-quality Mojave creosote bush scrub community dominated by creosote bush. Common succulent plant species observed in Segment 2 include silver cholla, pencil cholla, cottontop barrel cactus, and Engelmann's hedgehog cactus (*Echinocereus engelmannii*). Other common native species observed within this segment include Acton encelia, burrobush, cheesebush, desert tea, and desert trumpet. The Mojave creosote scrub community contains a disturbed understory dominated by annual non-native grasses such as red brome, cheat grass, small flower melic grass, common Mediterranean grass, fiddleneck, red-stemmed filaree, Asian mustard, and short-pod mustard (Appendix D1).

Sensitive Resources

No sensitive vegetation communities were identified for the APE within Segment 2, and no special-status plant species were observed during biological surveys. The potential for occurrence of special-status plant species within the project area for this segment is low based on the level of existing disturbance/development within the limits of the majority of proposed work areas. However, seven native succulents that are protected under the California Desert Native Plants Act were observed within or immediately adjacent to the APE in Segment 2: silver cholla, pencil cholla, hedgehog cactus, cottontop barrel cactus, teddy bear cholla, beavertail, and Mohave yucca. One teddy bear cholla was mapped south of tower MVL1_158-6, and another was mapped along the edge of the access road between tower MVL1_150-4 and MVL1_150-5. One Mojave yucca was mapped near the grading site between tower MVL1_155-5 and MVL1_155-6 (see Appendix D1 for figures showing the locations of the observed species). The remaining native succulent species within the APE were observed outside the immediate vicinity of the areas where direct impacts would occur (Appendix D1).

Common Wildlife

The APE within Segment 2 provides suitable habitat for a number of wildlife species known to occur within desert scrub and creosote scrub habitats. Reptile species observed within this APE include western whiptail, zebratail lizard (*Callisaurus draconoides*), and side-blotched lizard (*Uta stansburiana*). Common avian species observed within Segment 2 include ash-throated flycatcher and black-throated sparrow (*Amphispiza bilineata*). Mammal species observed during the survey include desert woodrat, white-tailed antelope squirrel, and black-tailed jackrabbit (*Lepus californicus*) (Appendix D1).

Sensitive Wildlife Species

The APE for Segment 2 provides high quality habitat for the federal and state threatened desert tortoise. The APE contains desert scrub habitat, friable soils for burrowing, and open vegetation allowing movement throughout the work area. During

the 2014 focused surveys, a total of 5 active burrows, 10 inactive burrows, and 4 observations of sign (scat, carcass, and pellets) were observed within Segment 2. Three of the active burrows were unoccupied during the survey and were located adjacent to the access road; one active burrow (occupied by a tortoise) was located near the excavation area between towers MCV1_129-1 and MCV1_129-2; and one occupied burrow was located north of tower MCV1_129-1 away from the impact area, but still within the APE. Of the inactive burrows, four were located adjacent to the access road, three were located within or adjacent to an excavation area, and three were located away from impact areas.

The APE also provides high-quality suitable habitat for several additional burrowing wildlife species that are listed as California Species of Special Concern or otherwise considered sensitive by CDFW. These species include burrowing owl, desert kit fox, and American badger. Several suitable burrowing owl burrows were found throughout the APE. Although these burrows were observed within the APE, none were within or near the proposed impact areas. Two potentially active kit fox dens and two burrows of unknown species were observed within the APE; however, none were observed within or near the proposed impact areas. Based on the size and shape of the unidentified burrows, there is potential for burrowing owl, desert kit fox, and American badger to use them; however, no identifying signs for these species (e.g., scat, tracks, whitewash, prey remains, burrow decoration) were observed.

The APE for work areas within Segment 2 provides suitable nesting habitat for a number of shrub and ground-nesting avian species, such as black-tailed gnatcatcher (*Polioptila melanura*) and horned lark, which were observed. Although not considered natural nesting habitat, the transmission towers located within the APE provide suitable nesting habitat for larger avian species and raptors, including golden eagle, common raven, and red-tailed hawk. The CNDDB identified a historical nesting record of golden eagle on the lattice tower immediately south of transmission tower MVL1_155-6. According to the BLM, this nest is known to have been consistently active in recent years. Biological surveys conducted in 2013 and 2014 confirmed the presence of this nest, although no golden eagles were observed during these surveys. Based on the confirmed recent use of this nest, there is a high potential for the species to nest on the lattice tower in the future. In 2013, two additional unidentified stick nests were observed within transmission towers in the vicinity of MVL1_155-5 and MVL1_155-6 within the APE; however, these were not observed in 2014. It is possible that these were unfinished golden eagle nests but the eagles decided to nest elsewhere. It is common for eagles to construct multiple nests but only select one for breeding.

Segment 3

Plant Species and Vegetation Communities

The APE within Segment 3 is moderately to highly disturbed from previous construction and development associated with installation of the transmission towers, agriculture, Powerline Road, and associated access and spur roads. Therefore, the native species diversity in Segment 3 is much lower than in other segments due to these disturbances. Vegetation within Segment 3 generally consists of a disturbed Mojave creosote bush scrub community dominated by creosote bush and active agriculture around MCV1_125-6. Less common native shrubs include burrobush and saltbush.

The Mojave creosote scrub community contains a disturbed understory dominated by Mediterranean grass and other non-native species (Appendix D1).

Sensitive Resources

No sensitive vegetation communities were identified for the APE within Segment 3, and no special-status plant species were observed during biological surveys. The potential for occurrence of special-status plant species within Segment 3 is low based on the level of existing disturbance/development within the limits of the majority of proposed work areas. Further, no native species protected under the California Desert Native Plants Act were observed within the APE for Segment 3 during the biological surveys (Appendix D1).

Common Wildlife

The APE within Segment 3 provides suitable habitat for a number of wildlife species known to occur within desert scrub and creosote scrub habitats. Reptile species observed during biological surveys include western side-blotched lizard and western whiptail. Avian species observed or detected include red-tailed hawk, killdeer (*Charadrius vociferus*), common raven and turkey vulture (*Cathartes aura*). Mammal species observed during the surveys include coyote and black-tailed jackrabbit.

Sensitive Wildlife Species

The APE within Segment 3 provides moderate quality habitat for the federal and state threatened desert tortoise. Towers MCV1_120-1 and -2 in this segment occur within the Superior-Cronese Critical Habitat Unit designated by USFWS. The APE contains disturbed desert scrub habitat, friable soils for burrowing, and open vegetation allowing movement throughout the work area; however, the highly disturbed nature of the surrounding areas limits the suitability of the work area for the species. Although no live desert tortoises were observed during the focused species survey, scat was observed between towers MCV1_120-1 and MCV1_120-2 and therefore, it is presumed that desert tortoise may be present in the area.

The APE also provides moderately suitable habitat for several species that are listed as California Species of Special Concern or considered sensitive by CDFW. These species include burrowing owl, desert kit fox, and American badger. No observations or sign associated with these burrowing mammal species (e.g., scat, tracks, burrows, prey remains) was observed in the APE.

The APE within Segment 3 provides suitable nesting habitat for a number of shrub and ground-nesting avian species including horned lark and killdeer, which were observed during biological surveys. The transmission towers located within the APE provide suitable nesting habitat for larger avian species and raptors including common raven, red-tailed hawk and potentially golden eagle. However, no nesting activity was observed within Segment 3 during the biological surveys, nor was any nests.

Segment 4

Plant Species and Vegetation Communities

Vegetation within the limits of the APE for Segment 4 generally consists of a disturbed Mojave creosote bush scrub community with rocky soils dominated by creosote bush and burrobush. Other common native species observed within this APE include desert tea, desert trumpet, saltbush, and cheesebush. The Mojave creosote scrub community contains a disturbed understory dominated by annual nonnative grasses such as red brome, cheat grass, common Mediterranean grass, Asian mustard, and short-pod mustard (Appendix D1).

Sensitive Resources

One sensitive plant community (Crucifixion Thorn Woodland) was identified during the database search as occurring within the Dunn USGS 7.5-minute topographic quadrangle. As shown in Table 1-1 of this IS MND, a portion of Segment 4 traverses this quadrangle. However, no sensitive plant communities were observed in the APE during the biological surveys, including Crucifixion Thorn Woodland. However, a plant species that is considered sensitive by BLM (the Death Valley sandpaper plant (*Petalonyx thurberi* ssp. *gilmanii*)) was observed within the APE for Segment 4. This plant species has a California Rare Plant Rank of 1B.3. Additionally, eight native species protected under the California Desert Native Plants Act were observed during the biological surveys for Segment 4: silver cholla, beavertail cactus, California barrel cactus, cottontop barrel cactus, teddy bear cholla, pencil cholla, fish hook cactus, and desert holly saltbush. However, only the beavertail cactus was observed in the immediate vicinity of a proposed grading site. Although the other native succulent species are located within the APE, they do not occur within or immediately adjacent to areas where direct impacts would occur (Appendix D1).

Common Wildlife

The APE within Segment 4 provides suitable habitat for a number of wildlife species known to occur within creosote scrub and other desert habitats. Reptile species observed during the survey included long-nosed leopard lizard (*Gambelia wislizenii*), western whiptail, zebratail lizard, side-blotched lizard, desert iguana (*Dipsosaurus doralis*), and desert horned lizard. Common avian species observed during the surveys include red-tailed hawk, Say's phoebe (*Sayornis saya*), ash-throated flycatcher (*Myiarchus cinerascens*), northern mockingbird (*Mimulus polyglottos*), black-throated sparrow (*Spizella brewer*i), white-crowned sparrow (*Zonotrichia leucophrys*), and common raven. Mammal species observed during the surveys include black-tailed jackrabbit, and coyote.

Sensitive Wildlife Species

The APE within Segment 4 provides moderate to high quality habitat for the federal and state threatened desert tortoise. Towers MVL1_129-5 through MCV2_93-4 within this segment occur within the Superior-Cronese Critical Habitat Unit designated by USFWS. The APE contains desert scrub habitat, friable soils for burrowing, and open vegetation allowing movement throughout the work area. A total of 18 potentially active desert tortoise burrows were observed within the APE, only one of which was located near an area of excavation. Although no desert tortoises were observed during the

focused survey in Segment 4, there is a moderate to high potential for the species to occupy the work area prior to ground disturbance based on the presence of suitable habitat and inactive burrows, as well as historical records within the vicinity (CNDDB 2014, as cited in Appendix D1).

The APE also provides moderately suitable habitat for several species that are listed as California Species of Special Concern or considered sensitive by CDFW. These species include burrowing owl, desert kit fox, and American badger. Several inactive burrowing owl burrows were found within the APE, but outside of the impact areas. Four inactive potential desert kit fox dens were observed within the APE, but not near a proposed impact area (see Appendix D1 for figures showing the locations of the inactive burrows). No signs of American badger (e.g., scat, tracks, burrows, prey remains) were observed in the APE within Segment 4.

Segment 4 provides suitable nesting habitat for a number of shrub- and ground-nesting special-status avian species. Loggerhead shrike and horned lark, both California Species of Special Concern, were observed within Segment 4. The transmission towers located within the APE provide suitable nesting habitat for larger avian species and raptors, including common raven and red-tailed hawk. One red-tailed hawk nest was observed in tower MCV2_93-5. In addition, the Soda Mountains in the vicinity of this segment provide nesting opportunities for golden eagle. Two dilapidated nests were detected in this area in 2012 and were determined inactive at the time (BLM 2016, as cited in Appendix D1). The current status of these nests is unknown.

Segment 5

Plant Species and Vegetation Communities

Vegetation within the limits of the APE for Segment 5 generally consists of a disturbed Mojave creosote bush scrub community with rocky soils dominated by creosote bush and burrobush. Other common native species observed within this APE include desert tea, desert trumpet, saltbush, and cheesebush. The Mojave creosote scrub community contains a disturbed understory dominated by annual nonnative grasses such as red brome, cheat grass, common Mediterranean grass, Asian mustard, and short-pod mustard (Appendix D1).

Sensitive Resources

No sensitive vegetation communities were identified within the APE for Segment 5. No special-status plant species were observed during the biological surveys. The potential for occurrence of special-status plant species within the proposed impact areas is low based on the level of existing disturbance/development within the limits of the majority of proposed work areas. Seven native succulent species protected under the California Desert Native Plants Act were observed within the APE during biological surveys: Desert holly saltbush, silver cholla, pencil cholla, cottontop barrel cactus, strawberry cactus (*Mammilaria dioica*), beavertail cactus, and Mojave yucca. Of these species, only two were in the vicinity of any grading site: one silver cholla was found near the grading area east of tower MCV1_66-6 and one beavertail cactus was found near the grading site between tower MCV1_88-5 and tower MCV1_89-1. The other native succulent species do not occur within or in the vicinity of areas where direct impacts would occur (Appendix D1).

Common Wildlife

The APE within Segment 5 provides suitable habitat for a number of wildlife species known to occur within desert scrub and creosote scrub habitats. Reptile species observed during the survey include western whiptail, zebratail lizard, and desert iguana. Common avian species observed during the surveys include turkey vulture, rock wren, orange-crowned warbler (*Oreothlypis celata*), Townsend's warbler (*Setophaga townsendi*), and black-throated sparrow. Mammal species observed during the surveys include black-tailed jackrabbit and coyote.

Sensitive Wildlife Species

The APE within Segment 5 provides moderate to high-quality habitat for the federal and state threatened desert tortoise. The APE contains desert scrub habitat, friable soils for burrowing, and open vegetation allowing movement throughout the work area. No desert tortoise or sign were observed within the APE during the focused species survey; however, there is a moderate to high potential for the species to occupy the work area prior to ground disturbance based on the presence of suitable habitat and historical records within the vicinity (CNDDB 2014, as cited in Appendix D1).

The APE also provides moderately suitable habitat for several species that are listed as California Species of Special Concern or considered sensitive by CDFW. A total of 13 inactive kit fox dens or potential dens, and three active dens were observed during biological surveys. Two of these kit fox dens were located in the vicinity of impact areas: one active den near the excavation area between towers MCV1 87-2 and MCV1 87-3, and two inactive dens between towers MCV1 86-3 and 86-4 (see Appendix D1 for figures showing the locations of the dens). No signs of the burrowing owl or American badger (e.g., scat, tracks, burrows, prey remains) were observed in the APE within Segment 5.

Segment 5 provides suitable nesting habitat for a number of shrub- and ground-nesting special-status avian species. Loggerhead shrike and LeConte's thrasher, both California Species of Special Concern, were observed within Segment 5. The transmission towers located within the APE provide suitable nesting habitat for larger avian species and raptors, including common raven and red-tailed hawk; however, no nests were observed during the surveys.

Segment 6

Plant Species and Vegetation Communities

The native plant diversity within Segment 6 is higher than that of Segments 1 through 5. Vegetation within Segment 6 generally consists of a mosaic of Mojave creosote bush scrub and Joshua tree woodland communities dominated by creosote bush, cheesebush, and Joshua trees. Other common native shrubs include saltbush, desert tea, button brittlebush (*Encelia frutescens*), narrowleaf goldenbush (*Ericameria linearifolia*), and desert sunflower (*Garea canescens*). The scrub community contains an understory dominated by native and nonnative forbs and grasses (Appendix D1).

Sensitive Resources

No sensitive vegetation communities were identified within the APE for Segment 6. No special-status species were observed within the APE in Segment 6. The potential for occurrence of special-status plant species within the proposed

impact areas is low based on the level of existing disturbance/development within the limits of the majority of proposed work areas. However, 10 native succulent species protected under the California Desert Native Plants Act (desert holly saltbush, catclaw acacia (*Acacia greggii*), hedgehog cactus, silver cholla, pencil cholla, cottontop barrel cactus, fish hook cactus, beavertail cactus, Joshua tree, and Mojave yucca) were observed during the biological surveys. Of these species, the following were in the vicinity of a grading site: three Joshua trees were located between towers MCV_61-2 and MCV_61-3; one Joshua tree was located between towers MCV1_61-1 and MCV1_61-2; one cottontop barrel cactus and five Joshua trees were located west of tower MCV1_59-4; two Joshua trees and one silver cholla were located between MCV1_57-5 and MCV1_58-1; one Mojave yucca, one fish hook cactus, and two Joshua trees were located between towers MCV1_56-4 and MCV1_56-5; and two silver cholla, one fish hook cactus, and one Joshua tree were located between towers MCV1_55-2 and MCV1_55-3. Although located within the APE, the other native succulent species do not occur in the vicinity of the areas of direct impact (Appendix D1).

Common Wildlife

The APE within Segment 6 provides suitable habitat for a number of wildlife species known to occur within desert scrub and creosote scrub habitats. Reptile species observed during the survey included red racer (*Coluber flagellum piceus*), western whiptail, and side-blotched lizard. Common avian species observed during the surveys include red-tailed hawk, northern mockingbird, black-throated sparrow, western kingbird (*Tyrannus verticalis*), and phainopepla (*Phainopepla nitens*). Mammal species observed during the survey include black-tailed jackrabbit, desert cottontail, antelope ground squirrel, desert woodrat (*Neotoma lepida*), and coyote.

Sensitive Wildlife Species

The APE within Segment 6 provides moderate to high-quality habitat for the federal and state threatened desert tortoise. The APE contains desert scrub habitat, friable soils for burrowing, and open vegetation allowing movement throughout the work area. Six inactive desert tortoise burrows were observed during focused species surveys. One burrow was near an excavation area between MCV1_60-5 and 61-1, and two burrows were near an access road between towers MCV1_60-5 and 61-2. Although located within the APE, the remaining three burrows are not in the immediate vicinity of any impact area. No desert tortoises were observed within the APE in Segment 6 during the focused species survey; however, there is a moderate to high potential for the species to occupy the work area prior to ground disturbance based on the presence of suitable habitat, signs, and historical records within the vicinity (CNDDB 2014, as cited in Appendix D1).

The APE also provides moderately suitable habitat for several species that are listed as California Species of Special Concern or considered sensitive by CDFW, including kit fox, burrowing owl, and American badger. A total of six inactive kit fox dens or potential dens were observed within Segment 6 during biological surveys, none of which were located in the vicinity of the excavation areas. One potential burrowing owl burrow was observed, but was located approximately 350 feet from the nearest impact area. No American badger or signs thereof (e.g., scat, tracks, burrows, prey remains) were observed in the APE within Segment 6.

Segment 6 provides suitable nesting habitat for a number of shrub and ground-nesting special-status avian species, such as black-tailed gnatcatcher, a California Species of Special Concern. Transmission towers located within the APE provide suitable nesting habitat for larger avian species and raptors, including common raven and red-tailed hawk. One unidentified potential raptor nest was observed in the tower south of tower MCV1_61-2 during the biological surveys.

There are 2 golden eagle nests located approximately 5 miles north of Segment 6, the status of which is currently unknown (BLM 2016). However, the distance to the nests is sufficient to avoid direct impacts to either nest.

Segment 7

Plant Species and Vegetation Communities

Vegetation within Segment 7 generally consists of a mosaic of black brush scrub and Joshua tree woodland communities dominated by black brush (*Coleogyne ramosissima*) and Joshua trees. Other common native shrubs include cheese bush, Acton Encelia, desert tea, ratany (*Krameria erecta*), Mexican bladder sage (*Salazaria mexicana*), desert pepperweed (*Lepidium fremontii*), and creosote bush. The scrub community contains an understory dominated by native and nonnative forbs and herbs (Appendix D1).

Sensitive Resources

No sensitive vegetation communities were identified for the APE within Segment 7. However, four special-status plant species were observed within the APE in Segment 7. One species, Parish's club cholla (*Grusonia parishii*), which has a California Rare Plant Rank of 2B.2, was not located in the immediate vicinity of any area that would be subject to direct impacts. The other three species were found throughout Segment 7 as follows:

Approximately 83 Tidestrom's milkvetch (*Astragalus tidestromii*; California Rare Plant Rank 2B.3) plants were located along access roads between towers MCV1_38-4 and MCV1_39-1.

Five desert pincushions (*Coryphantha chlorantha*; California Rare Plant Rank 2B.1) were observed along access roads, one within a grading site.

Twenty individual desert pincushions were observed away from any potential impact areas between towers MCV1_36-4 and MCV1_39-1.

Total of 276 individual Rusby's desert mallow (*Sphaeralcea rusby* var. *eremicola*; California Rare Plant Rank 1B.2; BLM sensitive) were observed along access roads, with two located in grading sites and 19 located away from areas of direct impact, between towers MSV1_36-2 and MSV1_39-1.

Six native succulent species protected under the California Desert Native Plants Act (catclaw acacia, teddy bear cholla, silver cholla, cottontop barrel cactus, fish hook cactus, and old man prickly pear cactus (*Opuntia erinacea*)) were observed during the biological surveys within the APE but were not located in the vicinity of any direct impact area. Six additional

species protected under the California Desert Native Plants Act were observed, including one beavertail cactus near the access road south of tower MCV1_39-1, one California barrel cactus near the grading site between towers MCV1_36-4 and MCV1_36-5, and the following species located within the grading sites between towers MCV1_36-2 and MCV1_39-1: 49 buckthorn cactus (*Opuntia acanthocarpa*), 15 Joshua trees, 27 Mojave yuccas, and 6 hedgehog cactus (Appendix D1).

Common Wildlife

The APE within Segment 7 provides suitable habitat for a number of wildlife species known to occur within desert scrub and creosote scrub habitats. Reptile species observed during the survey included western whiptail, and side-blotched lizard. Common avian species observed during the surveys include Gambel's quail (*Callipepla gambelii*), red-tailed hawk, hairy woodpecker (*Picoides villosus*), ash-throated flycatcher, western kingbird, bushtit (*Psaltiparus minimus*), cactus wren, blue-gray gnatcatcher (*Polioptila caerulea*), phainopepla, MacGillivray's warbler (*Geothlypis tolmiei*), and Brewer's sparrow (*Spizella breweri*). Mammal species observed during the survey include desert cottontail, antelope ground squirrel, and desert woodrat.

Sensitive Wildlife Species

The APE within Segment 7 provides moderate to high-quality habitat for the federal and state threatened desert tortoise. The APE contains desert scrub habitat, friable soils for burrowing, and open vegetation allowing movement throughout the work area. No desert tortoise or sign of desert tortoise was observed within Segment 7 during the focused surveys; however, there is a moderate to high potential for the species to occupy the work area prior to ground disturbance based on the presence of suitable habitat, signs, and historical records within the vicinity (CNDDB 2014, as cited in Appendix D1).

The APE also provides moderately suitable habitat for several species that are listed as California Species of Special Concern or considered sensitive by CDFW, including kit fox, burrowing owl and American badger. A total of four inactive kit fox dens or potential dens were observed within Segment 7 during biological surveys. Of these, two were located in the vicinity of the access roads near towers MCV1 36-5 and MCV1 36-2, while the others were observed away from proposed impact areas. No burrowing owl or American badger or signs of them (e.g., scat, tracks, burrows, prey remains) were observed in the APE within Segment 7.

Segment 7 provides suitable nesting habitat for a number of shrub- and ground-nesting special-status avian species. No nests were observed within Segment 7; however, the transmission towers located within the APE provide suitable nesting habitat for larger avian species and raptors, including common raven and red-tailed hawk.

There are known golden eagle nests located approximately 6 miles south of Segment 7, the status of which is currently unknown. However, the distance to the nests is sufficient that direct impacts to nesting would not occur.

Jurisdictional Waters and Wetlands

A jurisdictional delineation was conducted for the proposed project to determine whether jurisdictional water resources are present within or adjacent to the project area. The jurisdictional delineation was conducted by Psomas in September

2016, and the results are attached to this IS MND as Appendix D2. The survey area for the jurisdictional delineation is similar to the APE for the Biological Resources Report. Jurisdictional water resources were found within the survey areas for each of the segments. The resources identified within the project area consist of non-wetland waters of the U.S., regulated by the U.S. Army Corps of Engineers (USACE); waters of the State, regulated by the Regional Water Quality Control Board (RWQCB); and the bed, bank, and channel of rivers, and/or streams (and associated riparian vegetation), as regulated by the California Department of Fish and Wildlife (CDFW). During field surveys, Psomas found jurisdictional resources within the jurisdictions of each of these agencies. As such, LADWP would be required to obtain a Streambed Alteration Agreement from CDFW, a Section 401 Water Quality Certification, Waste Discharge Requirements from the RWQCB, and a Section 404 Nationwide Permit from the USACE prior to proceeding with the proposed project. No jurisdictional wetlands as defined by the Clean Water Act Section 404 were identified within the project area.

Wildlife Movement Corridors

As determined in the Biological Resources Report, the undeveloped land within and surrounding the APE provides suitable areas for the movement of wildlife species, including desert tortoise and coyote. However, the project alignment and surrounding open space are intersected by three highways (I-15, SR-247, and I-40) that restrict wildlife land movement in the project area under existing conditions (Appendix D1).

a) Would the project 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?

Special-Status Vegetation

Less Than Significant Impact with Mitigation Incorporated. The project area contains numerous special-status plant species and species that are protected under the California Desert Native Plants Act were observed within the APE or would have the potential to occur within the APE (Appendix D1). Where special-status plants, protected desert plants, or the seed banks for such plants are located within grading sites or along access roads where excavated soils would be distributed, they would be subject to direct or indirect impacts. Direct impacts would occur from vegetation removal and/or soil disturbance. Avoidance and minimization measures have been incorporated into the proposed project to minimize direct impacts to protected plant species. Specifically, the restoration phase of the proposed project would include soil salvaging and replacing the top 2 to 6 inches of soil within each of the grading sites to minimize impacts to native plants. As described in Appendix D1, the top 2 inches of soil contain the seed banks for sensitive annual species that could potentially be affected. As such, salvaging, preserving, and replacing the top 2 to 6 inches of soil would ensure that such seed banks are preserved and allowed to persist in place after construction. Restoration would also involve salvaging and storage of native vegetation. The vegetation would be replanted within the impact areas following

construction. Additionally, MM-BIO-1 has been provided to ensure implementation of the restoration phase, to ensure that construction activities remain within designated construction limits, to ensure that larger perennial plants are properly transplanted, and to ensure that overland travel is directed to avoid special-status and protected plants. Implementation of the restoration phase of the project and implementation of MM-BIO-1 would ensure that direct impacts to special-status and protected plant species are reduced to below a level of significance. As such, direct impacts would be less than significant with mitigation incorporated.

Where special-status plants or protected native succulents are located within the APE but outside the direct impact areas described above, such plants could potentially be subject to indirect impacts (e.g., increased fugitive dust, erosion). Indirect impacts would be temporary and minimal, since construction activities at each grading site would last for approximately 1.5 to 3 work days and BMPs would be employed during grading activities. For example, the General Construction Activity Stormwater Permit, issued by the State Water Resources Control Board, requires preparation of and compliance with a SWPPP to reduce stormwater runoff and erosion, thereby protecting nearby vegetation from indirect impacts related to increased runoff and/or erosion.

Compliance with regulations that limit indirect impacts and implementation of MM-BIO-1 would ensure that impacts to special-status and protected plant species are reduced to below a level of significance. Implementation of MM-BIO-1 would reduce direct impacts by requiring avoidance of special-status or otherwise protected plant species during grading activities. MM-BIO-1 requires preparation of a Translocation Plan for larger perennial plants such as Joshua tree, yucca, and cacti species. The Translocation Plan would be implemented when avoidance is not possible. Implementation of MM-BIO-1 would minimize potential indirect impacts to special- status plants, other protected plant species, and jurisdictional water features by ensuring that construction activities would be confined to the areas within construction perimeter stakes. This would ensure that plants and jurisdictional water features located outside of the areas of direct impact would not be trampled by construction workers or vehicles. Additionally, implementation of MM-BIO-1 would ensure that any overland travel that may be required during construction is directed to avoid sensitive biological resources, such as special-status plants, other protected plant species, and jurisdictional water features. As such, impacts to special-status and protected plant species would be less than significant with mitigation incorporated.

MM-BIO-1 The Los Angeles Department of Water and Power and/or its construction contractor shall retain a qualified biologist who shall perform the activities listed below. For the purposes of this measure, the term "protected plant(s)" shall mean the following: special-status plant species as defined in Section 3.4.1 of the Environmental Assessment/Initial Study – Mitigated Negative Declaration (IS MND) and native plants and succulents protected by the Native Plant Protection Act, California Desert Native Plants Act, and San Bernardino County Development Code Section 88.01.060(c).

- The qualified biological monitor will oversee restoration efforts, which shall be performed as specified in the project description (Section 2.1 of the IS MND) and in accordance with

the Land Use Plan Amendment (LUPA)-wide Conservation Management Action (CMA) measure for restoration of areas disturbed by construction activities (LUPA-BIO-7).

- The qualified biological monitor will coordinate with the construction team to ensure that construction activities are confined to the areas within construction perimeter stakes and that protected plants are avoided to the maximum extent feasible.
- The qualified biological monitor will define any areas of overland travel such that overland travel is confined to the project limits and/or to previously disturbed areas identified as non-sensitive by the biologist.
- The qualified biological monitor will oversee implementation of a Translocation Plan and transplanting of larger perennial protected plants. The Translocation Plan shall be reviewed and approved by the Bureau of Land Management prior to commencement of construction activities. Plants covered in this plan shall include but are not limited to Joshua tree, yucca, and cacti species. The Translocation Plan shall be implemented when complete avoidance of the plants covered in the Translocation Plan is not possible, as determined during construction by the biologist in coordination with the construction contractor.

Special-Status Wildlife

Less Than Significant Impact with Mitigation Incorporated. The project area contains numerous special-status wildlife species and habitat for such species (Appendix D1). Where special-status wildlife species and/or their habitat are located within grading sites or along access roads where excavated soils would be distributed, they would be subject to direct impacts during the proposed project. Direct impacts would occur from vegetation removal, soil disturbance, and/or injury to an individual. Where special-status wildlife and/or suitable habitat are located near the direct impact areas described above, such wildlife and habitat could potentially be subject to indirect impacts. Indirect impacts could include increased noise, human activity, erosion, and fugitive dust. Such indirect impacts could potentially result in temporary disruption to wildlife behavior and damage to habitat.

As determined in the Biological Resources Report, all segments of the proposed project have a moderate to high potential to support desert tortoise. The proposed project would involve grading activities within land that is considered to be suitable desert tortoise habitat. Focused desert tortoise surveys were conducted within each work area in the APE. Sign of the species, including potentially active burrows and a desert tortoise carcass, was observed in Segments 2, 3, 4, and 6 within the APE. Live tortoises were observed within Segment 2 (Appendix D1).

Due to the presence of desert tortoises and suitable habitat for desert tortoises within the project area, the activities associated with the proposed project (namely, grading and soil spreading along access roads) would have the potential to result in direct impacts to desert tortoise individuals through injury or killing, in the event that individuals are present within the grading areas during construction activities. Indirect impacts could occur from behavioral disruptions, temporary increases in human activity and noise, and/or removal of habitat during grading and soils spreading along access roads. MM-BIO-3 has been developed to minimize the potential for

injury or killing of desert tortoises to the extent possible and to conform with DRECP requirements. Pursuant to the DRECP, impacts to desert tortoise critical habitat would be compensated at a 5-to-1 mitigation ratio within the same critical habitat unit. MM-BIO-3 would also minimize human contact with desert tortoises and would minimize the potential for disruptions in desert tortoise movement and behaviors. MM-BIO-1 and the restoration component of the proposed project would result in the restoration of any habitat that is disturbed during construction.

Nesting Birds

The APE provides suitable nesting and foraging habitat for a number of common migratory birds and raptor species protected under the Migratory Birds Treaty Act and the Fish and Game Code (Appendix D1). Proposed grading activities and vegetation removal in the work areas would have the potential to disrupt or harm common migratory birds and raptor species protected under the Migratory Birds Treaty Act and the Fish and Game Code, in the event that such birds or raptors were to be present during construction activities. MM-BIO-4 would ensure avoidance and protection of any nesting birds and raptors having the potential to be adversely affected by the proposed project.

Golden Eagle

Several golden eagle nests are known to occur in the project area. Some, such as those in the vicinity of Segments 6 and 7, are sufficiently distant from proposed activities that direct impacts would not occur. Indirect impacts may occur but would be negligible. In other areas, such as adjacent to work areas MVL1_155-5 and MVL1_155-6, nests are close enough to proposed activities that the proposed project may directly affect nesting golden eagles (Appendix D1). MM-BIO-4 and MM-BIO-5 are set forth to avoid nesting golden eagles and to minimize direct and indirect impacts to nesting golden eagles.

California Species of Special Concern

The proposed project has the potential to result in direct removal of suitable habitat for California Species of Special Concern, including loggerhead shrike, burrowing owl, desert kit fox, American badger, and pallid bat. These species may occur immediately adjacent to the project area and may also be indirectly impacted by noises and vibrations generated by the proposed project; however, as the project area is linear and limited in size and duration, impacts to a California Species of Special Concern are not expected, or are expected to be minimal. (Appendix D1). MM-BIO-6 is set forth to avoid and protect California Species of Special Concern.

Implementation of MM-BIO-1 and the restoration phase of the proposed project would minimize direct impacts to habitat from the proposed project. While habitat would be temporarily removed due to grading activities, it would be restored during the proposed project's restoration phase. Restoration would be overseen by a qualified biologist, in accordance with MM-BIO-1. Indirect impacts to habitat would be minimized to the extent feasible through required compliance with regulations, such as MDAQMD Rule 403.2 and the General Construction Activity Stormwater Permit (see Section 3.3(a) for details).

Implementation of MM-BIO-2, MM-BIO-3, MM-BIO-4, and MM-BIO-5, and MM-BIO-6 would result in avoidance and/or protection of sensitive wildlife species during the proposed project. Implementation of these measures would involve preconstruction surveys for sensitive wildlife species and avoidance of such species during construction. Upon implementation of MM-BIO-1 through MM-BIO-6, upon complementation of the restoration phase of the proposed project, and upon compliance with existing regulations, impacts to special-status wildlife species and their habitat would be less than significant with mitigation incorporated.

MM-BIO-2 The Los Angeles Department of Water and Power shall provide ground disturbance mitigation at a ratio of 3-to-1 for impacts within Areas of Critical Environmental Concern (ACEC) and California Desert National Conservation Lands (NCL) units that are cumulatively at or above their respective disturbance caps. Based on Table 3.4-1 in the Initial Study – Mitigated Negative Declaration for the Path 46 Transmission Line Clearance Project, a total of 2.81 acres of ground disturbance impacts would occur within units that are cumulatively over their respective disturbance caps. A portion of these impacts co-occur with impacts to desert tortoise critical habitat, which require a higher mitigation ratio (5-to-1). Where impacts requiring mitigation co-occur, the higher mitigation ratio applies and the implemented mitigation is nested. As such, mitigation for desert tortoise critical habitat, as required in MM-BIO-3, will fulfill the ground disturbance mitigation that is required for impacts in ACECs and NCLs that co-occur with impacts to desert tortoise critical habitat. The Los Angeles Department of Water and Power shall initiate and/or complete the required compensation at a time to be determined by the Bureau of Land Management (BLM) and in accordance with the Land Use Plan Amendment (LUPA) Conservation Management Action (CMA) measure for timing of compensation activities for third party actions (LUPA-COMP-1).

MM-BIO-3 The Los Angeles Department of Water and Power (LADWP) shall provide mitigation for impacts to desert tortoise critical habitat at a ratio of 5-to-1 in accordance with the requirements outlined in the Bureau of Land Management's Desert Renewable Energy Conservation Plan Land Use Plan Amendment (BLM DRECP LUPA). Where impacts to desert tortoise critical habitat co-occur within ground disturbance impacts within Areas of Critical Environmental Concern (ACEC) and California Desert National Conservation Lands (NCL) units that are cumulatively over their respective disturbance caps, the higher mitigation ratio applies (i.e., 5-to-1 for critical habitat) and the implemented mitigation is nested (mitigation for desert tortoise critical habitat fulfills the ground disturbance mitigation that is required in MM-BIO-2). As shown in Table 3.5-1 in the Environmental Assessment/Initial Study – Mitigated Negative Declaration for the Path 46 Transmission Line Clearance Project, a total of 11.19 acres of total nested mitigation is expected to be required to offset both the impacts to desert tortoise critical habitat and the ground disturbance impacts in ACEC and NCL units. Compensatory mitigation shall be implemented consistent with the BLM DRECP

LUPA. LADWP shall complete the required compensation in accordance with the Ground Disturbance Mitigation Plan for the Path 46 Transmission Line Clearance Project (Los Angeles Department of Water and Power 2018; see MND Appendix D13) and the LUPA Conservation Management Action (CMA) measure for timing of compensation activities for third party actions (LUPA-COMP-1).

In addition, as outlined in the LUPA, LUPA-wide CMA measures for desert tortoise shall be implemented (LUPA-BIO-IFS 1 through LUPA BIO-IFS-9). CMAs specific to impacts within ACEC areas shall be implemented in accordance with Section 11.4.2.3 Ecological and Cultural Conservation of the LUPA.

In addition to the measures outlined in the DRECP LUPA, the following protective measures shall also be implemented:

- LADWP shall designate a Field Contact Representative (FCR) for each active segment of the proposed project. The FCR shall be responsible for implementing the required stipulations and halting any activity that may endanger a tortoise or any other sensitive species. The FCR may be a monitor or a project foreman.
- All workers shall participate in a Worker Environmental Awareness Program. The program shall be developed by LADWP and provided to the BLM 2 weeks prior to beginning of construction. The program should include, at a minimum, the following topics: occurrences of desert tortoise, sensitivity of the species to human activities, legal protection, penalties for violations of Federal and State laws, general desert tortoise activity patterns, reporting requirements, measures for protection during construction and operation, and personal measures employees can take to promote conservation.
- LADWP shall provide a minimum of one biological monitor for each active segment of the project who is authorized by the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife to handle desert tortoises.
- Preconstruction surveys for desert tortoise shall be conducted for each work area prior to any ground disturbance. All work areas shall be cleared by an authorized biologist within 48 hours of the onset of construction at any work location.
- A qualified biologist shall inspect work areas each day before work commences and shall remain on site for the entire duration of work activities.
- To prevent inadvertent entrapment of tortoise or other wildlife during construction, all excavated, steep-walled holes or trenches shall be covered with tarp, plywood or similar materials at the close of each working day to prevent animals from being trapped. Ramps

may be constructed of earth fill or wooden planks within deep walled trenches to allow for animals to escape action area, if necessary. Before such holes or trenches are backfilled, they shall be thoroughly inspected for trapped animals. Any wildlife observed shall be removed prior to backfilling.

- Tortoise handling shall be prohibited except by an authorized biologist or a biological monitor who is working under the direct supervision of an authorized biologist and only when it is necessary to do so. Should it be necessary to handle a tortoise, the authorized biologist or trainee shall do so using the techniques outlined in the most current version of the Desert Tortoise Field Manual produced by USFWS.
- All access roads not required for ground-to-conductor clearance activities shall be avoided, thereby limiting new or improved accessibility into the area.
- Vehicles shall not exceed a speed of 15 miles per hour in desert tortoise habitat.
- Overnight parking and storage of equipment and material shall be restricted to previously disturbed areas (i.e., access roads and other disturbed areas lacking vegetation). These areas shall be marked by the biological monitor and may include batch sites, pulling sites, and tower sites. If previously disturbed areas are not available, these activities shall be restricted to the right-of-way and shall be cleared of desert tortoises by the biological monitor prior to use.
- Within desert tortoise habitat, workers shall limit their activities and equipment to construction areas and routes of travel that have been flagged to eliminate adverse impacts to desert tortoises and their habitat. Cross-country travel is prohibited. All workers shall be instructed of this requirement.
- During proposed activities, construction personnel shall immediately report any sightings of desert tortoises within the construction zone to the biological monitor.
- Trash and food items shall be removed daily or placed in raven-proof containers.
- Within 30 days following completion of project activities, the FCR and authorized biologist shall prepare a report that includes the following:
    - All tortoises encountered or moved
    - Any tortoise that was injured or killed or found dead by project personnel
    - The practical application of these proposed mitigation measures and any measures that may further the protection of the tortoise during future projects
    - A total of acreage disturbed by jurisdiction
    - Site photos.

MM-BIO-4 Project activities shall avoid the avian nesting season of February 1 through August 31. If project activities must take place during the avian nesting season, a preconstruction clearance survey shall be conducted by a qualified biologist in areas of suitable nesting habitat, particularly those in which nests were observed during previous surveys to ensure direct or incidental take does not occur during the proposed project. Surveys for raptor nests shall focus on potential nesting sites (e.g., cliffs, transmission line structures) within a 0.5-mile buffer around the work areas; and surveys for nesting passerines shall be conducted within 200 feet of the work areas. The clearance survey shall take place no more than 7 days prior to the commencement of project activities, and may occur in conjunction with on-site monitoring for other sensitive wildlife species.

If a nesting bird is found during the clearance survey, an adequate buffer area will be established by a biological monitor, within which no construction will occur to protect the active nest during the duration of the project. Suitable buffers are typically up to 500 feet for common raptors and up to 200 feet for passerines, though buffer distances may be adjusted at the discretion of the biological monitor based on site conditions such as topography and vegetative cover and observed tolerance of the nesting individual(s) to disturbance. For non-listed species, project activities may encroach into the buffer area at the discretion of the biological monitor; however, for listed species, appropriate resource agencies shall be consulted prior to encroachment into an established buffer.

MM-BIO-5 Project activities that take place adjacent to areas where active or inactive golden eagle nests have been discovered shall be subject to the following:

- A qualified eagle biologist shall determine the nesting status of any golden eagle nest within 1 mile of any proposed project activities. The Los Angeles Department of Water and Power shall forward the name(s) and qualifications of each raptor biologist to the Bureau of Land Management (BLM) 2 weeks prior to project activities.
- No work shall occur within 1 mile of an active golden eagle nest during the breeding season (January 31 through August 31) unless a written determination which shows no nest activity has been forwarded to and approved by the BLM. Upon approval of a report showing an inactive nest, the BLM may approve work within one mile of an eagle nest.
- If an injured golden eagle is observed within or adjacent to an active work area, all work shall immediately stop and the U.S. Fish and Wildlife Service and BLM shall be contacted for further instructions.

MM-BIO-6 To ensure that California Species of Special Concern are not adversely impacted by the project, preconstruction clearance surveys shall be conducted by a qualified biologist within 500 feet of work areas. Surveys shall be conducted within 14 days prior to the start of construction in

a given work area. The survey methodology shall be consistent with the methods outlined in the 2012 California Department of Fish and Wildlife Staff Report on Burrowing Owl Mitigation and shall consist of walking parallel transects 23 to 66 feet apart, adjusting for vegetation height and density as needed, and noting any potential burrows with fresh burrowing owl sign or presence of burrowing owls. (Surveys may be conducted concurrently with desert tortoise preconstruction surveys.) As each burrow is investigated, surveying biologists shall also look for signs of American badger and desert kit fox. The qualified biologist may use a variety of approaches (including but not limited to monitoring, track plates, and direct observation) and evidence (including burrow characteristics and presence of sign such as scat and tracks) to determine burrow activity. If a burrow within a proposed disturbance area is definitively determined to be inactive, it may be collapsed to prevent future occupation. For inactive burrowing owl burrows, burrow exclusion shall be conducted consistent with the Desert Renewable Energy Conservation Plan's Conservation Management Actions (DRECP CMAs). If any evidence of occupation by a California Species of Special Concern is observed, a buffer shall be established by a qualified biologist that results in sufficient avoidance, as listed below:

- Desert kit fox or American badger potential den: 50 feet
- Desert kit fox or American badger active den: 100 feet
- Desert kit fox or American badger natal den: 500 feet
- Burrowing owl active burrow during breeding season: 656 feet
- Burrowing owl active burrow during non-breeding season: 165 feet

If avoidance of the potential American badger or desert kit fox dens is not possible, the following measures are required to avoid potential adverse impacts to these species:

- If the qualified biologist determines that potential dens are inactive, the biologist shall excavate these dens by hand with a shovel to prevent American badgers or desert kit foxes from re-using them during construction.
- If the qualified biologist determines that potential dens may be active, an on-site passive relocation program shall be implemented. This program shall consist of excluding American badgers or desert kit foxes from occupied burrows by installation of one-way doors at burrow entrances, monitoring of the burrow for seven days to confirm usage has been discontinued, and excavation and collapse of the burrow to prevent reoccupation. After the qualified biologist determines that American badgers or desert kit foxes have

stopped using the dens within the project boundary, the dens shall be hand-excavated with a shovel to prevent re-use during construction.

In the case of burrowing owls, if burrow avoidance is infeasible during the non-breeding season or during the breeding season (February 1 through August 31) where resident owls have not yet begun egg laying or incubation, or where the juveniles are foraging independently and capable of independent survival, a qualified biologist shall implement a passive relocation program in accordance with Appendix D1 (i.e., Example Components for Burrowing Owl Artificial Burrow and Exclusion Plans) of the 2012 California Department of Fish and Wildlife Staff Report on Burrowing Owl Mitigation. If passive relocation is required, a qualified biologist shall prepare a Burrowing Owl Exclusion and Mitigation Plan and a Mitigation Land Management Plan in, accordance with the 2012 California Department of Fish and Wildlife Staff Report on Burrowing Owl Mitigation and in accordance with the DRECP CMAs, for review by California Department of Fish and Wildlife and Bureau of Land Management prior to passive relocation activities. The Mitigation Land Management Plan shall include a requirement for the permanent conservation of off-site Burrowing Owl Passive Relocation Compensatory Mitigation.

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Less Than Significant Impact with Mitigation Incorporated. The acreage of proposed grading activities that would occur within the mapped jurisdictional waters and wetlands are as follows:

- **USACE Jurisdiction:** 0.204 acre of non-wetland waters of the U.S.
- **RWQCB Jurisdiction:** 0.794 acre of waters of the state.
- **CDFW Jurisdiction:** 0.825 acre under regulatory authority of CDFW.

The acreages listed above are for the entirety of the proposed project; as such, impacts to individual drainages within the project area are minimal (ranging from 0.001 acre to 0.1 acre). Direct impacts to jurisdictional waters and wetlands would occur in these areas, since the project would involve removal of soil and vegetation within drainages. While grading would occur within jurisdictional features, direct disturbances would be minimal, and LADWP would obtain the appropriate regulatory permits to authorize impacts to jurisdictional non-wetland waters (Streambed Alteration Agreement, Section 401 Water Quality Certification, and Section 404 Nationwide Permit). Furthermore, implementation of MM-BIO-1 would ensure that graded areas are restored. This measure would also ensure that construction activities remain within designated construction limits, thereby limiting impacts to jurisdictional drainages. The restoration efforts required by MM-BIO-1 would ensure that

impacts to jurisdictional features remain temporary and short term. Additionally, impacts to jurisdictional features in the project area would be minimized through BMPs set forth in LADWP's erosion control plan and SWPPP. As such, impacts to sensitive vegetation communities or riparian habitat would be less than significant with mitigation incorporated.

c) Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. Impacts to federally protected wetlands are not anticipated as a result of project implementation, because no jurisdictional wetlands as defined by the Clean Water Act Section 404 were identified within the project area (Appendix D2). As such, no impact would occur.

d) Would the project 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 native wildlife nursery sites?

Less Than Significant Impact with Mitigation Incorporated. One native species of fish was identified as having the potential to occur within the project area (the Mohave tui chub (*Gila bicolor mohavensis*)). However, as stated in the Biological Resources Report, the potential for this species to occur within the APE was determined to be low. This species requires perennial ponding water that is not present within the APE, and the species was not observed during biological surveys (Appendix D1). As such, the proposed project is not anticipated to affect native fish species.

As characterized in Section 3.5.1, the project area includes wildlife movement corridors, due to the open space areas in which the project is located (Appendix D1). However, as described in the Biological Resources Report, the proposed project would not create a significant physical alteration to the land beyond that which already exists or create a physical barrier that would restrict the movement of wildlife species across the Mojave Desert, and construction activities would be temporary. Additionally, the proposed project does not occur within an area that provides a narrow linkage between larger areas of undeveloped land that would facilitate the movement of wildlife species between two blocks of habitat. Therefore, no impacts to any proposed or established wildlife movement corridors would occur as a result of the proposed project.

The project area contains suitable nesting and foraging habitat for a number of common migratory birds and raptor species protected under the Migratory Birds Treaty Act and the Fish and Game Code (Appendix D1). As such, proposed grading activities and vegetation removal in the work areas would have the potential to disrupt or harm migratory birds and raptor species protected under the Migratory Birds Treaty Act and the Fish and Game Code, in the event that such birds or raptors were to be present during construction activities. MM-BIO-4 would ensure avoidance and protection of any nesting birds and raptors having the potential to be

affected by the proposed project. In the event that a golden eagle nest is identified during the preconstruction surveys that would be conducted in compliance with MM-BIO-4, MM-BIO-5 would be implemented to ensure avoidance and protection of golden eagles. Due to the absence of new physical alterations that would obstruct wildlife movement and implementation of MM-BIO-4 and MM-BIO-5, impacts related to nesting birds and raptors would be reduced below a level of significance. As such, impacts to migratory and nesting birds would be less than significant with mitigation incorporated.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact. San Bernardino County Development Code Section 88.01.060(c), Regulated Desert Native Plants, states that specified native desert plants shall not be removed except under a Tree or Plant Removal Permit in compliance with Section 88.01.050 (Tree or Plant Removal Permits). There are two species protected under this local ordinance that are located in the project area: Joshua trees and yuccas. These species were identified during biological surveys within Segment 6 and Segment 7 and were found to be located within several of the grading sites. The grading sites within these segments are located within BLM-owned land (refer to Table 2-2). As such, activities at these sites would not be subject to the San Bernardino County Development Code. Accordingly, Tree or Plant Removal Permits from the County of San Bernardino would not be required for removal of Joshua trees and yucca from the grading sites. However, in accordance with MM-BIO-1, if complete avoidance of such plants is not possible during grading, the biological monitor shall oversee implementation of a BLM-approved Translocation Plan, which would ensure that such plants are safely removed and then reestablished. Because grading sites containing plants protected under San Bernardino County Regulated Desert Native Plants are located within BLM lands, and because such plants would be transplanted and/or avoided**, no impact** would occur relative to consistency with local ordinances protecting biological resources.

f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Less Than Significant Impact with Mitigation Incorporated. The proposed project is located within the boundaries the DRECP. The DRECP is being developed under the California Natural Community Conservation Planning Act and the Federal Endangered Species Act, and the Federal Land Policy and Management Act. The DRECP establishes mitigation and habitat compensation ratios for project impacts that would occur within designated ACEC units (including habitat linkage ACEC's), NCL units, non-ACEC areas, and critical habitat areas.

The BLM DRECP LUPA identifies disturbance caps for each ACEC and NCL unit. Disturbance caps are a limitation on cumulative (past and present) ground disturbance activities allowable in each unit under the LUPA. Projects/activities that result in ground disturbance in units that are cumulatively below their disturbance cap require no additional disturbance mitigation, whereas projects/activities that result in ground disturbance in units that are cumulatively at or above their disturbance cap would require ground disturbance

mitigation. Ground disturbance impacts within units over the cap would require mitigation at a ratio of 3-to-1; mitigation for impacts within overlapping ACEC/NCL units are not double counted. Where ground disturbance impacts within units over the cap co-occur with impacts to other resources that require mitigation (i.e., desert tortoise critical habitat), the higher mitigation ratio applies and the mitigation is assumed to be nested (i.e., mitigation for desert tortoise critical habitat would also fulfill the ground disturbance mitigation). The status of disturbance caps in each unit and the impact acreages in each unit that would occur due to the proposed project are shown in Table 3.4-1. Table 3.4-2 provides the analysis of impacts to ACEC/NCL units and desert tortoise critical habitat.

Table 3.4-1
Land Designations

Land Designation		Designation Overlap	Status of Unit Disturbance Cap	Area to be Impacted within Designation (acres)
BLM Area of Critical Environmental Concern (ACECs)	Daggett Ridge Monkey Flower	Overlaps with the Mojave and Silurian Valley NCL	Over Cap	0.42
	Ivanpah	NA	Over Cap^	0.38
	Northern Lucerne Wildlife Linkage	NA	Over Cap	0.07
	Ord-Rodman	Overlaps with the Mojave and Silurian Valley NCL	Over Cap	0.52
	Shadow Valley	Overlaps with the Kingston-Amargosa NCL	Over Cap	0.98
	Superior-Cronese	NA	Over Cap	0.44
California Desert National Conservation Lands (NCLs)	Kingston-Amargosa	Overlaps with the Shadow Valley ACEC	Over Cap	0.98
	Mojave and Silurian Valley	Overlaps the Daggett Ridge Monkey Flower and Ord-Rodman ACECs	Under Cap	0.41
	Pinto Lucerne Valley and Eastern Slopes	NA	Under Cap	0.52

Notes: Impact acreages based on the ESA Biological Assessment (February 2017). Status of Unit Disturbance Cap based on the BLM Disturbance Cap Tracking data (February 2017).

Table 3.4-2
Land Designations and Impacts

Land Designation		Area to be Impacted within Designation (acres)	Desert Tortoise Critical Habitat	Overall Mitigation Ratio	Total Nested Mitigation Required (acres)
BLM Area of Critical Environmental	Daggett Ridge Monkey Flower*^	0.42	Yes	5-to-1	2.10

Table 3.4-2
Land Designations and Impacts

Land Designation		Area to be Impacted within Designation (acres)	Desert Tortoise Critical Habitat	Overall Mitigation Ratio	Total Nested Mitigation Required (acres)
Concern (ACEC)	Ivanpah^	0.38	No	3-to-1	1.14
	Northern Lucerne Wildlife Linkage^	0.07	No	3-to-1	0.21
	Ord-Rodman*^	0.52	Yes	5-to-1	2.60
	Shadow Valley*	0.98	No	3-to-1	2.94
	Superior-Cronese	0.44	Yes	5-to-1	2.20
California Desert National Conservation Lands	Kingston-Amargosa*	0.98	No	NA	--
	Mojave and Silurian Valley*	0.41	Yes	NA	--
	Pinto Lucerne Valley and Eastern Slopes	0.52	Yes	NA	--

Notes: Impact acreages based on the ESA Biological Assessment (February 2017). Status of Unit Disturbance Cap based on the BLM Disturbance Cap Tracking data (February 2017).

* indicates where ACEC units overlap with NCL units; see Table 3.4-1 for unit overlap details.

^ indicates units that are or are assumed to be cumulatively at or above their respective ground disturbance caps. Overall required mitigation ratio considers the overlap of units and the co-occurrence of impacts to determine the final required ratio.

The BLM has two adopted land use plans that provide specifications for biological resource protection that apply to the project area. These are the West Mojave Plan (WEMO) and the Northern and Eastern Mojave Desert Management Plan (NEMO). The WEMO Plan identifies take-avoidance measures to be implemented for protection of species and habitat within designated management areas, such as DWMAs, as well as outside designated areas. These avoidance measures apply to siting new ROWs, as well as operation and maintenance activities. Examples of avoidance measures include requiring tortoise surveys to be conducted prior to ground disturbance (intensity varying from one designated area to another), establishing criteria for environmental monitors overseeing ground-disturbing activities, limiting maintenance activities to existing access roads and months when juvenile tortoises are not present, and other BMPs to be implemented during construction. BMPs and take-avoidance measures consistent with the WEMO Plan have been integrated into the project as design features or as mitigation measures. Upon implementation of MM-BIO-1, MM-BIO-2, MM-BIO-3, MM-BIO-4, and MM-BIO-5, preconstruction surveys, take avoidance measures, biological monitoring, and habitat restoration would occur. These measures would ensure consistency with the WEMO Plan, and impacts would be less than significant with mitigation incorporated.

The NEMO plan addresses recovery of the desert tortoise and management of a few additional species of concern on public lands. The NEMO Plan states that existing utility corridors would be retained, and new utilities would be placed within them. Cumulative new surface disturbing projects on BLM lands in each tortoise DWMA would be limited to 1% of BLM lands in that area and no new access roads would be allowed in DWMAs. The size of each project would be minimized, and other standard mitigation measures would be applied to limit impacts. These measures have been integrated into project design features or as mitigation measures, as necessary. Upon implementation of MM-BIO-1, MM-BIO-2, MM-BIO-3, MM-BIO-4, and MM-BIO-5, and MM-BIO-6, the proposed project would occur in a manner consistent with the protective regulations that are set forth in the DREPC. As such, impacts would be less than significant with mitigation incorporated.

References

This section was prepared based on the results of the *Biological Resources Survey Report for the Los Angeles Department of Water and Power Path 46 Transmission Line Clearance Project*, prepared by ESA, dated May 2016 (see Appendix D1) and based on the regulations in the DRECP.

3.5 Cultural Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☒	☐	☐

Existing Setting

Archaeological Resources - Prehistoric Setting

The prehistory of the Mojave generally is described in terms of cultural "complexes." A complex is a specific archaeological manifestation of a general mode of life, characterized archaeologically by technology, particular artifacts, economic systems, trade, burial practices, and other aspects of culture. As discussed below, complexes

are typically associated with particular chronological periods. The following cultural chronology is based on Sutton et al.'s (2007) synthesis.

Paleo-Indian (10,000 to 8000 B.C.)

The Paleo-Indian period is sparsely represented in the Mojave, but is characterized primarily by large, fluted Clovis Projectile points. This limited evidence suggests that early human occupants of the Mojave probably lived in small, mobile groups in temporary camps on permanent water sources (Sutton et al. 2007).

Lake Mojave Complex (8000 to 6000 B.C.)

The name of this cultural complex was based on archaeological studies conducted along the margins of Pleistocene Lake Mojave. Lake Mojave sites have been found primarily around Fort Irwin, Lake Mojave, China Lake, Rosamond Lake, and Twentynine Palms, located near extinct water sources with the margins of pluvial lakes being the preferred settlement area. Subsistence and settlement patterns are likely to have been a direct response to climatic fluctuations occurring during the Pleistocene to Holocene transition. Lake Mojave populations were organized into relatively small, mobile groups and practiced a forager-like subsistence strategy. High mobility served to exploit ever-changing resource bases, coupled with a reliance on more permanent resources (water sources). Sites appear to have been repeatedly occupied, with artifact assemblages from both large and small sites being functionally identical (Sutton et al. 2007).

In terms of material culture, the Lake Mojave Complex is typified by stone tools such as Lake Mojave and Silver Lake projectile points, bifaces, steep-edged unifaces, crescents, and some groundstone implements. A characteristic of Lake Mojave artifact assemblages is the frequent use of fine-grained volcanic lithic material in the production of flaked stone tools, while cryptocrystalline material was preferred for use in the production of other types of implements (Giambastiani and Bullard 2007). The use of heavy projectile points, bifaces, and scrapers would suggest exploitation of large game. However, faunal assemblages and protein residue analyses from sites at Fort Irwin suggest heavy reliance on small game, such as rodents, reptiles, and lagomorphs (hares/rabbits/pikas). Ground stone wear is generally light, which suggests minor use of hard seeds. Marine shell beads and non-local lithic materials indicate trade and/or long distance resource procurement (Sutton et al. 2007).

Deadman Lake Complex (ca. 7500 to 5200 B.C.)

The Deadman Lake Complex is geographically restricted to Twentynine Palms in the southeastern Mojave Desert and appears to overlap with the Paleo-Indian and Pinto complexes (Sutton et al. 2007). Although still being fully defined, this complex is identified by artifact types including small- to medium-size contracting-stemmed or lozenge-shaped points, battered cobbles and core tools, bifaces, flaked tools, and milling equipment. Similar projectile points have been recovered from Ventana Cave in Arizona. Lithic materials include large quantities of coarse- to fine-grained igneous rock and smaller amounts of both local and exotic obsidian. Olivella shell beads are present, with both O. biplicata from the Pacific coast and O. dama from the Sea of Cortez represented.

The Pinto Complex (6000 to 3000 B.C.)

Archaeological deposits dating from this period suggest that Pinto settlement patterns consisted of seasonal occupation by small, semi-sedentary groups that were dependent upon a combination of big and small-game hunting and collection strategies, which could include the exploitation of stream or water resources. Typically, sites of this period are found along lakeshores and streams or springs, some of which are now dry, and in upland areas. Larger sites tend to be near wellwatered locations, with smaller sites in other areas. In comparison to smaller sites, larger sites exhibit substantial midden deposits and greater variation in artifact types. These larger sites were probably centralized locations from which foraging parties journeyed to seasonal resources (Sutton et al. 2007).

The extent of regional mobility at this time is uncertain. A lack of lithic material diversity might indicate that foraging activities were not as expansive as in the previous complex (Sutton et al. 2007). However, Olivella shell beads are still present, which indicates at least some degree of contact with coastal groups.

Material culture representative of this period include roughly formed projectile points, "heavykeeled" scrapers, choppers, and a greater prevalence of flat millingstones and manos (Warren 1984). Pinto series projectile points appear to have been frequently reworked, suggesting they were used primarily as spear, not dart, tips (Sutton et al. 2007).

Faunal assemblages are similar to those of the Lake Mojave Complex, with the exception of a slight increase in small fauna taxa (small animals) coupled with a decrease in artiodactyls (hoofed mammals) (Sutton et al. 2007). The rise of millingstones and manos indicates a more intensive use and processing of plant resources and site placement may have been in part based on access to plant resources. New dates indicate that intensive plant exploitation was occurring by ca. 7000 B.C. (Sutton et al. 2007).

At the end of the Middle Holocene, around 3000 B.C., environmental conditions became much drier and hotter, and few sites in the Mojave date to the period between 3000 and 2000 B.C., suggesting that the area may have been largely abandoned during this period of unfavorable climate (Sutton et al. 2007).

The Gypsum Complex (ca. 2000 B.C. to A.D. 200)

The Late Holocene was characterized by a wetter and cooler climate. Settlement patterns suggest small, temporary camps concentrated near streams. At the same time, we see more evidence of inter-tribal trade, particularly between the desert and the coast, and increasing social complexity (Sutton et al. 2007). The artifact assemblage associated with this period includes an increase in the prevalence of millingstones and manos, and it is believed that it was during this period that the pestle and mortar were introduced. These technological developments may point to the increased consumption of seeds and mesquite (Warren 1984). Other artifacts associated with the Gypsum Period include Elko corner-notched series, concave base Humboldt series, and contracting-stemmed Gypsum series projectile points. Ritual activities are indicated by the presence of quartz crystals, paint, and rock art (Sutton et al. 2007). Toward the end of the Gypsum period, there is evidence for the use of the bow and arrow (Warren 1984). Interestingly, there is a scarcity of Gypsum periods sites in the southern and eastern extent of the Mojave Desert (Sutton et al. 2007).

Rose Spring Complex (ca. A.D. 200 to 1200)

The general cultural pattern for this period is a continuation of that of the preceding Gypsum Period. The increase in cultural complexity continued into this period and the archaeological record attests to established trade routes between desert and coastal populations by way of shell beads and steatite, as well as an introduction of Anasazi influence as evidenced by the appearance of turquoise and pottery (Warren 1984).

Archaeological sites from this period are more numerous and contain more well-developed middens, indicating an increase in population and a more permanent settlement pattern (Sutton et al. 2007). Additionally, evidence of structures such as pit houses also supports more permanent settlements. Sites tend to be located near springs, washes, and lakeshores (Sutton et al. 2007). Material culture related to this period includes large quantities of obsidian artifacts, Rose Spring and Eastgate series projectile points, knives, drills, pipes, bone awls, millingstones, manos, mortars and pestles, marine shell ornaments, slate pendants, and incised stones (Sutton et al. 2007; Warren 1984). The bow and arrow continued in use.

The Late Prehistoric Period (A.D. 1100 to European Contact)

By the Late Prehistoric period, an extensive network of established trade routes wound their way through the desert, routing trade goods to populations throughout the Mojave Region. It also is believed that these trade routes encouraged or were the motivating factors for increasingly complex socioeconomic and sociopolitical organization within Late Prehistoric peoples in Southern California. Housepit village sites are prevalent during this period, as are the presence of Desert series and Cottonwood projectile points, brownware and buffware ceramics, steatite shaft straighteners, painted millingstones, and, to a lesser degree, coastal shell beads (Sutton et al. 2007; Warren 1984).

Ethnographic Setting

Mojave oral tradition, supported by archaeological evidence, suggests that the Yuman-speaking Mojave Indians were also among the earliest residents in the Mojave Desert. Their territory included a large region including the Old Woman Mountains, Paiute Springs, New York Mountains, Granite Mountains, Soda Lake, and the eastern end of the Mojave River (Earle 2005). At some point, between approximately 250 and 500 years ago, the Mojave left or were driven from this area to the Colorado River where they were documented by Father Francisco Garcés, a Spanish explorer, in 1776. Another Spanish explorer, Juan de Oñate, may have observed this group as early as 1604 based on his descriptions of the "Mojave" people along the Colorado River (Kroeber 1925).

At the time of European contact, the APE was occupied by the several groups, including the Chemehuevi and Las Vegas groups of the Southern Paiute and the Vanyume Serrano. The people generally referred to as the Southern Paiute belong to the Southern Numic branch of the Uto-Aztecan linguistic group. Historically, sixteen identifiable groups of Southern Paiute occupied a wide swath of land from southwestern Utah, northern Arizona, southern Nevada, and southeastern California (Kelly and Fowler 1986). The APE intersects with the traditional territory of the Las Vegas group.

Terrain in Southern Paiute territory varied from spruce and fir in the high country, transitioning to pine, juniper, piñon, sage, creosote, and mesquite in lower elevations. This diversified habitat led to varied subsistence patterns. Small game was the primary source of protein. Rabbits were hunted individually and in group game drives. Other small game harvested for food included wood rats, mice, gophers, squirrels, chipmunks, and birds. These were hunted with bow and arrow or nets. Large game was hunted to a lesser extent, both individually and in group hunts with bow and arrow. Large game included pronghorn, mountain sheep, and deer, and occasionally elk and bear. Another staple of the diet were chuckwalla lizards, which were harvested with hooked sticks (Kelly and Fowler 1986).

Plant foods made up the bulk of the diet, and were primarily harvested by women. On the plateaus pine nuts were harvested. In the early fall the cones were harvested and roasted to force the cones open. The nuts were dried and stored for later use. In canyon lands agave was harvested by cutting off the base of the stalk with a wooden chisel then roasting the "head" in an earthen oven. A variety of seeds were also harvested with a basketry beater, winnowed to remove the chaff, ground on a stone milling slab, and baked into bread or cooked as a soup or gruel. In the Late Prehistoric period, in areas where water was more available, limited agriculture was pursued. Crops included corn, squash, melons, beans, sunflower, and wheat. Individual gardens were up to an acre in size and larger plots tended as a group activity (Kelly and Fowler 1986).

Individual groups moved with the seasons. In the winter many occupied higher elevations subsisting on pine nuts and planting crops. In warmer months, groups moved to lower elevations to harvest seeds and berries and to hunt small game. Fall was usually a time of plenty, harvesting pine nuts and hunting large game (Kelly and Fowler 1986). Shelters varied, depending on the terrain. Caves were favored as winter dwellings. Conical brush dwellings were also constructed as were improvised structures formed by piling brush against trees (Kelly and Fowler 1986).

Clothing was a simple affair of hide or woven cloth aprons or breech clouts. In the winter twined bark leggings were worn by both sexes. Likewise, adornment was limited, but included pierced ears and septum, facial tattoos, and feathered headwear (Kelly and Fowler 1986).

Basketry was used widely among the Southern Paiute for food processing and storage, hauling materials, as cradle boards, and trade goods. Pottery was used for similar purposes among most groups, produced primarily by women using a paddle and anvil technique. Cordage and netting were also critical components of their material culture, used for a wide variety of purposes including transportation and hunting. A variety of simple and recurved bows were used for hunting and in conflict (Kelly and Fowler 1986).

Politically, individual tribes were fluid, generally closely related, with no specified head. Villages ranged from one or two households to as many as 20, moving frequently with the seasons to take advantage of resources (Kelly and Fowler 1986).

The first European contact with the Southern Paiute occurred in 1776; by the early 19th century, Southern Paiutes, whose territory was adjacent to the Old Spanish Trail, were being taken as slaves by Spanish settlers (Kelly and Fowler 1986). The 10-acre Las Vegas Colony reservation was established near Las Vegas, Nevada, in 1911; however, with no

significant land base, it was essentially an urban settlement. The Las Vegas Paiute Tribe was recognized as a sovereign nation in 1934, and the Las Vegas Paiute Tribal Constitution was approved in 1970. In 1983, the Las Vegas Paiute Tribe acquired the 4,000-acre Snow Mountain reservation, 18 miles northwest of the original reservation (Las Vegas Paiute Tribe 2014). The Chemehuevi inhabited the area between Needles, Blythe, Twentynine Palms, and the Colorado River, which contained the primary settlements. However, the APE is located in an area that may have been utilized for seasonal resource exploitation, travel, and trade (Earle 2005).

The oral tradition of the Chemehuevi suggests that they migrated from the north and engaged the Mojave group in a long war that drove the Mojave east to the Colorado River (Kroeber 1925). Archaeological evidence indicates that the war ended between 250 and 500 years ago (King and Casebier 1976). The Chemehuevi were divided into two moieties (kinship groups) represented by two songs, the Mountain Sheep Song and the Deer Song, which were associated with different hunting areas. They generally lived in bands of two or three families, each band having a leader. The harsh desert environment could support only the smallest groups comprised of nuclear families joined by kinship ties. These small hunter-gatherer groups moved in response to local food and water availability, typically seasonally or more frequently. The lack of resources of the area created a very diverse hunting economy where small game was an important protein source. Pronghorn sheep, mountain sheep, deer, rabbits, squirrels, desert chipmunks, and wood rats were important mammals in the local diet along with reptiles, such as desert tortoises, snakes, and lizards, and birds, eggs and insects. Bighorn sheep and desert tortoise have traditionally been considered important animals to the Chemehuevi, as well as neighboring Cahuilla and Mojave peoples. Agriculture was introduced to the Chemehuevi by their eastern neighbors and they cultivated crops of various types of maize and corn, squash, gourds, wheat, and potatoes along the Colorado River (Kelly and Fowler 1986).

The Chemehuevi utilized the paddle-and-anvil technique for their pottery, which included cooking pots, storage jars, spoons, scoops, and large vessels (Kelly and Fowler 1986). They also utilized twining techniques for their basketry, which were used for transporting items, winnowing and parching, seed beating, boiling water, and storage. Other artifacts associated with the Chemehuevi included the mano and millingstone (metate), mortar and pestle, digging sticks, and the sinew-backed bow with arrows of cane or willow. In addition to locally consumed trade goods, the Chemehuevi acted as "middle-men" in the long distance trade networks from groups to the west and the Pacific Coast and the Central Valley to the groups in the Southwest and along the Colorado River.

Following the Civil War, the traditional native subsistence base was threatened by the influx of settlers and accompanying livestock. With these resources unavailable, the Chemehuevi were employed on ranches, building railroads, and in the newly opened mines. The Chemehuevi were occupying the oasis of Mara (Twentynine Palms) when permanent settlement of the area by Europeans and Americans began. Livestock depleted natural resources and Euro-American settlers began to claim large pieces of land and water rights. In 1890, 160 acres were set aside for a reservation for the Chemehuevi. In 1910, 640 acres adjacent to the existing Cabazon reservation in Coachella was given jointly to the Cahuilla and the Chemehuevi, and those who remained on the Twentynine Palms reservation were encouraged to move there. Some went, some stayed, and others chose to settle elsewhere in California (Bean and Vane 2002).

The Chemehuevi Valley Reservation was established in 1907. However, tribal members were soon relocated to the Parker, Arizona area and their status as a tribe was taken away. In 1935, the United States Congress authorized as much acquisition of the reservation land as necessary for the Parker Dam Project, which resulted in the inundation of nearly 8,000 acres of reservation land (Chemehuevi Indian Tribe 2013). The tribe was reinstated and recognized as the Chemehuevi Tribe in 1970. Today, the Chemehuevi Indian reservation comprises approximately 32,000 acres of trust land, including thirty miles of Colorado River frontage, downstream of the project area. Chemehuevi descendents also reside on the Colorado River Indian Tribes Reservation and the Twentynine Palms Band of Mission Indians Reservation, as well as on several other reservations.

Serrano territory was bordered to the west roughly by the Cajon Pass in the San Bernardino Mountains, to the east by Twentynine Palms and to the south by Yucaipa Valley. Their territory extended north of the San Bernardino Mountains into the desert near Victorville, along the Mojave River. Serrano living along the Mojave River and in the desert were known as the Vanyume, and exhibited linguistic and cultural differences from the Serrano who inhabited the San Bernardino Mountains and surrounding areas (Earle 2005).

Francisco Garcés, in his diaries from his 1776 expedition along the Mojave River, noted a Vanyume Serrano occupation at a spring on the east side of Soda Lake, and that this marked the eastern limits of their territory (Earle 2005). Some Chemehuevi ethnographic sources confirm that Vanyume inhabited this area (Earle 2005). Serrano villages located at higher elevations were placed near canyons that received substantial precipitation or were adjacent to streams and springs. Villages situated at lower elevations were also located close to springs or in proximity to the termini of alluvial fans where the high water table provided abundant mesquite and shallow wells could be dug (Bean and Smith 1978; Warren 1984).

The Serrano were organized into clans, with the clan being the largest autonomous political entity. They lived in small villages where extended families lived in circular, dome-shaped structures made of willow frames covered with tule thatching. Each clan had one or more principal villages in addition to numerous smaller villages associated with the principal village (Price et al. 2008).

The Serrano subsistence strategy relied upon hunting and gathering, and occasionally fishing. Villages divided into smaller, mobile gathering groups during certain seasons to gather seasonally available foods. The division of labor was split between women gathering and men hunting and fishing (Bean and Smith 1978; Warren 1984). Mountain sheep, deer, rabbits, acorns, grass seeds, piñon nuts, bulbs, yucca roots, cacti fruit, berries, and mesquite were some of the more common resources utilized (Bean and Smith 1978; Warren 1984).

Despite early European and Spanish contact in 1771, the Serrano remained relatively autonomous until the period between 1819 and 1834 when most of the western Serrano were removed and placed into missions (Bean and Smith 1978; Warren 1984). Today, there are two sovereign nations that claim a Serrano heritage: the federally-recognized San Manuel Band of Serrano Mission Indians, and the federally-recognized Morongo Band of Mission Indians, whose members represent Serrano, Cahuilla, and Cupeño cultures.

Historic Setting

Several major trails crossed the Mojave before and at the time of Spanish contact, and continued to be used not only by the native peoples but also by Euro-American explorers. The Yuma- Needles Trail ran from south of Yuma up the western side of the Colorado River to the Needles area. The Mojave Trail ran from Needles west across the desert to the coast, following the path of the Mojave River. The Cocomaricopa Trail ran west from Arizona through the Salton Sink (Coachella Valley) and then northwest to meet the Mojave Trail near San Bernardino (Greene 1983).

The first Europeans known to have visited the Mojave were Pedro Fages in 1772 and Juan Bautista de Anza and Father Francisco Garcés in 1774 (Greene 1983). In 1775, Father Garcés separated from de Anza and crossed the Mojave along the ancient Mojave Trail from Needles west to the San Gabriel Mission, travelling past Soda Lake and resting at modern-day Afton Canyon in 1776 (Earle 2005). The Spanish missions that dotted the California coast never spread inland to the Mojave, and the desert remained relatively unexplored and unsettled by Europeans for much of the next century. The Romero-Estudillo Expedition of 1823–1824 was an attempt by the Spanish to establish a secure route between the California Coast and Tucson; however, despite two attempts, the expedition never managed to make it as far as the Colorado River (Greene 1983).

The first recorded American visitors to the Mojave were the party of Jedediah Smith, who crossed the Mojave along the Mojave Trail in 1826 (Greene 1983). Ewing Young and Kit Carson followed his route in the 1820s and 1830s. Several American and Mexican military expeditions were conducted in the 1840s and 1850s. In 1829-1830, fur trader Antonio Armijo scouted a route between Santa Fe, New Mexico, and Los Angeles. This route became a trade route known as the Old Spanish Trail, following along the same general route as the Mojave Trail (Greene 1983). After California became an American state in 1850, government-funded exploration and mapping of the region began, with the first major survey completed in 1853.

In 1848 gold was discovered by James W. Marshall at Coloma, some 400 miles to the north on the American River. The gold rush began and immigrants flooded into California, many headed to or through the Mojave Desert. By the late 1850s, the Mojave and Old Spanish trails had become major freight and mail roads. In addition, due to conflicts along the Colorado River between the federal government, Mormon settlers, and Native peoples, the U.S. Army established a series of forts along the Mojave Trail, including one at Soda Lake. The Mojave Trail became the major east-west travel route between Los Angeles and the Colorado River, and was known during this period as the Old Government Road (Greene 1983).

The discovery of the Comstock Lode in Nevada in 1859 shifted attention from gold to silver, and miners began to focus on the desert regions (Vredenburgh 2005). The 1870s and 1880s were fairly prosperous for mining in the Mojave Desert, and operations at that time were dominated by gold and silver mining. The Ord Mountain area was an early focus of gold mining in the Mojave, beginning in 1871. Gold and silver mining at the Silver Mountain District and Oro Grande began in the 1870s (Vredenburgh 2005). Mining began in the Calico Mining District near Barstow in 1881. Area mines are estimated to have produced up to $20 million in silver, making the Calico Mining District California's largest silver

producer. However, a drop in the price of silver following the Panic of 1893 contributed to the virtual cessation of silver mining in the district by the end of the 20th century (Vredenburgh 2005). Near the northern end of the APE, gold, silver, and turquoise were mined near Halloran Spring, Shadow Mountain, and the Silurian Hills (Vredenburgh 1996).

In the 20th century, mining operations shifted focus to borax, zinc, and silver. Originally mined near Searles Lake in 1863, the Pacific Coast Borax Company near Calico became the leading producer of Borax in San Bernardino County, producing over $9,000,000 between 1883 and 1907 (Cloudman et al. 1917). Mining productivity fell off in the 1920s due to increased inflation, but was revived during the Great Depression; however, gold mining virtually ceased during World War II. By 1956, the declining gold prices caused most remaining small gold operations to close (Shumway et al. 1980).

The Arrowhead Trail Highway (SR-31), one of the earliest automobile roads through the Mojave Desert, was constructed between 1917 and 1924. The road connected Los Angeles with Salt Lake City, Utah. In 1933 much of the Arrowhead Trails Highway between Barstow, California and the California-Nevada state line was incorporated into SR-91 (later I-15) (Lyman 1999).

Climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind, lasting for an extended period (decades or longer). Gases that trap heat in the atmosphere are often called greenhouse gases (GHGs). The greenhouse effect traps heat in the troposphere through a threefold process: short-wave radiation emitted by the Sun is absorbed by the Earth; the Earth emits a portion of this energy in the form of long-wave radiation; and GHGs in the upper atmosphere absorb this long-wave radiation and emit it into space and back toward the Earth. This "trapping" of the long-wave (thermal) radiation emitted back toward the Earth is the underlying process of the greenhouse effect.

Built Environment Resources

The transmission lines known in modern times as MCV1 and MCV2 and MVL1 were known historically as part of the LADWP Boulder Dam-Los Angeles 287.5 kV Transmission Line. The line consisted of three separate lines known as LADWP Boulder Lines 1, 2, and 3. LADWP Boulder Line 1 corresponds to MVL1; LADWP Boulder Line 2 corresponds to MCV2; and LADWP Boulder Line 3 corresponds to MCV1. The following discussion is summarized from the California Department of Parks and Recreation (DPR) 523 site record for the Boulder Dam-Los Angeles 287.5 kV Transmission Line (recorded as resource CA-SBR-7694H) (Powers 1993; Van Wormer and Dolan 1999).

In April 1930, LADWP entered into a contract with the U.S. Bureau of Reclamation to purchase electrical power from the Boulder Canyon Project (currently Hoover Dam). By the terms of this contract, LADWP was required to transmit power not only for itself, but also other municipally owned utilities in the Los Angeles area. LADWP began construction of its transmission system in June 1933 with the assistance of a $22.8 million loan from the Reconstruction Finance Corporation. LADWP Boulder Lines 1 and 2 were competed in 1936 and LADWP Boulder Line 3 was completed in 1940. All three lines were originally designed to transmit 287.5 kV power from Boulder Dam (now Hoover Dam) to

Los Angeles. The 270-mile-long Boulder Dam-Los Angeles 287.5 kV Transmission Line set a new world standard for the long-distance transmission of electrical power, with the overall scale of the LADWP Boulder Lines far exceeding anything that had been tried before. The project represented investments in research and development and technological advances in the design and construction of towers, conductors, control mechanisms and auxiliary equipment.

Planning and construction of the transmission lines included selection of the ROW assisted by aerial photography and mapping, a relatively new technique which, together with field observations, facilitated the development of accurate construction plans and profiles. The transmission line project included advancements in transportation through desert areas, in concrete mixing, and in methodology for stringing the conductor.

LADWP Boulder Lines 1 and 2 ran from the Boulder Switchyard to the Century Receiving Station in the east-central part of Los Angeles, extending about 266 miles. Each circuit was suspended from parallel rows of towers with centerlines 265 feet apart. Construction began in June 1933, finishing in mid-1936 with transmission of energy beginning in October of that year. Boulder Line 3 ran from the Boulder Switchyard to the Toluca Receiving Station in the San Fernando Valley section of northwestern Los Angeles, a distance of 258 miles. It roughly paralleled the route of Lines 1 and 2 and passed through the same switching stations to Victorville, but the alignment was north of and separate from that of Lines 1 and 2, and in many locations digressed from it for several miles or more.

In his 1993 evaluation, Powers explains that "[in] addition to providing research, development and construction jobs, the project provided a sense of purpose and direction during the Great Depression. By an estimate made in 1933, the contracts for cable, towers, materials and equipment created 25,000 jobs which provided unemployment relief for over 100,000 people. By May 1934, 1,100 men were directly employed in transmission line construction."

The approximate 200-mile-long, single-lane access road (known today as Powerline Road) that runs parallel to LADWP Boulder Lines 1 and 2 was constructed as a supply road to transport men and materials through the Mojave Desert, where most of the lines were built. Due to weather impacts and wear, ongoing maintenance of the 15-foot-wide road consisting of grading has occurred since its original construction.

Between 1970 and 1973, new switching stations were constructed at McCullough Pass and Victorville, and some transmission lines were converted to transmit higher amounts of energy. This conversion included replacement of the original type HH conductor with aluminum cable steel-reinforced conductor, and rebuilding of the cross-arms to provide additional clearance and carry the additional weight. The rebuilt segments of the Boulder Line 3 were renamed McCullough-Victorville 1 and Victorville-Toluca 1. LADWP Boulder Lines 1 and 2 between the Boulder switchyard and the Century receiving station continued to transmit at 287.5 kV, but were renamed Boulder-Victorville 1, Victorville-Century 1, Boulder-Victorville 2 and Victorville- Century 2, respectively. Another major alteration occurred in 1980 when the Boulder-Victorville Line 2 between the McCullough switching station and Victorville was converted to 500 kV. This segment was renamed McCullough-Victorville Line 2.

Paleontological Resources

The Path 46 Transmission Line Clearance Project is located in the north-central portion of the Mojave Desert, which is situated within the Mojave Desert geomorphic province. The terrain in this area consists of a series of isolated mountain ranges separated by broad, shallow southeast-trending valleys with interior drainage. Closed basin sinks, or playas often occur on the valley floors (Appendix H). The elevation of the APE ranges from about 1,500 to 3,500 feet above mean sea level.

The Mojave Desert geomorphic province, a triangular-shaped fault block that is bordered on the north by the sinistral (left lateral) Garlock Fault, to the south by the dextral (right lateral) San Andreas Fault, and to the east by the Colorado River and the California-Nevada border. During the Paleozoic Era (approximately 541 to 252 million years ago), the area that is now the Mojave Desert was a passive continental margin. As the supercontinent Pangaea began to split up during the late Triassic Period (approximately 235 million years ago), tectonic plate configurations became a subduction zone on the coast of California, with the dense oceanic crust subducting under the less dense continental crust. One of the results was the intrusion of large bodies of magma into and through the continental crust, a process that created the gigantic granitic batholiths that comprise the interiors of the Sierra Nevada mountain range, the transverse ranges, and smaller mountain ranges within the Mojave Desert (Appendix H).

Beginning in the Tertiary Period, the Mojave Desert underwent a period of extensive erosion. During the early Tertiary, the Mojave block was elevated and had external drainage, as evidenced by the lack of lower Tertiary rocks within the Mojave and the presence of outcrops to the north, south, and west (Appendix H). By the middle Miocene (approximately 16 to 12 million years ago), the Mojave drainage had become internalized, and the preservation of terrestrial vertebrate fossils within the Mojave Desert Region began and continued to the late Pleistocene, 11,000 years ago. Some vertebrate animals found within Neogene (approximately 23 million to 2.5 million years ago) and Quaternary (approximately 2.5 million years ago to present) of the Mojave Desert region include proboscideans, horses, camels, Bison, saber-tooth cats, badgers, snakes, lizards, and frogs.

a) Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

Records Search

A cultural resources records search was conducted for the project on June 26-28, and November 8, 2013, by staff at the California Historic Resources Inventory System – San Bernardino Archaeological Information Center (SBAIC). In an effort to establish a general impression of the archaeological sensitivity the APE and its surrounding environment, the review included the APE as well as a 1-mile radius around the APE.

Previous surveys and studies and archaeological site records were reviewed, along with the Historic Property Data File for San Bernardino County, the National Register of Historic Places (NRHP), the California Register of

Historical Resources (CRHR), the California Inventory of Historic Resources, the California Historical Landmarks, and the California Points of Historical Interest.

Based on available information, 15 built environment resources have been previously recorded within 1 mile of the APE, which include two transmission lines, ten roads, two railroad alignments, and one airport. Table 3.5-1, below, lists the 15 built environment resources within 1 mile of the APE. Four of the 15 built environment resources have been recorded within the APE. The built environment resources consist of the LADWP Boulder Line (CA-SBR-7694H) and three roads (P-36-24000, -028051 and -023423). Resource P-36-23423 (CA-SBR-14798H) is a contributor to the LADWP Boulder Line (CA-SBR-7694H). Two of the primary numbers for previously recorded roads (P-36-24000 and P-36-28051) appear to represent the same resource, Camp Rock Road.

Table 3.5-1
Previously Recorded Built Environment Resources Within 1 Mile of APE

Primary (P-36-)	Trinomial (CA-SBR-)	Description	Within APE	Within 1 Mile
001910	1910H	Union Pacific RR alignment		X
002910	2910H	National Old Trail Hwy		X
006693	6693H	Atlantic & Pacific/ Atchison, Topeka and Santa Fe RR		X
007694	7694H	LADWP Boulder Transmission Lines	X	
009360	9360H	Stoddard Road		X
010315	10315H	Boulder-San Bernardino transmission line		X
010627	10627H	Barstow-Daggett Airport		X
012658	12357H	I-15 freeway		X
021629	-	Historic road segment		X
023423	14798H	Road support and 19 miles of Powerline Road	X	
02400 and -028051	15185	Camp Rock Road	X	
026439	16754H	Dirt access road		X
026459	-	Historic era road segment		X
026508	-	Santa Fe Street		X

Source: *Final Historic Resource Assessment Report for the Los Angeles Department of Water and Power Path 46 Transmission Line Clearance Project*, prepared by ESA (Appendix G).

Historical Documents Reviewed

Searches of the BLM General Land Office Records online database (glorecords.blm.gov) and the USGS historical topographic map online database (natinonalmap.gov) were also conducted. According to the BLM

General Land Office Records database, the majority of the APE was not patented. However, there are some exceptions, including the MVL1_147-4, MCV1_151-4, and 125-5 and -6 work areas. The MCV1 151-4 work area in Section 27 was part of a patent issued to John B. Marsten on June 8, 1922 (Doc. No. 866861) under the authority of the Desert Land act of 1877. Additionally, the MCV1 125-5 and -6 work areas in Section 19 were patented to Geraldine Swan on November 8, 1919 (Doc. No. 717766), under the authority of the Desert Land act of 1877. A portion of the APE in Section 19 encompassing the MVL1_147-4 work area was part of a patent issued to Geraldine Swan and Arthur Anderson on November 8, 1919 (Doc. No. 028018). Also, the S½ of the NE¼ of Section 24 (NW corner of the MVL1_147-4 APE) was patented to Chester Swan on June 28, 1919 (Doc. No. 03026) under the authority of the Cash-Sales Entry Act of 1820. It appears that the MCV1_85-3 work area may have been granted to the State of California as part of the California Enabling Act of 1853 (Doc. No. 1211857); however, a note on the General Land Office Records file indicates that this record has not been verified against the legal land patents. Some of the APE (MVL1_155-5, MVL1_129-4, MCV2_104-5, MCV2_100-5) may have been part of a land grant issued to the Southern Pacific Railroad Company in 1866 (Doc. No. 142), and some other parts (MCV2_97-5 APE) may have been granted to the State of California as part of the California Enabling Act of 1853 (Doc. No. 11101856); however, a note on both General Land Office Records files indicate that neither of these records has been verified against the legal land patents.

Analysis

Less Than Significant Impact. The LADWP Boulder Line linear district (CA-SBR- 7694H) including Powerline Road (CA-SBR-14798H), and Camp Rock Road (P-36-24000/- 28051), have been recorded within the project APE. Camp Rock Road is recommended not eligible for listing in the NRHP or CRHR, and therefore, construction and operation of the proposed project would result in less than significant impacts to this resource. The LADWP Boulder Line has been determined eligible for listing in the NRHP under Criteria A and C, and is listed in the CRHR, and Powerline Road is considered a contributor to the significance of the LADWP Boulder Line.

The LADWP Boulder Line (CA-SBR-7694H) would continue to convey its significance under Criteria A (i.e., associated with events that have made a significant contribution to the broad pattern of our history) and C (i.e., embody the distinct characteristics of a type, period, or method of construction/represent the work of a master/possess high artistic value) and would also continue to retain all aspects of integrity including setting, feeling, and association, after implementation of the proposed project. Project-related soil spreading, grading, and tower raising activities would not have an adverse effect on CA-SBR-7694H or its contributor CASBR-14798H. While grading and other activities would not directly affect the transmission lines, activities would alter the surface of the landforms below the lines. Because the depth of soil disturbance resulting from the grading is relatively shallow (on average 2.18 feet), and the areas subject to grading would be contoured and revegetated to blend with existing topography, the proposed project would not visually alter the integrity aspects of setting, feeling, and association as they relate to the transmission lines and therefore would also not result in

an indirect adverse effect. Also, in consideration of the scale of the transmission line, the introduction of eight new footings that are similar in appearance to the current footings and the raising of the height of two towers would not result in an adverse effect to setting, feeling, or association of the resources as a whole.

These minor, virtually imperceptible changes to the setting would not substantially alter the resource's ability to convey its historic significance under Criteria A/1 and C/3. Therefore, potential impacts to CA-SBR-7694H or its contributor CA-SBR-14798H resulting from construction and operation of the proposed project would be less than significant.

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less Than Significant Impact with Mitigation Incorporated. A total of 30 resources were recorded or updated during the surveys. Twenty-four are located on BLM-owned lands, five are located on land owned by the County of San Bernardino, and one is located on State-owned lands. Of the 30 resources, 20 are newly recorded and consist of three prehistoric archaeological sites (CA-SBR-29513, -29517, and -29527), nine historic-period archaeological sites (CA-SBR-29512H, -29514H, -29515H, -29516H, -29518H, -28498H, -29521H, and -29526H, and P-36-029522,), two resources of undetermined age (CA-SBR-29523/H, and P-36-029524), and six isolates (P-36-029519, -029520, -029525, -029528, -029529, and -029530). Ten previously recorded resources were updated (CA-SBR-434, -2100, -2162, -2223, -3169 -3176, -3186, -6598, -17262H, and -17264H), all of which are archaeological sites.

Of the 30 recorded resources, 22 are located within the project APE, and eight (CA-SBR-29513, -29515H, -29516H, -28498H, and P-36-029519, -029520, -029524, and -029525) are located outside of the APE due to refinements to the Project APE. The 30 recorded or updated during the surveys are listed below in Table 3.5-2.

Table 3.5-2
Archaeological Resources Recorded or Updated During Survey

Trinomial (CA-SBR-)	Primary Number (P-36-)	Description	Date	NRHP/CRHR Eligibility	BLM Concurrence	Within APE
434	000434	Quarry and lithic scatter with small historic-period component.	Prehistoric/Historic	Previously determined eligible for NRHP, listed in CRHR	Concurs (eligible)	Within
2100	002100	Large quarry site with rock cairns	Prehistoric	Previously determined eligible for NRHP, listed in CRHR	Concurs (eligible)	APE Subsequently eliminated due to Project re-design

Table 3.5-2
Archaeological Resources Recorded or Updated During Survey

Trinomial (CA-SBR-)	Primary Number (P-36-)	Description	Date	NRHP/CRHR Eligibility	BLM Concurrence	Within APE
2223	002223	Quarry and lithic scatter	Prehistoric	Recommended eligible for NRHP and CRHR	Concurs (eligible)	Within
3169	003169	Lithic scatter	Prehistoric	Recommended not eligible	NA	Within
3176	003176	Quarry and lithic scatter	Prehistoric	Previously determined eligible for NRHP, listed in CRHR	Concurs (eligible)	Within
3186	003186	Rock cairn complex with an associated lithic scatter	Prehistoric	Listed in the NRHP, listed in CRHR	Concurs (listed)	Within
2162	002162	Quarry with rock rings, cleared circles; not relocated within survey area	Prehistoric	Previously determined eligible for NRHP, listed in CRHR	Concurs (eligible)	Within
6598	006598	Sparse lithic scatter	Prehistoric	Previously determined not eligible for NRHP; not eligible for CRHR	Concurs (not eligible)	Within
17262H	027766	Historic-era rock ring	Historic	Previously evaluated as not eligible	Concurs (not eligible)	Within
17264H	027768	Historic-era refuse scatter	Historic	Previously evaluated as not Eligible	Concurs (not eligible)	Within
29512H	029512	Small refuse deposit consisting of approximately 60 artifacts, primarily cans and glass bottle fragments	mid- to late-20th century	Recommended not eligible	Concurs (not eligible)	Within
29513	029513	Single reduction loci; thirteen flakes and five tools	Prehistoric	Not evaluated	NA	Outside

Table 3.5-2
Archaeological Resources Recorded or Updated During Survey

Trinomial (CA-SBR-)	Primary Number (P-36-)	Description	Date	NRHP/CRHR Eligibility	BLM Concurrence	Within APE
29514H	029514	Large historic-era site possibly related to the Fearnot Mine. Features include a mine shaft/ prospect pit, four waste rock piles, a concrete slab, and three artifact concentrations.	Early 20th century	Recommended not eligible	Concurs (not eligible)	Within
29515H	029515	Small refuse deposit consisting of 13 artifacts, primarily cans and glass bottle fragments	Mid-20th century	Not evaluated	NA	Outside
29516H	029516	Very small refuse deposit consisting of one clear glass, oval bottle base; one clear glass, oval bottle; and a church key-opened can	20th century	Not evaluated	NA	Outside
29517	029517	Prehistoric artifact scatter with a single reduction locus consisting of two primary flakes, five secondary flakes, and 29 pieces of shatter; two flakes are located outside of the concentration	Prehistoric	Recommended not eligible	Concurs (not eligible)	Within
29518H	029518	Small refuse deposit consisting of approximately 20 artifacts, primarily cans and glass bottle fragments	Mid-20th century	Recommended not eligible	Concurs (not eligible)	Within
	029519	Two light grey rhyolite tertiary Flakes	Prehistoric	Not evaluated	NA	Outside
-	029520	One edge modified red-brown chert flake	Prehistoric	Not evaluated	NA	Outside

Table 3.5-2
Archaeological Resources Recorded or Updated During Survey

Trinomial (CA-SBR-)	Primary Number (P-36-)	Description	Date	NRHP/CRHR Eligibility	BLM Concurrence	Within APE
28498H	028498H	Small refuse deposit consisting of 22 artifacts, primarily cans and glass bottle fragments.	Mid-20th century	Not evaluated	NA	Outside
29521H	029521	Historic-period road alignment	Mid-20th century	Recommended not eligible	Concurs (not eligible)	Within
-	029522	Survey marker	Mid-20th century	Recommended not eligible	Concurs (not eligible)	Within
29523/H	029523	Rock cairn and two rock rings	Undetermined	Recommended not eligible	Concurs (not eligible)	Within
-	029524	Rock cairn	Undetermined	Not Evaluated	NA	Outside
-		Assayed cobble	Prehistoric	Not evaluated	NA	Outside
29526H	029526	Sparse refuse deposit consisting of 35 artifacts, primarily cans and glass bottle fragments	Mid-20th century	Recommended not eligible	Concurs (not eligible)	Within
29527	029527	Sparse lithic scatter	Prehistoric	Recommended not eligible	Concurs (not eligible)	Within
	029529	Isolated obsidian bifacial thinning flake	Prehistoric	Recommended not eligible	Concurs (not eligible)	Within
	029530	Isolated chert primary flake	Prehistoric	Recommended not eligible	Concurs (not eligible)	Within
-	029520	Isolated chert primary flake	Prehistoric	Recommended not eligible	Concurs (not eligible)	Within

Of the 22 resources located within the APE, five (CA-SBR-434, -2100, -2162-3176, and -3186) have been previously determined eligible for listing in the NRHP and are listed in the CRHR. One (CA-SBR-2223) is recommended eligible for listing in the NRHP and CRHR. One (CA-SBR-6598) has been previously determined ineligible for listing in the NRHP and is similarly recommended ineligible for listing in the CRHR. The remaining 15 resources (CA-SBR-3169, -17262H, -17264H, -29512H, -29514H, -29517, -29518H, -29521H, -29523/H, -29526H, -29527, and P-36-029522, -029528, -029529, and -029530) are recommended not eligible for listing in the NRHP or CRHR and are therefore not considered historic properties under Section 106 of the National Historic Preservation Act.

According to Confidential Appendix F, the six NRHP- and CRHR-eligible resources (CA-SBR-434, -2100, -2162, -2223, -3176, and -3186) would not be adversely affected by implementation of the proposed project. The portions of five of these resources (CA-SBR-434, -2162, -2223, -3176, and -3186) located within the APE have suffered disturbances and generally retain poor integrity with no diagnostic artifacts, Single Reduction Loci, or features located within the portions of the APE where project-related ground-disturbance would occur. The proposed project would not adversely affect any characteristics from which these resources derive their significance and the resources will continue to be eligible for listing in the NRHP and CRHR following implementation of the proposed project. A number of features and artifacts associated with CA-SBR-2100 were identified within the APE for MCV1 120-1. Because of the sensitivity of this resource, the proposed project has been redesigned to address the ground-to-conductor clearance requirement through the implementation of protective measures to prevent the continued incursion of OHVs by blocking access to an illegal linear disturbance which bisects the site, rather than through grading. The APE associated with MCV1 120-1 has been eliminated from the proposed project. Implementation of the protective measures would be carried out in coordination amongst LADWP, BLM, and tribal representatives in a manner that would avoid adverse impacts to CA-SBR-2100.

Although no documented resources will be adversely affected as a result of the proposed project, this does not preclude the possibility of disturbing previously undocumented subsurface resources during construction. Grading and other ground-disturbing activities associated with the proposed project could have the potential to unearth archaeological resources qualifying as historic properties. As such, grading and other ground-disturbing activities could result in potentially adverse impacts on archaeological resources. Mitigation Measures CUL-1 through CUL-3 (MM-CUL-1 through MM-CUL-3) have been provided and would mitigate this impact to less than significant.

MM-CUL-1 Prior to earth moving activities, the Los Angeles Department of Water and Power (LADWP) shall retain a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (U.S. Department of the Interior 2008) to conduct cultural resources sensitivity training for all construction personnel. Construction personnel shall be informed of the types of archaeological resources that may be encountered, and of the proper procedures to be enacted in the event of an inadvertent discovery of archaeological resources or human remains. LADWP shall ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance.

MM-CUL-2 The Los Angeles Department of Water and Power (LADWP) shall retain an archaeological monitor (working under the direct supervision of a qualified archaeologist) and a Native American monitor to be present during ground-disturbing activities at CA-SBR-434, -2223 - 3176, -3186, and -6503 that have been previously determined or recommended eligible for listing in the National Register of Historic Places. The archaeological monitor and Native

American monitor shall have the authority to re-direct construction activities to assess the significance of discoveries made during ground disturbing activities. The Native American monitor shall be selected from amongst qualified tribal monitors affiliated with the San Manuel Band of Mission Indians. If ground-disturbing activities occur simultaneously in two or more locations located more than 50 meters (150 feet) apart, additional archaeological and Native American monitors may be required. The archaeological and Native American monitors shall keep daily logs. After monitoring has been completed, a monitoring report that details the results of monitoring shall be prepared and submitted to LADWP.

MM-CUL-3 In the event of the unanticipated discovery of archaeological materials, the Los Angeles Department of Water and Power (LADWP) shall immediately cease all work activities in the area (within approximately 100 feet) of the discovery until it can be evaluated by a qualified archaeologist. If the find is determined to be potentially significant, the archaeologist, in consultation with LADWP, the Bureau of Land Management (BLM) and appropriate Native American group(s), shall develop a treatment plan. Construction shall not resume until the treatment plan has been implemented and completed, and authorization has been granted by the BLM.

MM-CUL-4 If human remains are encountered unexpectedly during any ground-disturbing activities, all activity within a minimum of 200 feet of the remains shall halt, the area shall be secured, and no further disturbance shall occur in that area. The Los Angeles Department of Water and Power (LADWP) and the Bureau of Land Management (BLM) Barstow Field Office shall be contacted immediately and LADWP shall contact the San Bernardino County Coroner. The Coroner shall examine the remains within two days of notification. If the remains are located on private lands, the land manager or owner shall be contacted and informed of the discovery. If the remains are located on federal lands, the appropriate federal land managers, federal law enforcement, and federal archaeologists shall be informed. The Coroner shall determine whether the remains are archaeological or modern. For modern remains, the appropriate law enforcement official shall be contacted by the Coroner, and work shall not resume until law enforcement has released the area. If the remains are determined to be archaeological and are located on federally owned/managed lands, the appropriate Field Office Archaeologist shall be contacted. The archaeologist will initiate the proper procedures under the Archaeological Resources Protection Act of 1979 and/or Native American Graves Protection and Repatriation Act (NAGPRA). If the County Coroner determines that the remains are Native American, and they are not located on federally owned/managed lands, the Coroner shall contact by telephone within 24 hours the Native American Heritage Commission (NAHC). The NAHC will immediately notify the person it believes to be the most likely descendent of the remains. The most likely descendent has 48 hours to make recommendations to the

landowner for treatment or disposition of the human remains. If the descendent does not make recommendations within 48 hours, the landowner shall reinter the remains in an area of the property secure from further disturbance. If the landowner does not accept the descendant's recommendations, the owner or the descendent may request mediation by the NAHC. The activity that resulted in the discovery of human remains may resume at any time that a written, binding agreement is executed between the BLM, lineal descendants, and/or the federally recognized affiliated Indian Tribe(s) that adopts a recovery plan for the excavation or removal of the human remains, funerary objects, sacred objects, or objects of cultural patrimony following 43 CFR 10.3(b)(1) of these regulations. The disposition of all human remains and NAGPRA items shall be carried out following 43 CFR 10.6.

c) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant Impact with Mitigation Incorporated. Grading and tower raising activities associated with the proposed project have the potential to negatively impact surficial or subsurficial paleontological resources in geological units that are conducive to the preservation of fossils. These impacts vary depending upon the depth and lateral extent of ground disturbance and the density and uniformity of fossil distribution in a given rock unit. Direct impacts include destruction of paleontological resources due to breakage, fragmentation, and/or removal from the geological context in which they are contained through activities such as minor road grading or movement of heavy equipment on unpaved roads that disturb only the ground surface, which may result in impacts to surface fossils due to crushing and fragmentation. Activities such as excavation and scraping of the ground surface that impact both the surface and subsurface geology may result in damage or destruction of fossils located on the surface and preserved in subsurface sediments. Important, irretrievable scientific data of an educational and scientific resource can be lost and represents a significant adverse environmental impact.

The APE is underlain by geological units composed of igneous, metamorphic, and sedimentary rocks and sediments ranging in age from the early Precambrian (>541 million years ago (mya)) to recent. Of the 72 work areas in the APE, a total of 55 contain geologic formations with very low and low potential to yield paleontological resources (Potential Fossil Yield Classification (PFYC) Classes 1 and 2) and do not require any additional paleontological work. Fifteen work areas have moderate likelihood of encountering paleontological resources (PFYC 3). The remaining two work areas within the APE contain geologic formations with high paleontological potential (PFYC Class 4). Work areas identified as paleontologically sensitive (i.e., PFYC 3 or greater) are summarized in Table 3.5-3 below.

Table 3.5-3
Geology, Excavation Depths, or Work Areas with PFYC Classes 3 and Greater

Work Area	Mapped Surficial Geological Unit (Map Unit)	Geological Period (Approximate Age)	Excavation Depth (ft.)	PFYC Class
MVL1 158-6	Quaternary younger alluvium, elevated; Quaternary younger wash; Quaternary intermediate alluvium	Recent (<11,000 years ago)	3.8	3-Moderate
MVL1 159-1	Quaternary younger alluvium, elevated, Quaternary younger wash, Quaternary intermediate alluvium, elevated	Pleistocene (2.6 mya)- Recent (<11,000 years ago)	2.3	3-Moderate
MVL1 150-4	Quaternary younger alluvium, Quaternary intermediate alluvium, and Quaternary younger alluvium (Qia+Qya)	Pleistocene (2.6 mya) to Recent (<11,000 years ago)	2	3-Moderate
MVL1 150-3	Quaternary younger alluvium, Quaternary intermediate alluvium and Quaternary younger alluvium (Qia+Qya)	Pleistocene (2.6 mya) to Recent (<11,000 years ago)	3	3-Moderate
MVL1 155-5	Quaternary hillslope alluvium	Pleistocene to Holocene (2.6 mya- recent)	5.4	3-Moderate
MCV1 125-6	Quaternary alluvium	Recent (<11,000 years ago)	-	3b-Moderate (unknown)**
MCV1 125-5	Quaternary alluvium	Recent (<11,000 years ago)	-	3b-Moderate (unknown)**
MCV1 120-1	Quaternary older fanglomerate and gravel (Qof)	Pleistocene (2.6 mya- 11,000 years ago)	0	3b-Moderate (unknown)
MVL1 129-4	Quaternary alluvium and Plio-Pleistocene non-marine	Pliocene to Recent (5.3 mya-recent)	2.5	3-Moderate
MCV2 104-5	Barstow Formation (Ta, Tav)	Middle Miocene (13-16 mya)	3	4a-High
MCV2 103-3	Quaternary alluvium (Qal) and Plio-Pleistocene non-marine (Qp)	Holocene (<11,000 years ago) and Pliocene to Pleistocene (5.3 mya- 11,000 years ago)	3.2	3-Moderate
MCV2 100-5	Volcanic fanglomerate (QTg)	Tertiary (66.0 to 2.6 mya)	1.75	3b-Moderate (unknown)
MCV2 97-5	Gravel Fanglomerate (QTcg)	Tertiary (66- 2.6 mya)	1.7	3b-Moderate (unknown)
MCV2 97-1	Plio-Pleistocene non-marine	Pliocene to Pleistocene (5.3 mya-11,000 years ago)	2.25	3-Moderate
MCV1 92-4	Barstow Fm. (Tcl)	Middle Miocene (13-16 mya)	2	4a-High
MCV2 93-4	Quaternary alluvium (Qa), Plio-Pleistocene non-marine (QP) Tertiary non-marine (Tc)	Tertiary (66 mya)- Holocene (<11,000 years ago)	4.8	3-Moderate

Table 3.5-3
Geology, Excavation Depths, or Work Areas with PFYC Classes 3 and Greater

Work Area	Mapped Surficial Geological Unit (Map Unit)	Geological Period (Approximate Age)	Excavation Depth (ft.)	PFYC Class
MCV2 90-4	Quaternary alluvium (Qal) Quaternary colluvium (Qc) Plio-Pleistocene non-marine (QP)	Pleistocene-recent (2.6 mya-recent)	4	3- Moderate

* See Appendix H

** Due to the anticipated deep excavations for footing replacement for tower raising, the buried portion of the vertical APE is assigned a PFYC class of 3b-Moderate (Unknown), but is considered low (2) on the surface.

As a result of the paleontological resources research and surveys conducted in connection with the proposed project, it has been determined that of the 72 work areas, just over half (39; approximately 54%) of the project work areas are underlain all, or in part, by Pleistocene (approximately 2.6 mya-11,000 years ago) to Holocene (<11,000 years ago) terrestrial sedimentary units with PFYC class of 2 (low). These locations are listed in Table 5 of Appendix H. Igneous and metamorphic rocks found at 16 (approximately 22%) of the 72 work areas (MCV2 152-2; MVL1 168-3; MCV1 151-4, 149-2, and 145-3; MVL1 111-1 and 110-5; MCV1 85-2, 84-5, 73-6, 62-3, 61-2, 61-1, 60-5, 59-4, and 57-5) have no potential for yielding significant paleontological resources and are thus assigned a PFYC class of 1 (very low).

Pleistocene and older sedimentary geological units within the Mojave and northern Colorado Deserts have a history of producing significant paleontological resources including frogs, lizards, snakes, tortoises, birds, horses, camels, proboscideans, rodents, lagomorphs (rabbits), and carnivores. According to Appendix H, it is possible that some of the Pleistocene geological units mapped within the Mojave Desert contain undocumented surficial and buried paleosols that are conducive to fossil preservation. Within the project APE, 15 (approximately 21%) of the 72 work areas are composed of Quaternary older fanglomerate and gravel, Quaternary volcanic gravel, volcanic and gravel fanglomerates, Quaternary intermediate alluvium (elevated), Quaternary hillslope alluvium, Quaternary colluvium, Tertiary non-marine, and Plio-Pleistocene non-marine geological units: (MVL1 159-1, 158-6, and 155-5; MCV1 125-6, 125-5, and 120-1; MVL1 150-4, 150-3, and 129-4; MCV2 103-3, 100-5, 97-5, 97-1, 93-4, and 90-4). These units are considered to have a PFYC class of 3 (moderate) (see Appendix H, Table 5, for full list of work areas).

The Barstow Formation, for which the Barstovian Land Mammal Age is named, is a middle Miocene (approximately 13-16 mya), terrestrial deposit that is known for yielding a diverse assemblage of fossil mammals (Pagnac 2009; URS 2013b). The Barstow Formation is mapped at work areas MCV2 104-5 and MCV1 92-4 (approximately 3%) and are assigned a PFYC class of 4 (high). No paleontological resources were observed during the field surveys.

Proposed construction activities at 17 identified work areas along the Path 46 transmission line alignment (see Table 3.5-3) have a moderate to high likelihood of encountering surficial or subsurficial paleontological resources. Protective measure would be implemented at work area MCV1 120-1 and project-related ground disturbance will be minimal. As such, no paleontological monitoring is recommended for this location. At work areas MCV1 125-5 and 125-6, surficial sediments are not paleontologically sensitive however; the subsurficial geologic unit was assessed as having moderate potential for paleontological resources.

Due to the sensitivity of surficial or subsurficial paleontological resources in geological units underlying work areas identified in Table 3.5-3, proposed grading and/or tower raising activities may result in potentially significant impacts to paleontological resources. Therefore, MM-CUL-5 through MM-CUL-7 have been included and would be implemented during construction to ensure that potentially significant impacts to paleontological resources are reduced to less than significant level.

MM-CUL-5 A Qualified Principal Investigator (Qualified Professional Paleontologist or Project Paleontologist) shall be retained to oversee and direct the paleontological aspects of this project. The Bureau of Land Management (BLM) defines a Principal Investigator as the one listed on the Paleontological Resources Use Permit (BLM 2008). BLM (1998) outlines the qualifications required to obtain a Paleontological Resources Use Permit.

MM-CUL-6 Full-time paleontological monitoring shall be required in all portions of the area of potential effects (APE) containing geological formations with associated Potential Fossil Yield Classification (PFYC) Class 4a. These work areas are listed in Table 3.5-3. Full-time paleontological monitoring shall also occur during initial excavation in portions of the APE containing geological formations with associated PFYC Classes 3a and 3b (with the exception of work areas McCullough-Victorville (MCV) Line 1_120-1, 125-5, and 125-6) to determine if the subsurface geology is conducive to the preservation of fossils. Because protective measure will be implemented at work area MCV1 120-1 and project-related ground disturbance will be minimal, no paleontological monitoring is recommended for this location. At work areas MCV1 125-5 and 125-6, surficial sediments are not paleontologically sensitive however, full-time monitoring shall occur below a depth of 10 feet below surface.

For work areas with PFYC Classes 3a and 3b, after the initial monitoring is conducted, if the Principal Investigator determines the subsurface sediments to be unsuitable for the preservation of significant paleontological resources, he or she may reduce or discontinue paleontological monitoring of the work area, in consultation with the Bureau of Land Management (BLM).

If a paleontological discovery is made during project excavations, the BLM and Los Angeles Department of Water and Power shall be notified and all project ground-disturbing work shall be redirected until the find is assessed and/or salvaged. If appropriate sedimentological indicators (carbonate-rich paleosols, clay clasts, mudstones and/or, plant debris) are observed, the paleontological monitor shall test the sediment for microvertebrates using 20 or 30 mesh screens. If microvertebrate remains are found, the monitor shall be prepared with five gallon buckets to collect samples for screening on or offsite. All identifiable fossils collected during the implementation of the proposed Project shall be accessioned into the Western Science Center in Hemet, California, which is the designated BLM approved fossil repository under BLM Permit # CA-15-07P.

MM-CUL-7 In the event construction or other project personnel discover any potential fossils during construction, project operation and maintenance, or decommissioning and a paleontological monitor designated for the project is not onsite, all project ground-disturbing work shall halt, the fossils shall be left undisturbed, an exclusion zone shall be set up around the find consisting of flagging or other brightly colored tape to prevent damage, and the Bureau of Land Management (BLM) and Los Angeles Department of Water and Power (LADWP) shall be notified immediately. Further determinations of significance and procedures shall be made at that time by the BLM, in consultation with the Principal Investigator and LADWP. All fossils shall be recorded using BLM guidelines (BLM 2007, 2008).

d) Would the project disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact with Mitigation Incorporated. The Class III archaeological surveys prepared in support of the proposed project (Confidential Appendix F) did not identify known cemeteries, cremation sites, or human remains within the project APE. The resulting potential for the inadvertent discovery of Native American or other human remains during subsurface construction activities is considered remote. However, any unlikely effect to unknown human remains would be potentially significant. MM-CUL-4 has been provided in the remote likelihood that unknown human remains are encountered during construction and would reduce potential impacts to a less than significant level.

References

None.

3.6 Geology and Soils

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

Existing Setting

The proposed project is located in the Mojave Desert geomorphic province, which is characterized by isolated mountain ranges separated by expanses of desert plains. It has an interior enclosed drainage and many playas. There are two important fault trends that control topography: a prominent northwest-southeast trend and a secondary east-west trend (California Geological Survey 2002). The proposed work areas are underlain by a variety of soil types, including

Mesozoic volcanic rock, quaternary alluvium, Mesozoic granitic rocks, Plio-Pleistocene and Pliocene loosely consolidated deposits, and Precambrian rocks (U.S. Geological Survey 2015).

a) Would the project 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.

Less Than Significant Impact. Several of the proposed work areas are located near an Alquist-Priolo Earthquake Fault Zone as shown on the most recent Alquist-Priolo Earthquake Fault Zone Maps (California Geological Survey 2015). The proposed project would not involve the construction of any habitable structures, nor would the proposed project increase the population in the project area. Construction activities would be temporary, lasting for up to 18 months and requiring approximately 12 construction personnel working sequentially along the transmission line corridor. Operational activities along the transmission lines would not change under the proposed project. The only permanent structures that would be constructed under the proposed project are the footings for the two existing transmission towers that would be raised. There are no known faults underneath these transmission towers or immediately adjacent to them (U.S. Geological Survey 2015). Furthermore, the footings and raised towers would be designed and installed pursuant to existing federal, state, and County engineering and design standards related to seismic criteria. Due to the infrequency of human presence in the proposed work areas and due to the minor and temporary nature of the construction activities, the proposed project would not substantially expose people or structures to adverse impacts related to fault rupture, and impacts would be less than significant. For these reasons, the proposed project would not increase the risk of loss, injury, or death involving fault rupture within the project area, and impacts would be less than significant.

ii) Strong seismic ground shaking?

Less Than Significant Impact. The proposed project is located within the seismically active Southern California region and, like all locations within the region, is subject to strong seismic ground shaking. While construction workers would have the potential to be exposed to seismic ground shaking during the construction processes, the risk of loss, injury, or death would not be adverse relative to other areas in Southern California. The proposed project would not involve construction of any habitable structures, nor would it change the use of any existing structures resulting in an increase of occupants who may be exposed to fault rupture. For the tower raising activities, the footings and raised towers would be designed and installed pursuant to existing federal, state, and County engineering and

design standards related to seismic criteria, which would reduce potential damage to the raised transmission towers from ground movement. For these reasons, the proposed project would not increase the risk of loss, injury, or death involving seismic activity within the project area, and impacts would be less than significant.

iii) Seismic-related ground failure, including liquefaction?

No Impact. Liquefaction is the process in which saturated silty to cohesionless soils below the groundwater table temporarily lose strength during strong ground shaking as a consequence of increased pore pressure during conditions such as those caused by an earthquake. Earthquake waves cause water pressure to increase in the sediment and the sand grains to lose contact with each other, leading the sediment to lose strength and behave like a liquid. The proposed project consists of 70 work areas where minimal amounts of grading would occur. The average depth of excavation would be approximately 2.4 feet. Many of the work areas are located in areas that are not susceptible to liquefaction (County of San Bernardino 2007). In the event that a work area were to be located on potentially liquefiable soils, the grading activities would not expose people or structures to risk related to liquefaction. No habitable structures are proposed, and the project would not increase the population in the project area. The proposed project also includes two work areas where existing transmission towers would be raised, and new footings for the transmission towers would be installed. The footings and raised towers would be designed and installed pursuant to existing federal, state, and County engineering and design standards related to seismic criteria, which would reduce potential damage to the raised transmission towers from ground movement, including movement from liquefaction. For these reasons, the proposed grading activities and tower raising activities would not substantially increase the susceptibility of people or structures to risk of loss, injury, or death related to liquefaction. No impact would occur.

iv) Landslides?

Less Than Significant Impact. Landslides are characterized as deep-seated ground failures, in which a large section of a slope detaches and slides downhill. Many of the proposed work site are located on undeveloped flat land, which would not have the potential to be impacted by a landslide. The two tower raising locations are located on flat agricultural land that would also not be expected to experience land sliding. Although some of the work sites may be located adjacent to slopes that could become unstable during an earthquake, the amount of grading per work site would be minimal and the risk to construction workers from landslides would be negligible. Given the relatively small scale of these planned excavations (the total volume of excavated soils would be 10,811 cubic yards, which equates to an average of 160 cubic yards of material per grading area), it is unlikely that landslide movements would be generated by excavation associated with the proposed project.

Furthermore, the proposed project would not include construction of any habitable structures, nor would it increase the population in the project area. As such, the proposed project would not result in changes to structures or population levels susceptible to risk from landslide. For these reasons, impacts would be less than significant.

b) Would the project result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. The proposed project involves grading activities at 68 sites within the Mojave Desert, barricade installation at 2 locations, and tower raising activities at 2 locations. The tower raising sites are located in an agricultural field. The proposed project would result in approximately 7 acres of grading across the 68 grading sites. The grading activities would have the potential to contribute to erosion or loss of topsoil at the work sites. However, there are a variety of state and federal regulations that prevent erosion and loss of topsoil during construction that would be implemented for the proposed project. This would include preparation of and compliance with a SWPPP, which would include erosion control measures. Furthermore, in order to mitigate impacts to biological resources, LADWP's construction contractor would be required to salvage and preserve topsoil during the grading activities and then replace the topsoil once grading is completed (see Section 3.4 and 3.5). While this requirement is intended to preserve the viability of the desert topsoil for biological purposes, it would also minimize the amount of topsoil loss that would occur. During operation, no changes to maintenance or operational activities would occur relative to existing conditions; as such, once construction is complete, no change in soil erosion or loss of topsoil attributable to the proposed project would occur. Upon implementing the requirement to salvage topsoil during construction and upon compliance and with state and federal regulations involving stormwater pollution, impacts related to soil erosion and topsoil loss would be less than significant.

c) Would the project 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?

Less Than Significant Impact. The proposed project involves movement of earth materials with the potential to trigger geological instability. The project would also involve a construction crew of approximately 10 workers moving sequentially along the transmission line corridor. The construction crew would have the potential to be exposed to geologic instability during the construction process. After construction has been completed, operational and maintenance activities associated with the transmission lines would be the same as those that currently exist. As such, potential impacts would be limited to the 6- to 12-month construction period.

Refer to Section 3.6(a)(ii) and Section 3.6(a)(iv) for a discussion of impacts related to landslides and liquefaction. Lateral spreading is a type of liquefaction-induced ground failure occurring on mildly sloping ground. Lateral spreading primarily involves side-to-side movement of earth materials due to ground shaking, and is evidenced by near-vertical cracks to predominantly horizontal movement of the soil mass involved. As discussed in

Section 3.6(a)(iv), most of the work areas are not located in areas that are susceptible to liquefaction. As such, lateral spreading would be unlikely to occur in the proposed work areas. Subsidence is the lowering of surface elevation due to changes occurring underground, such as the extraction of large amounts of groundwater, oil, or gas. When groundwater is extracted from aquifers at a rate that exceeds the rate of replenishment, overdraft occurs, which can lead to subsidence. The proposed project would involve excavating approximately 10,811 cubic yards of soil across 68 work areas, raising 2 transmission towers, and installing barricades at 2 locations. These activities would not involve removal of groundwater, oil, or gas. As such, the proposed project would not result in on- or off-site subsidence. Collapsible soils consist of loose, dry materials that collapse and compact under the addition of water or excessive loading. Collapsible soils are prevalent throughout the southwestern United States, specifically in areas of young alluvial fans. Several work sites are located in areas underlain by quaternary alluvium (U.S. Geological Survey 2015). Soil collapse occurs when the land surface is saturated at depths greater than those reached by typical rain events. While collapse has the potential to occur within or near the project area, the proposed project would not be expected to exacerbate or trigger collapse, as it would involve minor grading activities and the raising of two existing transmission towers.

In the event that geologic instability were to occur in the project area, the proposed project would not significantly increase the number of people who could be affected, nor would it involve the construction of any habitable structures with the potential to be affected by geologic instability. During construction, approximately 10 workers would be present in the project area for up to 18 months, with approximately 24 workers required for the tower raising activities. The footings and raised towers would be designed and installed pursuant to existing federal, state, and County engineering and design standards related to seismic criteria, which would minimize the potential for the raised transmission towers to be damaged by geologic instability. Because operational activities would remain the same as those that currently occur in the project area, the proposed project would not expose additional people or structures to hazards related to geologic instability. For these reasons, impacts would be less than significant.

d) Would the project 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?

Less Than Significant Impact. Expansive soils are clay-based soils that tend to expand (increase in volume) as they absorb water, and shrink (lessen in volume) as water is drawn away. If soils consist of expansive clays, foundation movement and/or damage can occur if wetting and drying of the clay does not occur uniformly across the entire area. The proposed project would involve minor grading activities at 68 work sites in undeveloped areas of the Mojave Desert, barricade installation activities at two sites, and the raising of two existing transmission towers in an agricultural field. The project area is generally underlain by quaternary alluvium, volcanic rock, granitic rock, and sandstone, shale, and gravel deposits (U.S. Geological Survey 2015). In the event that soil expansion were to occur in the project area, it would not create substantial risks to life or property. The proposed project would not involve construction of habitable structures, and the presence of

on-site workers would be temporary. The footings and raised towers for the two tower raising sites would be designed and installed pursuant to existing federal, state, and County engineering and design standards related to seismic criteria, which would reduce potential damage to the raised transmission towers from ground movement, including movement from expansive soils. Therefore, the proposed project would not create a substantial risk to life or property resulting from expansive soils, and the impact would be less than significant.

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. The proposed project involves minor grading activities along existing transmission lines in the Mojave Desert and raising two existing transmission towers. No septic tanks or alternative wastewater disposal systems are proposed. Therefore, no impact associated with the use of such systems would occur.

References

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3.7 Greenhouse Gas Emissions

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☒	☐

Existing Setting

Climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind, lasting for an extended period (decades or longer). Gases that trap heat in the atmosphere are often called greenhouse gases (GHGs). The greenhouse effect traps heat in the troposphere through a threefold process: short-wave radiation emitted by the Sun is absorbed by the Earth; the Earth emits a portion of this energy in the form of long-wave radiation; and GHGs in the upper atmosphere absorb this long-wave radiation and emit it into space and back toward the Earth. This "trapping" of the long-wave (thermal) radiation emitted back toward the Earth is the underlying process of the greenhouse effect.

The greenhouse effect is a natural process that contributes to regulating the Earth's temperature. Without it, the temperature of the Earth would be about 0°F (−18°C) instead of its current 57°F (14°C). Global climate change concerns are focused on whether human activities are leading to an enhancement of the greenhouse effect.

Principal GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), ozone (O_3), and water vapor. Some GHGs, such as CO_2, CH_4, and N_2O, can occur naturally and are emitted into to the atmosphere through natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Human-caused GHGs, which have a much greater heat-absorption potential than CO_2, include fluorinated gases, such as hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride, which are associated with certain industrial products and processes (Climate Action Team 2006).

The effect each GHG has on climate change is measured as a combination of the mass of its emissions and the potential of a gas or aerosol to trap heat in the atmosphere, known as its global warming potential (GWP). The GWP varies between GHGs; for example, the GWP of CH_4 is 21, and the GWP of N_2O is 310. Total GHG emissions are expressed as a function of how much warming would be caused by the same mass of CO_2. Thus, GHG gas emissions are typically measured in terms of pounds or tons of CO_2 equivalent (CO_2E).[2]

Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. There are currently no established thresholds for assessing whether the GHG emissions of a project would be considered a cumulatively considerable

[2] The CO_2E for a gas is derived by multiplying the mass of the gas by the associated GWP, such that metric tons of CO_2E = (metric tons of a GHG) × (GWP of the GHG). CalEEMod assumes that the GWP for CH_4 is 21, which means that emissions of 1 metric ton of CH_4 are equivalent to emissions of 21 metric tons of CO_2, and the GWP for N_2O is 310, based on the Intergovernmental Panel on Climate Change (IPCC) Second Assessment Report. The IPCC has released subsequent Assessment Reports with updated GWPs, and CARB reporting and other statewide documents are beginning to transition to the use of the GWPs in the IPCC Fourth Assessment Report. Furthermore, the use of the different GWPs will not substantially change the overall project GHG emissions, which are primarily CO_2. As such, it is appropriate to use the hardwired GWP values in CalEEMod from the IPCC Second Assessment Report.

contribution to global climate change; however, Federal regulations require mandatory reporting of GHG emissions if annual emissions are greater than 25,000 metric tons CO_2E per year (MT CO_2E/year). Projects with GHG emissions greater than 100,000 MT CO_2E/year are considered a major source under the Prevention of Significant Deterioration program of the Clean Air Act.

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant Impact. GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective (CAPCOA 2008). This approach is consistent with that recommended by the California Natural Resource Agency, which noted in its Public Notice for the proposed CEQA amendments that evidence indicates, in most cases, that the impact of GHG emissions should be considered in the context of a cumulative impact, rather than a project-level impact (CNRA 2009a). Similarly, the *Final Statement of Reasons for Regulatory Action* for amendments to the CEQA Guidelines confirms that an environmental impact report or other environmental document must analyze the incremental contribution of a project to GHG levels and determine whether those emissions are cumulatively considerable (CNRA 2009b).

The CEQA Guidelines provide for streamlining the environmental review of project-level analysis of GHG emissions from a programmatic document, such as a GHG reduction plan, and allow for a finding of less than significant where a project is determined to be consistent with a local reduction plan (CEQA Guidelines, Title 14 California Code of Regulations Section 15183.5). The CEQA Guidelines provide that the environmental analysis of specific projects may be tiered from a programmatic GHG plan that substantially lessens the cumulative effect of GHG emissions. If a public agency adopts such a programmatic GHG Plan, the environmental review of subsequent projects may be streamlined. A specific project's incremental contribution of GHG emissions will not be considered cumulatively significant if the project complies with the adopted GHG plan.

County of San Bernardino GHG Reduction Plan

The County of San Bernardino developed and adopted a GHG Plan in September 2011, which presents a comprehensive set of actions to reduce its internal and external GHG emissions to 15% below current levels by 2020, consistent with the Assembly Bill (AB) 32 Scoping Plan. The County of San Bernardino's GHG Reduction Plan was prepared to accomplish the following specific objectives (County of San Bernardino 2011):

- Reduce emissions from activities over which the County has jurisdictional and operational control consistent with the target reductions of the AB 32 Scoping Plan;

- Provide estimated GHG reductions associated with the County of San Bernardino's existing sustainability efforts and integrate the County's sustainability efforts into the discrete actions of the GHG Plan;
- Provide a list of discrete actions that will reduce GHG emissions; and
- Approve a GHG Plan that satisfies the requirements of Section 15183.5 of the CEQA Guidelines so that compliance with the GHG Plan can be used in appropriate situations to determine the significance of a project's impacts relating to GHG emissions, thus providing streamlined CEQA analysis of future projects that are consistent with the approved GHG Plan.

As described in the GHG Plan, all development projects, including those otherwise determined to be exempt from CEQA, are subject to applicable Development Code provisions, including the GHG performance standards and state requirements. With the application of the GHG performance standards, projects that are exempt from CEQA and small projects that do not exceed 3,000 MT CO2e/year are considered to be consistent with the GHG Reduction Plan and determined to have a less–than-significant individual and cumulative impact for GHG emissions (County of San Bernardino 2011). The development of this threshold implies that it should be applied to the total of a project's annual operational emissions plus its construction emissions annualized over the project life.

The GHG Reduction Plan includes goals and objectives aimed to reduce emissions generated during construction of projects. With respect to the proposed project, the GHG Reduction Plan specifies the following:

- GHG Goal TL 4: Reduce GHG emissions by regulating the idling of diesel-fueled vehicles and equipment and encouraging the use of alternative fuels and transportation technologies.
- Objective GHG TL 4.1: Reduce the exhaust emissions of diesel-fueled vehicles and equipment.

Other reduction strategies include an anti-idling enforcement policy, whereby the County of San Bernardino requires that diesel-fueled vehicles and off-road equipment shall not be left idling on site for periods in excess of 5 minutes. The County of San Bernardino will also continue to implement its diesel exhaust emissions control measures, which extend beyond the idling restriction described above in the anti-idling enforcement policy. The County of San Bernardino's diesel exhaust control measures described in Development Code (County of San Bernardino 2015) Section 83.01.040 apply to all discretionary land use projects approved by the County of San Bernardino on or after January 15, 2009. These measures include, but are not limited to:

Off-Road Diesel Vehicle/Equipment Operations. All business establishments and contractors that use off-road diesel vehicle/equipment as part of their normal business operations shall adhere to the following measures during their operations in order to reduce diesel particulate matter emissions from diesel-fueled engines:

- Use reformulated ultra-low-sulfur diesel fuel in equipment and use equipment certified by the EPA or that pre-dates EPA regulations.

- Maintain engines in good working order to reduce emissions.
- Signs shall be posted requiring vehicle drivers to turn off engines when parked.
- Any requirements or standards subsequently adopted by the South Coast Air Quality Management District, the Mojave Desert Air Quality Management District or CARB.
- Provide temporary traffic control during all phases of construction.
- On-site electrical power connections shall be provided for electric construction tools to eliminate the need for diesel-powered electric generators, where feasible.
- Maintain construction equipment engines in good working order to reduce emissions. The developer shall have each contractor certify that all construction equipment is properly serviced and maintained in good operating condition.
- Contractors shall use ultra-low sulfur diesel fuel for stationary construction equipment as required by Air Quality Management District Rules 431.1 and 431.2 to reduce the release of undesirable emissions.
- Substitute electric and gasoline-powered equipment for diesel-powered equipment, where feasible.

Proposed project GHG Emissions. CalEEMod Version 2013.2.2 was used to calculate the annual GHG emissions based on the construction scenario described in Section 3.2, Air Quality. On-site sources of GHG emissions include off-road equipment and off-site sources include on-road vehicles (haul trucks, vendor trucks, and worker vehicles). Table 3.7-1, Estimated Annual Construction Greenhouse Gas Emissions, presents construction emissions for the proposed project from on-site and off-site emission sources.

Table 3.7-1
Estimated Annual Construction Greenhouse Gas Emissions

	MT CO_2	MT CH_4	MT N_2O	MT CO_2E
Estimated Annual GHG Emissions	461.29	0.11	0.00	463.58
Annualized Emissions over 30 Years	—	—	—	15.45

Notes: See Appendix D1 for detailed results.
MT CO_2 = metric tons carbon dioxide; MT CH_4 – metric tons methane; MT N2O – metric tons nitrous oxide; MT CO2E – metric tons carbon dioxide equivalent

As shown in Table 3.7-1, the estimated total GHG emissions during construction of the proposed project would be approximately 464 MT CO_2E. Total emissions annualized over 30 years—the estimated lifespan for a public infrastructure project—would be approximately 16 MT CO_2E/year. In addition, GHG emissions generated during construction of the proposed project would be short-term in nature, lasting only for the duration of the construction period, and they would not represent a long-term source of GHG emissions. In regards to long-term operations, the proposed project would not change the routine inspection and maintenance of the existing transmission lines or result in a net increase in GHG emissions. As shown, the

total annual emissions would not exceed the GHG significance threshold of 3,000 MT CO_2E/year. Because the proposed project's GHG emissions would not result in a cumulatively considerable contribution, the project would result in a cumulative impact in terms of climate change that is less than significant.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant Impact. As discussed in response 3.7(a) and as stated in the San Bernardino County Final GHG Reduction Plan (2011), with the application of the GHG performance standards, small projects that do not exceed 3,000 MT CO_2E/year are considered to be consistent with the GHG Plan and determined to have a less-than-significant individual and cumulative impact for GHG emissions.

As depicted in Table 3.7-1, construction of the proposed project would not exceed the 3,000 MT CO_2E/year threshold adopted by San Bernardino County. Based on the guidance presented in the County of San Bernardino's GHG Reduction Plan, the proposed project would be consistent with the applicable plan adopted to reduce GHG emissions; therefore, the project would result in a less-than-significant cumulative impact to GHG emissions and climate change.

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3.8 Hazards and Hazardous Materials

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 that 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?	☐	☐	☒	☐
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

Existing Setting

Project Site Conditions

The proposed project would be located within an existing utility corridor extending through primarily vacant areas of the Mojave Desert. As such, existing hazards are limited to natural hazards typical of the desert environment, such as flooding. Typical operation and maintenance practices of transmission lines may result in the release of small amounts of solvents, pesticides, paint products, motor and lubricating oils, and cleaners in the corridor. However, substantial quantities of hazardous materials and wastes are not currently generated, used, or transported as part of existing operations.

Regulatory Database

A regulatory database search was conducted of the project vicinity and included a review of databases on the following websites: California Department of Toxic Substances Control's EnviroStor (DTSC 2015) and the State Water Resources Control Board's (SWRCB) Geotracker (SWRCB 2015). The review examined the affected portions of the utility corridor and immediately surrounding areas. Several properties within the project vicinity are listed on these hazardous waste sites lists. However, all of the work areas appear to fall outside of any listed hazardous waste sites.

Schools

The majority of the proposed work areas are located in vacant areas of the Mojave Desert and on BLM land. The nearest school to the project area is the Silver Valley Unified School District Alternative Education Center, located approximately 2 miles northwest of the grading sites near MVL1_150-3, MVL1_150-4, and MCV1_129-1 (California Department of Education 2014).

Airports

The closest public airport is the Barstow-Daggett Airport, located within 2 miles of work sites MVL1_147-4, MVL1_147-5, MCV1_125-6, and MCV1_125-5 (Caltrans 2012). These four work sites are just outside the planning area boundaries of the Airport Comprehensive Land Use Plan for the Barstow-Daggett Airport (Barstow-Daggett ACLUP) (County of San Bernardino 1992). A helicopter landing strip within the Fort Irwin Military Reservation is located approximately 2 miles from work sites MCV1_88-1, MCV1_88-2, and MCV1_87-5. Portions of the project area are within Airport Safety Review Area 4 (AR4). AR4 includes low-altitude/high speed corridors designated for military aircraft use (County of San Bernardino 2014).

Emergency Evacuation

The work areas are located in relatively remote locations that would be primarily accessed by existing access roads, which are not major evacuation or emergency routes. I-15 serves as a major east-west transportation corridor for the region and is critical to emergency operations.

Wildland Fires

Wildland fire is not likely to occur in the project area, as desert vegetation is typically characterized by low fire frequency (BLM 1980).

a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less Than Significant Impact. Implementation of the proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Construction activities would be temporary in nature and would involve the limited transportation, storage, usage, and disposal of hazardous materials. Such hazardous materials could include on-site fueling/servicing of construction equipment, and the transport of fuels, lubricating fluids, and solvents. These types of materials are not acutely hazardous, and all storage, handling, and disposal of these materials are regulated by the California Department of Toxic Substances Control, the U.S. EPA, the Occupational Safety & Health Administration, and the San Bernardino County Fire Department. The transport, use, and disposal of construction-related hazardous materials would occur in conformance with applicable federal, state, and local regulations governing such activities. Therefore, the short-term construction impact would be less than significant.

Once construction is complete, the operational activities along the transmission lines would not change upon implementation of the proposed project. As such, no operational impact related to the routine use or transport of hazardous materials would occur as a result of the proposed project.

b) Would the project 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?

Less Than Significant Impact. The proposed project construction would not create a significant hazard to the public or the environment through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. As discussed in Section 3.9(a), construction activities for both phases of the proposed project may involve limited transport, storage, use, or disposal of some hazardous materials, such as on-site fueling/servicing of construction equipment, and the transport of fuels, lubricating fluids, and solvents. There is also the potential that areas used for agriculture or areas that have been used for agriculture in past would contain residual pesticides in the soil that is being excavated. However, there are only two work areas currently being used for agriculture (MCV1_125-5 and MCV1_125-6). The majority of the project area is located in undeveloped areas of the Mojave Desert. As such, the potential for encountering pesticides of high concentration is low. Furthermore, these types of materials that would be used or that would have the potential to be encountered (i.e., pesticides) are not acutely hazardous.

The heavy equipment used for grading would be operated using oil, fuel, lubricating grease, coolants and hydraulic fluids. In the event that hazardous or regulated materials were spilled, direct impacts could occur related to the release of hazardous materials into the environment, resulting in the exposure of workers to the materials. Such impacts would generally be temporary, due to the short-term nature of construction. Any hazardous substance spills would be cleaned immediately and any resulting waste would be transferred off site in accordance with all applicable local, state, and federal regulations. Contractors would maintain spill kits on site for use in case of a spill. Measures would be taken to control the spill, and the BLM would be notified as required. As such, in the unlikely event that hazardous materials are spilled during construction, impacts would be temporary, minor, and localized, because such spills would be required to be properly controlled and safety removed in accordance with existing regulations.

Compliance with existing federal, state, and local regulations would ensure that construction impacts related to reasonably foreseeable upset and accident conditions involving the release of hazardous materials would be less than significant.

Once construction is complete, the operational activities along the transmission lines would not change upon implementation of the proposed project. As such, no operational impact related to the release of hazardous materials would occur as a result of the proposed project.

c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact. There are no schools within 0.25 mile of the proposed work areas (California Department of Education 2014). The majority of the proposed work areas are located in undeveloped areas of the Mojave Desert and on BLM land, so it is unlikely that a school would be proposed near the project area in the future. The proposed project would not alter any land uses or introduce any new sources of hazardous materials. Furthermore, the activities associated with the proposed ground-to-conductor activities would involve hazardous materials typical of construction processes and therefore would not introduce acutely hazardous materials into the project area. As such, no impact would occur as a result of the proposed project.

d) Would the project be located on a site that 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?

Less Than Significant Impact. Several properties within the project vicinity are listed on hazardous waste sites lists compiled pursuant to Government Code Section 65962.5, such as the RWQCB GeoTracker site and the Department of Toxic Substances Control's EnviroStor site. Furthermore, all of the proposed sites are located within an existing utility corridor that is primarily within BLM land. As such, typical hazardous waste generating uses such as gas stations and manufacturing would not occur within the project area. Additionally,

construction activities would not require deep excavations. This would further decrease the likelihood for hazardous materials sites, such as underground storage tanks, to be encountered during ground-to-conductor clearance activities. Furthermore, construction activities would occur primarily in areas that are naturally vegetated, with prior on-site activities limited to those required to construct and maintain the transmission infrastructure. For these reasons, it is not anticipated that any hazardous materials sites would be encountered or disturbed during the proposed ground-to-conductor clearance activities. In the unlikely event that hazardous wastes are uncovered, workers would be required to adhere to existing state and federal requirements pertaining to safe handling and proper disposal of such wastes. As such, impacts would be less than significant.

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?

Less Than Significant Impact. The Barstow-Daggett Airport is within 2 miles of work sites MVL1_147-4, MVL1_147-5, MCV1_125-6, and MCV1_125-5 (Caltrans 2012). These four work sites are just outside the planning area boundaries of the Barstow-Daggett ACLUP (County of San Bernardino 1992). A helicopter landing strip within the Fort Irwin Military Reservation is located approximately 2 miles from work sites MCV1_88-1, MCV1_88-2, and MCV1_87-5. Portions of the project area are within Airport Safety Review Area 4 (AR4). AR4 includes low-altitude/high speed corridors designated for military aircraft use (County of San Bernardino 2014).

At all work sites except MCV1_125-6 and MCV1_125-5, the proposed project would involve grading activities within an existing utility corridor. Such activities would not affect aircraft, as they would take place beneath and adjacent to existing transmission lines and would therefore not interfere with flight paths.

The proposed work at MCV1_125-6 and MCV1_125-5 would involve raising two existing transmission towers by approximately 20 feet. These two towers are located just north of the planning boundary of the Barstow-Daggett ACLUP (County of San Bernardino 1992). As such, the raised towers would be located outside of the Airport Safety Review Areas designated in the Barstow-Daggett ACLUP. Existing towers are 110 feet in height, and the raised towers would be a maximum of 130 feet in height above ground level (AGL). The slightly taller structures would not be anticipated to exceed the 200 feet AGL height standard established by the FAA (FAA 2007) to determine whether marking and/or lighting is required on temporary or permanent structures. As such, an airport safety hazard related to the slightly taller structures would not be anticipated.

The tower raising process would involve approximately 24 construction workers, and the grading activities would involve approximately 10 construction workers. The work crew(s) would be present on each work site for a limited period of time. While the number of workers near the Barstow-Daggett Airport or the Fort Irwin Military Reservation would temporarily increase during the proposed construction activities, the number of workers and the amount of time that they would be present on each work site would be limited. Furthermore,

the proposed project would not permanently increase the number of people who reside or work near the Barstow-Daggett Airport or the Fort Irwin Military Reservation, nor would the proposed project introduce new habitable structures or noise sensitive uses to the project area. For these reasons, the proposed project would not substantially alter airport safety hazards in the project area and impacts would be less than significant.

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?

No Impact. The proposed work sites are located within undeveloped areas of the Mojave Desert, with most work sites located on BLM land. No private airstrips are located in the vicinity of the work sites. As described under Section 3.8(e), the proposed project would not substantially alter airport safety hazards in the project area. No impact would occur.

g) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No Impact. The proposed project would be located primarily in undeveloped areas of the Mojave Desert within an existing utility corridor. While existing unpaved access roads would be used to complete the proposed project, these access roads are located within the existing utility corridor and are not identified as emergency evacuation routes. Temporary use of these access roads would not hinder emergency response or evacuation. In the event of an accident within one of the work areas, emergency vehicles would be able to use I-15 to access the work area. As such, no impact would occur.

h) Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Less Than Significant Impact. The proposed project would be located in primarily undeveloped areas of the Mojave Desert. The Vegetation Element in the CDCA Plan notes that desert vegetation is typically characterized by low fire frequency (BLM 1980). The County maps fire safety areas within the County; however, the project area is not located in a fire safety area (County of San Bernardino 2007). The proposed project would involve the temporary presence of construction workers in the project area (approximately 10 construction workers for up to 18 months, with 25 workers at the tower raising sites), who would be temporarily exposed to wildland fire, in the event that one were to occur in the project area. However, the risk would not be greater than that of other areas in Southern California. Additionally, no habitable structures are proposed, and the project would not permanently increase the population in the project area resulting in an increase of people and/or structures that would be at risk of loss, injury, or death involving wildland fire. As such, impacts would be less than significant.

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3.9 Hydrology and Water Quality

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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	☐	☐	☒	☐

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☒	☐
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☒	☐

Existing Setting

Surface Water

The project area is within the Mojave Desert, an arid area with high summer temperatures and low humidity. Annual average precipitation is approximately 5 inches per year (Western Regional Climate Center 2015). The proposed project is located within the South Lahontan RWQCB Hydrologic Basin (Region 6). According to the 2010 EPA approved 303(d) List, there are no impaired waterbodies in the vicinity of the project area (State Water Resources Control Board 2011). Surface flow in the project area comes primarily from stormwater runoff from precipitation. Numerous drainage features such as ephemeral washes and swales traverse the project area. The majority of features that appear to convey flows in the project area are eroded rills and gullies that formed as a result of lack of activity on the access roads and large, sudden rain events that acted on the friable soils (ESA 2015). The majority of these washes, swales, and other drainages are unnamed. Nearby named waterbodies include the Mojave River, located near Segment 2 and Segment 3; Red Pass Lake, located approximately 800 feet north of the grading site near MCV1_88-5 within Segment 5; and Riggs Wash, located adjacent to Segment 6 (USGS 2015).

Ground Water

The project area is underlain by multiple groundwater basins, including the Middle Mojave River Valley (Basin 6-41), Lower Mojave River Valley (Basin 6-40), and Cronise Valley (6-35) groundwater basins (Mojave Water Agency 2015). Beneficial uses for these basins include municipal, agricultural, industrial, freshwater replenishment, and aquaculture (Lahontan RWQCB 2005).

Floodplains

Several work sites, particularly those near Barstow and Baker, may be located within or adjacent to an area potentially subject to a 100-year flood. Additionally, the ephemeral washes in the project area represent potential hazard areas for flooding. However, the ground-to-conductor clearance activities would not adversely affect floodplains or expose substantial numbers of people to flood hazards.

a) Would the project violate any water quality standards or waste discharge requirements?

Less Than Significant Impact. The proposed project involves grading activities at 68 sites within the Mojave Desert, barricade installations at 2 sites, and tower raising activities at 2 locations. The proposed project would result in a total of approximately 7 acres of grading across the 68 grading sites, and the tower raising activities would result in 3.7 acres of temporary disturbance. Barricade installation would involve minimal grading. In the event that stormwater were to be generated during construction activities, sediment runoff or runoff containing pollutants from construction equipment present on site would have the potential to occur. As such, water quality standards and waste discharge requirements related to stormwater runoff would apply to the proposed project.

Prior to the start of construction, LADWP would be required to obtain a General Storm Water Permit Associated with Construction Activity, issued by the State Water Resources Control Board. One of the conditions of the General Permit is the development and the implementation of a SWPPP by a QSD, which would identify structural and nonstructural BMPs to be implemented by the QSP during the construction phase. LADWP would also develop and implement an erosion control plan for the proposed project. These BMPs would minimize direct impacts to surface water quality and would also minimize the potential for indirect impacts to occur such as increases in sediment loads in surface waters. With implementation of BMPs as outlined in the SWPPP and erosion control plan, the proposed project would not violate any water quality standards or waste discharge requirements. Therefore, impacts on water quality from construction activities would be less than significant. Operational conditions and activities would not be altered by the proposed project such that water quality standards or waste discharge requirements would be violated. Impacts would therefore be less than significant.

b) Would the project 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 (i.e., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?

Less Than Significant Impact. The proposed project would correct insufficient ground-to-conductor clearances along three existing overhead transmission lines. This would involve grading at 68 work sites, installing barricades at 2 work sites, and raising transmission towers at 2 locations. Water associated with the proposed project would consist of water used for dust control during construction activities. This water would be transported to the work sites in a water truck and would not increase water use in the project area to the extent that groundwater supplies would become substantially depleted. Furthermore, the only impervious surfaces that would be installed in association with proposed project are the new footings associated with the tower raising activities. These footings would be 13 square feet each, for a total permanent impact area of approximately 100 square feet.

Groundwater can potentially be encountered during construction activities when deep excavations are involved and/or when groundwater levels are high. However, the proposed grading activities would have an average depth of 2.4 feet. As such, it is not anticipated that groundwater would be encountered or affected during the proposed grading activities. During the tower raising activities, new footings would be placed in the ground at a depth of approximately 30 feet. Impacts would be less than significant.

c) Would the project 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?

Less Than Significant Impact. Numerous drainage features such as ephemeral washes and swales traverse the project area; however, the proposed ground-to-conductor clearance activities are not anticipated to impact any drainage feature or alter the stream course of any feature. Furthermore, no proposed ground-to-conductor clearance activities are anticipated to result in temporary or permanent fill of any stream or river. The majority of features that appear to convey flows in the project area are eroded rills and gullies that formed as a result of lack of activity on the access roads and large, sudden rain events that acted on the friable soils (ESA 2015). The proposed ground-to-conductor clearance activities may alter some of these rills and gullies. The alternation of rills and gullies within an existing utility corridor would not result in substantial erosion or siltation on or off site. However, storm events occurring during the construction phase would have the potential to carry disturbed sediments off site. Compliance with the stormwater runoff regulations described under Section 3.9(a) would ensure that impacts related to erosion and siltation during construction activities would remain less than significant. It is anticipated that during operation, any rills or gullies within the project area that were altered by

the ground-to-conductor clearance activities would be reestablished and that drainage patterns would not be substantially altered during operation. Impacts would be less than significant.

d) Would the project 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?

Less Than Significant Impact. As described in Section 3.9(c), the proposed project would not alter the course of a stream or river. Furthermore, as described in Section 3.9(b), the proposed project would not increase the amount of impervious surfaces in the project area, with the exception of the new footings for the two transmission towers that would be raised, which would total 100 square feet of new impervious surfaces. Because the proposed project would not introduce substantial amounts of new impervious surfaces, the rate or amount of surface runoff would not be substantially increased to the extent that flooding is caused on or off site.

As explained in Section 3.9(c), the proposed ground-to-conductor clearance activities may result in minor alternations to the drainage patterns within the project area. This is because existing rills or gullies formed by water flow may be altered, and the shape and slope of the grading sites may be slightly altered as areas underneath the power lines are graded and excavated soils are spread along access roads. However, these minor alternations in drainage would not substantially alter the extent to which flooding occurs in the project area or vicinity, as flooding would not be impeded or substantially redirected. It is anticipated that once construction activities at each site are complete, any rills or gullies that were altered by the ground-to-conductor clearance activities would be naturally reestablished and that drainage patterns would not be substantially altered during operation. Impacts would therefore be less than significant.

e) Would the project 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?

Less Than Significant Impact. As described under Section 3.9(d), the proposed project would not increase the amount of runoff from the project area. As such, the proposed project would not affect the capacity of stormwater drainage systems. However, storm events occurring during the construction phase would have the potential to carry disturbed sediments and spilled substances from construction activities, thereby creating a temporary source of polluted runoff. Compliance with the water quality regulations described under Section 3.9(a) would ensure that impacts related to polluted runoff during construction activities would remain less than significant. Operation conditions and activities would not be altered by the proposed project such that a new source of polluted runoff would be created. Impacts would therefore be less than significant.

f) Would the project otherwise substantially degrade water quality?

No Impact. Other than the sources described for construction activities (i.e., potential soil erosion and fuels for construction equipment), the proposed project does not include other potential sources of contaminants that could potentially degrade water quality. Additionally, as discussed in Section 3.9(a) above, a SWPPP and an erosion control plan would be developed and implemented to prevent the degradation of water quality. Compliance with existing regulations would ensure a less than significant impact related to water quality.

g) Would the project 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?

No Impact. The proposed project would not involve construction of housing. As such, no impact would occur.

h) Would the project place within a 100-year flood hazard area structures which would impede or redirect flood flows?

No Impact. There are several 100-year flood hazard areas near Barstow and Baker (DWR 2015b). While some of the proposed work sites may be located within or near a 100-year flood hazard area, the proposed ground-to-conductor clearance activities do not involve installation of new permanent or habitable structures. As such, no impact would occur.

i) Would the project 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?

Less Than Significant Impact. There are several levees located near Barstow and Baker (DWR 2015b). While the proposed project would result in the temporary presence of construction workers within the project area who would have the potential to be exposed to flooding, this would be unlikely due to the short-term nature of construction and the absence of flood hazard areas throughout much of the project area (DWR 2015b). Furthermore, the risk would not be substantial relative to other areas throughout Southern California. Operational conditions and activities would not introduce additional people or structures to the project area; as such, the project would not expose additional people or structures to risk involving flooding during operation. Impacts would therefore be less than significant.

j) Inundation by seiche, tsunami, or mudflow?

Less Than Significant Impact. Seiches are oscillations generated in enclosed bodies of water, usually as a result of earthquake-related ground shaking. A seiche wave has the potential to overflow the sides of a containing basin to inundate adjacent or downstream areas. There are no large enclosed bodies of water directly upstream from the project area. As such, the project area would not be subject to inundation by seiche.

Tsunamis are large ocean waves caused by the sudden water displacement that results from an underwater earthquake, landslide, or volcanic eruption. Tsunamis affect low-lying areas along the coastline. The project area is located over 80 miles northeast of the Pacific Ocean. As such, the project area would not be susceptible to inundation by tsunami.

Several of the work sites are located adjacent to slopes that would have the potential to be impacted by landslides or mudflows. While construction workers would have the potential to be exposed to mudflow during the construction processes, the risk of loss, injury, or death would not be adverse relative to many other areas across Southern California. Furthermore, the proposed project would not include construction of any habitable structures, nor would it increase the population in the project area. As such, the proposed project would not result in changes to structures or population levels susceptible to risk from mudflow. For these reasons, impacts would be less than significant.

References

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3.10 Land Use and Planning

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☒	☐	☐

Existing Setting

The proposed project is located within an existing ROW within Utility Corridor D (the Boulder Corridor), which is delineated in the CDCA Plan. Corridor D originates at the border of Nevada and California, traverses the CDCA Planning Area in a southwest direction, and extends past the town of Victorville, California in a southerly direction, terminating at the border of San Bernardino County (edge of CDCA Planning Area). The corridor measures approximately 2 miles in width. Several major utilities and affiliated ROWs are authorized in this corridor and include MCV1, MCV2, MVL1; a 500 KV direct current transmission line, one sub-surface 40-inch gas pipeline, and two fiber optic lines owned by WorldCom Network Inc. (BLM 2015).

a) Would the project physically divide an established community?

No Impact. The proposed work sites are located in undeveloped areas of the Mojave Desert, with the exception of several work sites within Segment 3 that are within or near agricultural fields. Because the project area is not within an established community, it would not have the potential to divide such a community. No impact would occur.

b) Would the project 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?

Less Than Significant Impact. Numerous land use plans apply to the project area. Consistency with applicable land use plans is addressed below.

BLM Land Use Plans

The proposed project would be within the jurisdictional boundaries of the CDCA Plan, as amended, and the boundaries of the DRECP BLM Land Use Plan Amendment. The consistency of the proposed project with these plans is addressed below.

- **1980 California Desert Conservation Area Plan, as amended.** On BLM-administered lands, the proposed action is subject to the 1980 CDCA Plan, as amended. As part of the FLPMA, the CDCA Plan was developed to guide land use management of BLM lands within this portion of California. The proposed action is located in Corridor D (Boulder Corridor), a designated 2-mile-wide planning corridor in the CDCA Plan (BLM 1980). The CDCA Plan identifies one 287 kV power line and two 500 kV power lines (the subject transmission lines of this EA) as pre-existing lines. Per the CDCA Plan, existing facilities within designated corridors may be maintained and upgraded or improved in accordance with existing ROW grants or by amendments to ROW grants. Existing facilities outside designated corridors may only be maintained but not upgraded or improved (BLM 1980).
- **2016 Desert Renewable Energy Conservation Plan**. Phase I of the Desert Renewable Energy Conservation Plan (DRECP) was approved on September 14, 2016, by the BLM. This phase of the BLM DRECP is a Land Use Plan Amendment (LUPA) to the CDCA Plan and identifies priority areas for renewable energy development while setting aside areas for conservation and recreation. The BLM DRECP LUPA establishes mitigation and habitat compensation ratios for project impacts that would occur within designated Areas of Critical Environmental Concern (ACECs), including habitat linkage ACECs; California Desert National Conservation Lands (NCLs); and non-ACEC areas. The proposed action extends through the areas covered by the DRECP.
- **California Desert National Conservation Lands**. In 1976, Congress designated a 25-million acre expanse of resource-rich desert lands in southern California as the CDCA through the Federal Land Policy and Management Act. In 2009, Congress passed the Omnibus Public Land Management Act, which directed the BLM to include lands managed for conservation purposes within the CDCA as part of the NCLs. Phase I of the DRECP designated 4.2 million acres as part of the NCLs. Much of this land was already a part of the NCLs (in particular, large portions of the Mojave Trails and Sand to Snow National Monuments), but 2.89 million acres were a new addition to the system. NCLs are closed to all energy development. Phase II of the DRECP will focus on better aligning local, state, and federal renewable energy development and conservation plans, policies, and goals.

County of San Bernardino 2007 General Plan

The project area is within the boundaries of the County of San Bernardino 2007 General Plan (General Plan). The land use and zoning designations for all of the work sites is Resource Conservation, with the exception of MVL1_147-4 and MVL1_147-5, which are located in an area zoned as Regional Industrial (County of San

Bernardino 2015). The purpose of the Resource Conservation land use and zoning designation is set forth in the General Plan, as follows (County of San Bernardino 2014):

- To encourage limited rural development that maximizes preservation of open space, watershed and wildlife habitat areas.
- To identify areas where rural residences may be established on lands with limited grazing potential but which have significant open space values.
- To prevent inappropriate urban population densities in remote and/or hazardous areas of the County.
- To establish areas where open space and non-agricultural activities are the primary use of the land, but where agriculture and compatible uses may co-exist.

The proposed project would not involve an increase in residential development, would not result in population growth, and would not preclude the establishment of open space areas. As such, the proposed project would be consistent with the above four purposes of the Resource Conservation land use and zoning designation.

The purpose of the Regional Industrial land use and zoning designation is set forth in the General Plan, as follows (County of San Bernardino 2014):

- To identify and establish areas suitable for major industrial centers or a single large industrial plant having 200,000 or more square feet of floor area, or more than 500 employees on any shift.
- To provide sites for industrial uses which have severe potential for negative impacts on any uses that would locate relatively close to them.
- To identify areas intended eventually to be utilized for industrial purposes to support the public need for manufacturing uses and employment opportunities.

Within the Regional Industrial zone and land use designation, the proposed project would be located within an existing utility corridor. As such, the proposed project would not preclude the development of industrial uses within this zone and would therefore not conflict with the above purposes for the Regional Industrial zone.

For the reasons listed above, the proposed project would be consistent with the land use designations for the project area set forth in the General Plan.

c) Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?

Less Than Significant Impact with Mitigation Incorporated. As previously discussed in Section 3.4(f), the proposed project is located within the boundaries the DRECP. The DRECP is being developed under the California Natural Community Conservation Planning Act and the Federal Endangered Species Act, and the

Federal Land Policy and Management Act. The DRECP establishes mitigation and habitat compensation ratios for project impacts that would occur within designated ACEC units (including habitat linkage ACEC's), NCL units, non-ACEC areas, and critical habitat areas. The BLM has two adopted land use plans that provide specifications for biological resource protection that apply to the project area. These are the WEMO Plan and the NEMO Plan, which are both described in Section 2 of this IS MND. As described in Section 2, the WEMO Plan identifies take-avoidance measures to be implemented for protection of species and habitat within designated management areas, such as DWMAs, as well as outside designated areas. These avoidance measures apply to siting new ROWs, as well as operation and maintenance activities. Examples of avoidance measures include requiring tortoise surveys to be conducted prior to ground disturbance (intensity varying from one designated area to another), establishing criteria for environmental monitors overseeing ground-disturbing activities, limiting maintenance activities to existing access roads and months when juvenile tortoises are not present, and other BMPs to be implemented during construction. BMPs and take-avoidance measures consistent with the WEMO Plan have been integrated into the project as design features or as mitigation measures. Upon implementation of MM-BIO-1, MM-BIO-2, MM-BIO-3, MM-BIO-4, and MM-BIO-5, preconstruction surveys, take avoidance measures, biological monitoring, and habitat restoration would occur. These measures would ensure consistency with the WEMO Plan, and impacts would be less than significant with mitigation incorporated.

The NEMO plan addresses recovery of the desert tortoise and management of a few additional species of concern on public lands. The NEMO Plan states that existing utility corridors would be retained, and new utilities would be placed within them. Cumulative new surface disturbing projects on BLM lands in each tortoise DWMA would be limited to 1% of BLM lands in that area and no new access roads would be allowed in DWMAs. The size of each project would be minimized, and other standard mitigation measures would be applied to limit impacts. These measures have been integrated into project design features or as mitigation measures, as necessary. Upon implementation of MM-BIO-1, MM-BIO-2, MM-BIO-3, MM-BIO-4, and MM-BIO-5, and MM-BIO-6, the proposed project would occur in a manner consistent with the protective regulations that are set forth in the DREPC. As such, impacts would be less than significant with mitigation incorporated.

References

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3.11 Mineral Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒

Existing Setting

Minerals are typically grouped into four categories including metallic minerals, industrial/ nonmetallic minerals, energy minerals, and construction materials. On public lands, mineral resources are categorized by the disposal categories of locatable, leasable, and saleable. Leasable minerals include energy-related mineral resources such as oil, natural gas, coal, and geothermal, and some non-energy minerals, such as potash, salt, phosphate, and sulfur. Saleable minerals, or mineral materials, are common varieties of minerals and building materials such as sand, gravel, stone, aggregate, silica, clay, and volcanic rock products. Locatable minerals are those that are not leasable or saleable, and include minerals such as gold, silver, copper, lead, zinc, barite, gypsum, molybdenum, gemstones, and certain varieties of high calcium limestone. The CDCA, within which the project area would be located, is an important area in the state for mineral production. At the time of the CDCA Plan adoption, the CDCA produced 50% of the state's revenue from mineral resources, and 46 mineral commodities are known to exist in the CDCA (BLM 1980). As such, mineral resources are prevalent in the vicinity of the project area. As indicated in Section 3.11(a) below, the project area includes areas designated by the state as having the potential to contain mineral deposits. However, the project area does not include any oil wells or oil fields.

a) Would the project 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?

No Impact. The proposed project consists of 72 individual work sites located along an approximately 115-mile alignment in the Mojave Desert. Portions of the project area pass through Mineral Resource Zone 3a and Mineral Resource Zone 4, as designated by the Department of Conservation (DOC 2008). A designation of

Mineral Resource Zone 3a is given to areas containing known mineral deposits that may qualify as mineral resources. These areas are considered to have moderate potential for the discovery of economic mineral deposits. A designation of Mineral Resource Zone 4 is given to areas where geologic information does not rule out either the presence or absence of mineral resources (DOC 2000). As such, there is the potential that mineral resources of value to the region and residents of the state exist within the project area.

Because the proposed project would occur within a CDCA-designated utility corridor primarily used for linear utility ROWs the proposed project would not affect extraction of leasable minerals, as no operations are currently present within the corridor. However, the project area could potentially include other mineral resources of value. The proposed project would involve shallow grading activities within an existing utility corridor. In the event that mineral resources are present at the work sites, extraction of the resource would be temporarily precluded during the limited construction period. Such impacts are unlikely because the proposed project is located within an existed utility corridor, and there are no known mineral extraction sites in operation at any of the proposed work sites. Furthermore, once construction has been completed, mineral resource extraction would not be precluded in the event that mineral resources were to be discovered at any of the work sites. As such, no long-term direct impacts would occur to mineral resources. Indirect impacts would not occur because any mineral extraction operations located in the vicinity of the project area would not be hindered by the minor and temporary ground-to-conductor clearance activities.

Therefore, the proposed project would not 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. Additionally, according to the State of California Department of Conservation, Division of Oil, Gas, and Geothermal Resources, no oil wells or oil fields are known to exist in the project area (DOGGR 2015). As such, the proposed project would have no potential to interfere with the extraction of oil. No impact would occur.

b) Would the project 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?

No Impact. See Section 3.11(a). No impacts to locally important mineral resources would occur.

References

BLM (Bureau of Land Management). 1980. *The California Desert Conservation Area Plan 1980*, as amended.

County of San Bernardino. 2014. *County of San Bernardino 2007 General Plan.* Prepared by URS Corporation. San Bernardino, California: County of San Bernardino Land Use Services Division. Adopted March 13, 2007. Last amended April 24, 2014. Accessed August 19, 2015. http://cms.sbcounty.gov/lus/planning/generalplan.aspx.

DOC (California Department of Conservation). 2000. *Guidelines for Classification and Designation of Mineral Lands*.

DOC. 2008. GIS Data.

DOGGR (California Department of Conservation, Division of Oil, Gas, and Geothermal Resources). 2015. DOGGR Well Finder. Accessed August 20, 2015. http://maps.conservation.ca.gov/doggr/index.html#close.

3.12 Noise

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☒	☐
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?	☐	☐	☐	☒

Existing Setting

The majority of the proposed work areas are located in vacant portions of the Mojave Desert. Nearby sensitive receptors are limited to several rural residences. The grading site near MCV1_151-4 is located approximately 350 feet southwest of a rural residence. The grading sites near MVL1_158-6, MVL1_159-1, and MCV1_138-1 are located approximately 1.5 miles northeast of several residences that are adjacent to SR-247. The tower raising sites at MCV1_125-5 and

MCV1_125-6 are located approximately 500 feet south and southeast of structures associated with the farmland on which the tower raising sites are located. While other work sites may be located near residential property lines, the majority are not located in the vicinity of habitable structures. Ambient noise levels at rural residences are typically 50 A-weighted decibels (dBA) L_{eq} (FTA 2006).

a) Would the project result in 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?

Less Than Significant Impact. Implementation of the proposed project would result in two primary types of potential noise impacts: short-term (i.e., temporary) noise during construction, and long-term noise during operation.

Construction

Implementation of the proposed project would result in short-term (i.e., temporary) noise during construction. Table 3.12-1 shows the sound levels typically produced by the construction equipment that would be used for the proposed project. The proposed grading and barricade installation activities, which would occur at 70 work sites, would involve the following types of construction equipment: motor graders, bulldozers, excavators, compact skid-steer loaders, dump trucks, water trucks, wheel/track loaders, backhoe loaders, jackhammers, and various small utility vehicles. The proposed tower raising activities, which would occur at two work sites, would involve the following types of construction equipment: cranes, manlifts, wheel/track loaders, backhoe loaders, all-terrain forklifts, water trucks, diesel air compressors, and small utility vehicles.

Table 3.12-1
Construction Equipment Noise Emission Levels

Equipment	Typical Sound Level (dBA) 50 Feet from Source
Backhoe	80
Crane, mobile	83
Air compressor	81
Dozer	85
Grader	85
Loader	85
Jackhammer	88
Truck	88

Source: FTA 2006

The County's Development Code establishes standards concerning acceptable noise levels for both noise-sensitive land uses and for noise-generating land uses. It also defines noise-sensitive land uses and limits the amount of noise that can be received at a noise- sensitive land use. The standards established in the

Development Code for emanations from a stationary noise source as it affects adjacent properties are listed in Table 3.12-2.

Table 3.12-2
County of San Bernardino Noise Standards for Stationary Noise Sources

Affected Land Use (Receiving Noise)	7:00 a.m to 10:00 p.m. Leq	10:00 p.m. to 7:00 a.m. Leq
Residential	55 dB(A)	45 dB(A)
Professional Services	55 dB(A)	55 dB(A)
Other Commercial	60 dB(A)	60 dB(A)
Industrial	70 dB(A)	70 dB(A)

Source: County of San Bernardino 2014a
Notes: Leq = Equivalent Energy Level. The sound level corresponding to a steady-state sound level containing the same total energy as a time varying signal over a given sample period, typically 1, 8 or 24 hours.
dB(A) = A-weighted Sound Pressure Level. The sound pressure level, in decibels, as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound, placing greater emphasis on those frequencies within the sensitivity range of the human ear.

As shown in Table 3.12-1, some of the construction equipment involved with the proposed project would have the potential to exceed the noise standards shown in Table 3.12-2. However, the proposed project is located within an existing utility corridor that is surrounded primarily by undeveloped land. Because noise attenuates with distance and because the project area primarily consists of undeveloped land, it is unlikely that the project would result in exceedances of the standards listed in the Development Code, as most work sites are not located in the vicinity of residential, professional, commercial, or industrial uses. The majority of the project area is zoned for Resource Conservation, which accommodates limited rural residential development and is primarily intended for open space and non-agricultural uses (County of San Bernardino 2014b). Exceptions are MVL1_147-4 and MVL1_147-5, which are located on land zoned as Regional Industrial and are situated just south of a solar energy facility. MCV1_125-6 and MCV1_125-5, the tower raising sites, are located within the Resource Conservation zone but are within an agricultural field, just north of the Barstow-Daggett Airport. One grading site is located relatively near a residential use: MCV1_151-4 is approximately 350 feet southwest of a rural residence. While other work sites may be located near residential property lines, the majority are not located in the vicinity of habitable structures. Noise-sensitive land uses are defined in the Development Code as follows: "residential uses, schools, hospitals, nursing homes, religious institutions, libraries, and similar uses." Because the project area is primarily undeveloped, there are few noise-sensitive land uses in the project area. Furthermore, construction activities at each work site would be temporary, lasting approximately 1.5 to 3 days per site. Tower raising would take longer (approximately 45 days for each of the two tower raising sites). However, this duration is still limited, and the tower raising sites are located within agricultural fields that are situated just north of an airport.

For the reasons described above, the temporary construction noise that would be generated by the proposed project would comply with local standards, and impacts would be less than significant.

Operation

During operation, noise levels in the project area would not be affected by the proposed project, because operational conditions would not change under the proposed project. No operational impacts would occur.

b) Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact. Implementation of the proposed project would result in short-term (i.e., temporary) groundborne vibration during construction. Operation of construction equipment causes vibrations that spread through the ground and diminish in strength with distance. The primary source of operational vibration would include on-site haul trucks. Standard construction equipment (e.g., a large bulldozer) generates vibration levels of approximately 0.089 inches per second at 25 feet. Table 3.12-3 presents typical vibration levels for such equipment at 12 to 150 feet. Other equipment used during construction such as jackhammers would generate less vibration than presented in Table 3.12-3.

Table 3.12-3
Vibration Velocities for Construction Equipment

Distance from Equipment	Peak Particle Velocity (inches/second)
12	0.268
15	0.191
20	0.124
25	0.089
50	0.031
75	0.017
100	0.011
125	0.008
150	0.006

Source: FTA 2006

The Development Code states that no ground vibration shall be allowed that can be felt without the aid of instruments at or beyond a lot line, and vibration shall not be allowed if it produces a particle velocity greater than or equal to 0.2 inches per second measured at or beyond the lot line. As shown in Table 3.12-3, construction equipment would have to be within approximately 12 feet of a lot line in order to exceed this threshold. As stated in Section 3.12(a), one of the proposed work sites is located within approximately 350 feet of a residence. As shown in Table 3.12-3, vibration experienced at this residence would be well below

the threshold of 0.2 inches per second established in the Development Code and would likely be imperceptible. Ground-borne vibration information related to construction activities collected by the California Department of Transportation (Caltrans 2004) indicates that continuous vibrations with a peak particle velocity of approximately 0.1 inch/second begin to annoy people. Because the proposed project involves construction work within an existing utility corridor that is approximately 800 feet wide, it is unlikely that vibration resulting from the proposed project would be perceptible at any habitable structures, including the residence mentioned above. Furthermore, construction activities at each work site would be temporary, lasting approximately 1.5 to 3 days per site, with the exception of tower raising, which would take approximately 45 days per site. For the reasons described above, impacts related to exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels would be less than significant.

c) Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

No Impact. Upon completion of construction activities, operational activities would remain the same as existing conditions. Because no change in operational activities would occur as a result of the proposed project, a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project would not occur. No impact would occur.

d) Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less Than Significant Impact. Implementation of the proposed project would result in short-term (i.e., temporary) noise during construction. However, as described in Section 3.12.3(a), there are few noise-sensitive uses in the vicinity of the project and no noise sensitive uses in the project area itself because the project area is within an existing utility corridor. The areas surrounding the proposed project are primarily undeveloped and are mostly zoned for Resource Conservation. Furthermore, while construction may cause a temporary increase in ambient noise levels, this increase would only last for an average of 1.5 to 3 days per work site. (Tower raising would take 45 days for each of two sites.) The proposed project involves grading at 68 locations, installing barricades at 2 locations, and tower raising activities at 2 locations. Grading an average of 160 cubic yards of material for each of the 68 grading locations would not be anticipated to produce substantial amounts of temporary noise, nor would raising two transmission towers or installing the proposed barricades. While ambient noise levels would be temporarily raised within the project area as the construction crew moves down the utility corridor, noise would be produced at each work site for a limited amount of time and would not be produced adjacent to sensitive receptors. For these reasons, impacts involving substantial temporary increases or periodic increases in ambient noise levels would be less than significant.

e) Would the project be 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?

Less Than Significant Impact. The Barstow-Daggett Airport is within two miles of work sites MVL1_147-4, MVL1_147-5, MCV1_125-6, and MCV1_125-5 (Caltrans 2012). These four work sites are just outside the planning area boundaries of the Barstow-Daggett ACLUP (County of San Bernardino 1992). Additionally, a helicopter landing strip within the Fort Irwin Military Reservation is located approximately 2 miles from work sites MCV1_88-1, MCV1_88-2, and MCV1_87-5. The proposed project would temporarily expose construction workers to noise levels from the Barstow-Daggett Airport and any air traffic associated with the Fort Irwin Military Reservation. However, this exposure would be temporary, as construction at each work site would last for approximately 1.5 to 3 days at each work site, with the exception of tower raising, which would take approximately 45 days at each of the 2 tower raising sites.

f) Would the project be within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The proposed work sites are located within undeveloped areas of the Mojave Desert, with most work sites located on BLM land. No private airstrips are located in the vicinity of the work sites. Furthermore, the project would include no occupied facilities that would expose people to excessive noise levels related to aircraft use. For these reasons, no impact related to exposing people residing or working in the project area to excessive noise levels from a private airstrip would occur.

References

Caltrans (California Department of Transportation). 2004. *Transportation- and Construction-Induced Vibration Guidance Manual.* June 2004.

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County of San Bernardino. 1992. *Airport Comprehensive Land Use Plan – Barstow-Daggett Airport.* May 1992. Accessed August 19, 2015. cms.sbcounty.gov/lus/Planning/AirportLandUse.aspx.

County of San Bernardino. 2014a. *County of San Bernardino 2007 Development Code.* Adopted March 13, 2007. Last amended January 16, 2014. Accessed August 19, 2015. http://cms.sbcounty.gov/lus/planning/zoningoverlaymaps/hazardmaps.aspx.

County of San Bernardino. 2014b. *County of San Bernardino 2007 General Plan.* Prepared by URS Corporation. San Bernardino, California: County of San Bernardino Land Use Services Division. Adopted March 13, 2007. Last amended April 24, 2014. Accessed August 19, 2015. http://cms.sbcounty.gov/lus/planning/generalplan.aspx.

FTA (Federal Transit Administration). 2006. *Transit Noise and Vibration Impact Assessment*. May 2006. Accessed February 12, 2015. http://www.ontarioplan.org/index.cfm/33710/33960.

3.13 Population and Housing

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒

a) Would the project 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)?

No Impact. The proposed project would correct insufficient ground-to-conductor clearances along three existing overhead transmission lines. No new homes, businesses, or infrastructure would result and the project would not enable any new development to occur. Therefore, the proposed project would not result in direct or indirect population growth. No impact to population growth would occur.

b) Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No Impact. The project area consists of an existing transmission line corridor, and the proposed project would correct insufficient ground-to-conductor clearances within this corridor. No housing would be removed necessitating the construction of replacement housing elsewhere. No impact would occur.

c) Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact. As described above, the proposed project would not remove any housing. As such, no persons would be displaced as a result of the proposed project. Construction of replacement housing would not be necessary, and no impact would occur.

References

None.

3.14 Public Services

Would the project:	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:				
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☒	☐
Parks?	☐	☐	☒	☐
Other public facilities?	☐	☐	☒	☐

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:

Fire Protection

Less Than Significant Impact. The need for new or altered fire facilities is typically associated with an increase in population. As described under Section 3.13, the proposed project would not alter population in the project area. As such, the proposed project would not substantially alter service ratios, response times, or other performance objectives to the extent that new or expanded fire protection facilities, equipment, or staff would be required. Impacts to fire protection would be less than significant.

Police Protection

Less Than Significant Impact. The need for new or altered police facilities is typically associated with an increase in population. As described under Section 3.13, the proposed project would not alter population in the project area. As such, the proposed project would not substantially alter service ratios, response times, or other performance objectives to the extent that new or expanded police protection facilities, equipment, or staff would be required. Impacts to police protection would be less than significant.

Schools

Less Than Significant Impact. The need for new or altered schools is typically associated with an increase in population. As described under Section 3.13, the proposed project would not alter population in the project area. As such, the proposed project would not substantially alter the ability of existing schools to accommodate students to the extent that new or expanded school facilities, materials, or staff would be required. Impacts to schools would be less than significant.

Parks

Less Than Significant Impact. The need for new or altered parks is typically associated with an increase in population. As described under Section 3.13, the proposed project would not alter population in the project area. As such, the proposed project would not substantially alter the ability of parks to serve the region to the extent that new or expanded parks would be required. Impacts to parks would be less than significant.

Other Public Facilities

Less Than Significant Impact. Other public facilities include libraries and government administrative services. The need for new or altered libraries or administrative services is typically associated with an increase in population. As described under Section 3.13, the proposed project would not result in the need for libraries or other government administrative services to the extent that new or expanded facilities would be required Impacts to other public facilities would be less than significant.

References

None.

3.15 Recreation

Would the project:	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?	☐	☐	☐	☒

Existing Setting

Lands administered by the BLM are open to a variety of recreational uses. OHV Areas consist of designated areas where OHVs are allowed to tour and race. The proposed project includes work areas within the BLM Stoddard Valley OHV Open Area, which is within the BLM Stoddard Valley Subregional plan area (BLM 2015a). The open riding area is formed by I-15 and SR-247 (Barstow Road), immediately south of Barstow. Most visitors access the area to the east, off I-15 at the Outlet Center Drive Exit (Sidewinder Road) or at the Hodge Road Exit, to the south on I-15. Most area visitors ride motorcycles or all-terrain vehicles, or tour the area in four-wheel drive vehicles. The areas off Sidewinder Road (Outlet Center Drive exit on I-15) are used extensively for OHV "free play." This area is used extensively for competitive racing events by permit (BLM 2015b).

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?

No Impact. During times of active construction (grading) within the ROW, public access to the portion of the ROW in which construction is taking place would be precluded. However, construction at each site would last approximately 1.5 to 3 days, and construction would occur at one to two sites at a time. As such, interruptions in OHV access to the project area would be temporary and intermittent, and thus, would not result in increased use of other neighborhood and regional parks. Therefore physical deterioration of facilities would not occur or be accelerated as a result of the proposed project. As discussed in Section 3.13, the proposed project would not result in population increases resulting in an increased need for park facilities. For these reasons, no impact would occur.

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?

No Impact. The proposed project does not include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse impact on the environment. As such, no impact would occur.

References

BLM (Bureau of Land Management). 2015a. "Stoddard Valley Subregion." Accessed August 21, 2015. http://www.blm.gov/ca/st/en/fo/cdd/west_mojave__wemo/wemo_maps.html.

BLM. 2015b. "Stoddard Valley Off-Highway Vehicle Area." Accessed August 19, 2015. http://www.blm.gov/ca/st/en/fo/barstow/stoddard.html.

3.16 Transportation and Traffic

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☒	☐
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	☐	☐	☒	☐

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒

Existing Setting

The transportation network within the project area is composed of a mix of interstate, county highways, and local roadways. The circulation system plays a major role in the movement of goods originating from both interstate and international sources. The agricultural and mining communities in San Bernardino County rely on the state and county roadways for access as well as recreational and tourist-oriented trips on public land. This trend and use of the transportation network will continue as new developments occur within San Bernardino County as well as the surrounding communities.

Several regionally and locally significant roadways are within the vicinity of the project area. The existing utility corridor in which the proposed work sites are located is generally parallel to I-15, a five-lane interstate freeway that provides north-south regional access between San Bernardino, Riverside, and San Diego counties. I-40 extends generally east-west across the County. SR-247 and SR-127 are north-south, two-lane highways that traverse the project area near Segment 2 and Segment 5, respectively. The proposed work areas would be primarily accessed via the existing access roads that parallel the transmission lines. Access to sites along MCV2 and MVL1 would be provided via the existing Powerline Road and associated spur roads, and access to sites along MCV1 would be provided via an existing unnamed access road that runs parallel to the lines. Construction trucks and equipment may use roadways such as I-15, I-40, SR-247, and SR-127 to access that existing roads when traveling to the proposed grading sites.

The Barstow-Daggett Airport is within two miles of work sites MVL1_147-4, MVL1_147-5, MCV1_125-6, and MCV1_125-5 (Caltrans 2012). A helicopter landing strip within the Fort Irwin Military Reservation is located approximately 2 miles from work sites MCV1_88-1, MCV1_88-2, and MCV1_87-5. The Baker Airport is located approximately 7 miles southeast of Segment 7. Due to the proximity of MCV1_125-6 and MCV1_125-5 to the Barstow-Daggett Airport, LADWP will be required to file a Notice of Proposed Construction or Alteration (FAA Form 7460-1) either 45 days prior to construction or 45 days prior to obtaining a construction permit for the project, whichever is earliest (14 CFR Part 77.9).

Due to the remoteness of the project area, bicycle routes and pedestrian facilities (sidewalks) are nonexistent.

Transportation and Traffic Analysis

a) Would the project 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?

Less Than Significant Impact. The County General Plan sets forth goals and policies regarding transportation in the Circulation and Infrastructure Element. These goals and policies include providing a safe, functional, and convenient transportation system including: public transit; balancing different types of transportation modes; coordinating land use and transportation planning to ensure adequate transportation facilities to support planned land uses and ease congestion; and, encouraging and promoting greater use of non-motorized means of personal transportation.

Construction. Construction would occur for up to 18 months during which 6 to 10 construction workers would be sequentially accessing 70 individual sites located across the Mojave Desert. Several construction trucks would also be required at each site (motor graders, bulldozers, excavators, compact skid-steer loaders, dump trucks, water trucks, wheel/track loaders, backhoe loaders, and various small utility vehicles). It is assumed that 10 construction workers would travel to and from the site(s) each day. It is assumed that once the construction equipment is delivered to the first grading location, it would be transported from site to site within the existing utility corridor. However, due to the distance between grading sites, the construction trucks and equipment would occasionally use highways such as I-15 to access the next grading site. Assuming that two of each construction truck and six small utility vehicles would be required for the project, an additional 32 one-way trips would occur when roadways or highways are used to access the next grading site. As such, a worst-case-scenario of trips attributable to the proposed grading activities would be approximately 30 one-way trips per day (equipment trips plus construction worker trips). For the two tower raising sites, 12 to 24 construction workers would be required. Assuming that the maximum number of construction workers would be required at each tower raising site, the approximate number of one-way trips per day per site would be 24 trips. The tower raising process would require backhoe loaders, water trucks, large and midsize cranes, all terrain forklifts, man lifts, wheel/track loaders, and various small utility vehicles. The construction equipment required for tower raising would remain in the construction staging area throughout the tower raising process; however, one-way trips would increase to approximately 47 one-way trips during the equipment delivery and removal days.

Increases in construction traffic in the vicinity of the project area would be temporary and dispersed. The project area is generally undeveloped, and the surrounding land uses primarily consist of vacant land, with some agricultural and industrial land uses. As such, the addition of approximately 30 to 50 one-way daily trips would

not adversely affect roadways in the project vicinity. Effects would be short-term, minor, and localized. For these reasons, the proposed project would not conflict with policies establishing measures of effectiveness for the performance of the circulation system, and impacts would be less than significant.

Operation. During operation, traffic in the project area would not be affected by the proposed project. Operational conditions would not change under the proposed project. Transmission lines would continue to be inspected regularly via helicopter and by ground using existing access roads. No operational impacts would occur.

b) Would the project 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?

Less Than Significant Impact. Implementation of the proposed project would result in a short-term (i.e., temporary) increase in the number of trips in the project area during construction, as described in Section 3.17.3(a). During operation, traffic levels in the project area would not be affected by the proposed project.

Construction. The project area does not include any roadways that are part of the congestion management program (CMP) road system identified in the County of San Bernardino's 2007 CMP Update, as the project area is located within an existing utility corridor (County of San Bernardino 2007). Construction workers, equipment, and trucks associated with the proposed project may use highways such as I-15, I-40, SR-247, or SR-127 to access work sites. These roadways are part of the CMP road system. However, traffic attributable to the proposed project would not conflict with goals and policies established in the CMP, as trips associated with the proposed project would be negligible when viewed in a regional context. Additionally, these trips would be distributed across the 115-mile project area throughout the 6- to 18-month long construction period. As such, potential increases in construction traffic in the vicinity of the work sites would be minor, temporary, and dispersed. For these reasons, the proposed project would not conflict with standards and policies established in the CMP, and impacts would be less than significant.

Operation. Operational conditions would not be changed by implementation of the proposed project. Transmission lines would continue to be inspected regularly via helicopter and by ground using existing access roads. The proposed project would not involve any changes in land use within the project area requiring analysis of impacts to the CMP system. As such, no operational impacts would occur related to standards and policies established in the CMP.

c) Would the project 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?

Less Than Significant Impact. An increase in air traffic levels is generally caused by residential development that creates population growth to the extent that use of airports increases. The proposed project would not involve residential development; therefore, an increase in air traffic levels would not occur.

Air traffic safety risks are generally associated with increased heights in the vicinity of airports, to the extent that air traffic patterns would need to change or to the extent that a hazard is created. The proposed tower raising sites are located within approximately one mile of the Barstow-Daggett County Airport. The raised towers would be approximately 130 feet AGL and are not anticipated to exceed the 200 feet AGL height standard established by the FAA (FAA 2007) to determine whether marking and/or lighting is required on temporary or permanent structures. As such, an airport safety hazard related to the slightly taller structures would not be anticipated. Impacts would be less than significant.

d) Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less Than Significant Impact. The proposed project would not alter or introduce any design features or existing roadways. Construction trucks and equipment may use roadways such as I-15 to access existing dirt roads and access roads when traveling to the proposed grading sites. As construction trucks and equipment enter and exit roadways and highways, these maneuvering activities could potentially result in safety impacts as construction vehicles, and slowly accelerating trucks in particular, would be entering and existing highways. However, where appropriate, access to the ROW would be controlled through the use of proper signage and flagging. This would warn oncoming traffic that trucks may be entering or existing the highway. As such, while temporary and intermittent safety hazards may be created along highways near the project area, impacts would be less than significant because standard construction safety measures would be put in place.

e) Would the project result in inadequate emergency access?

No Impact. The proposed project would be located primarily in undeveloped areas of the Mojave Desert within an existing utility corridor. While existing unpaved access roads would be used throughout the 6- to 18-month construction period, these access roads are located within the existing utility corridor. Temporary use of these access roads would not hinder emergency access. As such, no impact would occur.

f) Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

No Impact. The proposed project would be located in generally undeveloped areas of the Mojave Desert within an existing utility corridor. As such, transit, bicycle, and pedestrian facilities would not be affected. No impact would occur.

References

Caltrans (California Department of Transportation). 2012. Caltrans Earth Layers - Airports. 2012. Accessed February 17, 2015. www.dot.ca.gov/hq/tsip/gis/caltrans_earth/globe_content.php.

County of San Bernardino. 2007. *Congestion Management Program for San Bernardino County*. 2007 Update. Prepared by the San Bernardino Associated Governments in cooperation with the Comprehensive Transportation Plan Technical Advisory Committee. December 2007. Accessed August 25, 2015. http://www.sanbag.ca.gov/planning2/congestion-mgmt.html.

FAA (Federal Aviation Administration). 2007. Advisory Circular AC 70/7460-1K Obstruction Marking and Lighting. Effective February 1, 2007.

3.17 Tribal Cultural Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☒	☐	☐
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

Less Than Significant Impact with Mitigation Incorporated. The proposed project is subject to compliance with Assembly Bill (AB) 52 which requires consideration of impacts to tribal cultural resources (TCRs) as defined in California Public Resources Code 21074 as part of the CEQA process, and requires LADWP to notify any groups who have requested notification of the proposed action who are traditionally or culturally affiliated with the geographic area of the project. LADWP notified eleven Native American individuals/organizations of the proposed action under AB 52. To date, no responses to these notifications have been received. Because AB 52 is a government-to-government process, all records of correspondence related to AB 52 notification and any subsequent consultation are on file with LADWP. Implementation of MM-CUL-1 through MM-CUL-4 would ensure that impacts to TCRs are less than significant.

ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? (In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.)

Less Than Significant Impact with Mitigation Incorporated. See discussion under Section 3.7.3(e)(i).

References

None.

3.18 Utilities and Service Systems

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 storm water drainage facilities or expansion of	☐	☐	☐	☒

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☒	☐
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 statutes and regulations related to solid waste?	☐	☐	☒	☐

a) Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Less Than Significant Impact. The proposed project involves grading activities at 68 sites within the Mojave Desert, barricade installation activities at two sites, and tower raising activities at two sites. The proposed project would result in a total of approximately 7 acres of grading across 68 grading sites and 3.7 acres of disturbance at the tower raising sites. Minimal to no disturbance would occur at the two barricade installation sites. In the event that stormwater were to be generated during construction activities, sediment runoff or runoff containing pollutants from construction equipment present on site would have the potential to occur. As such, wastewater treatment requirements related to stormwater runoff would apply to the proposed project. This would include preparation and implementation of a SWPPP and erosion control plan, which would be prepared for the proposed project and would specify appropriate BMPs to control runoff from the work sites. Additionally, any wastewater discharged by the proposed project must comply with National Pollutant Discharge Elimination System requirements. Construction activities would be required to comply with all applicable wastewater treatment requirements of the RWQCB. Furthermore, given the isolated location of the temporary work sites in undeveloped desert areas, impacts to stormwater facilities are not anticipated. Operation conditions and activities would not be altered by the proposed project such that wastewater treatment requirements would be violated. For these reasons and upon compliance with the applicable permit requirements during construction,

the impact to the wastewater treatment requirements of the applicable Regional Water Quality Control Board would be less than significant.

b) Would the project 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?

No Impact. The proposed project would correct insufficient ground-to-conductor clearances along three existing overhead transmission lines. This would involve grading at 68 works sites, barricade installation at 2 work sites, and raising transmission towers at 2 locations. These activities would not increase the amount of water used or wastewater generated at the work sites. Any water associated with the proposed project would consist of water used for dust control during construction activities. This water would be transported to the work sites with a water truck. Thus, no new or expanded water or wastewater treatment facilities would be required due to implementation of the proposed project. No impact would occur.

c) Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

No Impact. The proposed project would correct insufficient ground-to-conductor clearances along three existing overhead transmission lines. This would involve grading at 68 works sites, raising transmission towers at 2 locations, and installing barricades at 2 locations. The majority of work sites are located within undeveloped portions of the Mojave Desert. Raising two transmission towers and grading within an existing utility corridor would not lead to increased stormwater flows from any of the work sites during either construction or operation. As such, the proposed project would not require the construction of new storm water drainage facilities or expansion of existing facilities. No impact would occur.

d) Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Less Than Significant Impact. High water demand is typically associated with residential developments, hotels, and large offices. The proposed project would involve temporary grading activities at 68 work sites, barricade installations at 2 sites, and transmission tower raising activities at 2 work sites within the Mojave Desert. The water needs of the proposed project would be limited to water required for dust control during construction activities, which would be delivered to the project area by water trucks. New or expanded water entitlements would not be required, as water to supply the water trucks would be minor relative to the total water service provided by regional purveyors. Impacts would be less than significant.

e) Would the project 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?

No Impact. The proposed project would correct insufficient ground-to-conductor clearances along three existing overhead transmission lines. This would involve grading at 68 works sites, barricade installations at 2 sites, and raising transmission towers at 2 locations. These activities would not increase the amount of wastewater produced in the project area. No impact would occur.

f) Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less Than Significant Impact. The proposed project would correct insufficient ground-to-conductor clearances along three existing overhead transmission lines. This would involve grading at 68 works sites, barricade installations at 2 sites, and raising transmission towers at 2 locations. The grading activities would involve removal of earth materials and placement of excavated soils along existing access roads. The transmission tower raising activities may produce minimal amounts of construction debris, such as concrete associated with the demolished footings at two sites. Construction waste would be disposed of at a landfill approved to accept such materials and would be recycled when feasible. Due to the minimal amount of waste that would be produced during construction, area landfills would be able to accommodate any solid waste disposal needs associated with the proposed project. Operational conditions would not change under the proposed project; as such, no solid waste would be produced during operation that would be attributable to the proposed project. Impacts would be less than significant.

g) Would the project comply with federal, state, and local statutes and regulations related to solid waste?

Less Than Significant Impact. The proposed project would comply with federal, state, and local statutes and regulations related to solid waste. As discussed in Section 3.18.3(f), construction debris generated by the proposed project would be minimal. Any construction debris that are produced would be recycled or disposed of according to local and regional standards. All materials would be handled and disposed of in accordance with existing local, state, and federal regulations. Compliance with existing regulations would ensure a less than significant impact.

References

None.

3.19 Mandatory Findings of Significance

	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, the 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?	☐	☐	☒	☐

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?

Less Than Significant Impact with Mitigation Incorporated. The proposed project is located within an existing utility corridor, along existing transmission lines that cross a generally undeveloped portion of the Mojave Desert. As explained in Section 3.4, Biological Resources and Section 3.5, Cultural Resources, the proposed project has the potential to significantly affect biological and cultural resources, including special-status wildlife and plant species and examples of periods of California history and prehistory. However, mitigation measures have been set forth to reduce the impacts of the proposed project on wildlife species, plant and animal communities, and cultural resources. Biological mitigation would ensure avoidance of protected plant species to the extent feasible, proper translocation of larger perennial protected plants if avoidance is not feasible, and implementation of a restoration plan to return the construction areas to their original condition. Biological mitigation would also entail protection measures for desert tortoise, nesting birds, golden eagles, burrowing owl, American badger, and desert kit fox, including preconstruction surveys,

avoidance, and construction monitoring. Cultural resources mitigation would include archaeological monitoring, Native American monitoring, and implementation of treatment plans, if significant resources are encountered during construction. Upon implementation of the mitigation measures identified in Section 3.4 and 3.5, the proposed project would not have the potential to 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, or reduce the number or restrict the range of a rare or endangered plant or animal. Upon implementation of the mitigation measures identified in Section 3.5, Cultural Resources, impacts of the proposed project to California history or prehistory would be less than significant. As such, impacts to biological and cultural resources would be less than significant with mitigation incorporated.

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, the effects of other current projects, and the effects of probable future projects)?

Less Than Significant Impact with Mitigation Incorporated. The proposed project would occur within an existing utility corridor. As shown in Sections 3.3, Air Quality; 3.12, Noise; and 3.16, Transportation and Traffic, the temporary construction activities of the proposed project would not generate substantial air emissions, noise, or traffic. As such, project construction would not combine with other nearby construction projects in the Mojave Desert to produce cumulatively considerable impacts in those categories. Due to the temporary nature of the proposed project and the proposed restoration efforts, adverse impacts in the categories of aesthetics, agricultural resources, and recreation are not anticipated. As such, the proposed project would not combine with other projects in the Mojave Desert to produce a cumulative effect on aesthetics, agricultural resources, or recreation, since the impacts of the proposed project would be limited in duration and the construction sites would be returned to their original state once construction is completed. Implementation of mitigation measures for biological, cultural, and paleontological resources would ensure that the proposed project would not contribute to cumulative impacts on special-status species, nesting birds, and archaeological resources. As explained in Section 3.13, Population and Housing, the proposed project would not result in a population change in the project area. As such, resources that can be affected by population growth, such as public services and recreational facilities, would not be substantially affected by the proposed project.

The proposed project would not alter operational conditions. As such, the proposed project would not contribute any operational noise impacts, air emissions, or traffic to the project area with the potential to combine with related projects. As such, the cumulative impacts of the proposed project would be less than significant.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less Than Significant Impact. Implementation of the proposed project would not result in any impacts that are significant and unavoidable or cumulatively considerable. The analysis presented in this document does not identify significant adverse impacts on human beings. The impacts were characterized as absent or less than significant. Therefore, the proposed project would not have environmental impacts that would cause substantial adverse impacts on human beings, either directly or indirectly.

References

None.

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