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Draft Environmental Impact Report

McCullough–Victorville Transmission Lines 1 and 2 Upgrade Project

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Prepared by:

Los Angeles Department of Water & Power

ENVIRONMENTAL PLANNING AND ASSESSMENT
111 North Hope Street, Room 1044
Los Angeles, California 90012
Contact: Matthew Kerby

Prepared with assistance from:

DUDEK

225 South Lake Avenue, Suite M210
Pasadena, California 91101
Contact: Nicole Cobleigh

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AAQS	ambient air quality standards
AB	Assembly Bill
ACEC	Area of Critical Environmental Concern
amsl	above mean sea level
ARPA	Archaeological Resources Protection Act
BCC	Bird of Conservation Concern
BGEPA	Bald and Golden Eagle Protection Act
BIOS	Biogeographic Information and Observation System
BLM	U.S. Bureau of Land Management
BMP	best management practice
BO	Biological Opinion
BP	Before Present
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CARB	California Air Resources Board
CDCA	California Desert Conservation Area
CDFW	California Department Fish and Wildlife
CDNCL	California Desert National Conservation Lands
CDNPA	California Desert Native Plants Act
CEC	California Energy Commission
CEHC	California Essential Habitat Connectivity
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CGP	Construction General Permit
CMA	Conservation Management Action
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CWA	Clean Water Act
CWHR	California Wildlife Habitat Relationship
dBA	A-weighted decibels
DPM	diesel particulate matter
DRECP	Desert Renewable Energy Conservation Plan
ECA	Essential Connectivity Area
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
FESA	federal Endangered Species Act
FLPMA	Federal Land Policy and Management Act
GHG	greenhouse gas
HAP	hazardous air pollutant
HIA	Health Impact Assessment
HRA	Health Risk Assessment
I	Interstate
ITP	Incidental Take Permit

Acronym/Abbreviation	Definition
JD	jurisdictional delineation
kV	kilovolt
LADWP	Los Angeles Department of Water and Power
LUPA	Land Use Plan Amendment
MBTA	Migratory Bird Treaty Act
MCA	Medieval Climatic Anomaly
MCC-VIC	McCullough–Victorville transmission alignment
MCV1	McCullough–Victorville Transmission Line 1
MCV2	McCullough–Victorville Transmission Line 2
MDAB	Mojave Desert Air Basin
MDAQMD	Mojave Desert Air Quality Management District
MLD	most likely descendant
MM	Mitigation Measure
MSHCP	Multiple Species Habitat Conservation Plan
MW	megawatt
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NALMA	North American Land Mammal Age
NCCP	Natural Community Conservation Plan
NCL	National Conservation Lands
NEMO	Northern and Eastern Mojave Desert Management Plan
NO	nitric oxide
NO_2	nitrogen dioxide
NOP	Notice of Preparation
NOx	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NVCRIS	Nevada Cultural Resource Information System
OHWM	ordinary high-water mark
OPLMA	Omnibus Public Lands Management Act
PM	particulate matter
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to 10 microns
$PM_{2.5}$	particulate matter with an aerodynamic diameter less than or equal to 2.5 microns
PPV	peak particle velocity
PRC	California Public Resources Code
PRMMP	Paleontological Resources Monitoring and Mitigation Plan
Project	McCullough–Victorville Transmission Lines 1 and 2 Upgrade Project
PRPA	Paleontological Resources Protection Act
ROW	right-of-way
RPS	Renewable Portfolio Standard
RWQCB	Regional Water Quality Control Board
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South-Central Coastal Information Center
SCRAM	Support Center for Regulatory Atmospheric Modeling
SJVAPCD	San Joaquin Valley Air Pollution Control District
SO_2	sulfur dioxide
SR	State Route
SVP	Society of Vertebrate Paleontology
SWPPP	Stormwater Pollution Prevention Plan

Acronym/Abbreviation	Definition
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TCR	tribal cultural resource
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
VMT	vehicle miles traveled
VOC	volatile organic compound
WEAP	Worker Environmental Awareness Program
WEMO	West Mojave Plan
WJTCA	Western Joshua Tree Conservation Act
WOR	West of River

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1 Executive Summary

1.1 Introduction

This Environmental Impact Report (EIR) has been prepared by the Los Angeles Department of Water and Power (LADWP) as lead agency pursuant to the California Environmental Quality Act (CEQA) Public Resources Code Section 21000 et seq., and the CEQA Guidelines (California Code of Regulations, Section 15000 et seq.). This EIR has been prepared to evaluate the environmental effects of the proposed McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project (Project). The purpose of this EIR is to focus the discussion on those potential effects on the environment of the Project that the lead agency has determined may be significant. In addition, feasible mitigation measures are recommended, when applicable, that could reduce significant environmental impacts or avoid significant environmental impacts.

The proposed Project would upgrade two existing transmission lines of the McCullough-Victorville transmission alignment (MCC-VIC), Transmission Line 1 (MCV1) and Transmission Line 2 (MCV2), which run parallel to each other within a utility corridor owned and maintained by LADWP. The utility corridor is entirely within the Mojave Desert and spans 162 miles from Boulder City, Nevada in Clark County, Nevada, to the Victorville Switching Station in Victorville, California within San Bernardino County, California. The Project is divided into the Nevada segment, which runs for 24 miles from the McCullough Substation to Line 1 Tower 27-5 (MCV1_27-5) and Line 2 Tower 26-7 (MCV2_26-7) at the California Border, and the California segment, which runs for 138 miles from MCV1_27-6 and MCV2_27-1 to the Victorville Switching Station (Psomas 2023). The tower numbering uses mileage from the source of the energy feed. For example, Tower 27-5 represents the fifth tower of the 27th mile of the transmission line. The utility corridor largely crosses undeveloped state and federal lands, including lands under the jurisdiction of California State Lands Commission and the U.S. Bureau of Land Management (BLM) (Aspen 2020). The Project would require maintenance and rehabilitation of access roads, reinforcing or replacing tower structural steel members for approximately 1,508 towers, complete tower replacement for approximately 153 towers, tower raising for towers with ground-to-clearance violations and the subsequent power line re-tensioning that is necessary, as well as replacing all conductors, ground wires, insulators, and associated hardware assemblies, and adding grounding for every tower along the alignment. As such, the proposed Project would occur along the entire LADWP utility corridor.

Existing development within the utility corridor consists of access roads, tower disturbance footprints, the transmission towers and transmission lines themselves, as well as their associated hardware. The alignment crosses select roadways. The proposed Project would require establishing a temporary work area at each of the 1,740 transmission towers along the alignment, varying in size based on the construction activities required at that tower. All work areas would occur only within the existing tower sites and existing access road areas and rights-of-way.

The utility corridor is predominately surrounded by vacant, undeveloped state and federal lands, and is mostly located within San Bernardino County, California, except for approximately 24 miles of the 162-mile corridor that is located in Clark County, Nevada. The nearest residential uses to the utility corridor are directly adjacent to towers MCV1_139-6 through 140-2, approximately 9 miles south of Barstow, California. The nearest schools to the utility corridor are the Baker Valley Unified School District elementary, middle, and high schools, located at 72100 Schoolhouse Lane, Baker, California. These schools are approximately 1,075 feet south-southeast of the Highway 127 access road through Baker at its nearest point. Figure 3-1, Project Location, and Figure 3-2, Project Alignment, show the entirety of the MCV1 and MCV2 transmission line alignments at different levels of detail.

1.2 Document Organization

This EIR is organized as follows:

Chapter 1, Executive Summary, outlines the conclusions of the environmental analysis and provides a summary of the proposed Project and the Project alternatives analyzed in the EIR. This section also includes a table summarizing all environmental impacts identified in the EIR along with the associated mitigation measures proposed to reduce or avoid each impact.

Chapter 2, Introduction, serves as a forward to the EIR, introducing the Project, the applicable environmental review procedures, and the organization of the EIR.

Chapter 3, Project Description, provides a thorough description of the Project setting, objectives, characteristics, operation, and construction of the proposed Project and required discretionary approvals.

Chapter 4, Environmental Impact Analysis, describes the potential environmental impacts of the proposed Project, as well as proposed mitigation measures to reduce or avoid any potentially significant impacts. The discussion in Chapter 4 is organized into the five environmental issue areas listed below. (All other impact areas were determined to be less than significant through the Initial Study process and are discussed in Chapter 5 and Appendix A of this EIR.)

- Air Quality
- Biological Resources
- Cultural Resources
- Paleontological Resources
- Tribal Cultural Resources

For each environmental issue area, the analysis and discussion are organized into the following subsections:

- **Existing Conditions** – This subsection provides information describing the existing setting on or surrounding the Project site that may be subject to change as a result of the implementation of the Project.
- **Relevant Plans, Policies, and Ordinances** – This subsection describes the laws, regulations, ordinances, plans, and policies applicable to the environmental issue area and the proposed Project.
- **Thresholds of Significance** – This subsection identifies a set of thresholds by which the level of impact is determined.
- **Impacts Analysis** – This subsection provides a detailed analysis regarding the environmental effects of the proposed Project, and whether the impacts of the proposed Project would meet or exceed the thresholds of significance.
- **Mitigation Measures** – This subsection identifies potentially feasible mitigation measures that would avoid or substantially reduce significant adverse Project impacts.
- **Level of Significance After Mitigation** – This subsection discusses whether Project-related impacts would be reduced to below a level of significance with implementation of the mitigation measures identified in the EIR. If applicable, this subsection also identifies any residual significant and unavoidable adverse impacts of the proposed Project that would result even with implementation of any feasible mitigation measures.

- **Cumulative Effects –** This subsection includes an evaluation of the potential cumulative impacts of the proposed Project in combination with identified related projects.
- **References** – This subsection includes a list of all references cited within the preceding discussion and analysis.

Chapter 5, Other CEQA Considerations, addresses impact areas determined to be less than significant through the Initial Study process, significant environmental effects that cannot be avoided, the significant irreversible environmental changes that would result from implementation of the proposed Project, and growth-inducing impacts associated with the proposed Project.

Chapter 6, Alternatives, discusses alternatives to the proposed Project, including a No Project Alternative. This chapter describes the rationale for selecting the range of alternatives discussed in the EIR and identifies the alternatives considered by LADWP that were rejected from further discussion as infeasible. Lastly, Chapter 6 includes a discussion of the environmental impacts of the alternatives that were carried forward for analysis and identifies the Environmentally Superior Alternative.

Chapter 7, List of Preparers, gives names and contact information of those responsible for writing this EIR.

1.3 Project Background

LADWP placed the first transmission line of the MCC-VIC alignment in 1936 at a capacity of 287.5 kilovolts and constructed the second parallel transmission line in 1939 (LADWP 2024a). In 1970, LADWP upgraded one of the transmission lines and subsequently upgraded the second transmission line in 1980 (LADWP 2024a). The current transmission line upgrade is required to accommodate incoming renewable energy resources along the West of Colorado River (WOR) Path 46 transmission corridor. This Project would enable an additional 475 megawatts to contribute over 15% toward LADWP's Renewable Portfolio Standard (RPS) as part of LADWP's most recent commitment under the RPS to provide 100% carbon-free energy to customers by 2035, 10 years ahead of the state's target.

In 2004, the Los Angeles City Council passed Resolution 03-2064-S1 requesting that the Board of Water and Power adopt an RPS Policy of 20 percent renewable energy by 2017, which the Board passed in 2005 along with an interim goal of 13% renewable energy provided by 2010 (LADWP 2013). The City Council then approved the LADWP RPS on June 29, 2005. LADWP's RPS acts as a roadmap to provide customers with an increasing percentage of energy from renewable resources, including wind, solar, small hydroelectric, geothermal, and biomass, and its specific renewable energy targets have been amended over time (LADWP 2024b).

1.4 Project Description

1.4.1 Project Objectives

The underlying purpose of the Project is to accommodate incoming renewable energy resources from the East territory region, along the WOR Path 46 transmission corridor in order to help LADWP achieve state and local requirements for greenhouse gas reductions and an increased renewable energy portfolio. As set forth in the CEQA Guidelines, the project's specific objectives are provided below.

- Reduce the environmental impacts associated with greenhouse gas emissions and create a more sustainable environment.

- Assist LADWP in meeting RPS goals by increasing LADWP's transmission capacity by 475 megawatts.
- Meet LADWP's future electrical energy demands.
- Allow interconnection and expansion of LADWP's renewable energy in the East territory, along the WOR Path 46 transmission corridor.
- Increase LADWP's system reliability and flexibility in the utilization of renewable energy sources.
- Enable the delivery of renewable energy.
- Minimize the environmental disturbance of transmission upgrades by constructing improvements within an existing transmission corridor; avoiding sensitive resources to the extent feasible; and minimizing the number of new access routes.

1.4.2 Proposed Facilities

The proposed Project would upgrade two parallel LADWP transmission lines, MCV1 and MCV2, to increase their capacity to newly rate them at approximately 570 kilovolts at 2500A/3000A (continuous/emergency) from their current rating of 500 kilovolts at 1600A/2400A (LADWP 2024a). The Project would consist of modifications and/or replacement of existing insulators and hardware assemblies, raising existing transmission towers as needed to mitigate any ground clearance violations, replacing towers as needed within the footprints of existing tower sites, repairing or replacing damaged structural members, replacing conductors, ground wire, and re-tensioning conductors, repairing/retrofitting existing main access roads and spur roads, and replacing or reinforcing tower foundations where needed. The transmission line upgrade is required to accommodate incoming renewable energy resources along the WOR Path 46 transmission corridor and to ensure the continued safe and reliable operation of the lines (LADWP 2024a). The proposed Project would require establishing a temporary work area at each of the 1,740 transmission structures. Pre-construction activities at each work area would begin with surveying; installing tower center and adjacent right of way boundary offset monuments; setting mowing limits; installation of temporary fencing where required; staking, clearing, and grading for both existing and new transmission structure foundation locations, laydown areas, and soil stockpiles; and installation of best management practices (BMPs). The approximate work area at each transmission tower site location would be approximately 60 by 60 feet. The approximate work area at each stringing site (Conductor Pulling and Tensioning Sites) would be 200 by 500 feet. The approximate work area at each guard structure would be 200 by 50 feet. The approximate work area at each Tower Crane Pad would be 50 by 50 feet. All work areas would occur only within the existing tower sites and existing access road areas and rights-of-way. The pre-disturbed existing tower sites and access roads of the transmission line not being worked on would be used as much as possible while work is being done on the transmission line actively being upgraded. Table 3-1 in Chapter 3, Project Description, of this EIR summarizes the estimated disturbance areas for the Project. As shown therein, a total of 1,437 acres of land along the utility corridor would be affected by the proposed Project.

1.4.3 Construction Schedule

Construction of the proposed Project is expected to commence around April 2025, beginning with survey work and access road rehabilitation. In 2026, transmission line construction would begin, and construction activities are expected to be complete in January 2029. Construction activities would normally occur between sunrise and sunset up to six days per week (Monday through Saturday). Construction is expected to occur on Saturdays, as well as all normal business days, for the entire duration of the Project. Nighttime work is not planned but may occur between sunset and sunrise during the summer and early fall months to limit daytime customer outages. Table 3-2 in Chapter 3 of this EIR shows the standard phasing for project construction and the duration for each phase, as it applies to

the proposed Project. Typically, no construction work would occur on Sundays or national holidays. Temporary staging and laydown areas for construction materials and equipment, and worker vehicle parking would be accommodated within each tower site location until work at that location has been completed. Additional equipment would be staged at the designated staging areas and laydown yards on a day-to-day basis and would be driven to the work sites as required.

1.5 Areas of Known Controversy

A public scoping period was held to solicit input on the scope of the analysis for the EIR between April 1, 2024, and May 1, 2024. Additionally, a virtual scoping meeting was held by LADWP on April 17, 2024. The purpose of this meeting was to seek input from public agencies and the general public regarding the potential environmental impacts of the proposed Project. Three written comments were received during the scoping period. Comment letters are included in Appendix A of this EIR. The public comments, questions, and concerns that were received at the scoping meeting, as well as in writing, generally pertained to the following topics:

- The need for transportation permits from the San Bernardino County, Department of Public Works
- Potential impacts to biological resources along the transmission line alignment during construction
- Potential impacts to tribal cultural resources

1.6 Required Permits and Approvals

The following permits and approvals may be required for the proposed Project:

- Approval by Los Angeles Department of Water and Power Board of Commissioners
- Approval by the U.S. Bureau of Land Management
- California Department of Fish and Wildlife Section 1602 Notification of Lake or Streambed Alteration
- California Department of Fish and Wildlife Incidental Take Permit(s)
- National Pollutant Discharge Elimination System (NPDES) Water Pollution Control Permit
- Regional Water Quality Control Board Section 401 Water Quality Certification and Waste Discharge Requirements
- San Bernardino County Grading Permit (where applicable)
- City of Henderson or Boulder City Grading Permit (where applicable)
- State Water Resources Control Board Section 402 Storm Water Permit Associated with Construction Activities
- U.S. Army Corps of Engineers Section 404 Nationwide Permit
- Right of entry – state lands via public access roads

Construction would be completed in compliance with the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002). Per the General Permit, a Stormwater Pollution Prevention Plan incorporating BMPs for erosion control would be developed and implemented during Project construction.

1.7 Impacts Determined to be Significant

Table 1-1 provides a summary of the impact analysis related to the proposed Project. The table identifies a summary of the significant environmental impacts resulting from the Project pursuant to the CEQA Guidelines Section 15123(b)(1). For more detailed discussion, please see Chapter 4 of this EIR. Table 1-1 also lists the applicable mitigation measures related to identified significant impacts from the proposed Project, as well as the level of significance after mitigation is identified. As discussed in Section 4.1, Air Quality, impacts associated with construction air quality were identified as being significant and unavoidable. Cumulative impacts associated with construction air quality were also identified as being significant and unavoidable.

1.8 Effects Found Not to be Significant

As stated in Chapter 5 of this EIR, the Initial Study (Appendix A) concluded that the Project would not result in significant impacts to aesthetics, agriculture and forestry resources, energy, 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, utilities and service systems, and wildfire. Additionally, the Project would not result in significant impacts to certain thresholds for geology and soils, as described within Appendix A. Therefore, these specific resource thresholds are not addressed in the EIR as separate environmental impact analysis and are not summarized in Table 1-1.

Several environmental topics were found to be less than significant with mitigation incorporated, less than significant, or result in no impact, as described in the EIR and summarized in Table 1-1, including the following: biological resources, cultural resources, paleontological resources, and tribal cultural resources.

1.9 Summary of Environmental Impacts and Mitigation

Table 1-1 provides a summary of the impact analysis related to the Project. Table 1-1 identifies a summary of the environmental impacts resulting from the Project pursuant to the CEQA Guidelines Section 15123(b)(1). For more detailed discussions, please see Chapter 4 of this EIR. Table 1-1 lists the applicable mitigation measures required to reduce potentially significant impacts, and in some cases, included to further reduce some impacts already identified as less than significant before mitigation. Please see each individual section in Chapter 4 for the references listed within the mitigation measures.

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
4.1 Air Quality			
AQ-1: Would the Project conflict with or obstruct implementation of the applicable air quality plan?	Potentially significant	**MM-AQ-1. Fugitive Dust Controls**. Comply with all applicable Rules and Regulations of the Mojave Desert Air Quality Management District (MDAQMD), including, but not limited to Rules 401 (Visible Emissions), 402 (Nuisance), and 403 (Fugitive Dust). To ensure compliance with these Rules and Regulations, the Project Applicant or successor in interest shall prepare and submit a Dust Control Plan to the MDAQMD for approval. The Dust Control Plan shall document the best management practices (BMPs) that will be implemented during Project construction to prevent, to the maximum extent practicable, wind and soil erosion. BMPs that will be included in the Dust Control Plan shall include, but are not limited to, the following: ▪ Signage compliant with Rule 403 (Attachment B) shall be erected at each Project site entrance prior to the commencement of construction. ▪ Use a water truck to maintain moist disturbed surfaces and actively spread water during earthwork to minimize visible fugitive dust emissions. If the Project site has exposed sand or fines deposits, or if the Project exposes such soils through earthmoving, chemical stabilization or covering with a stabilizing layer of gravel will be required to eliminate visible dust/sand from the sand/fines deposits. ▪ All vehicle speeds on unpaved roads shall be limited to 15 miles per hour. ▪ All perimeter fencing shall be wind fencing or the equivalent, to a minimum of four feet of height or the top of all perimeter fencing. The Project Applicant shall maintain the wind fencing as needed to keep it intact and remove windblown dropout. This wind fencing requirement may be superseded by local ordinance, rule, or Project-specific biological mitigation prohibiting wind fencing.	Significant and unavoidable

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		▪ All maintenance and access vehicular roads and parking areas shall be stabilized with chemical dust suppressants sufficient to eliminate visible fugitive dust from vehicular travel and wind erosion. The Project Applicant shall take actions to prevent Project-related track out onto paved surfaces and clean any Project-related track out within 24 hours. All other disturbed earthen surfaces within the Project area shall be stabilized by natural or irrigated vegetation, compaction, chemical, or other means sufficient to prohibit visible dust from wind erosion. ▪ Obtain MDAQMD permits for any miscellaneous process equipment that may not be exempt under MDAQMD Rule 219 including, but not limited to, internal combustion engines with a manufacturer's maximum continuous rating greater than 50 brake horsepower. MM-AQ-2. Exhaust Controls. During Project construction, all internal combustion engines/construction equipment greater than 75 horsepower operating on the Project site shall meet U.S. EPA-certified Tier 4 Final emissions standards. The LADWP and/or its designated construction contractor shall include this requirement in applicable bid documents, purchase orders, and contracts with successful contractors. Successful contractors must demonstrate the ability to supply the compliant construction equipment for use prior to any ground-disturbing and construction activities. An exemption from these requirements may be granted in the event that LADWP and/or its designated construction contractor documents that equipment with the required tier is not reasonably available and corresponding reductions in criteria air pollutant emissions are achieved from other construction equipment.[1] Before an exemption may be considered by LADWP, the LADWP	

[1] For example, if a Tier 4 Final piece of equipment is not reasonably available at the time of construction and a lower tier equipment is used instead, other pieces of equipment with engines less than 75 hp could be upgraded to Tier 4 or replaced with an alternative-fueled (not diesel-fueled) equipment to offset the emissions associated with using a piece of equipment that does not meet Tier 4 Final standards.

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		and/or its designated construction contractor shall be required to demonstrate that at least two construction fleet owners/operators in the High Desert and San Bernardino County Region were contacted and that those owners/operators confirmed Tier 4 Final equipment could not be located within the High Desert and San Bernardino County Region.	
AQ-2: 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?	Potentially significant	See **MM-AQ-1** and **MM-AQ-2**.	Significant and unavoidable
AQ-3: Would the Project expose sensitive receptors to substantial pollutant concentrations?	Potentially significant	See **MM-AQ-1** and **MM-AQ-2**.	Significant and unavoidable
AQ-4: Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less than significant	N/A	N/A
4.2 Biological Resources			
BIO-1: 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 Wildlife or U.S. Fish and Wildlife Service?	Potentially significant	**MM-BIO-1. Western Joshua Tree Census, Permitting, and Avoidance.** During candidacy or if western Joshua tree is listed under CESA, LADWP shall implement the mitigation measure below. Western Joshua Tree Conservation Act Census. In sections of the Project area within which western Joshua tree has been documented (i.e., between L1 156-1 and L2 155-1 to the Victorville Substation), an individual stem or trunk of western Joshua tree including dead trees must be mapped by a certified arborist who shall conduct a census within the Project area and a 50-foot buffer (census area) per the Western Joshua Tree Conservation Act census instructions. The certified arborist shall systematically	Less than significant

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		search the entire census area using parallel transects for all western Joshua trees and their locations using high-accuracy (<1-meter [approximately 3-foot]) GPS technology. Additionally, the size class of each tree must be determined based on measurement methods described in the census instructions (i.e., from the middle of the base of the trunk to the top of the leaf that is furthest away from the base for the entire path of growth of the tree). The western Joshua tree height classes are defined as follows: Size Class A = 0–1 meter in height; Class B = 1 meter or greater but less than 5 meters in height; and Class C = 5 meters or greater in height. Other data must be gathered in accordance with the census instructions, which include but are not limited to tree maturity, presence of flowers and/or fruit, and photos of each stem. Western Joshua Tree Conservation Act Permitting. If it is determined that certain western Joshua tree individuals cannot be avoided, the Project shall apply for a Western Joshua Tree Conservation Act Incidental Take Permit (ITP) by which mitigation for direct impacts to those western Joshua trees would be fulfilled through payment of the elected fees as described in California Fish and Game Code Section 1927.3. In conformance with the reduced fee schedule prescribed for the Project area, mitigation will consist of payment of $1,000 for each western Joshua tree five meters or greater in height, $200 for each western Joshua tree less than five meters but greater than 1 meter in height; and $150 for each western Joshua tree less than 1 meter in height. Other local regulations (i.e., City of Victorville Municipal Code, Chapter 13.33 and San Bernardino County Development Code Chapter 88.01) also require permitting or notification prior to removal of western Joshua trees. Therefore, the Project must also receive written consent from the City of Victorville's Director of Parks and Recreation prior to the removal or relocation of western Joshua trees located within the City of Victorville in accordance with City of Victorville Municipal Code, Chapter 13.33, Preservation and	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		Removal of Joshua Trees. Additionally, the Project applicant shall submit an application for a Tree or Plant Removal Permit for all western Joshua trees to be removed within unincorporated areas of San Bernardino County in accordance with San Bernardino County Development Code Chapter 88.01.050. Western Joshua Tree Avoidance. To ensure avoidance of western Joshua trees to be preserved in place, all western Joshua trees within the census area (Project area between L1-156-1 and L2-155-1 to the Victorville Substation and a 50-foot buffer) for which a permit has not been attained must be clearly marked in the field prior to the start of construction. **MM-BIO-2. Authorized Biologist Authority.** The Authorized biologist(s) or biological monitor(s) shall have authority to immediately stop any activity that does not comply with biological mitigation measures and/or to order any reasonable measure to avoid the unauthorized take of Mojave desert tortoise, Mohave ground squirrel, western Joshua tree or other sensitive biological resources. The authorized biologist shall coordinate with the LADWP construction manager and environmental project manager to stop or direct work. **MM-BIO-3. Biological Monitoring.** At minimum, biological monitoring shall include the following tasks and responsibilities: ▪ The Authorized biologist(s) and/or monitor(s) shall be on site daily during Project activities to conduct compliance inspections to prevent unauthorized take of Mojave desert tortoise, Mohave ground squirrel, and western Joshua tree. ▪ Enforcement of biological mitigation measures, permit conditions, and protective measures associated with Project approvals. ▪ Ensure that signs, stakes, and fencing are intact	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		▪ Ensure that Project activities are only occurring within the direct impact footprint. ▪ Inspect all open holes and trenches daily and just prior to back-filling or covering. At the end of each workday, LADWP shall place an escape ramp at each end of trenches to allow any animals that may have become trapped in the hole or trench to climb out overnight. The ramp may be constructed of either dirt fill or wood planking or other suitable material that is placed at an angle no greater than 30 degrees. If any worker discovers that special-status wildlife has become trapped, they shall notify the LADWP construction manager and environmental project manager immediately and LADWP shall halt the Project activity and notify the biologist immediately. Project workers and the biologist shall allow the individual to escape unimpeded if possible, or an appropriately permitted biologist may move the individual out of harm's way before allowing work to continue. - Conduct pre-construction sweeps in areas with suitable habitat to support special-status wildlife. Supervise and conduct regular spot checks during vegetation clearing, grubbing, and grading. If permits are not necessary to handle or harass the species, flush or move wildlife from work areas ahead of ground disturbance activities during pre-construction sweeps. - If slow-moving and/or fossorial special-status species that do not easily flush are detected in the work area, a biologist possessing an appropriate California scientific collecting permit to handle special-status species will capture and relocate individuals to nearby undisturbed areas with suitable habitat outside of the construction area, but as close to their origin as possible. All wildlife moved during project activities shall be documented by the biologist on site.	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		- Periodically monitor the construction site to see that dust is minimized. If the biological monitor determines that dust is adversely affecting special-status species, the monitor shall require the construction personnel to implement best available control measures to reduce dust. Examples of such best available control measures include periodic watering of work areas, application of environmentally safe soil stabilization materials, and/or roll compaction (also required by MM-AQ-1 – Fugitive Dust Controls). **MM-BIO-4. Education Program.** LADWP shall conduct an education program prior to all Project activities for all employees, agents, or contractors that will be working on behalf of the LADWP in the Project Area. The education program shall include a discussion of the biology and general behavior of desert tortoise and Mohave ground squirrel and the biology of western Joshua tree; information about the distribution and habitat needs of the species; sensitivity of the species to human activity; the legal status of the species under CESA, including their protected status, recovery efforts, penalties for violations; and Project-specific protective measures detailed in the ITP. The education program shall consist of an in-person presentation from the Authorized Biologist or Biological Monitor and/or a digital presentation that can be accessed in the field via cellular phones, tablets, laptop computers, and/or similar portable devices. LADWP shall prepare and distribute wallet-sized cards or a fact sheet handout (hard copy or digital) detailing the information presented during the education program for workers to carry in the Project Area. In addition, a tail-gate presentation prior to surface-disturbing Project activities shall also be presented by the Authorized Biologist or Biological Monitor prior to the start of any project-specific Project activities to identify specific on-site resources identified for avoidance during pre-activity surveys. For the education program and each tailgate presentation, LADWP shall provide interpretation for non-English speaking workers, and	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		the same instruction shall be provided to any new workers before they are authorized to perform work in the Project Area. Upon completion of the program and after each tail-gate presentation, employees shall sign a form (hard-copy or digital) stating they attended the program and presentation and understand all protection measures. The form shall be made available to CDFW upon request. The program shall: ▪ Be developed by or in consultation with the Authorized Biologist and consist of an on-site presentation with supporting written material and/or electronic media, including photographs of special-status species, available to all participants. ▪ Provide an explanation of the function of flagging that designates authorized work areas or resources marked for avoidance and specify the prohibition of soil disturbance or vehicle travel outside designated areas. ▪ Discuss general safety protocols such as vehicle speed limits (15 miles per hour), hazardous substance spill prevention and containment measures, and fire prevention and protection measures. ▪ Review avoidance, minimization, and mitigation requirements. ▪ Explain the sensitivity of the vegetation and habitat within and adjacent to work areas and proper identification of these resources. ▪ Discuss the relevant policies and plans, and the consequences of non-compliance with these acts and/or any permit conditions ▪ Discuss the locations and types of special-status resources on the Project sites and adjacent areas and explain the reasons for protecting these resources. ▪ Inform participants that no snakes, other reptiles, mammals, birds, bats, or any other wildlife will be harmed or harassed.	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		▪ Place special emphasis on special-status plant and wildlife species that are known to occur in the Project activity work area. ▪ Provide contact information for the biologist and instructions for notification of any vehicle-wildlife collisions or dead or injured wildlife species encountered during Project activities. **MM-BIO-5. Delineation of Impact Boundaries.** Before beginning activities that would cause impacts, the contractor shall clearly delineate work area boundaries with fencing, stakes, or flags within which the impacts will take place, and in consultation with the Authorized biologist, mark or delineate where sensitive biological resources occur within the impact footprint if being avoided. All impacts outside the fenced, staked, or flagged areas shall be avoided, and all fencing, stakes, and flags shall be maintained until the completion of impacts in that area. LADWP shall avoid direct impacts to vegetation within the Mojave River corridor. **MM-BIO-6. Desert Tortoise Protocol Surveys.** LADWP shall conduct protocol level surveys for desert tortoise in all Project impact areas, including areas where impacts are occurring within existing disturbance areas, as outlined in the mitigation measure below. Desert Tortoise Protocol Surveys. Prior to the start of construction, qualified biologists must conduct protocol level presence or absence surveys in all project impact areas within suitable habitat in accordance with the USFWS Desert Tortoise Field Manual. LADWP shall coordinate with USFWS and CDFW concurrently to ensure consistency and adequacy of surveys and subsequent planning efforts. If it is determined by CDFW and USFWS that an ITP is required for the Project to move forward, LADWP shall acquire an ITP from CDFW for the species and a consistency determination from USFWS or enter into formal consultation with USFWS for issuance of a biological opinion (BO) prior to the start of Project activities. Upon Project implementation, LADWP shall	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		adhere to any additional measures and conditions set forth within the ITP. No take of desert tortoise shall occur without authorization in the form of an ITP pursuant to California Fish and Game Code Section 2081. Desert Tortoise Compensatory Mitigation. Upon completion of protocol surveys, LADWP will coordinate with USFWS and CDFW to determine what portions of the Project would be considered occupied desert tortoise habitat based on survey results. LADWP shall provide compensatory mitigation as determined through the ITP process. At minimum, LADWP shall provide compensatory mitigation for impacts to desert tortoise critical habitat 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, and the implemented mitigation is nested (mitigation for desert tortoise critical habitat fulfills the ground disturbance mitigation that is required). Compensatory mitigation shall be implemented consistent with the BLM DRECP. LADWP shall complete the required compensation in accordance with 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:	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		▪ LADWP shall provide a minimum of one biological monitor who is authorized by the USFWS and the CDFW to handle desert tortoises for each active work crew. ▪ 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 construction 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.	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		▪ 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, LADWP and the 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-7. Mohave Ground Squirrel Habitat Assessments and Protocol Surveys.** For Project activities taking place in the distribution range of Mohave ground squirrel, A permitted biologist	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		shall conduct habitat assessments and protocol level trapping surveys as outlined in the mitigation measure below. Mohave Ground Squirrel Habitat Assessments. Prior to the start of construction, permitted biologists shall conduct habitat assessments in all work areas to evaluate each work area's potential to support suitable Mohave ground squirrel habitat. The assessment would consist of meandering pedestrian transects, wherein biologists will note presence or absence of suitable vegetation communities and individual plants that would provide forage (e.g., spiny hopsage, winterfat), as well as presence of burrows and/or friable soils. The habitat assessment would also take into account connectivity with known populations. The determination of the habitat assessment will inform whether where protocol trapping survey would be required. Mohave Ground Squirrel Protocol Surveys. In areas where a permitted biologist has determined that suitable Mohave ground squirrel habitat is present, a permitted biologist must conduct protocol level surveys per CDFW Mohave Ground Squirrel Survey Guidelines (CDFW 2023b). The protocol surveys will consist of an initial visual survey, and three 5-day live trapping surveys conducted in the following periods at least two weeks apart: March 15 through April 30, May 1 through May 31, and June 1 through July 15. Camera trapping surveys would be conducted simultaneously with live trapping as recommended in CDFW guidelines. If CDFW determines that camera-only methods would be conducive to reducing impacts to Mohave ground-squirrel, LADWP will coordinate with CDFW on an alternative camera-trapping survey protocol that would adequately determine presence or absence of the species. If it is determined by CDFW that an ITP is required for the Project to move forward, LADWP shall acquire an ITP from CDFW for the species prior to the start of Project activities. Upon Project	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		implementation, LADWP shall adhere to any additional measures and conditions set forth within the ITP. No take of Mohave ground squirrel shall occur without authorization in the form of an ITP pursuant to California Fish and Game Code Section 2081. Mohave Ground Squirrel Compensatory Mitigation. Upon completion of protocol surveys, LADWP will coordinate with USFWS and CDFW to determine what portions of the Project would be considered occupied Mohave ground squirrel habitat based on survey results. LADWP shall provide compensatory mitigation as determined through the ITP process. Where impacts to Mohave ground-squirrel occupied habitat co-occur within ground disturbance impacts within ACEC and California Desert NCL units that are cumulatively over their respective disturbance caps, the higher mitigation ratio applies, and the implemented mitigation is nested (mitigation for Mohave ground-squirrel occupied habitat fulfills the ground disturbance mitigation that is required). Compensatory mitigation shall be implemented consistent with the BLM DRECP LUPA. **MM-BIO-8. Protocol Survey for Listed Riparian Birds and Avoidance.** Prior to Project activities, LADWP will conduct protocol surveys for listed riparian bird species in riparian habitat along the Mojave River located within 500 feet of the Project area as outlined in the mitigation measure below. The year prior to the start of construction, LADWP shall have a permitted or qualified biologist, as applicable, conduct focused surveys for western yellow-billed cuckoo in accordance with A Natural History Summary and Survey Protocol for the Western Distinct Population Segment of the Yellow-billed Cuckoo (USFWS 2016), least Bell's vireo in accordance with the USFWS Least Bell's Vireo Survey Guidelines (USFWS 2001), and southwestern willow flycatcher in accordance with A Natural History Summary and Survey Protocol for the Southwestern Willow Flycatcher (Sogge et	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		al. 2010). If a protocol survey determines presence of a given species, LADWP shall avoid Project activities within 500 feet of the habitat during the species' breeding season (i.e., yellow-billed cuckoo – June 15 through August 15; least Bell's vireo – April 10 through July 31; southwestern willow flycatcher – May 15 through July 17. **MM-BIO-9. Nesting Bird Surveys and Avoidance.** 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 500-foot 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 active nests containing eggs or young are 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. LADWP shall have a qualified avian biologist document species, baseline behavior, stage of reproduction, and existing site conditions including vertical and horizontal distances from proposed work areas, visual or acoustic barriers, and existing level of disturbance to avoid impacts to nesting birds, eggs, and nests. The biologist shall establish an appropriate nest buffer based on the species and the planned activity's level of disturbance, site conditions, and the observed bird behavior. The on-site biologist shall increase buffer sizes as needed if nesting individuals show signs of	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		disturbance. The buffer zone may be decreased, at the biologist's discretion, based on the individual's sensitivity to visual or audible disturbances but shall not be decreased below 300-feet for special-status avian species or raptor species. The nest buffer area shall be avoided and demarcated in the field with flagging and stakes or construction fencing. Active nests shall be monitored until the biologist has determined the young have fledged or the project is finished. The biologist has the authority to halt or stop work if nesting individuals exhibit signs of disturbance. Established buffers shall remain until the biologist determines the young have fledged or the nest is no longer active, or until Project activities cease. MM-BIO-10. Crotch's Bumble Bee Protocol Survey and Avoidance. During candidacy or if Crotch's bumble bee is listed under CESA, LADWP shall implement the mitigation measure below. Within the known distribution range for Crotch's bumble bee, presence/absence surveys for the species shall be conducted prior to construction within the time periods described below in order to evaluate locations and use of Crotch's bumble bee nesting colonies if present within the Project area. The survey shall include 1) a habitat assessment and 2) focused surveys, both of which will be based on recommendations described in the "Survey Considerations for CESA (California Endangered Species Act) Candidate Bumble Bee Species," released by the CDFW on June 6, 2023, or the most current at the time of construction. LADWP will submit a survey plan prior to conducting focused surveys, which will identify the Project and its location, survey methods, lead surveyors, field assistants. The habitat assessment shall be conducted prior to focused surveys and, at a minimum, include a review of historical and current species occurrences; document potential habitat on site including foraging, nesting, and/or overwintering resources; and identify which plant species are present. For the purposes of this mitigation measure, nest	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		resources are defined as abandoned small mammal burrows, bunch grasses with a duff layer, thatch, hollow trees, brush piles, and man-made structures that may support bumble bee colonies such as rock walls, rubble, and furniture. If nesting resources are present in the impact area, focused surveys will be conducted. The focused surveys will be performed by a biologist with expertise in surveying for bumble bees and include at least three survey passes that are not on sequential days or in the same week, preferably spaced two to four weeks apart. The timing of these surveys shall coincide with the Crotch's bumble bee colony active period (April 1 through August 31). Surveys may occur between 1 hour after sunrise and 2 hours before sunset. Surveys will not be conducted during wet conditions (e.g., foggy, raining, or drizzling) and surveyors will wait at least 1 hour following rain. Optimal surveys are when there are sunny to partly sunny skies that are greater than 60 degrees Fahrenheit. Surveys may be conducted earlier if other bees or butterflies are flying. Surveys shall not be conducted when it is windy (i.e., sustained winds greater than 8 mph). Within non-developed habitats, the biologist shall look for nest resources suitable for bumble bee use. Ensuring that all nest resources receive 100% visual coverage, the biologist shall watch the nest resources for up to five minutes, looking for exiting or entering worker bumble bees. Worker bees should arrive and exit an active nest site with frequency, such that their presence would be apparent after five minutes of observation. If a bumble bee worker is detected, then a representative shall be identified to species. Biologists should be able to view several burrows at one time to sufficiently determine if bees are entering/exiting them depending on their proximity to one another. It is up to the discretion of the biologist regarding the actual survey viewshed limits from the chosen vantage point which would provide 100% visual coverage; this could include a 30- to 50-foot-wide area. If a nest is suspected, the surveyor can block the entrance of the	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		possible nest with a sterile vial or jar until nest activity is confirmed (no longer than 30 minutes). Identification will include trained biologists netting/capturing the representative bumble bee in appropriate insect nets, per the protocol in U.S. National Protocol Framework for the Inventory and Monitoring of Bees. The bee shall be placed in a clear container for observation and photographic documentation if able. The bee will be photographed using a macro lens from various angles to ensure recordation of key identifying characteristics. If bumble bee identifying characteristics cannot be adequately captured in the container due to movement, the container will be placed in a cooler with ice until the bumble bee becomes inactive (generally within 15 minutes). Once inert, the bumble bee shall be removed from the container and placed on a white sheet of paper or card for examination and photographic documentation. The bumble bee shall be released into the same area from which it was captured upon completion of identification. Based on implementation of this method on a variety of other bumble bee species, they become active shortly after removal from the cold environment, so photography must be performed quickly. If Crotch's bumble bee nests are not detected, no further mitigation would be required. The mere presence of foraging Crotch's bumble bees would not require implementation of additional minimization measures because they can forage up to 10 kilometers from their nests. If nest resources occupied by Crotch's bumble bee are detected within the construction area, no construction activities shall occur within 50 feet of the nest, or as determined, by a qualified biologist through evaluation of topographic features or distribution of floral resources. The nest resources will be avoided for the duration of the Crotch's bumble bee nesting season (February 1 through October 31), which includes the queen flight season, the colony active period, and the daughter-queen (gyne) flight season. Outside of the nesting season, it is assumed that no	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		live individuals would be present within the nest as the gynes usually leave from September through October, and all other individuals (original queen, workers, males) die. The gyne is highly mobile and can independently disperse to outside of the construction footprint to surrounding open space areas that support suitable hibernacula resources. A written survey report will be submitted to CDFW within 30 days of the survey. The report will include survey methods, weather conditions, and survey results, including a list of insect species observed and a figure showing the locations of any Crotch's bumble bee nest sites or individuals observed. The survey report will include the qualifications/resumes of the surveyor(s) and approved biologist(s) for identification of photo vouchers, detailed habitat assessment, and photo vouchers. If Crotch's bumble bee nests are observed, the survey report will also include recommendations for avoidance, and the location information will be submitted to the California Natural Diversity Database (CNDDB) at the time of, or prior to, submittal of the survey report. If the above measures are followed, it is assumed that the Project shall not need to obtain authorization from CDFW through the CESA ITP process. If the nest resources cannot be avoided during the nesting period, as outlined in this measure, LADWP will consult with CDFW regarding the need to obtain an ITP. Any measures determined to be necessary through the ITP process to offset impacts to Crotch's bumble bee may supersede measures provided in this CEQA document. In the event an ITP is needed, mitigation for direct impacts to Crotch's bumble bee will be fulfilled through compensatory mitigation at a ratio determined by the ITP nesting habitat replacement of equal or better functions and values to those impacted by the Project, or as otherwise determined through the ITP process.	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		MM-BIO-11. Pre-Construction Surveys and Avoidance and Minimization Measures for Special-Status Plants. Prior to Project activities, LADWP shall conduct focused surveys for special-status plants as outlined in the mitigation measure below. Focused Special-Status Plant Surveys. To mitigate for potential impacts to habitat occupied by special-status plant species, surveys shall be conducted within impact areas where special-status plant species have a moderate or high potential to occur. The following species were documented within the Project area or have a moderate or high potential to occur: desert wing-fruit (*Acleisanthes nevadensis*), Nevada onion (*Allium nevadense*), white bear poppy (*Arctomecon merriamii*), Mojave milkweed (*Asclepias nyctaginifolia*), Tidestrom's milkvetch (*Astragalus tidestromii*), scaly cloak fern (*Astrolepis cochisensis* ssp. *cochisensis*), three-awned grama (*Bouteloua trifida*), Emory's crucifixion thorn (*Castela emoryi*), desert pincushion (*Coryphantha chlorantha*), viviparous foxtail cactus (*Coryphantha vivipara* var. *rosea*), Gilman's cymopterus (*Cymopterus gilmanii*), purple-nerve cymopterus (*Cymopterus multinervatus*), Mojave monkeyflower (*Diplacus mohavensis*), nine-awned pappus grass (*Enneapogon desvauxii*), Harwood's eriastrum (*Eriastrum harwoodii*), desert bedstraw (*Galium proliferum*), Parish's club-cholla (*Grusonia parishii*), polished blazing star (*Mentzelia polita*), Darlington's blazing star (*Mentzelia puburula*), creamy blazing star (*Mentzelia tridentata*), cave evening-primrose (*Oenothera cavernae*), rosy two-toned beardtongue (*Penstemon bicolor* ssp. *roseus*), sky-blue phacelia (*Phacelia coerulea*), Parish's phacelia (*Phacelia parishii*), Abert's sanvitalia (*Sanvitalia abertii*), Rusby's desert-mallow (*Sphaeralcea rusbyi* var. *eremicola*), and Mormon needle grass (*Stipa arida*). These focused surveys shall occur during the season prior to construction and shall be conducted during a period when the target species would be observable and identifiable (e.g., blooming	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		period for annuals). Focused surveys for special-status plant species shall be conducted by a qualified biologist according to the CNPS Botanical Survey Guidelines (CNPS 2001); Protocols for Surveying and Evaluating Impacts to Special Status Native Populations and Natural Communities (CDFW 2018); and U.S. Fish and Wildlife Service General Rare Plant Survey Guidelines (Cypher 2002). Avoidance and Minimization. If special-status plant species are detected during focused survey efforts described above, the full extent of the occurrence within the area shall be recorded. The location of each special-status plant occurrence shall be mapped and number of individuals for each occurrence documented. If impacts to special-status plants cannot be avoided, the following measures shall be implemented: ▪ Special-status plants in the vicinity of the disturbance will be temporarily fenced or prominently flagged and a buffer established around the populations to prevent inadvertent encroachment by vehicles and equipment during the activity; ▪ Seeds will be collected and stored in appropriate storage conditions (e.g., cool and dry), and dispersed/transplanted following the construction activity and reapplication of salvaged topsoil; and ▪ The top 6 inches of topsoil will be salvaged, stockpiled, and replaced as soon as practicable after project completion. Soil stockpiles shall be stabilized, consistent with the project's Stormwater Pollution Prevention Plan. The salvaged topsoil shall be redistributed and contoured to blend with surrounding grades. In the event that a federally or state-listed plant is observed during focused survey, the Los Angeles Department of Water and Power (LADWP) shall consult with the applicable agency (i.e., CDFW	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		and/or USFWS) and obtain written concurrence for measures required for federally or state-listed plant species, if observed. **MM-BIO-12. Relocation of Desert Native Plants.** If it has been determined that protected native desert plants cannot be avoided, LADWP shall apply for a permit with San Bernardino County for removal or relocation of protected native desert plants as required under California Desert Native Plants Act (Food and Agricultural Code, Division 23). The permit application form shall specify information outlined in the California Desert Native Plant Act Section 80114, which includes but is not limited to, the number and species of native plants to be relocated, a description of the real property from which the plants are to be removed, the destination of the native plants, and the manner in which the plants are to be salvaged. Pursuant to the California Desert Native Plants Act, tags or seals issued by the County must be attached to the native plants at the time of harvesting and before transporting to their permanent relocation site(s) and must remain attached to the plant until transplanted into its ultimate destination. Transport of salvaged plants will occur as prescribed by the County. The following actions shall also be implemented to ensure successful relocation of desert native plants for which salvage is necessary: ▪ Salvaged plants shall be transplanted expeditiously to either their final on-site location or to an approved off-site area. If the plants cannot be expeditiously taken to their permanent relocation area at the time of excavation, they may be transplanted in a temporary area (stockpiled) prior to being moved to their permanent relocation site(s). ▪ Transplanted plants shall be watered prior to and at the time of transplantation. Watering of the transplanted plants shall continue for one year. **MM-BIO-13. Avoidance and Minimization of Impacts to Golden Eagle.** Project activities that take place adjacent to areas where	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		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. LADWP shall provide the name(s) and qualifications of each raptor biologist to the CDFW two 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 provided to and approved by the CDFW. Upon approval of a report showing an inactive nest, the CDFW may approve work within 1 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 CDFW shall be contacted for further instructions. **MM-BIO-14. Pre-Construction Burrowing Owl Surveys.** LADWP shall conduct take avoidance surveys for burrowing owl in accordance with protocols established in the Staff Report on Burrowing Owl Mitigation (2012 Staff Report; CDFW 2012). A pre-construction burrowing owl survey shall be completed no more than 14 days before initiation of vegetation removal or grading activities. If ground-disturbing activities are delayed or suspended for more than 30 days after the pre-construction surveys, the project site shall be re-surveyed. If burrowing owls are located within or adjacent to an area subject to impact from a Project activity, LADWP shall postpone the activity, if possible, until burrowing owls are no longer present. If postponement of impacts is not feasible due to Project activity urgency, LADWP shall implement the following actions to minimize impacts.	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		▪ LADWP shall implement measures consistent with practices identified in the 2012 Staff Report to minimize potential impacts to burrowing owl. Measures may include, but are not limited to, the use of buffer zones, visual screens (e.g., hay bales monitored during the day and removed at night to prevent raptor perching; screens shall not exceed 4 feet in height and shall be at least 30 feet from active burrows), or other measures while Project activities are occurring. ▪ Buffers will be established around occupied burrows as determined by a qualified biologist, taking into account existing vegetation, human development, and land uses in an area. The buffer zone may be increased or decreased based on the individual owl's sensitivity to visual or audible disturbances. Project activities may occur within 50 meters to 500 meters of an active burrow (based on level of disturbance). No project activities shall be allowed to encroach into established buffers without the consent of a monitoring biologist. The buffer shall remain in place until it is determined that occupied burrows have been vacated or the nesting season has completed ▪ LADWP shall make every effort to minimize impacts to occupied owl burrows. ▪ If LADWP proposes to relocate burrowing owls from an active burrow or if an active burrow will be impacted, a burrowing owl relocation plan shall be prepared for CDFW review and approval that will be performed outside of breeding season and after fledgling independence and any relocation shall be subject to compensatory mitigation. ▪ Outside of the nesting season, passive owl relocation techniques approved by CDFW shall be implemented. Owls shall be excluded from burrows in the immediate project area and within a buffer zone if there is a threat to the surface or subterranean burrow structure by installing one-way doors in burrow entrances. These doors will be placed at least 48 hours	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		prior to ground-disturbing activities. The project area shall be monitored daily for 1 week to confirm owl departure from burrows prior to any ground-disturbing activities. Compensatory mitigation for permanent loss of owl habitat will be provided following the guidance in the 2012 Staff Report. ▪ If impacts occur to an occupied burrow or if a burrowing owl relocation plan is implemented, LADWP shall provide compensatory mitigation. Compensatory mitigation shall be implemented consistent with the recommendations in the 2012 Staff Report such that the habitat acreage, number of burrows, and burrowing owls impacted are replaced at a minimum of 1:1 in-kind habitat replacement of equal or better functions and values to those impacted by the Project, or as otherwise determined through coordination with CDFW. **MM-BIO-15. Desert Bighorn Sheep Avoidance.** Within suitable bighorn sheep habitat in the Clark, Newberry, and Soda Mountains, helicopter use will be conducted outside of the lambing season (January 1–September 30) to avoid disturbance to desert bighorn sheep during their birthing and rearing period. If avoidance of the lambing season cannot be avoided, LADWP will coordinate with CDFW to modify helicopter operations to avoid disturbance of known lambing sites. If a bighorn sheep is incidentally observed during Project activities, work within 200 feet of the sheep would be halted, and activities would recommence after the animal moves away on its own. **MM-BIO-16. Special-Status Meso-Carnivore Avoidance and Minimization.** Within 14 days prior to Project activities, LADWP shall have a qualified biologist conduct a pre-construction survey within planned Project work areas and a 500-foot buffer to determine if active or potential desert kit fox, American badger, or ringtail dens are present. Surveys shall encompass both the Project area and a buffer distance adequate to determine the potential for direct or indirect impacts. Surveys shall attain 100% visual coverage and be	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		conducted using 10-meter (33-foot) transects (or reduced based on topography and vegetation), to determine the presence or absence of individuals, dens, and sign. If potential desert kit fox, American badger, or ringtail dens are located, LADWP shall have a qualified wildlife biologist monitor the dens using observation and tracking material and/or trail cameras over a three (3) day period to determine the status of the den. If non-natal active dens can be avoided and buffered from Project activities, the biologist shall flag a minimum 100-foot disturbance-free buffer zone. A minimum 500-foot disturbance-free buffer shall be place around the natal den and maintained until juvenile independence is determined by the biologist. If the Project requires encroaching within a 500-foot buffer, LADWP shall consult with CDFW. The biologist shall block inactive dens within the Project work area or buffer zone that will not be directly impacted by project activities with rocks and sticks to discourage use. The biologist shall periodically check and ensure the inactive burrows remain blocked and are not occupied. The biologist shall remove the obstruction when Project activities are complete. The biologist has the authority to halt or stop work in coordination with the LADWP construction manager and environmental project manager if individuals exhibit signs of disturbance. Established buffers shall remain until the biologist determines the young have dispersed or the den is no longer active, or until Project activities cease. If desert kit fox, American badger, or ringtail are proposed to be relocated from an active den or an active den will be impacted, an exclusion plan shall be prepared for CDFW review and approval that will be performed outside of breeding/pupping season and after juvenile dispersal. LADWP shall implement compensatory mitigation such that the habitat acreage, number of dens, and individuals impacted are replaced at a minimum of 1:1 in-kind habitat replacement of equal or better functions and values to	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		those impacted by the Project, or as otherwise determined through coordination with CDFW. **MM-BIO-17. Compensatory Mitigation for Special-Status Vegetation Communities.** LADWP shall provide compensatory mitigation for permanent impacts to special-status vegetation communities at a minimum of 1:1 in-kind habitat replacement of equal or better functions and values to those impacted by the Project, or as otherwise determined through coordination with CDFW. MM-BIO-6 and MM-BIO-19 would fulfill compensatory mitigation for special-status vegetation communities if impacts occur within an ACEC, NCL, or desert tortoise critical habitat. **MM-BIO-18. Aquatic Resources Mitigation.** Prior to Project initiation, LADWP shall coordinate with the USACE, CDFW, and RWQCB (collectively the resource agencies) to determine which of the following permits for impacts to jurisdictional aquatic resources would be required: ▪ USACE Section 404 Permit ▪ RWQCB Section 401 Water Quality Certification ▪ RWQCB Waste Discharge Requirements ▪ CDFW Section 1602 Notification of Lake or Streambed Alteration In addition to conditions of the above applicable permits and the RWQCB Construction General Permit (CGP) Coverage/SWPPP [Stormwater Pollution Prevention Plan] that would be acquired for the Project, LADWP shall implement practices identified below to minimize adverse impacts to streams and watersheds. ▪ Vehicles and equipment shall not be operated in ponded or flowing water. ▪ LADWP shall minimize road building and vegetation clearing within ephemeral streams to the extent feasible.	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		▪ Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources resulting from Project-related activities shall be prevented from contaminating the soil and/or entering ephemeral streams. LADWP shall ensure that safety precautions specified by this measure, as well as all other safety requirements of other measures and permit conditions, are followed during all phases of the Project. ▪ No petroleum products or other pollutants from the equipment shall be allowed to enter any state or federal -jurisdictional waters under any flow. ▪ LADWP shall ensure that Project activities do not impair water flow (velocity and low flow channel width). ▪ No broken concrete, debris, soil, silt, sand, bark, slash, sawdust, rubbish, or other organic or earthen material from any construction or associated activity of whatever nature shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into any waters of the U.S. or state. ▪ Stationary equipment such as motors, pumps, generators, and welders located within or adjacent to a drainage shall be positioned over drip pans. Stationary heavy equipment shall have suitable containment to handle a catastrophic spill/leak. Clean up equipment such as brooms, absorbent pads, and skimmers shall be on site prior to the start of construction. ▪ The resources agencies will calculate and identify the final amount of required compensatory mitigation as provided by this measure prior to issuance of respective permits using the following criteria: - For any Project activity that impacts a river, stream, or lake and associated fish and wildlife resources which permanently alters the physical and ecological function of the feature or installs permanent structures or materials into	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		the areas subject to CFGC Section 1602, LADWP shall mitigate impacts to rivers, streams, or lakes at a minimum 1:1 ratio. **MM-BIO-19. Ground Disturbance Mitigation.** LADWP shall provide ground disturbance mitigation 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. A portion of these impacts may co-occur with impacts to desert tortoise critical habitat. Where impacts requiring mitigation co-occur, the implemented mitigation is nested. As such, mitigation for desert tortoise critical habitat, as required in MM-BIO-6, 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. LADWP shall initiate and/or complete the required compensation at a time to be determined by the 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).	
BIO-2: 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 Wildlife or U.S. Fish and Wildlife Service?	Potentially significant	See **MM-BIO-3** through **MM-BIO-5** and **MM-BIO-17.**	Less than significant
BIO-3: Would the Project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Potentially significant	See **MM-BIO-2** through **MM-BIO-5** and **MM-BIO-18.**	Less than significant

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
BIO-4: 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	N/A	N/A
BIO-5: Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Potentially significant	See **MM-BIO-1** and **MM-BIO-11.**	Less than significant
BIO-6: 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?	Potentially significant	See **MM-BIO-2** through **MM-BIO-6** and **MM-BIO-19**	Less than significant
4.3 Cultural Resources			
CUL-1. Would the Project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	Potentially significant	**MM-CUL-1. Retain a qualified Project Archeologist.** Prior to Project implementation, a Project Archaeologist whose training and background conforms to the US Secretary of the Interior's Professional Qualifications Standards, as published in Title 36, Code of Federal Regulations, part 61 (36 C.F.R., part 61), holds a valid Bureau of Land Management (BLM) Cultural Resources Use Permit, and has experience working in the California Desert District, will be retained by LADWP to oversee all cultural resources compliance for the Project. The resume of the selected Project Archaeologist shall be sent to LADWP and BLM for their records. **MM-CUL-2. Treatment Plan.** Prior to start of construction, the Project Archaeologist shall develop and implement a Treatment Plan specific to those significant eligible resources that cannot be avoided by construction. This plan shall address the expected loss	Less than significant

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		of significant archaeological data through the scientific excavation, analysis, and interpretation of the site's archaeological materials. At a minimum, the Treatment Plan shall describe the methodology proposed for archaeological excavation, transportation and storage of all archaeological material, laboratory and analysis methods, curation of archaeological material at a specified repository or repatriation of resources at the BLM's discretion, and schedule for subsequent reporting. A draft of the Treatment Plan must be submitted to LADWP and the BLM for a 30-day review and approval period. The Treatment Plan must be approved by LADWP and the BLM before construction commences. If the resource(s) subject to treatment is/are located on BLM lands, additional permitting requirements, such as obtaining an Archaeological Resources Protection Act (ARPA) permit, shall be required. **MM-CUL-3. Cultural Resources Monitoring Plan.** Prior to start of construction, the Project Archaeologist shall develop a Cultural Resource Monitoring Plan (CRMP or Plan) that addresses the details of all activities and provides procedures that must be followed to reduce the potential impacts to undiscovered buried archaeological resources associated with the proposed Project. A draft of the Plan must be submitted to LADWP and the BLM for a 30-day review and approval period. The Plan must be approved by LADWP and the BLM before construction commences. At a minimum, the Plan shall: ▪ Describe the methodology and a program for avoiding and monitoring significant eligible cultural resources identified in a Class III Cultural Survey Report approved by the BLM that can be avoided during Project construction; ▪ Require protective fencing or other markers, at the BLM's discretion, be erected and maintained to protect these resources from inadvertent adverse effects during construction;	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		▪ Include maps and a narrative discussion of areas considered to be of high sensitivity for discovery of buried archaeological resources, in the event they are encountered during construction; ▪ Detail the specific protocols for monitoring construction activities in these high-sensitivity areas; ▪ Detail the methods, consultation procedures, and timelines for addressing all post-review discoveries; ▪ Identify the person(s) expected to perform monitoring tasks, their responsibilities, and the reporting relationships between Project construction management and the mitigation and compliance monitoring team; ▪ Specify daily monitoring reporting and identify the forms and/or documentation that need to be completed daily during monitoring. ▪ Address the authority given to the qualified archaeological monitors to temporarily halt ground disturbance during construction. If a cultural resource over 50 years of age is found (or if younger, but determined exceptionally significant by the BLM on federal lands or LADWP on private lands; or considered a unique archaeological resource under CEQA), ground disturbance shall be halted or redirected in the immediate vicinity of the discovery sufficient to ensure that the resource is protected from ground disturbance. Monitoring and daily reporting shall continue during the Project's ground-disturbing activities elsewhere. Additional procedures regarding halting ground disturbance, like communication protocols and flagging the resource for avoidance plus a 50-foot buffer, to address a post-review discovery or unanticipated effects shall be described in the Plan. **MM-CUL-4. Work Environmental Awareness Program.** Prior to the start of construction and for the duration of ground disturbance activities, the Project Archaeologist shall develop a Worker	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		Environmental Awareness Program (WEAP). This training shall be given to all Construction Contractor staff including all subconsultants within one (1) week of employment at the Project site, for all areas along the linear facilities routes, and at laydown areas, access roads, and other ancillary areas such as staging areas or construction yards. The training shall be prepared by the Project Archaeologist and may be conducted by the Project Archaeologist or designated Field Director. The Project Archaeologist shall be available (by telephone or in person) to answer questions posed by employees related to the identification and protection of cultural resources. The training may be discontinued when ground disturbance is completed or suspended but must be resumed if ground disturbance resumes. Training shall include: ▪ A detailed discussion of applicable laws, and penalties under the law; ▪ Samples or visuals of artifacts that might be found in the project vicinity; ▪ A brief overview of the cultural sensitivity of the Project and the surrounding area; ▪ A discussion of what such artifacts may look like when partially buried, or wholly buried and then freshly exposed; ▪ A discussion of what prehistoric and historical archaeological deposits look like at the surface and when exposed during construction, and the range of variation in the appearance of such deposits; ▪ Express instruction that only the Project Archaeologist, alternate Project Archaeologist, and supervisory cultural resource field staff have the authority to halt ground disturbance in the area of a discovery to an extent sufficient to ensure that the resource is protected from further impacts, as determined by the Project Archaeologist;	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		▪ Instruction that employees are to halt work on their own in the vicinity of a potential cultural resources discovery and shall contact their supervisor and the Project Archaeologist or supervisory cultural resource field staff, and that redirection of work would be determined by the construction supervisor and the Project Archaeologist; ▪ An informational brochure that identifies reporting procedures in the event of a discovery; and ▪ A log signed by each worker indicating that they have received the training. ▪ This is a mandatory training, and all construction personnel must attend prior to beginning work on the Project's sites. A copy of the sign-in sheet shall be kept ensuring compliance with this mitigation measure and will be provided to LADWP and the BLM after each WEAP training is given. **MM-CUL-5. Archaeological Monitoring.** Qualified archaeological monitors, overseen by a BLM-approved Field Director and the selected Project Archaeologist, shall be present for initial grading activities in undisturbed soil, in areas of high sensitivity, or within 500 feet of a known significant cultural resource. The archaeological monitor(s) shall complete daily monitoring forms. The Project Archaeologist will have the authority to increase or decrease the monitoring effort should the monitoring results indicate that a change is warranted, in consultation with LADWP and BLM. **MM-CUL-6. Monitoring Report.** Within six (6) months of finishing construction of the Project, a Cultural Resources Monitoring Report shall be prepared and provided to the BLM and LADWP. The report shall include evidence of the required WEAP for the construction staff held during the required pre-construction meeting(s) and evidence that any artifacts have been treated in accordance with	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		procedures stipulated in the Cultural Resources Monitoring Plan (MM CUL-3). **MM-CUL-7. Unanticipated Discoveries.** During Project construction, should unanticipated archaeological resources be discovered during grading, foundation work, or other construction activities, all construction work occurring within 50 feet of the find shall immediately stop until the Project Archaeologist can evaluate the significance of the find and determine (in consultation with the BLM if the find is on federal land and/or LADWP's designated point of contact if the find is on private land, as appropriate) whether additional study or testing is warranted. Depending upon the significance of the find, the archaeological monitors, as directed by the Project Archaeologist, may record the find and allow work to continue. If the discovery proves significant and cannot be avoided, treatment of the resource will be conducted in accordance with the approved Treatment Plan (MM CUL-2). During the assessment and recovery time, construction work may proceed in other areas. **MM-CUL-8. Built Environment Treatment Plan.** Prior to construction, if the existing towers along MCC-VIC L1&2 cannot be replaced with in-kind structures or with structures that follow the Secretary of the Interior's Standards (SOIS) for the Treatment of Historic Properties, LADWP will retain the services of a qualified architectural historian meeting the Secretary of the Interior's Professional Qualification Standards for Architectural History to prepare and implement a Built Environment Treatment Plan in coordination with the LADWP and the BLM. The treatment plan shall include, but is not limited to, photo-documentation, creation of a website for public research, and public interpretation of the resource in accordance with BLM Manual 8170. The treatment plan will be submitted to LADWP and the BLM for a 30-day review and approval prior to implementation and prior to the start of construction.	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		If subsequent significant eligible built environment resources other than MCC-VIC L1&2 are identified within the Project Area and avoidance is determined to be infeasible as Project design is finalized, the preparation and implementation of a separate treatment plan shall be required specific to the type of resource that cannot be avoided. The treatment plan shall include, but is not limited to, photo-documentation, creation of website for public research, and public interpretation of the resource. The treatment plan will be submitted to LADWP and the BLM for a 30-day review and approval prior to implementation and prior to the start of construction.	
CUL-2. Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?		See **MM-CUL-1** through **MM-CUL-8.**	Less than significant
CUL-3. Would the Project disturb any human remains, including those interred outside of dedicated cemeteries?		See **MM-CUL-1** through **MM-CUL-8.** **MM-CUL-9. Treatment of Human Remains.** In accordance with State of California law (Health & Safety Code §7050.5; Public Resources Code §5097.98), if human remains are found, all ground disturbing activities shall halt within 165 feet (50 meters) of the discovery. The BLM and the County Coroner shall be notified within 24 hours of the discovery. No further excavation or disturbance of the discovery or any nearby area reasonably suspected to overlie potential remains shall occur until the County Coroner has determined whether the remains are subject to its authority. The County Coroner must make this determination within two (2) working days of notification of the discovery (pursuant to Health & Safety Code §7050.5, subd. (b)). If the County Coroner determines that the remains do not require an assessment of cause of death and that the remains are, or are believed to be Native American, the Coroner must notify the Native American Heritage Commission (NAHC) by telephone within 24 hours, which must in turn immediately notify those persons it believes to be the	Less than significant

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		Most Likely Descendant (MLD) of the deceased Native American. The MLD shall complete its inspection and make recommendations within 48 hours of being granted access to the site. The MLD may recommend means for treatment or disposition, with appropriate dignity, of the human remains and any associated grave goods.	
4.4 Paleontological Resources			
PALEO-1. Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Potentially significant	**MM-PALEO-1. Paleontological Resources Monitoring and Mitigation Plan.** The following recommendations will ensure that impacts to paleontological resources are maintained below a level of significance. ▪ A paleontological principal investigator, as defined by the Society of Vertebrate Paleontology (SVP 2010), will prepare a paleontological resources monitoring and mitigation plan and provide and supervise a trained paleontological monitor who will be present during ground-disturbing activities at identified facilities with fossiliferous sediments. The monitor will be empowered to temporarily halt or redirect ground-disturbing activities to ensure avoidance of adverse impacts to paleontological resources. The monitor will be equipped to rapidly remove any large fossil specimens encountered during excavation. During monitoring, samples will be collected and processed to recover microvertebrate fossils. Processing will include wet screen washing and microscopic examination of the residual materials to identify small vertebrate remains. ▪ Upon encountering a large deposit of bone, salvage of all bone in the area will be conducted with additional field staff and in accordance with modern paleontological techniques.	Less than significant

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
		▪ All fossils collected during the Project will be prepared to a reasonable point of identification. Excess sediment or matrix will be removed from the specimens to reduce the bulk and cost of storage. Itemized catalogs of all material collected and identified will be provided to the museum repository, along with the specimens. ▪ A report documenting the results of the monitoring and salvage activities and the significance of the fossils will be prepared. ▪ All fossils collected during this work, along with the itemized inventory of these specimens, will be deposited in a museum repository for permanent curation and storage.	
4.5 Tribal Cultural Resources			
TCR-1. 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: a. 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)? b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria	Potentially significant	See **MM-CUL-1** through **MM-CUL-7** and **MM-CUL-9**. **MM-TCR-1. Native American Monitoring.** Prior to any ground disturbances within the Project Area, LADWP shall enter into a contract with and retain Native American monitors designated by Tribal representatives pursuant to its AB 52 consultation efforts. These monitors shall have the same authority as the archaeological monitors for this Project. Documentation of retention shall be submitted to the BLM and kept on file with LADWP.	Less than significant

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure	Level of Significance After Mitigation
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.			

1.10 Summary of Project Alternatives

Section 15126.6 of the CEQA Guidelines identifies the parameters within which consideration and discussion of alternatives to the Project should occur. As stated in this section of the CEQA Guidelines, alternatives must focus on those that are reasonably feasible and that attain most of the basic objectives of the Project. Each alternative should be capable of avoiding or substantially lessening any significant impacts of the Project. The rationale for selecting the alternatives to be evaluated and a discussion of the No Project Alternative are also required, per CEQA Section 15126.6.

1.10.1 Alternatives Evaluated

The purpose of the proposed Project is to accommodate incoming renewable energy resources from the East territory region, along the WOR Path 46 transmission corridor to help LADWP achieve state and local requirements for greenhouse gas reductions and an increased renewable energy portfolio.

Given the nature of the Project, the location of the Project, and modifications incorporated into the Project design and construction, no feasible alternatives are available to evaluate, other than the No Project Alternative.

Under the No Project Alternative, development of the Project would not occur as discussed in Chapter 3 of this EIR. The Project site would remain unchanged, and no upgrade or replacement activity would occur. The No Project Alternative would have no workforce or vehicle trips compared to the proposed Project.

In accordance with the CEQA Guidelines Section 15126.6(d), the discussion of the environmental effects of the alternatives may be less detailed than the discussion of the impacts of the Project. Table 1-2 provides a summary of the comparison of the impacts of the alternatives with the Project; an analysis of the Environmentally Superior Alternative is provided in Section 6.5 as well as summarized below. Pursuant to the CEQA Guidelines previously stated, as well as the Project objectives, a range of alternatives to the Project are considered and evaluated in this EIR. To summarize these Project alternatives, as suggested in CEQA Guidelines Section 15126.6(d), a matrix was prepared to summarize and compare the impacts of each Project alternative (Table 1-2).

Table 1-2. Comparison of Project and Alternative Impacts

Environmental Topic	Project Impact	No Project Alternative
Air Quality	Significant and Unavoidable	▼ No Impact
Biological Resources	Less than Significant with Mitigation	▼ No Impact
Cultural Resources	Less than Significant with Mitigation	▼ No Impact
Paleontological Resources	Less than Significant with Mitigation	▼ No Impact
Tribal Cultural Resources	Less than Significant with Mitigation	▼ No Impact

Green – No Impact or Less than Significant, Yellow – Less than Significant with Mitigation, Red – Significant and Unavoidable
▲ Impacts would be greater than those of the proposed Project.
= Impacts would be comparable to those of the proposed Project
▼ Impacts would be reduced when compared to those of the proposed Project.

1.10.2 Environmentally Superior Alternative

As indicated in Table 1-2, the No Project Alternative, would result in the fewest environmental impacts, all of which are during construction, and therefore would be considered the Environmentally Superior Alternative. Pursuant to CEQA Guidelines Section 15126.6(e)(2), if the No Project Alternative is the environmentally superior alterative, the EIR shall also identify an environmentally superior alternative among the other alternatives. However, as discussed in Section 6.3, no other alternatives are feasible to carry forward in the alternatives analysis because they are all equally, if not more impactful, than the proposed Project. Additionally, the No Project Alternative would preclude LADWP from upgrading its system to increase the use of renewable energy supplies and therefore be in direct conflict with contributing over 15% toward LADWP's Renewable Portfolio Standard as part of LADWP's most recent commitment under the RPS to provide 100% carbon-free energy to customers by 2035 and 10 years ahead of the State's target. As such, other than the No Project Alternative, the proposed Project would result in the fewest environmental impacts while still meeting all of the Project objectives and also allowing LADWP to enhance the provision of renewable energy sources consistent with the RPS.

1.11 References

Aspen (Aspen Environmental Group). 2020. *McCullough–Victorville Transmission Lines 1 & 2 Project Biological Sensitivity Report*.

LADWP (Los Angeles Department of Water and Power). 2013. *Renewables Portfolio Standard Policy and Enforcement Program*. Amended December 2013. Accessed April 2024. https://planning.lacity.gov/eir/8150Sunset/References/6.0.%20Other%20CEQA%20Considerations/OTHER.08_LADWP,%20Renewables%20Portfolio%20Policy%20and%20Enforcement%20Program_December%202013.pdf.

LADWP. 2024a. *McCullough-Victorville Transmission Lines 1 and 2 Project Description*. Accessed April 2, 2024. https://www.ladwp.com/community/construction-projects/other/mccullough-victorville-transmission-lines-1-and-2.

LADWP. 2024b. *Sustainability Greening the Grid*. Accessed April 16, 2024. https://www.ladwp.com/strategic-initiatives/sustainability/greening-grid#:~:text=LADWP%E2%80%99s%20Renewable%20Portfolio%20Standard%20%28RPS%29%20is%20a%20roadmap,renewable%20energy%20at%20a%20consistent%20and%20sustainable%20rate.

Psomas. 2023. *Jurisdictional Delineation Report.* March 1, 2023.

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2 Introduction

2.1 Purpose and Scope

The purpose of this Environmental Impact Report (EIR) is to evaluate and disclose the potential environmental consequences of the proposed McCullough–Victorville Transmission Lines 1 and 2 Upgrade Project (Project). The Project constitutes a "project" as defined in the California Environmental Quality Act (CEQA) Guidelines Section 15378. The Los Angeles Department of Water and Power (LADWP) is the lead agency preparing this EIR in accordance with the CEQA statutes (California Public Resources Code Section 21000 et seq.) and the California CEQA Guidelines (14 CCR 15000 et seq.).

As discussed in detail in Chapter 3, Project Description, of this EIR, the proposed Project includes tower site clearing, reinforcing or replacing tower structural steel members for approximately 1,508 towers, complete tower replacement for approximately 153 towers, tower raising for towers with ground-to-clearance violations and the subsequent power line re-tensioning that is necessary, as well as maintenance and rehabilitation of access roads and replacing all conductors, ground wires, insulators, and associated hardware assemblies, and adding grounding at all 1,740 tower along the alignment.

2.2 Compliance with CEQA

2.2.1 Format

This chapter of this EIR sets forth the summary requirements of CEQA as required by Section 15123 of the CEQA Guidelines. Chapter 1, Executive Summary, and Chapter 3, Project Description, also comply with CEQA project description requirements by discussing the Project location, providing a statement of the document's purpose and intended use, and identifying the Project objectives.

Issues identified in the Initial Study prepared for the Project that were found to have no impact or a less than significant impact are provided in Appendix A, Initial Study and Notice of Preparation (NOP), and in Chapter 5, Other CEQA Considerations, of this document. This EIR addresses the issues found to be potentially significant in the Initial Study. Each potentially significant issue area has a corresponding EIR section. Each EIR section includes an existing setting discussion that describes the physical environmental conditions within the Project area as they existed at the time the NOP was prepared, in April 2024; these conditions are considered the baseline physical conditions from which LADWP determines whether an impact is considered to be significant (CEQA Guidelines Section 15125[a]). Section 15125(d) of the CEQA Guidelines requires that an EIR "discuss any inconsistencies between the project and applicable general plans and regional plans," which was discussed in the Project's Initial Study in Section 3.11, Land Use and Planning. Each EIR section identifies thresholds of significance and includes an analysis to determine the amount and degree of impact relative to each significance threshold. For all significant environmental impacts, mitigation measures, where feasible, are required in order to minimize significant adverse impacts (CEQA Guidelines Section 15126.4[a][1]).

The analysis of impacts and identification of mitigation measures are derived from technical reports that are included as technical appendices to this EIR and from other informational resources as listed at the end of each subsection of this document.

2.2.2 Environmental Procedures

The basic purposes of CEQA are the following (CEQA Guidelines Section 15002):

1. Inform governmental decisionmakers and the public about the potential significant environmental effects of proposed activities;
2. Identify the ways that environmental damage can be avoided or significantly reduced;
3. Prevent significant, unavoidable damage to the environment by requiring changes in the project through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and
4. Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

The EIR process typically consists of three parts: (1) the NOP (including the Initial Study), (2) the Draft EIR, and (3) the Final EIR. Pursuant to Section 15063 of the CEQA Guidelines, LADWP prepared an Initial Study (IS, Environmental Checklist) for the Project in order to determine if the Project would have a significant effect on the environment. The NOP was intended to encourage interagency communication concerning the proposed action and provide sufficient background information about the proposed action so that agencies, organizations, and individuals could respond with specific comments and questions on the scope and content of the EIR. Based upon the analysis contained in the IS/NOP, LADWP concluded that an EIR should be prepared. The NOP for the EIR and a description of potential adverse impacts were distributed to the State Clearinghouse, responsible agencies, and other interested parties on April 1, 2024. Pursuant to Section 15082 of the CEQA Guidelines, recipients of the NOP were requested to provide responses within 30 days after their receipt of the NOP. During the 30-day public review period of the NOP, LADWP held a Scoping Meeting on April 17, 2024, to gather additional public input on the Project. Copies of the NOP (including the Initial Study) and the NOP distribution list are provided in Appendix A. All comments received during the NOP public notice period were considered during the preparation of this EIR. Written comments received on the NOP are included in Appendix A of this EIR.

Based on the scope of analysis for this EIR, including comments received during the NOP public scoping period, the following issues were determined to be potentially significant and are therefore addressed in Chapter 4, Environmental Impact Analysis, of this document:

- Air Quality
- Biological Resources
- Cultural Resources
- Paleontological Resources
- Tribal Cultural Resources

Other potential environmental impact areas, including aesthetics, agriculture and forestry resources, geology and soils, energy, 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, utilities and service systems, and wildfire, were not found to be significant based on the results of the Initial Study. These issues are addressed in Section 5.2, Effects Found Not to Be Significant, of this EIR.

As the lead agency for the Project, LADWP has assumed responsibility for preparing this EIR. LADWP will use the information included in this EIR to consider potential impacts to the physical environment associated with the Project when considering approval of the Project. As set forth in Section 15021 of the CEQA Guidelines, LADWP, as lead agency, has the duty to avoid or minimize environmental damage where feasible. Furthermore, Section 15021(d) states that:

> CEQA recognizes that in determining whether and how a Project should be approved, a public agency has an obligation to balance a variety of public objectives, including economic, environmental, and social factors and in particular the goal of providing a decent home and satisfying living environment for every Californian. An agency shall prepare a statement of overriding considerations as described in Section 15093 to reflect the ultimate balancing of competing public objectives when the agency decides to approve a Project that will cause one or more significant effects on the environment.

In accordance with CEQA, the lead agency will be required to make findings for each environmental impact of the Project that cannot be mitigated to a less-than-significant level. If the lead agency determines that the benefits of the Project outweigh significant environmental effects that cannot be mitigated to a less-than-significant level, the agency will be required to adopt a statement of overriding considerations stating the reasons supporting its action notwithstanding the Project's significant environmental effects.

The EIR will be made available for review to agencies and the public for 45 days to provide comments on the "sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the Project might be avoided or mitigated" (CEQA Guidelines Section 15204[a]).

2.2.3 Incorporated by Reference

The County of San Bernardino General Plan (County of San Bernardino 2014), the Airport Comprehensive Land Use Plan for the Barstow-Daggett Airport (County of San Bernardino 1992), the Bureau of Land Management (BLM) California Desert Conservation Area Plan (CDCA) (BLM 1980), and other references were reviewed in order to assist environmental review of the Project. These aforementioned documents are incorporated by reference (CEQA Guidelines 15150) and are available upon request.

2.2.4 NOP and Scoping Comments

The NOP for the Project was published on April 1, 2024, which will thus be the environmental baseline for the Project. The proposed Project would require establishing a temporary work area at each of the 1,740 transmission structures along both transmission lines within the LADWP utility corridor. The majority of the work shall occur within existing pre-disturbed areas along the McCullough-Victorville transmission line corridor, including existing tower sites, spur roads and main access roads. The remainder of the utility corridor is generally unoccupied.

The public review period for the Initial Study/NOP began on April 1, 2024, and ended on May 1, 2024. Several agencies and organizations commented on the Initial Study/NOP, and those comments can be found in Appendix A. During the 30-day public review period of the NOP, LADWP held a Scoping Meeting on April 17, 2024. Comments raised in comment letters or at the scoping meeting during the 30-day scoping period are summarized in Table 2-1.

Table 2-1. NOP Comments

Commenter	Date	Comments
San Bernardino County, Department of Public Works	04/29/2024	▪ Transportation permits will be required for public road improvements within the County Maintained Road System.
California Department of Fish and Wildlife	04/30/2024	▪ An assessment of the various habitat types located within the Project footprint, and a map that identifies the location of each habitat type. ▪ A general biological inventory of the fish, amphibian, reptile, bird, and mammal species that are present or have the potential to be present within each habitat type onsite and within adjacent areas that could be affected by the Project. ▪ A complete, recent inventory of rare, threatened, endangered, and other sensitive species located within the Project footprint and within offsite areas with the potential to be affected, including California Species of Special Concern (CSSC) and California Fully Protected Species (Fish and Game Code, Section 3511). ▪ Desert bighorn sheep (Bighorn Sheep) are known to occur and lamb within and adjacent to the proposed Project alignment. ▪ The proposed Project occurs within the range of Agassiz's desert tortoise; a state listed endangered and federally listed threatened species. ▪ The proposed Project has the potential to provide suitable foraging and/or nesting habitat for burrowing owl. ▪ The proposed Project alignment overlaps with the California Wildlife Habitat Relationships (CWHR) modeling of high-quality Mojave fringe-toed lizard predicted habitat. ▪ The DEIR should provide a thorough discussion of the direct, indirect, and cumulative impacts expected to adversely affect biological resources as a result of the Project. ▪ CDFW recommends the DEIR describe and analyze a range of reasonable alternatives to the Project that are potentially feasible, would feasibly attain most of the basic objectives of the Project, and would avoid or substantially lessen any of the Project's significant effects (CEQA Guidelines Section 15126.6[a]). The alternatives analysis should also evaluate a "no project" alternative (CEQA Guidelines Section 15126.6[e]).

Table 2-1. NOP Comments

Commenter	Date	Comments
		▪ The DEIR should identify mitigation measures and alternatives that are appropriate and adequate to avoid or minimize potential impacts, to the extent feasible. ▪ CDFW recommends that a CESA Incidental Take Permit (ITP) be obtained if the Project has the potential to result in "take" (California Fish and Game Code Section 86 defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") of State-listed CESA species, either through construction or over the life of the project. ▪ The Project site contains suitable habitat for the California Endangered Species Act (CESA)-threatened Mohave ground squirrel. ▪ Based on the Project location, there may be western Joshua trees on the Project site. ▪ Based on review of aerial photography, ephemeral streams transects the Project site. Depending on how the Project is developed, Project activities may impact Fish and Game Code Section 1602 resources.
Twenty-Nine Palms Band of Mission Indians	05/03/2024	▪ After reviewing the proposed project, the Twenty-Nine Palms Band of Mission Indians has determined: The project is outside of the known Chemehuevi Traditional Use Area.

Source: Appendix A.

None of the comments received change the issue areas that the Initial Study determined would be discussed in the EIR. All of the issues and concerns raised in the comments have been fully addressed and analyzed in Chapter 4, Environmental Impact Analysis, of the EIR.

2.3 References

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

County of San Bernardino. 1992. *Airport Comprehensive Land Use Plan – Barstow-Daggett Airport*. Accessed December 14, 2023. https://www.sbcounty.gov/Uploads/lus/Airports/BarstowDagget.pdf.

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. https://www.sbcounty.gov/Uploads/lus/GeneralPlan/FINALGP.pdf.

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3 Project Description

This chapter describes the objectives of the proposed McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project (Project) and provides a detailed description of Project characteristics. This chapter also discusses the discretionary actions required and includes a brief description of the environmental effects, which are evaluated in Chapter 4, Environmental Impact Analysis, through Chapter 6, Alternatives, of this EIR.

3.1 Project Location

The proposed Project would upgrade two existing transmission lines of the McCullough-Victorville transmission alignment (MCC-VIC), Transmission Line 1 (MCV1) and Transmission Line 2 (MCV2), which run parallel to each other within a utility corridor owned and maintained by LADWP. The utility corridor is entirely within the Mojave Desert and spans 162 miles from Boulder City, Nevada in Clark County, Nevada, to the Victorville Switching Station in Victorville, California within San Bernardino County, California. The Project is divided into the Nevada segment, which runs for 24 miles from the McCullough Substation to Line 1 Tower 27-5 (MCV1_27-5) and Line 2 Tower 26-7 (MCV2_26-7) at the California Border, and the California segment, which runs for 138 miles from MCV1_27-6 and MCV2_27-1 to the Victorville Switching Station (Psomas 2023). The tower numbering uses mileage from the source of the energy feed. For example, Tower 27-5 represents the fifth tower of the 27th mile of the transmission line. The utility corridor largely crosses undeveloped state and federal lands, including lands under the jurisdiction of California State Lands Commission and the Bureau of Land Management (BLM) (Aspen 2020). The Project would require maintenance and rehabilitation of access roads, reinforcing or replacing tower structural steel members for approximately 1,508 towers, complete tower replacement for approximately 153 towers, tower raising for towers with ground-to-clearance violations and the subsequent power line re-tensioning that is necessary, as well as replacing all conductors, ground wires, insulators, and associated hardware assemblies, and adding grounding for every tower along the alignment. As such, the proposed Project would occur along the entire LADWP utility corridor.

Existing development within the utility corridor consists of access roads, tower disturbance footprints, the transmission towers and transmission lines themselves, as well as their associated hardware. The alignment crosses select roadways. The proposed Project would require establishing a temporary work area at each of the 1,740 transmission towers along the alignment, varying in size based on the construction activities required at that tower. All work areas would occur only within the existing tower sites and existing access road areas and rights-of-way.

The utility corridor is predominately surrounded by vacant, undeveloped state and federal lands, and is mostly located within San Bernardino County, California, except for approximately 24 miles of the 162-mile corridor which is located in Clark County, Nevada. The nearest residential uses to the utility corridor are directly adjacent to towers MCV1_139-6 through 140-2, approximately 9 miles south of Barstow, California. The nearest schools to the utility corridor are the Baker Valley Unified School District elementary, middle, and high schools, located at 72100 Schoolhouse Lane, Baker, California. These schools are approximately 1,075 feet south-southeast of the Highway 127 access road through Baker at its nearest point. Figure 3-1, Project Location, and Figure 3-2, Project Alignment, show the entirety of the MCV1 and MCV2 transmission line alignments at different levels of detail.

3.2 Project Background

LADWP placed the first transmission line of the MCC-VIC alignment in 1936 at a capacity of 287.5 kV and constructed the second parallel transmission line in 1939 (LADWP 2024a). In 1970, LADWP upgraded one of the transmission lines and subsequently upgraded the second transmission line in 1980 (LADWP 2024a). The current transmission line upgrade is required to accommodate incoming renewable energy resources along the West of Colorado River (WOR) Path 46 transmission corridor. This Project would enable an additional 475 MW to contribute over 15% towards LADWP's Renewable Portfolio Standard (RPS) as part of LADWP's most recent commitment under the RPS to provide 100% carbon-free energy to customers by 2035, 10 years ahead of the State's target.

In 2004, the Los Angeles City Council passed Resolution 03-2064-S1 requesting that the Board of Water and Power adopt an RPS Policy of 20 percent renewable energy by 2017, which the Board passed in 2005 along with an interim goal of 13% renewable energy provided by 2010 (LADWP 2013). The City Council then approved the LADWP RPS on June 29, 2005. LADWP's RPS acts as a roadmap to provide customers with an increasing percentage of energy from renewable resources, including wind, solar, small hydroelectric, geothermal, and biomass, and its specific renewable energy targets have been amended over time (LADWP 2024b).

3.3 Project Objectives

The underlying purpose of the Project is to accommodate incoming renewable energy resources from the East territory region, along the West of River (WOR) Path 46 transmission corridor in order to help LADWP achieve state and local requirements for GHG reductions and an increased renewable energy portfolio. As set forth in the CEQA Guidelines, the project's specific objectives are provided below.

- Reduce the environmental impacts associated with greenhouse gas emissions and create a more sustainable environment.
- Assist LADWP in meeting RPS goals by increasing LADWP's transmission capacity by 475 megawatts (MW).
- Meet LADWP's future electrical energy demands.
- Allow interconnection and expansion of LADWP's renewable energy in the East territory, along the WOR Path 46 transmission corridor.
- Increase LADWP's system reliability and flexibility in the utilization of renewable energy sources.
- Enable the delivery of renewable energy.
- Minimize the environmental disturbance of transmission upgrades by constructing improvements within an existing transmission corridor; avoiding sensitive resources to the extent feasible; and minimizing the number of new access routes.

3.4 Existing Conditions

The proposed Project would upgrade the transmission lines that run from Searchlight, Nevada to Victorville, California. The utility corridor is located entirely within the Mojave Desert, generally is isolated away from development, and largely crosses undeveloped state and federal lands, including lands under the jurisdiction of California State Lands Commission and BLM (Aspen 2020). The Project also crosses rural and low-density residential land uses on non-federal land in San Bernardino County, California and Clark County, Nevada (Aspen

2020). Existing development within the utility corridor consists of access roads, tower disturbance footprints, the transmission towers and transmission lines themselves, as well as their associated hardware.

The hydrology of the area is characterized by steep drainages in the mountainous areas that convey surface water from rainfall events that are generally relegated to the winter months (though monsoonal moisture may come from the south and southeast causing potentially severe summer thunderstorms) (Psomas 2023). The western Mojave Desert is characterized by numerous small channels that convey surface water immediately after a rainfall event, and while these channels in the western end of the alignment drain into the Mojave River, channels that occur along most of the transmission corridor drain toward one of several lakebeds that are typically dry (Psomas 2023). Such lakebeds that occur along the transmission corridor include Red Pass Lake, Silver Lake, Ivanpah Lake, and Roach Lake (Psomas 2023).

3.5 Proposed Project

3.5.1 Proposed Facilities

The proposed Project would upgrade two parallel LADWP transmission lines, MCV1 and MCV2, to increase their capacity to newly rate them at approximately 570 kV at 2500A/3000A (continuous/emergency) from their current rating of 500 kV at 1600A/2400A (LADWP 2023). The Project would consist of modifications and/or replacement of existing insulators and hardware assemblies, raising existing transmission towers as needed to mitigate any ground clearance violations, replacing towers as needed within the footprints of existing tower sites, repairing or replacing damaged structural members, replacing conductors, ground wire, and re-tensioning conductors, repairing/retrofitting existing main access roads and spur roads, and replacing or reinforcing tower foundations where needed. The transmission line upgrade is required to accommodate incoming renewable energy resources along the WOR Path 46 transmission corridor and to ensure the continued safe and reliable operation of the lines (LADWP 2023). The proposed Project would require establishing a temporary work area at each of the 1,740 transmission structures. Pre-construction activities at each work area would begin with surveying; installing tower center and adjacent right of way boundary offset monuments; setting mowing limits; installation of temporary fencing where required; staking, clearing, and grading for both existing and new transmission structure foundation locations, laydown areas, and soil stockpiles; and installation of best management practices (BMPs). The approximate work area at each transmission tower site location would be approximately 60 by 60 feet. The approximate work area at each stringing site (Conductor Pulling and Tensioning Sites) would be 200 by 500 feet. The approximate work area at each guard structure would be 200 by 50 feet. The approximate work area at each Tower Crane Pad would be 50 by 50 feet. All work areas would occur only within the existing tower sites and existing access road areas and rights-of-way. The pre-disturbed existing tower sites and access roads of the transmission line not being worked on would be used as much as possible while work is being done on the transmission line actively being upgraded. Table 3-1 summarizes the estimated disturbance areas for the Project. As shown therein, a total of 1,437 acres of land along the utility corridor would be affected by the proposed Project.

Table 3-1. Project Disturbance Areas

Type of Disturbance	Duration	Typical Disturbance Width (feet)	Typical Disturbance Length (feet)	Total Disturbance Area (acres)	Number of Sites	Total Disturbance Area (acres)
Existing Transmission Tower Footprint	Existing	60	60	0.1	1,740	143.8
Existing Access Roads	Existing	25	844,800	485	2	969.7
Conductor Pulling and Tensioning Sites	Temporary	200	500	2.3	91	208.9
Guard Structures	Temporary	200	50	0.2	276	63.4
Tower Crane Pads	Temporary	50	50	0.06	435	25.0
Laydown Areas (materials, steel for the Project)	Temporary	800	545	10	2	20.0
Staging Areas (equipment set up)	Temporary	50	100	0.115	16	1.8
Helicopter Fly Yards/Staging Area (includes two fuel stations)	Temporary	200	200	0.9	4	3.7
Helicopter Landing Area	Temporary	50	50	0.06	16	0.9
					Total Disturbance Area (acres)	**1,437**

The following equipment and activities would be associated with the Project.

Reinforcing/Replacing Structural Steel Members

Approximately 1,508 towers (86%) of the 1,740 towers are in critical need of repair and would be reinforced under the Project, while approximately 153 towers would need to be replaced entirely. These activities would constitute the majority of the work to occur under the proposed Project. Most steel member activities are expected to occur within existing tower disturbance areas or laydown and staging areas. Construction equipment that may be used in tower reinforcement efforts are cranes, manlifts, water trucks, lowboy trailers, flatbed trucks, and hand tools.

For foundations which require complete replacement, the existing foundation would be demolished, excavated, and removed. Installation of rebar and concrete forms would be required prior to concrete pouring. Construction equipment that may be used are excavators, drill rigs, concrete mixing trucks, concrete pumping trucks, flatbed trucks, lowboy trailers, water trucks, and a backhoe loader.

Rehabilitation and Maintenance of Existing Access Roads

Access to Project work sites would occur via existing access roads that provide vehicle access through the entire alignment to each transmission structure. These access roads traverse lands managed by BLM. Typical pre-construction activities associated with rehabilitation of existing access roads may include light vegetation clearing, blading, grading and recompacting to fill potholes, removal of ruts, and repair of surface irregularities to provide a smooth surface capable of supporting trucks and heavy construction equipment. Existing access roads may also require upgrades such as protection for drainages and widening areas that are too narrow for safe vehicle operation. Repair and stabilization of slides, washouts, and other slope failures may be necessary to prevent future failures. Repair or replacement of existing drainage structures that are damaged or beyond repair may also be required. The type of rehabilitation activities required would be based on specific site conditions to be determined during final engineering.

The need for existing access road rehabilitation is expected to be greatest where topography creates the challenge for the movement of trucks and heavy construction equipment. The following typical construction activities for rehabilitation of existing access roads would occur:

- **Existing relatively flat terrain approximately 0% to 4% grade:** Construction activities may require activities such as grubbing and constructing drainage improvements (e.g., wet crossings, water bars, McCarthy drains, and/or culverts). Any new drains would be coordinated with the land manager and included in permit amendments.
- **Existing rolling terrain approximately 5% to 12% grade:** Construction activities generally include activities typical to flat terrain and may require activities such as cut and fill in excess of 2 feet in depth, benched grading, drainage improvements (e.g., v-ditches, down drains, and energy dissipaters), and slope stability improvements such as retaining walls and mechanically stabilized earth walls.
- **Existing mountainous terrain over 12% grade:** Construction activities may include similar activities as rolling terrain construction activities and could require significant cut and fill depths, benched grading, drainage improvements, and slope stability improvements.

Generally, all existing access roads require a minimum 14-foot width with 2 feet of shoulder on each side to accommodate required drainage features depending on the existing topography. Curves would generally have a minimum radius of curvature of 50 feet measured from the center line of the drivable road width. Along a curved section, the road width would be typically widened an additional 1 to 8 feet depending on the radius of the curvature to accommodate construction and maintenance vehicles. Access road gradients may be modified so that sustained grades do not generally exceed 12%. Grades greater than 12% would be permitted when such grades do not exceed 40 feet in length and are located more than 50 feet from any other excessive grade. In some instances, LADWP may deviate from mitigating grades greater than 12%.

Replacing Lattice Steel Structures

Approximately 153 tower structures may be completely replaced. Similar to the steel member replacements, complete tower replacements are expected to occur within existing tower disturbance areas. Construction equipment that may be used include cranes, manlifts, water trucks, lowboy trailers, flatbed trucks, and hand tools. In the event that replacing lattice steel structures requires a crane, a crane pad would be installed, taking care to minimize the disturbance area to the maximum extent.

Tower Site Clearing

Tower site and guard structure clearing would only be required under specific scenarios. Under these scenarios, preparation of individual tower structure sites would be required after access roads are rehabilitated. Vegetation would be mostly mowed, crushed, and cleared in the existing tower sites and grading would be required for new tower sites. Within the work areas, at some tower locations, a level cleared area, or pad, may be necessary to complete the construction of the towers. However, many tower sites would be considerably smaller depending on the size of the tower, the terrain, resource considerations, and whether helicopter construction would be used, among other factors. Cleared pads would be required for tower footings, assembly of the tower, installation of portable hydraulic lifts, and the necessary crane maneuvers. All pads not needed for normal transmission line maintenance would be graded to blend as near as possible with the natural contours and revegetated in accordance with the permits provided by each respective agency.

Laydown, Staging, and Helicopter Area

Laydown and staging areas would be required for materials storage, construction equipment, construction vehicles, and temporary construction offices. It is estimated that two laydown areas, approximately ten acres in size, would be and located centrally or near each end of the transmission line route. Approximately 16 staging areas, totaling about 1.8 acres in size, will be placed along the route as well. The laydown and staging areas would be located temporarily on previously disturbed private land and would be level and surfaced with crushed aggregate base. LADWP will negotiate with landowners to determine specific locations of the staging areas.

Helicopter use may be required where the terrain is steep or access is limited. The use of helicopters for the construction of transmission tower structures would eliminate the need for rehabilitating access roads to structure locations where terrain is steep and would therefore minimize land disturbance associated with crane pads, structure laydown areas, and the trucks and tractors used for delivery of structures to sites. However, the following site and ground disturbing construction activities would be required to upgrade the existing transmission line within the identified helicopter construction areas:

- Portable landing pads
- Helicopter fly yards/staging areas and associated temporary access roads
- Tower structure vegetation clearing
- Guard structures at major crossings
- Access road pullouts

Transmission line materials (e.g., tower steel, conductor reels, structure hardware) would be delivered by truck to the helicopter fly yards/staging areas serving as support yards for fueling and maintenance, as well as for the transport of materials and personnel. Vegetation clearing may be required at these sites to ensure safe working conditions. Towers may also be assembled in sections at these yards prior to delivery to the tower sites. In such cases, heavy lift helicopters would then fly the towers from the yards to the tower sites.

Construction equipment to be used for grading would include motor graders, bulldozers, excavators, compact skid-steer loaders, lawn mowers, weed whackers, dump trucks, water trucks, wheel/track loaders, backhoe loaders, jackhammers, and various small utility vehicles. The construction equipment would be staged within existing pre-disturbed areas along the transmission line corridor, including tower sites, spur roads and main access roads.

The preparation of graded and compacted pads would be carried out as necessary to accommodate the cranes, forklifts, and man lifts required to raise the towers.

Replacing Conductors and Associated Hardware

A Conductor Useful Life Study will be prepared to identify what portions of the conductor and ground wires, along with the associated hardware, would be replaced for the transmission lines. Where required, removal of the existing conductor would be done using a pulling line which would then be used to pull in the new conductor as the old conductor wire is removed. The towers would then be rigged with insulator strings and stringing sheaves at each ground wire and conductor position. Sheaves are rollers that are temporarily attached to the lower end of the insulators to allow the conductor to be pulled, or "strung" along the line.

For protection during wire installation, temporary guard structures would be built as required next to highways, railroads, power lines, structures, utility infrastructure, and other major obstacles. Guard structures would typically consist of H-frame poles placed on either side of an obstacle. These structures would prevent ground wire, conductor, or equipment from falling onto an obstacle. Equipment for installing guard structures would include augers, line trucks, pole trailers, and cranes. The amount of disturbance per guard structure would typically be 200 feet by 50 feet. The guard structures would be left in place until conductors and ground wires were strung, tensioned, and clipped. Guard structures may not be necessary for small roads. In such cases, other safety measures, such as barriers, flagmen, or other traffic control, would be used. These guard structures would be temporary and would be removed after wire installation is complete.

Raising Lattice Steel Structures

Tower raising activities would begin with staging equipment at the tower location, which would accommodate the backhoe loaders, rubber tire loaders, large and small cranes, all terrain forklifts, portable hydraulic systems, and manlifts needed to raise the towers. Other equipment involved would include water trucks and various small utility vehicles. Tower raising may be accomplished by use of either cranes or a portable hydraulic lift system. In some cases, tower raising may be accomplished by repositioning towers onto reinforced existing 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. Standard footings are approximately 4 feet in diameter and approximately 30 feet in depth. Reinforced or new tower footings may be installed at each tower raising 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 portable hydraulic lift system or large crane, while vertical extensions are inserted. 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 majority of activities are expected to occur within existing tower disturbance areas. In the event that raising lattice steel structures requires a crane, a crane pad would be installed, taking care to minimize the disturbance area to the maximum extent. Tower raising utilizing a hydraulic lift system is expected to stay within the confines of the current disturbed areas.

Re-Tensioning Conductors

After a 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 manlifts. To the greatest extent practical, pulling and tensioning sites would be within the transmission right-of-way in the existing disturbed areas. The

tensioning and pulling sites could be as large as 200 feet by 500 feet, but they would be limited in size depending on each specific location and what is reasonable for safe construction practices at that location. The size of each site would be limited as much as possible and would be designed in coordination with the responsible property owner or land management agency. Depending on topography, some grading may be required at pulling and tensioning sites to create level pads for equipment. Tensioners, line trucks, wire trailers, and tractors needed for stringing and anchoring the ground wire or conductor would be stationed at tensioning sites. A puller, line trucks, sag caterpillar, and tractors would be needed for pulling and temporarily anchoring the ground wire and conductor.

Replacing Insulators and Hardware Assemblies

Insulators and hardware assemblies would be replaced on all towers. This would be done through use of manlifts, handheld power tools, and other hand tools. These activities would occur within existing tower disturbance areas.

Upgrading and Installing Additional Grounding

All towers would be grounded locally through the use of ground rods. These rods would be installed by using handheld power tools, and other hand tools. Rod installation activities would occur within existing tower disturbance areas.

Work Area Restoration

Upon completion of construction, site restoration activities would be undertaken to return construction areas to their original condition. To achieve this, a restoration plan would be prepared by a qualified restoration ecologist with experience restoring California and Nevada 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 a Qualified Stormwater Pollution Prevention Plan Developer.

Prior to grading or site disturbance, vegetation and topsoil (including desert crust/varnish) within the impact areas would be salvaged and the upper layer of desert varnish (cobble and soil crust), consisting of approximately 2 to 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. Some 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 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.

3.5.2 Construction Schedule

Construction of the proposed Project is expected to commence around April 2025 with completion anticipated in January 2029. Construction activities would normally occur between sunrise and sunset up to six days per week (Monday through Saturday). Construction is expected to occur on Saturdays, as well as all normal business days, for the entire duration of the Project. Nighttime work is not planned but may occur between sunset and sunrise during the summer and early fall months to limit daytime customer outages. Table 3-2 below shows the standard phasing for project construction and the duration for each phase, as it applies to the proposed Project. Typically, no construction work would occur on Sundays or national holidays. Temporary staging and laydown areas for construction materials and equipment, and worker vehicle parking would be accommodated within each tower site location until work at that location has been completed. Additional equipment would be staged at the designated staging areas and laydown yards on a day-to-day basis and would be driven to the work sites as required.

Table 3-2. Construction Phasing

Construction Activity	Duration (days)	Approximate Start	Approximate End
Pre-Construction			
Survey/LiDAR	56	04/16/2025	06/10/2025
Access Road Rehabilitation	504	04/16/2025	09/01/2026
Laydown/Staging/Site Grading	824	05/31/2026	09/01/2028
Stormwater Pollution Prevention Plan Preparation and Implementation	1,378	04/16/2025	01/23/2029
Line 1			
Foundation	364	09/01/2026	08/31/2027
Conductor Replacement			
Ground Wire Replacement			
Insulators			
Hardware Assemblies			
Structure Modification and Raising			
Restoration, Recontouring, Revegetation, and Removal of BMPs	512	08/31/2027	01/23/2029
Line 2			
Foundation	367	09/01/2027	09/01/2028
Conductor Replacement			
Ground Wire Replacement			
Insulators			
Hardware Assemblies			
Structure Modification and Raising			
Construction			
Restoration, Recontouring, Revegetation, and Removal of BMPs	145	09/01/2028	01/23/2029
	Final Completion and Demobilization		**01/23/2029**

Note: BMP = best management practice

As shown in Table 3-2, construction would involve several distinct phases that would generally occur in sequential order. These would include access road rehabilitation, site preparation and site grading. Additionally, survey and LiDAR analyses would begin in April 2025 and would end in June 2025, access road rehabilitation would occur from April 2025 and finish in September 2026, and site laydown, staging, and grading would begin in May 2026 and end in September 2028. Construction on MCV1 would begin in September 2026, ending in August 2027, with construction activities related to tower foundations, conductor and ground wire replacements, insulators, hardware assemblies, and structure modification and raising. Construction of the new tower foundations would include standard footings that are 4 feet wide and 30 feet deep. Another round of construction on MCV1, focused on restoration, recontouring, revegetation, and removal of BMPs, would begin in August 2027 and end in January 2029. Construction on MCV2 would begin in September 2027, ending in September 2028, and would include construction activities related to tower foundations, conductor and ground wire replacements, insulators, hardware assemblies, and structure modification and raising. The last round of construction on MCV2, focusing on restoration, recontouring, revegetation, and removal of BMPs would begin in September 2028 and would conclude in January 2029. Completion and demobilization of the proposed Project would also occur in January 2029.

The construction process would require up to 276 on-site personnel every day, depending on the phase of work. Daily truck trips would be required for construction workers accessing the construction site(s) and to deliver construction materials and facility equipment and to haul off debris. Heavy equipment would be required throughout construction, including backhoe loaders, excavators, all-terrain forklifts, hydraulic tower lifting systems, large and small-sized cranes, manlifts, concrete mixing trucks, concrete pumping trucks, bulldozers, water trucks, and more. Construction equipment would be staged within the confines of existing pre-disturbed areas along the utility corridor, including tower sites, spur roads, and main access roads. Table 3-3 presents the expected construction on-road vehicles and off-road equipment per phase of construction.

Table 3-3. Anticipated Construction Equipment

Construction Phase	One-Way Vehicle Trips			Equipment			
	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Average Daily Haul Truck Trips	Equipment Type	Quantity	Average Daily Usage Hours	Max Daily Usage Hours
Grading (Access Road Rehabilitation)	72	12	4	Tractors/Loaders/ Backhoes	3	6	10
				Graders	3	6	10
				Dozer	3	6	10
Grading (Laydown/ Staging/Site Grading)	72	12	4	Graders	2	6	10
				Dozer	2	6	10
				Excavator	5	6	10
				Skid Steer Loader	5	6	10
				Tractors/Loaders/ Backhoes	2	6	10
Line 1							
Construction (Foundation, Conductor	276	30	32	Large Crane	6	6	10
				Small Crane	11	6	10
				Tensioner	3	6	10

Table 3-3. Anticipated Construction Equipment

Construction Phase	One-Way Vehicle Trips			Equipment			
	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Average Daily Haul Truck Trips	Equipment Type	Quantity	Average Daily Usage Hours	Max Daily Usage Hours
Replacement, Ground Wire Replacement, Insulators, Hardware Assembles, Structure Modification/ Raising)				Power auger	4	6	10
				Jack hammer	4	6	10
				Portable Hydraulic Tower Lifting System	10	6	10
				Aerial Lift	40	6	10
				Rough Terrain Forklift	2	6	10
Grading	72	12	4	Tractors/Loaders/ Backhoes	3	6	10
				Graders	3	6	10
				Dozer	3	6	10
Line 2							
Construction (Foundation, Conductor Replacement, Ground Wire Replacement, Insulators, Hardware Assembles, Structure Modification/ Raising)	276	30	32	Large Crane	6	6	10
				Small Crane	11	6	10
				Tensioner	3	6	10
				Power auger	4	6	10
				Jack hammer	4	6	10
				Portable Hydraulic Tower Lifting System	10	6	10
				Aerial Lift	40	6	10
				Rough Terrain Forklift	2	6	10
Grading	72	12	4	Tractors/Loaders/ Backhoes	3	6	10
				Graders	3	6	10
				Dozer	3	6	10

Source: Appendix B.

Where the terrain is steep or access is limited, helicopter use may be required. The helicopters would be used approximately 3 hours per day (average) to up to 8 hours per day (maximum) during construction on the transmission lines. The Project would require several helicopter laydown and staging areas for materials storage, construction equipment, construction vehicles, and temporary construction offices. Laydown areas would be approximately ten acres in size and located centrally or near each end of the transmission line route (LADWP 2023).

3.5.3 Operations

Operation of the proposed Project is anticipated to begin in 2027 for MCV1 and 2028 for MCV2. The upgrades of the existing MCV1 and MCV2 transmission lines would provide critical transmission capacity and is required to accommodate incoming renewable energy resources along the WOR Path 46 transmission corridor. Regular maintenance activities would continue along the corridor in the same manner in which operation and maintenance is completed currently.

3.6 California Environmental Quality Act

The baseline for a Project is typically the physical environmental condition that exists in the vicinity of a project when the NOP is published (14 CCR 15125[a]). The NOP for the Project was published on April 1, 2024, which will thus be the environmental baseline for the Project. Currently, existing development within the utility corridor consists of access roads, tower disturbance footprints, the transmission towers and transmission lines themselves, as well as their associated hardware. The LADWP utility corridor, that runs through the Mojave Desert, largely crosses vacant and undeveloped land state and federal lands, as shown in Figure 3-1 and Figure 3-2.

This EIR was prepared by the LADWP, as the Lead Agency, to inform decision makers and the public of the potential significant environmental effects associated with the Project. This EIR has been prepared in accordance with the California Environmental Quality Act (CEQA) of 1970 (California Public Resources Code, Section 21000 et seq.) and the Guidelines for Implementation of the California Environmental Quality Act (CEQA Guidelines; 14 CCR 15000 et seq.) published by the Public Resources Agency of the State of California.

The purpose of this EIR is to focus the discussion on those potential effects on the environment of the Project that the Lead Agency has determined may be significant. In addition, feasible mitigation measures are recommended, when applicable, that could reduce significant environmental impacts or avoid significant environmental impacts.

Full buildout of the Project, as discussed throughout this section of the EIR, is assumed in the analysis herein. The proposed Project, both construction and operation, is evaluated with an assumed buildout scenario to represent a conservative maximum buildout to fully characterize environmental impacts associated with Project implementation.

3.7 Requested Approvals and Entitlements

The following permits and approvals may be required for the proposed Project:

- Approval by Los Angeles Department of Water and Power Board of Commissioners
- Approval by the U.S. Bureau of Land Management
- California Department of Fish and Wildlife Section 1602 Notification of Lake or Streambed Alteration
- California Department of Fish and Wildlife Incidental Take Permit(s)
- National Pollutant Discharge Elimination System (NPDES) Water Pollution Control Permit
- Regional Water Quality Control Board Section 401 Water Quality Certification and Waste Discharge Requirements
- San Bernardino County Grading Permit (where applicable)
- City of Henderson or Boulder City Grading Permit (where applicable)

- State Water Resources Control Board Section 402 Storm Water Permit Associated with Construction Activities
- U.S. Army Corps of Engineers Section 404 Nationwide Permit
- Right of entry – state lands via public access roads

Construction would be completed in compliance with the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002). Per the General Permit, a Stormwater Pollution Prevention Plan (SWPPP) incorporating BMPs for erosion control would be developed and implemented during Project construction.

3.8 References

Aspen (Aspen Environmental Group). 2020. *McCullough–Victorville Transmission Lines 1 & 2 Project Biological Sensitivity Report*.

LADWP (Los Angeles Department of Water and Power). 2013. Renewables Portfolio Standard Policy and Enforcement Program. Amended December 2013. Accessed April 2024. https://planning.lacity.gov/eir/8150Sunset/References/6.0.%20Other%20CEQA%20Considerations/OTHER.08_LADWP,%20Renewables%20Portfolio%20Policy%20and%20Enforcement%20Program_December%202013.pdf.

LADWP. 2023. "CEQA Data Needs List."

LADWP. 2024a. *McCullough-Victorville Transmission Lines 1 and 2 Project Description*. Accessed April 2, 2024. https://www.ladwp.com/community/construction-projects/other/mccullough-victorville-transmission-lines-1-and-2.

LADWP. 2024b. *Sustainability Greening the Grid*. Accessed April 16, 2024. https://www.ladwp.com/strategic-initiatives/sustainability/greening-grid#:~:text=LADWP%E2%80%99s%20Renewable%20Portfolio%20Standard%20%28RPS%29%20is%20a%20roadmap,renewable%20energy%20at%20a%20consistent%20and%20sustainable%20rate.

Psomas. 2023. *Jurisdictional Delineation Report.* March 1, 2023.

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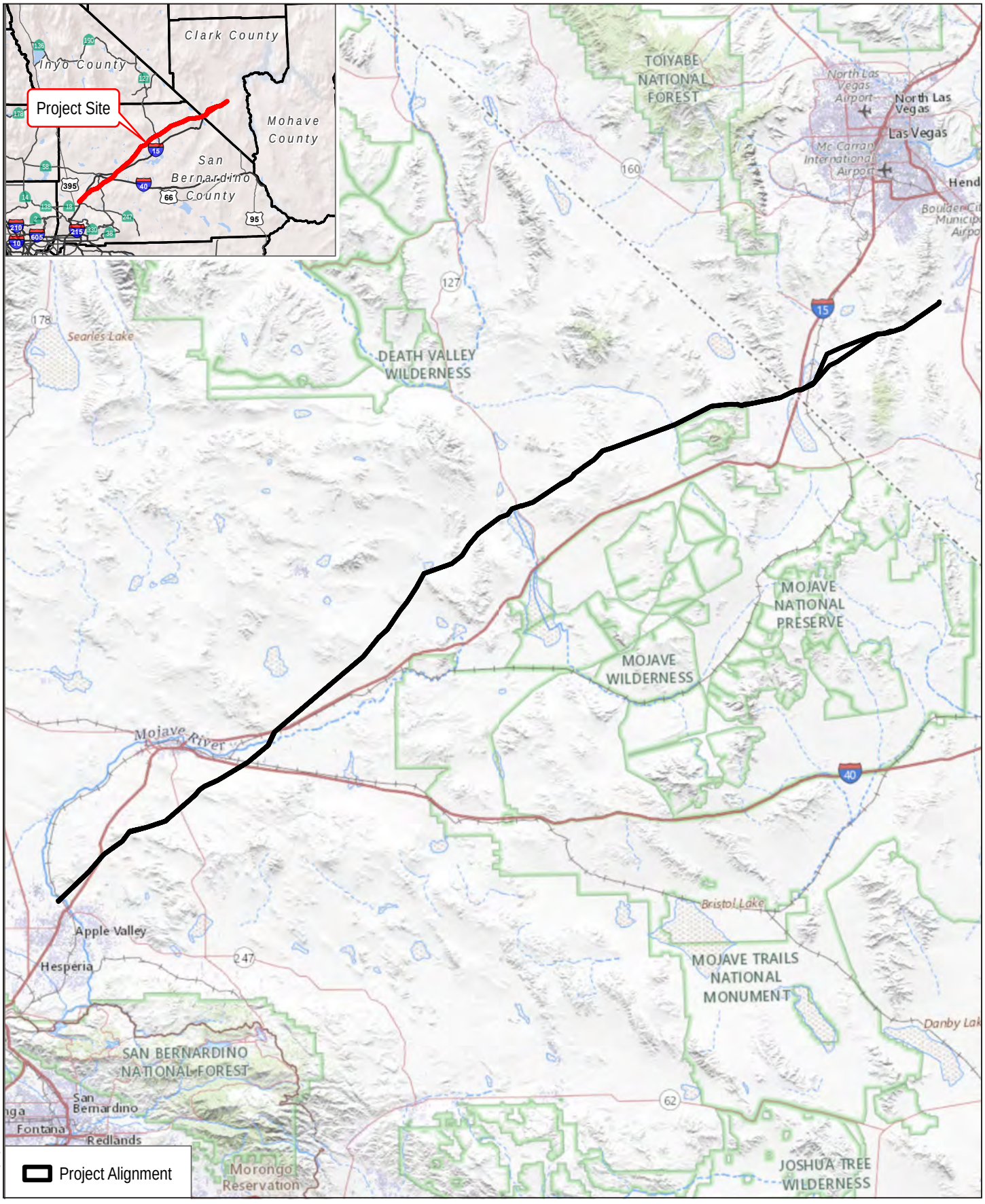

SOURCE: USGS National Map 2024

FIGURE 3-1

Project Location

McCullough-Victorville Transmission Lines 1 And 2 Upgrade Project EIR

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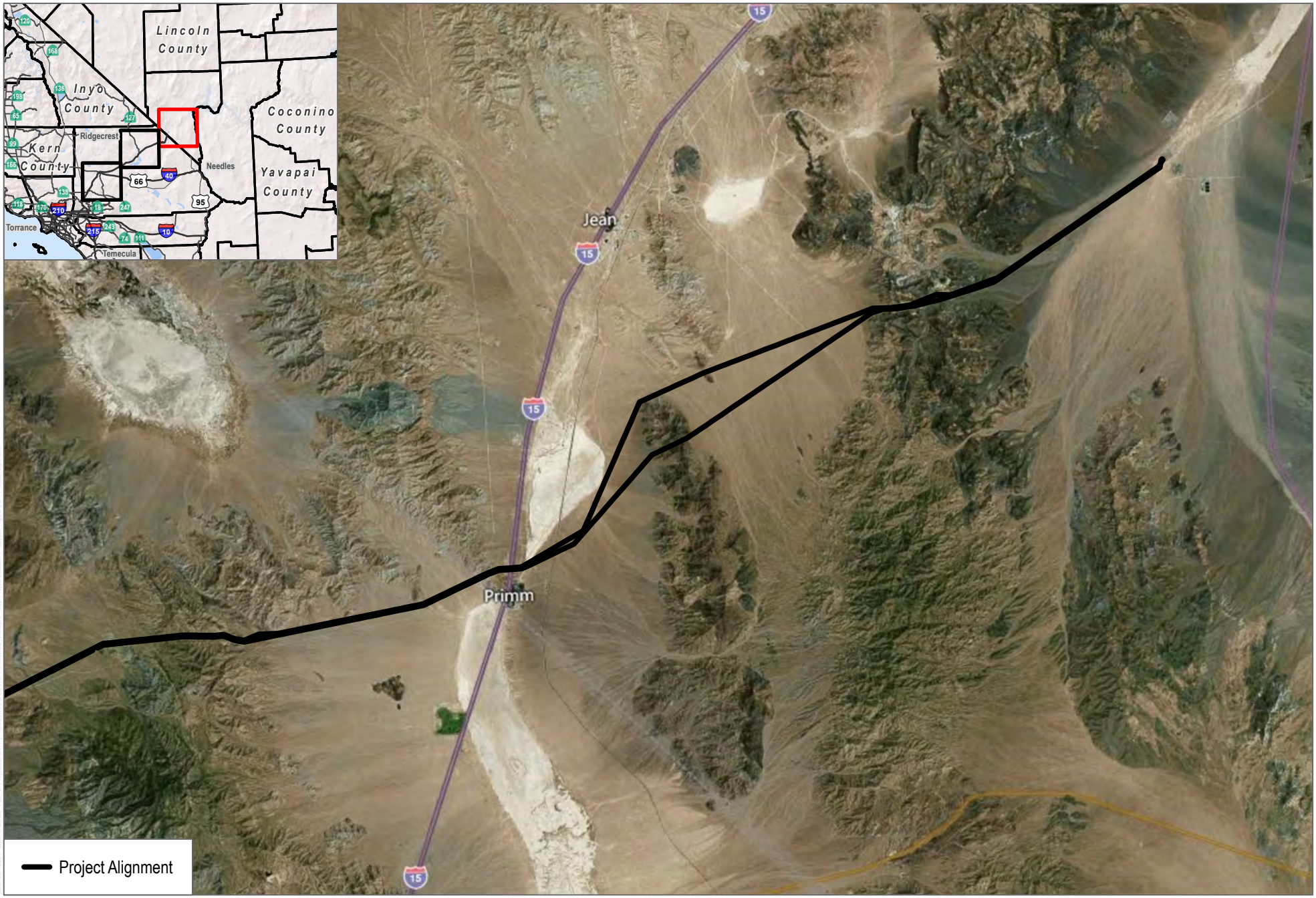


SOURCE: Bing Map 2022

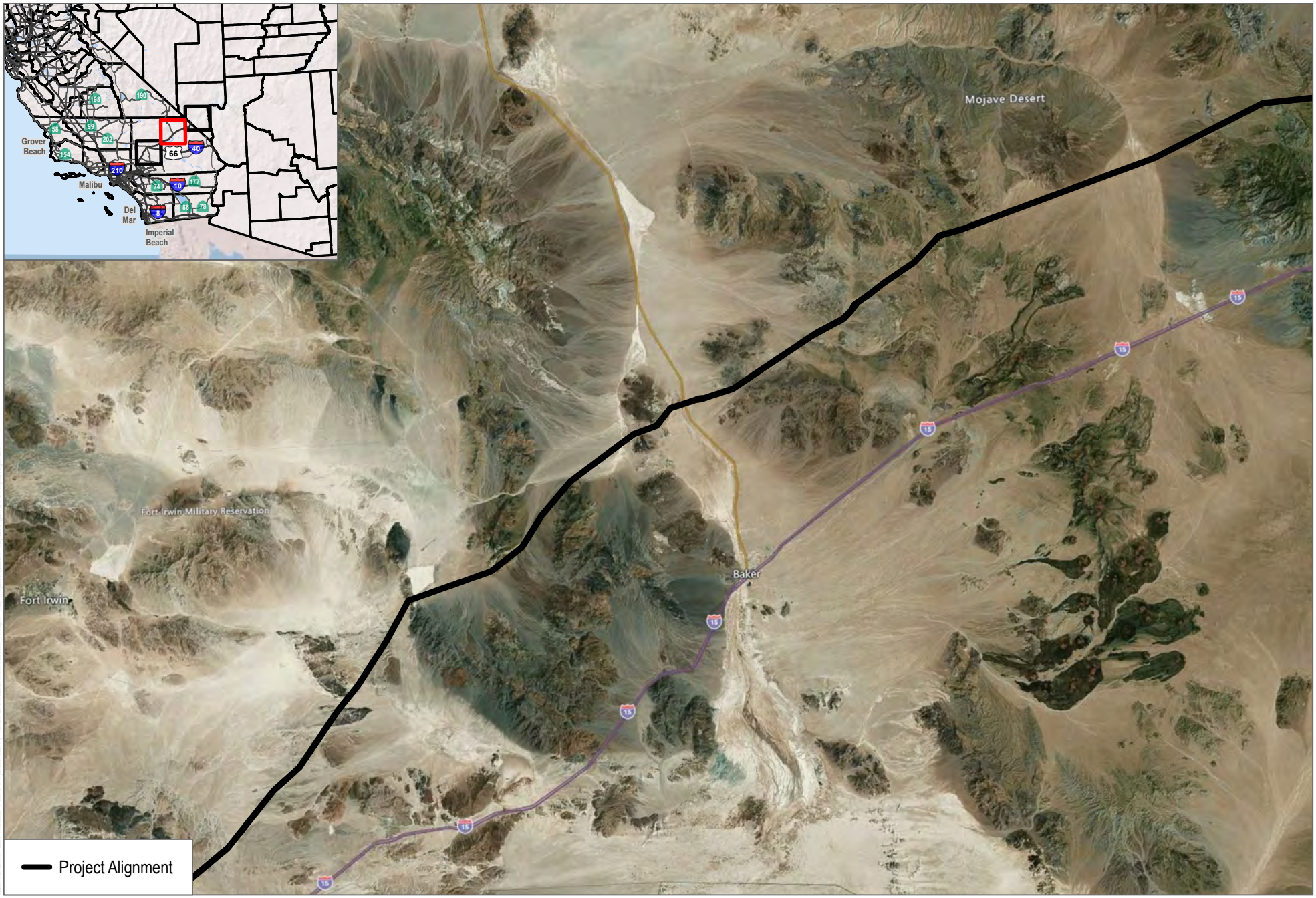
DUDEK

0 10,000 20,000 Feet

FIGURE 3.2-1

Project Alignment

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: Bing Maps 2022

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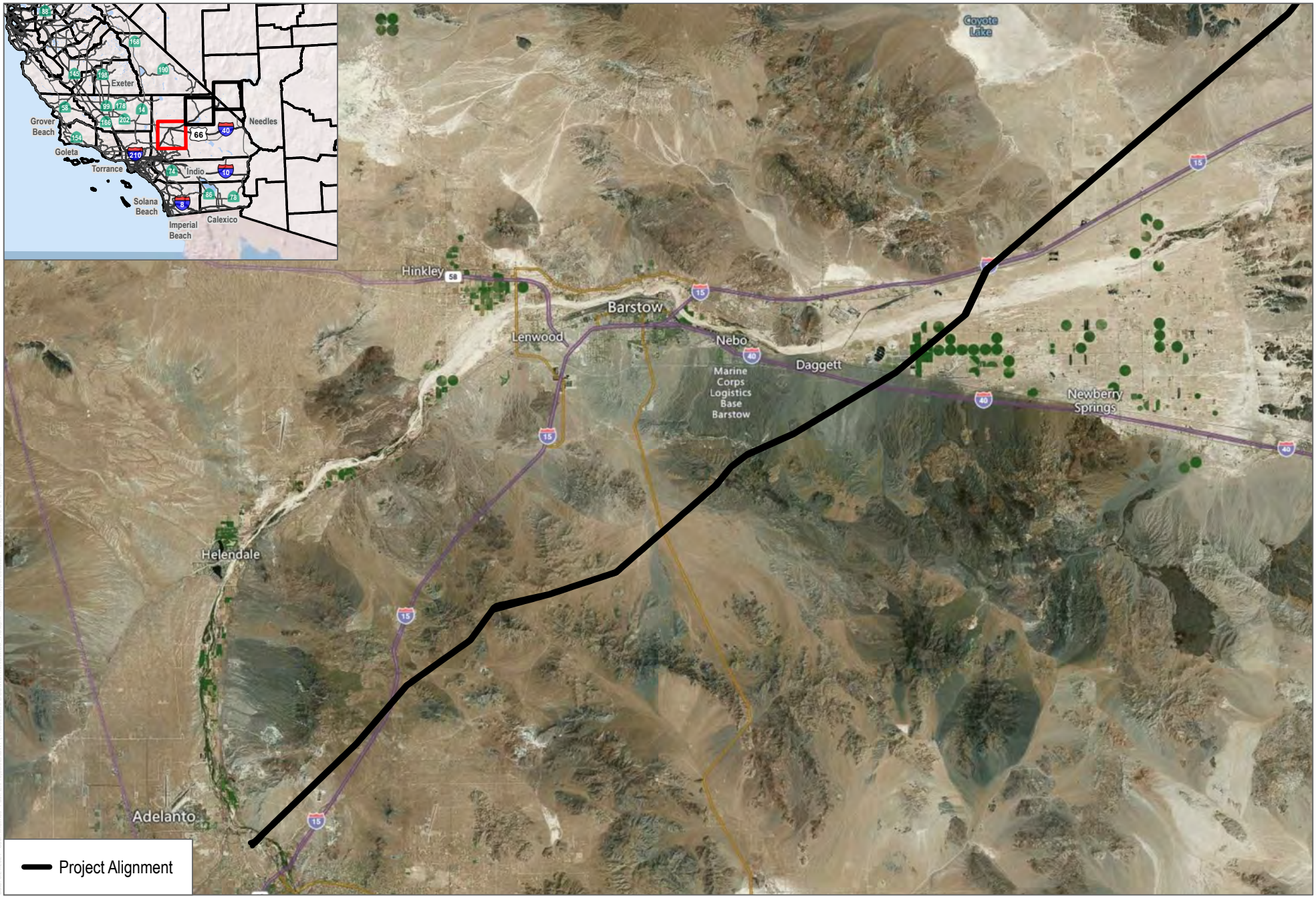
FIGURE 3.2-2

Project Alignment

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: Bing Maps 2022

DUDEK

0 15,000 30,000 Feet

FIGURE 3.2-3

Project Alignment

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

4 Environmental Analysis

The purpose of this Environmental Impact Report (EIR) is to evaluate the potential environmental effects of the proposed McCullough–Victorville Transmission Lines 1 and 2 Upgrade Project (Project). Full buildout of the proposed Project, as discussed throughout Chapter 3, Project Description, of this EIR, is assumed in the analysis herein.

The Los Angeles Department of Water and Power (LADWP) circulated a Notice of Preparation (NOP) beginning on April 1, 2024, with the public review period ending on May 1, 2024. The NOP was transmitted to the State Clearinghouse, responsible agencies, other affected agencies, and interested parties to solicit issues or potential environmental effects related to the Project. The NOP, Initial Study, and comment letters are contained in Appendix A and a summary of comments received during the scoping period are included in Table 2-1 within Chapter 2, Introduction, of this EIR.

Sections 4.1 through 4.5 of the EIR contain the potential environmental impacts analysis associated with implementation of the Project and focus on the following issues:

- Air Quality
- Biological Resources
- Cultural Resources
- Paleontological Resources
- Tribal Cultural Resources

During preparation of the Initial Study/NOP for this EIR, other potential environmental impact areas, including aesthetics, agriculture and forestry resources, geology and soils, energy, 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, utilities and service systems, and wildfire, were found not to be significant based on the results of the Initial Study. These issues and the analysis for these issues are included in Appendix A, as well as Chapter 5, Other CEQA Considerations, of this EIR.

Technical Studies

Technical studies were prepared to accurately analyze air quality, biological resources, cultural resources, and paleontological resources, which were then used in the preparation of this EIR. These documents are identified in the discussions for the individual environmental issues and included as technical appendices to the EIR. Hard copies of the technical studies are available at the LADWP office and will also be available on the LADWP website: https://www.ladwp.com/community/construction-projects/other/mccullough-victorville-transmission-lines-1-and-2.

Analysis Format

The EIR assesses how the Project would impact each of these issue areas. Each environmental issue addressed in this EIR is presented in terms of the following subsections:

- **Existing Conditions:** Provides information describing the existing setting within and surrounding the LADWP utility corridor that may be subject to change as a result of implementation of the Project. This setting

discussion describes the conditions that existed when the NOP was sent to responsible agencies and the State Clearinghouse.

- **Relevant Regulations, Plans, Policies, and Ordinances**: Provides a discussion of federal, state, regional, and local regulations, plans, policies, and ordinances applicable to the Project.
- **Thresholds of Significance**: Provides criteria for determining the significance of Project impacts for each environmental topic.
- **Impact Analysis**: Provides a discussion of the characteristics of the Project that may have an effect on the environment, analyzes the nature and extent to which the Project is expected to change the existing environment, and indicates whether the Project impacts meet or exceed the levels of significance thresholds. Project-related impact analysis is based on the assumptions detailed in Chapter 3, which include, but are not limited to, discussion on the following: existing baseline conditions, Project components (i.e., maintenance and rehabilitation of access roads, reinforcement or replacement of towers, etc.), and Project construction assumptions (i.e., construction and grading quantities).
- **Mitigation Measures**: Identifies mitigation measures to reduce significant adverse impacts to the extent feasible.
- **Level of Significance After Mitigation**: Provides a discussion of significant adverse environmental impacts that cannot be feasibly mitigated or avoided, significant adverse environmental impacts that can be feasibly mitigated or avoided, adverse environmental impacts that are not significant, and beneficial impacts.
- **Cumulative Effects**: Provides a discussion of cumulative environmental effects of the proposed Project in combination with related projects as well as the Project's contribution to cumulative impacts.
- **References Cited**: Provides a list of references and documents cited within the section.

Cumulative Effects Analysis Methodology

Section 15130(b)(1)(A) of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.) allows for the preparation of a list of past, present, and reasonably anticipated future projects as a viable method of determining cumulative impacts. The cumulative effects analysis in this EIR utilizes a summary of projections in adopted regional or statewide plans, given the regional nature of this Project. Consistent with CEQA (California Public Resources Code, Section 21000 et seq.), this discussion is guided by the standards of practicality and reasonableness.

Section 15130(b)(3) of the CEQA Guidelines states that "lead agencies shall define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used." Unless otherwise indicated in the analysis in Chapter 4 of this EIR, the geographic scope used in the cumulative analysis includes the LADWP utility corridor area and the surrounding region, all of which is within the Mojave Desert. Therefore, the cumulative analysis would be done at a regional level. However, there are environmental issues whose relevant geographic scope for purposes of cumulative impact analysis may be larger or smaller than this area, and may be defined by local, regional, or state agency jurisdiction or by other environmental factors. For example, the geographic scope of cumulative air quality impacts is defined by the Mojave Desert Air Quality Management District. The District includes San Bernardino County High Desert and the Palo Verde Valley of Riverside County.

4.1 Air Quality

This section describes existing conditions related to air quality, identifies associated regulatory requirements, evaluates potential Project and cumulative impacts, and identifies mitigation measures for any significant or potentially significant impacts related to implementation of the of the McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project ("Project" or "proposed Project"). The purpose of the Project is to accommodate incoming renewable energy resources from the East territory region, along the West of River Path 46 transmission corridor in order to help the Los Angeles Department of Water and Power (LADWP) achieve state and local requirements for greenhouse gas (GHG) reductions and an increased renewable energy portfolio.

4.1.1 Existing Conditions

Meteorological and Topographical Conditions

The McCullough-Victorville Transmission Lines 1 and 2 run northeast/southwest, parallel to each other, for 162 miles from Boulder City, Nevada to Victorville, California (Psomas 2023). Approximately 138 miles of the Transmission Lines are in the state of California and the remaining 24 miles are located in the state of Nevada (Psomas 2023). The majority of the Project alignment is located within the Mojave Desert Air Basin (MDAB).[1] The MDAB includes the desert portions of Los Angeles, Kern, San Bernardino, and Riverside counties. Most of this area is commonly referred to as the "High Desert" because elevations range from approximately 2,000 to 5,000 feet above mean sea level. The MDAB is generally above the regional inversion layer and experiences relatively good dispersion conditions.

The MDAB is separated from Southern California coastal regions and Central California valley regions by mountains extending up to 10,000 feet above mean sea level. As a result, the Mojave Desert is removed from the cooling effects of the Pacific Ocean and is characterized by extreme temperatures. The MDAB consists of an assemblage of mountain ranges interspersed with valleys that often contain dry lakes. Lower-elevation mountains scattered throughout the basin are generally 1,000 feet to 4,000 feet high. Mountain passes form channels for air masses flowing from the west and southwest, and the prevailing winds from the west and southwest are caused by the proximity of the MDAB to coastal and central regions and the blocking effect of the Sierra Nevada to the north.

This MDAB region is characterized by hot, dry summers and cool winters, with little precipitation. During the summer, the MDAB is generally influenced by a Pacific subtropical high-pressure cell that resides off the coast of California. This high-pressure cell prevents cloud formation and engenders daytime solar heating. The MDAB is rarely influenced by the cold air masses that move south from Canada and Alaska, as these frontal systems diffuse by the time they reach the MDAB. Most moisture arrives in frequent warm, moist, unstable air masses from the south. The MDAB averages between 3 and 7 inches of precipitation per year (from 16 to 30 days with at least 0.01 inches of precipitation). The MDAB is classified as a dry–hot desert climate, with portions classified as dry–very hot desert, to indicate at least 3 months have maximum average temperatures over 100.4°F (MDAQMD 2008).

[1] The description of the MDAB climate and topography is based on the MDAQMD California Environmental Quality Act (CEQA) and Federal Conformity Guidelines ("MDAQMD CEQA Guidelines;" MDAQMD 2020). The description of the Western Mojave Desert O_3 nonattainment area is based the MDAQMD Federal 8-Hour Ozone Attainment Plan for the Western Mojave Desert Non-Attainment Area (MDAQMD 2008).

A portion of the Project alignment is located within the MDAQMD portion of the Western Mojave Desert ozone (O_3) nonattainment area (MDAQMD 2008), which includes the following San Bernardino County communities: Phelan, Hesperia, Adelanto, Victorville, Apple Valley, Barstow, Joshua Tree, Yucca Valley, and Twentynine Palms (the southwestern portion of the MDAQMD).

Pollutants and Effects

Criteria Air Pollutants

Criteria air pollutants are defined as pollutants for which the federal and state governments have established minimum ambient air quality standards (AAQS), or criteria, for outdoor pollutant concentrations in order to protect public health. The federal and state standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM_{10}), particulate matter with an aerodynamic diameter less than or equal to 2.5 microns ($PM_{2.5}$), and lead (Pb). These pollutants, as well as toxic air contaminants (TACs), are discussed below.[2] In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants.

Ozone. O_3 is a strong-smelling, pale blue, reactive, toxic chemical gas consisting of three oxygen atoms. It is a secondary pollutant formed in the atmosphere by a photochemical process involving the sun's energy and O_3 precursors. These precursors are mainly oxides of nitrogen (NO_x) and volatile organic compounds (VOCs) (also referred to as reactive organic gases [ROGs]). The maximum effects of precursor emissions on O_3 concentrations usually occur several hours after they are emitted and many miles from the source. Meteorology and terrain play major roles in O_3 formation, and ideal conditions occur during summer and early autumn on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. O_3 exists in the upper atmosphere O_3 layer (stratospheric O_3) and at Earth's surface in the lower atmosphere (tropospheric O_3).[3] The O_3 that the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) regulate as a criteria air pollutant is produced close to ground level, where people live, exercise, and breathe. Ground-level O_3 is a harmful air pollutant that causes numerous adverse health effects and is thus considered "bad" O_3. Stratospheric, or "good," O_3 occurs naturally in the upper atmosphere, where it reduces the amount of ultraviolet light (i.e., solar radiation) entering Earth's atmosphere. Without the protection of the beneficial stratospheric O_3 layer, plant and animal life would be seriously harmed.

O_3 in the troposphere causes numerous adverse health effects; short-term exposures (lasting for a few hours) to O_3 can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes (EPA 2020). Inhalation of O_3 causes inflammation and irritation of the tissues lining human airways, causing and worsening a variety of symptoms. Exposure to O_3 can reduce the volume of air that the lungs breathe in and can cause shortness of breath. O_3 in sufficient doses increases the permeability of lung cells, rendering them more susceptible to toxins and microorganisms. The occurrence and severity of health effects from O_3 exposure vary widely among individuals, even when the dose and the duration of exposure are the same. Research shows adults and children who spend more time outdoors participating in vigorous physical activities are at greater risk from the harmful health effects

[2] The descriptions of the criteria air pollutants and associated health effects are based on the U.S. Environmental Protection Agency's "Criteria Air Pollutants" (EPA 2023a), as well as the California Air Resources Board's "Glossary" (CARB 2023a).

[3] The troposphere is the layer of Earth's atmosphere nearest to the surface of Earth, extending outward approximately 5 miles at the poles and approximately 10 miles at the equator.

of O_3 exposure. While there are relatively few studies of O_3's effects on children, the available studies show that children are no more or less likely to suffer harmful effects than adults. However, there are a number of reasons why children may be more susceptible to O_3 and other pollutants. Children and teens spend nearly twice as much time outdoors and engaged in vigorous activities as adults. Children breathe more rapidly than adults and inhale more pollution per pound of their body weight than adults. Also, children are less likely than adults to notice their own symptoms and avoid harmful exposures. Further research may be able to better distinguish between health effects in children and adults. Children, adolescents, and adults who exercise or work outdoors, where O_3 concentrations are the highest, are at the greatest risk of harm from this pollutant (CARB 2023b).

Nitrogen Dioxide. NO_2 is a brownish, highly reactive gas that is present in all urban atmospheres. The major mechanism for the formation of NO_2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide (NO), which is a colorless, odorless gas. NO_x, which includes NO_2 and NO, plays a major role, together with VOCs, in the atmospheric reactions that produce O_3. NO_x is formed from fuel combustion under high temperature or pressure. In addition, NO_2 is an important precursor to acid rain and may affect both terrestrial and aquatic ecosystems. The two major emissions sources are transportation and stationary fuel combustion sources (such as electric utility and industrial boilers).

A large body of health science literature indicates that exposure to NO_2 can induce adverse health effects. The strongest health evidence, and the health basis for the AAQS for NO_2, results from controlled human exposure studies that show that NO_2 exposure can intensify responses to allergens in allergic asthmatics. In addition, a number of epidemiological studies have demonstrated associations between NO_2 exposure and premature death, cardiopulmonary effects, decreased lung function growth in children, respiratory symptoms, emergency room visits for asthma, and intensified allergic responses. Infants and children are particularly at risk because they have disproportionately higher exposure to NO_2 than adults due to their greater breathing rate for their body weight and, for children, they typically spend more time outdoors. Several studies have shown that long-term NO_2 exposure during childhood, the period of rapid lung growth, can lead to smaller lungs at maturity in children with higher compared to lower levels of exposure. In addition, children with asthma have a greater degree of airway responsiveness compared with adult asthmatics. In adults, the greatest risk is to people who have chronic respiratory diseases, such as asthma and chronic obstructive pulmonary disease (CARB 2023c).

Carbon Monoxide. CO is a colorless, odorless gas formed by the incomplete combustion of hydrocarbons, or fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas, automobile exhaust accounts for the majority of CO emissions. CO is a nonreactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions—primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, which is a typical situation at dusk in urban areas from November to February. The highest levels of CO typically occur during the colder months of the year, when inversion conditions are more frequent.

CO is harmful because it binds to hemoglobin in the blood, reducing the ability of blood to carry oxygen. This interferes with oxygen delivery to the body's organs. The most common effects of CO exposure are fatigue, headaches, confusion and reduced mental alertness, light-headedness, and dizziness due to inadequate oxygen delivery to the brain. For people with cardiovascular disease, short-term CO exposure can further reduce their body's already compromised ability to respond to the increased oxygen demands of exercise, exertion, or stress. Inadequate oxygen delivery to the heart muscle leads to chest pain and decreased exercise tolerance. Unborn babies whose mothers experience high levels of CO exposure during pregnancy are at risk of adverse developmental

effects. Unborn babies, infants, elderly people, and people with anemia or with a history of heart or respiratory disease are most likely to experience health effects with exposure to elevated levels of CO (CARB 2023d).

Sulfur Dioxide. SO_2 is a colorless, pungent gas formed primarily from incomplete combustion of sulfur-containing fossil fuels. The main sources of SO_2 are coal and oil used in power plants and industries; as such, the highest levels of SO_2 are generally found near large industrial complexes. In recent years, SO_2 concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO_2 and limits on the sulfur content of fuels.

Controlled human exposure and epidemiological studies show that children and adults with asthma are more likely to experience adverse responses with SO_2 exposure, compared with the non-asthmatic population. Effects at levels near the 1-hour standard are those of asthma exacerbation, including bronchoconstriction accompanied by symptoms of respiratory irritation such as wheezing, shortness of breath, and chest tightness, especially during exercise or physical activity. Also, exposure at elevated levels of SO_2 (above 1 part per million [ppm]) results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality. The elderly and people with cardiovascular disease or chronic lung disease (such as bronchitis or emphysema) are most likely to experience these adverse effects (CARB 2023e).

SO_2 is of concern both because it is a direct respiratory irritant and because it contributes to the formation of sulfate and sulfuric acid in particulate matter (NRC 2005). People with asthma are of particular concern, both because they have increased baseline airflow resistance and because their SO_2-induced increase in airflow resistance is greater than in healthy people, and it increases with the severity of their asthma (NRC 2005). SO_2 is thought to induce airway constriction via neural reflexes involving irritant receptors in the airways (NRC 2005).

Particulate Matter. Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. $PM_{2.5}$ and PM_{10} represent fractions of particulate matter. Coarse particulate matter (PM_{10}) is about $^1/_7$ the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood-burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. Fine particulate matter ($PM_{2.5}$) is roughly $^1/_{28}$ the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (e.g., from motor vehicles, power generation, and industrial facilities), residential fireplaces, and woodstoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as sulfur oxides, NO_x, and VOCs.

$PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances such as lead, sulfates, and nitrates can cause lung damage directly or be absorbed into the bloodstream, causing damage elsewhere in the body. Additionally, these substances can transport adsorbed gases such as chlorides or ammonium into the lungs, also causing injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissue. Suspended particulates also damage and discolor surfaces on which they settle and produce haze and reduce regional visibility.

A number of adverse health effects have been associated with exposure to both $PM_{2.5}$ and PM_{10}. For $PM_{2.5}$, short-term exposures (up to 24-hour duration) have been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days. These adverse health effects have been reported primarily in infants, children, and older adults with preexisting heart or lung diseases. In addition, of all of the common air pollutants, $PM_{2.5}$ is associated with the greatest proportion of adverse health effects related to air pollution, both in the United States and worldwide based on the World Health Organization's Global Burden of Disease Project. Short-term exposures to PM_{10} have been associated primarily with worsening of respiratory diseases, including asthma and chronic obstructive pulmonary disease, leading to hospitalization and emergency department visits (CARB 2023f).

Long-term exposure (months to years) to $PM_{2.5}$ has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children. The effects of long-term exposure to PM_{10} are less clear, although several studies suggest a link between long-term PM_{10} exposure and respiratory mortality. The International Agency for Research on Cancer published a review in 2015 that concluded that particulate matter in outdoor air pollution causes lung cancer (CARB 2023f). As discussed for O_3, air quality in the MDAB has generally improved since the inception of air pollutant monitoring including PM_{10} ambient concentrations.

Lead. Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturing of batteries, paints, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phase out of leaded gasoline reduced the overall inventory of airborne lead by nearly 95%. With the phase-out of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emissions sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and, in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood, because children are highly susceptible to the effects of lead. Such exposures are associated with decrements in neurobehavioral performance, including intelligence quotient performance, psychomotor performance, reaction time, and growth.

Sulfates. Sulfates are the fully oxidized form of sulfur, which typically occur in combination with metals or hydrogen ions. Sulfates are produced from reactions of SO_2 in the atmosphere. Sulfates can result in respiratory impairment, as well as reduced visibility.

Vinyl Chloride. Vinyl chloride is a colorless gas with a mild, sweet odor, which has been detected near landfills, sewage plants, and hazardous waste sites, due to the microbial breakdown of chlorinated solvents. Short-term exposure to high levels of vinyl chloride in air can cause nervous system effects, such as dizziness, drowsiness, and headaches. Long-term exposure through inhalation can cause liver damage, including liver cancer.

Hydrogen Sulfide. Hydrogen sulfide is a colorless and flammable gas that has a characteristic odor of rotten eggs. Sources of hydrogen sulfide include geothermal power plants, petroleum refineries, sewers, and sewage treatment plants. Exposure to hydrogen sulfide can result in nuisance odors, as well as headaches and breathing difficulties at higher concentrations.

Visibility-Reducing Particles. Visibility-reducing particles are any particles in the air that obstruct the range of visibility. Sources of visibility-reducing particles are the same as for $PM_{2.5}$ described above. Effects of reduced visibility can include obscuring the viewshed of natural scenery, reducing airport safety, and discouraging tourism.

Volatile Organic Compounds. Hydrocarbons are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of O_3 are referred to and regulated as volatile organic compounds (VOCs). Combustion engine exhaust, oil refineries, and fossil-fueled power plants are the main sources of hydrocarbons. Other sources of hydrocarbons include evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint.

The primary health effects of VOCs result from the formation of O_3 and its related health effects. High levels of VOCs in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons, such as benzene, are considered TACs. There are no separate health standards for VOCs as a group.

Non-Criteria Air Pollutants

Toxic Air Contaminants. A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute and/or chronic noncancer health effects. A toxic substance released into the air is considered a toxic air contaminant (TAC). TACs are identified by federal and state agencies based on a review of available scientific evidence. In California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act. This two-step process of risk identification and risk management and reduction was designed to protect residents from the health effects of toxic substances in the air. Examples of TACs include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources, such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources, such as automobiles; and area sources, such as landfills.

Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and noncarcinogenic effects. Noncarcinogenic effects typically affect one or more target organ systems and may be experienced on either short-term (acute) or long-term (chronic) exposure to a given TAC.

Diesel Particulate Matter. Diesel particulate matter (DPM) is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is composed of two phases, gas and particle, both of which contribute to health risks. More than 90% of DPM is less than 1 micrometer in diameter (about $^1/_{70}$ the diameter of a human hair), and thus is a subset of $PM_{2.5}$ (CARB 2023g). DPM is typically composed of carbon particles (soot, also called black carbon) and numerous organic compounds, including over 40 known carcinogenic organic substances. Examples of these chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene (CARB 2023g). In August 1998, CARB classified "particulate emissions from diesel-fueled engines" (i.e., DPM) (17 CCR 93000) as a TAC. DPM is emitted from a broad range of diesel engines: on-road diesel engines of trucks, buses, and cars and off-road diesel engines including locomotives, marine vessels, and heavy-duty construction equipment, among others.

Approximately 70% of all airborne cancer risk in California is associated with DPM (CARB 2000). To reduce the cancer risk associated with DPM, CARB adopted a diesel risk reduction plan in 2000 (CARB 2000). Because it is part of $PM_{2.5}$, DPM also contributes to the same noncancer health effects as $PM_{2.5}$ exposure. These effects include premature death; hospitalizations and emergency department visits for exacerbated chronic heart and lung

disease, including asthma; increased respiratory symptoms; and decreased lung function in children. Several studies suggest that exposure to DPM may also facilitate development of new allergies (CARB 2023g). Those most vulnerable to noncancer health effects are children, whose lungs are still developing, and the elderly, who often have chronic health problems.

Odorous Compounds. Odors are generally regarded as an annoyance rather than a health hazard. Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The ability to detect odors varies considerably among the population and overall is quite subjective. People may have different reactions to the same odor. An odor that is offensive to one person may be perfectly acceptable to another (e.g., coffee roaster). An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. In a phenomenon known as odor fatigue, a person can become desensitized to almost any odor, and recognition may only occur with an alteration in the intensity. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

Valley Fever. Coccidioidomycosis, more commonly known as "Valley Fever," is an infection caused by inhalation of the spores of the *Coccidioides immitis* fungus, which grows in the soils of the southwestern United States. The ecologic factors that appear to be most conducive to survival and replication of the spores are high summer temperatures, mild winters, sparse rainfall, and alkaline, sandy soils. San Bernardino County is not considered a highly endemic region for Valley Fever as the California Department of Public Health listed San Bernardino County as having 11.4 cases per 100,000 people (CDPH 2021).

Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution include children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. Facilities and structures where these air pollution-sensitive people live or spend considerable amounts of time are known as sensitive receptors. Land uses where air-pollution-sensitive individuals are most likely to spend time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (sensitive sites or sensitive land uses) (CARB 2005). The MDAQMD identifies sensitive receptors as residences, schools, playgrounds, childcare centers, and medical facilities (MDAQMD 2020). The land surrounding the Proposed Project work areas consists primarily of undeveloped open space areas in the Mojave Desert. Scattered rural residential land uses are also located in the vicinity of the transmission lines, mostly between Harvard, California and Victorville, California, in the Western Mojave Desert.

Local Ambient Air Quality

Mojave Desert Air Basin Attainment Designation

Pursuant to the 1990 federal Clean Air Act amendments, the EPA classifies air basins (or portions thereof) as "attainment" or "nonattainment" for each criteria air pollutant, based on whether the National Ambient Air Quality Standards (NAAQS) have been achieved. Generally, if the recorded concentrations of a pollutant are lower than the standard, the area is classified as "attainment" for that pollutant. If an area exceeds the standard, the area is classified as "nonattainment" for that pollutant. If there is not enough data available to determine whether the standard is exceeded in an area, the area is designated as "unclassified" or "unclassifiable." The designation of "unclassifiable/attainment" means that the area meets the standard or is expected to meet the standard despite

a lack of monitoring data. Areas that achieve the standards after a nonattainment designation are re-designated as maintenance areas and must have approved maintenance plans to ensure continued attainment of the standards. The California Clean Air Act, like its federal counterpart, called for the designation of areas as "attainment" or "nonattainment," but based on California Ambient Air Quality Standards (CAAQS) rather than the NAAQS. Table 4.1-1 depicts the current attainment status of the Project area within California with respect to the NAAQS and CAAQS. Notably, the Mojave Desert Air Basin MDAB has experienced a substantial reduction in maximum 8-hour concentrations of O_3 over time, as well as reductions in PM_{10}, from strategies including implementation of Reasonable Available Control Technology, vehicle emission standards, and other measures, as described in the respective MDAQMD O_3 attainment plan (MDAQMD 2008) and PM_{10} attainment demonstration and maintenance plan (MDAQMD 1995).

Table 4.1-1. Mojave Desert Air Basin Attainment Classification

Pollutant	Designation/Classification	
	Federal Standards	California Standards
O_3 – 1 hour	No federal standard	**Nonattainment**
O_3 – 8 hours	**Severe nonattainment**[b]	**Nonattainment**
NO_2	Unclassifiable/attainment	Attainment
CO	Unclassifiable/attainment	Attainment
SO_2	Unclassifiable/attainment	Attainment
PM_{10}	**Moderate nonattainment**	**Nonattainment**
$PM_{2.5}$	Unclassifiable/attainment	Attainment
Lead	Unclassifiable/attainment	Attainment
Hydrogen sulfide	No federal standard	Unclassified[c]
Sulfates	No federal standard	Attainment
Visibility-reducing particles	No federal standard	Unclassified
Vinyl chloride	No federal standard	No designation

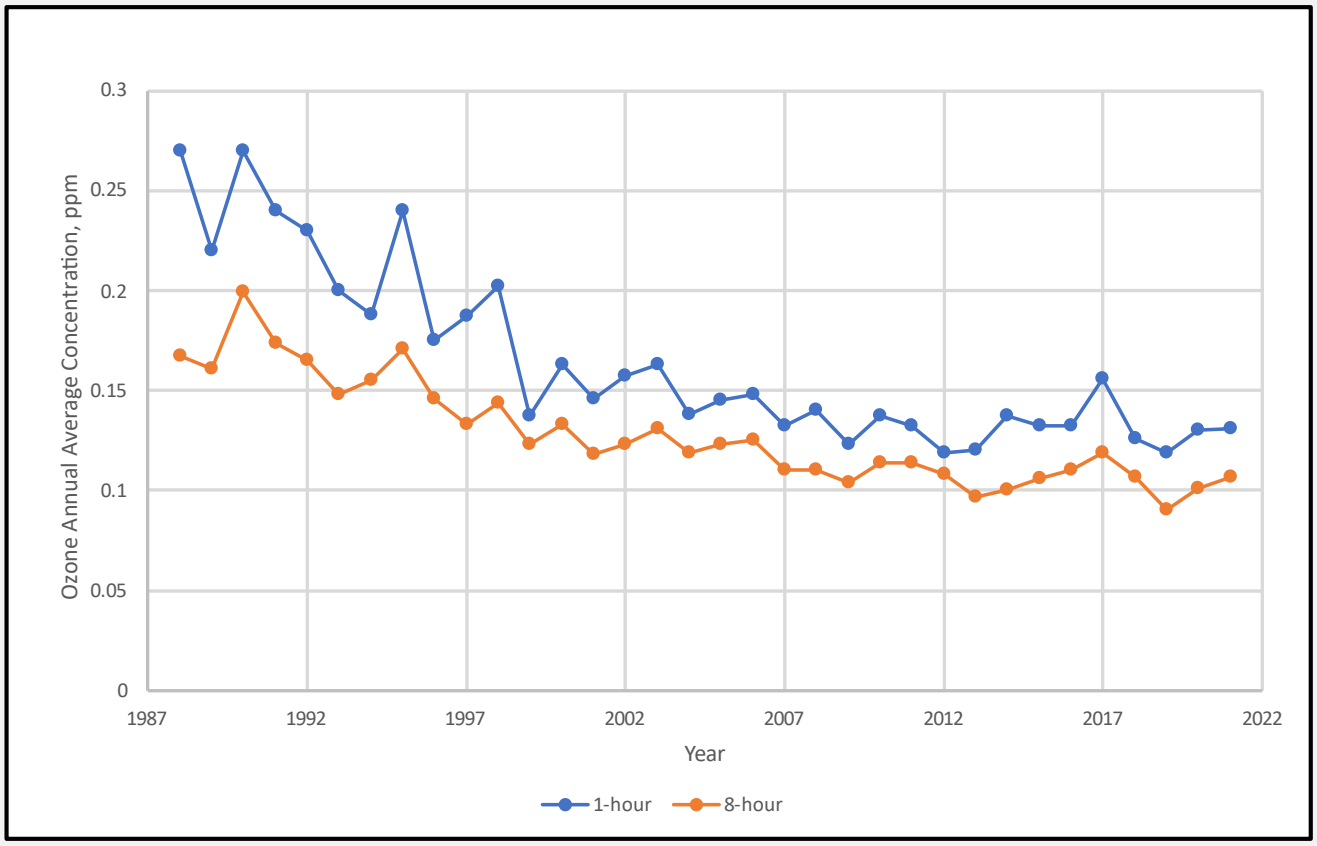
Sources: EPA 2022 (federal); CARB 2022a (state).
Definitions: attainment = meets the standards; attainment/maintenance = achieve the standards after a nonattainment designation; nonattainment = does not meet the standards; unclassified or unclassifiable = insufficient data to classify; unclassifiable/attainment = meets the standard or is expected to be meet the standard despite a lack of monitoring data.
Notes: O_3 = ozone; NO_2 = nitrogen dioxide; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter.

[a] Designations/classifications in **bold** type indicate nonattainment.
[b] West Mojave Desert portion of the MDAB, where a portion of the Project is located, is designated severe nonattainment. The remaining areas of the MDAB are designated unclassifiable/attainment.
[c] The entire MDAB is designated unclassified, except for the Searles Valley portion of the basin, which is designated nonattainment.

In summary, a portion of the Project alignment is located in the West Mojave Desert Portion of the MDAB that is designated as a nonattainment area for federal and state O_3 standards and federal and state PM_{10} standards, and unclassifiable/attainment for all other criteria air pollutants (EPA 2022; CARB 2022a). Additional segments of the transmission lines are located in the eastern MDAB of California, which is designated nonattainment for state O_3 and federal and state PM_{10} standards and unclassifiable/attainment for all other criteria air pollutants (EPA 2022; CARB 2022a). Finally, a portion of the Project is within western Nevada, in an area designated unclassifiable/attainment for all criteria air pollutants (EPA 2022).

Despite the current nonattainment status for O_3 and PM_{10}, air quality in the MDAB has generally improved since the inception of air pollutant monitoring. This improvement is mainly a result of lower-polluting on-road motor vehicles, more stringent regulation of industrial sources, and the implementation of emission reduction strategies by the MDAQMD and nearby air districts including the South Coast Air Quality Management District (SCAQMD) and the San Joaquin Valley Air Pollution Control District (SJVAPCD), as well as CARB and EPA. This general trend toward cleaner air within the state, including the MDAB, has occurred in spite of continued population growth. Figure 4.1-1 and Figure 4.1-2 demonstrate the reduction in O_3 and PM_{10} over time, respectively.[4]

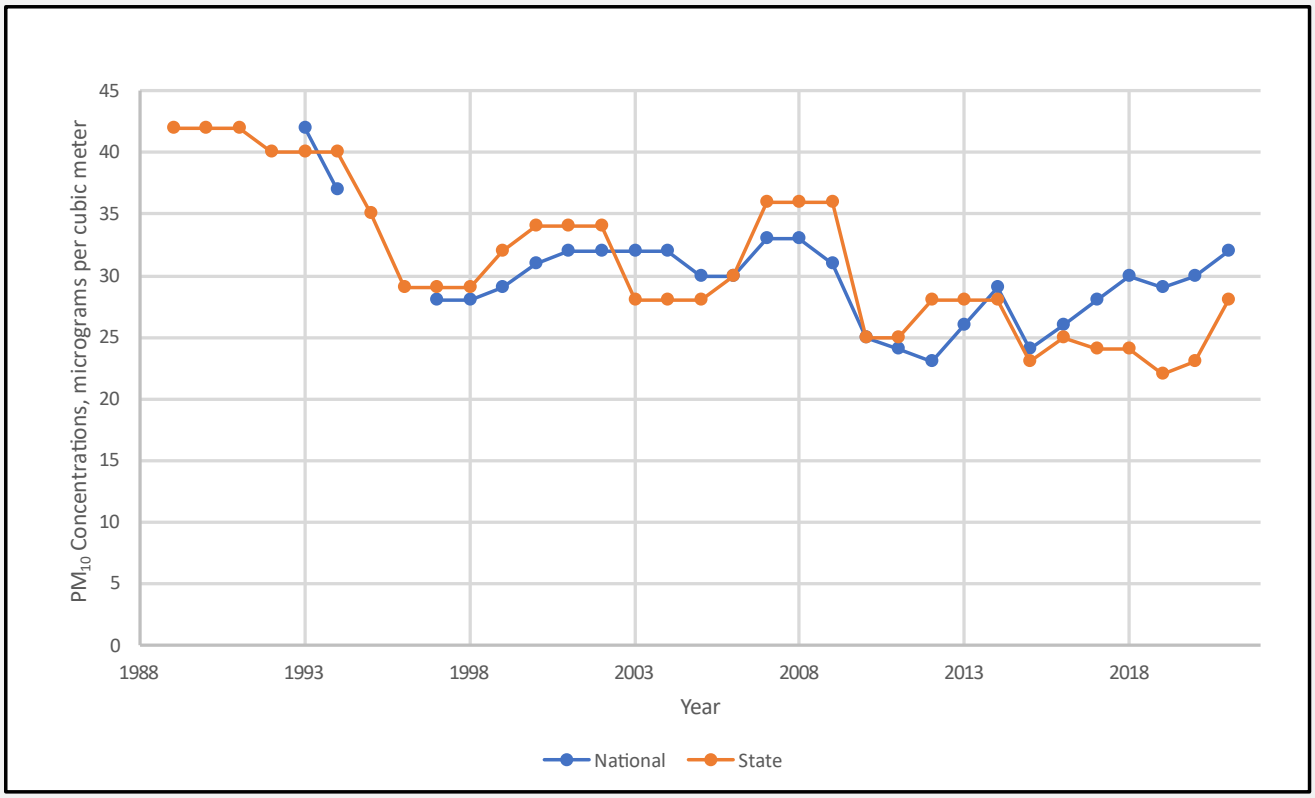
Figure 4.1-1. State 1-Hour and 8-Hour O_3 Concentration Trend – Mojave Desert Air Basin



Source: CARB 2022b, iADAM Air Quality Statistics. Units = parts per million (ppm).

[4] Figures are provided for the non-attainment criteria air pollutants only (i.e., O_3 and PM_{10}).

Figure 4.1-2. National and State 3-Year Average PM_{10} Statistics – Mojave Desert Air Basin



Source: CARB 2022b, iADAM Air Quality Statistics. Units = micrograms per cubic meter.

The MDAQMD is downwind of the Los Angeles basin, and to a lesser extent, is downwind of the San Joaquin Valley. Prevailing winds transport O_3 and O_3 precursors from both regions into and through the MDAB during the summer O_3 season and these transport couplings have been officially recognized by CARB. While local MDAQMD emissions contribute to exceedances of both the NAAQS and CAAQS for O_3, because the MDAQMD is overwhelmingly impacted by O_3 transported from the South Coast Air Basin, the MDAB would likely be in attainment of O_3 standards without the influence of this transported air pollution from upwind regions (MDAQMD 2008). Nonetheless, as shown in Figure 4.1-1, the MDAQMD has experienced a substantial reduction in maximum 8-hour O_3 concentrations over time. Per the O_3 indicator values between 1995 and 2006 within the Western Mojave Desert, all indicators, including number of exceedance days, have decreased since 1995, indicating overall improvements in the various measures of O_3 air quality (MDAQMD 2008). The three stations closest to the South Coast Air Basin have the highest historical O_3 concentrations (Phelan, Hesperia, and Victorville), while the more distant or isolated stations (Barstow and Twentynine Palms) have much lower O_3 concentrations and are experience concentrations in attainment of the NAAQS (MDAQMD 2008).

Regarding particulate matter (PM), which is a primary and secondary pollutant, the MDAQMD believes that local sources contribute to PM_{10} concentrations in the Mojave Desert Planning Area as the monitoring sites are located in and around anthropogenic sources of dust (e.g., primary PM); however, O_3 precursor transport from upwind air basins include some nitrate and sulfate aerosol or secondary particulates, which contribute to PM concentrations. Because the Mojave Desert Planning Area contains relatively limited NO_x and sulfur sources, transport contributions are estimated as half of the measured total nitrate and sulfate content, which contribute to overall PM concentrations (MDAQMD 1995).

Accordingly, it is important to note that the SCAQMD, which has jurisdiction over the South Coast Air Basin, has also experienced an improvement in air quality over the last few decades. The SCAQMD implements air quality plans, such as the 2016 Air Quality Management Plan and the draft 2022 Air Quality Management Plan, which are comprehensive documents that outline their air pollution control program for attaining all CAAQS and NAAQS. Specifically, the SCAQMD 2022 Air Quality Management Plan addresses attainment of the 2015 8-hour O_3 standard (70 parts per billion) for the South Coast Air Basin and the Coachella Valley. PM_{10} levels have declined almost 50% since 1990 within the South Coast Air Basin, and $PM_{2.5}$ levels have also declined 50% since measurements began in 1999 (SCAQMD 2013). Similar improvements are observed with O_3 within the South Coast Air Basin, although the rate of O_3 decline has slowed in recent years (SCAQMD 2013). Despite great strides in cleaning the air over the past several decades, the Los Angeles area still has the highest levels of O_3 in the nation and meeting the O_3 standards within the South Coast Air Basin will require federal action and zero- and low-emission technologies to reduce NO_x (SCAQMD 2022). Overall, improvements within the South Coast Air Basin will also result in improvements within the MDAB. Lastly, the MDAQMD continues to implement available control technologies and rules and regulations to further reduce sources of O_3 and PM within their jurisdictional boundaries including attainment plans and rule development, as explained in Section 4.1.2 Regulatory Framework.

Local Ambient Air Quality Conditions

California Air Resources Board (CARB), air districts, and other agencies monitor ambient air quality at approximately 250 air quality monitoring stations across the state. The MDAQMD monitors local ambient air quality in the Project area. Air quality monitoring stations usually measure pollutant concentrations 10 feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. The most recent background ambient air quality data from 2020 to 2022 are presented in Table 4.1-2. The Victorville monitoring station, located at 14306 Park Avenue, Victorville, California, and the Barstow monitoring station, located at 301 E. Mountain View Street, Barstow, California, are the nearest air quality monitoring stations along the Project alignment. The data collected at these stations are considered representative of the air quality experienced in the Project vicinity and are provided in Table 4.1-2. The number of days exceeding the AAQS is also shown in Table 4.1-2.

Table 4.1-2. Local Ambient Air Quality Data

Monitoring Station	Unit	Averaging Time	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
					2020	2021	2022	2020	2021	2022
Ozone (O3)										
Victorville	ppm	Maximum 1-hour concentration	State	0.09	0.112	0.112	0.100	4	8	3
	ppm		State	0.070	0.095	0.098	0.090	38	35	49

Table 4.1-2. Local Ambient Air Quality Data

Monitoring Station	Unit	Averaging Time	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
					2020	2021	2022	2020	2021	2022
		Maximum 8-hour concentration	Federal	0.070	0.094	0.098	0.090	35	34	44
Barstow	ppm	Maximum 1-hour concentration	State	0.09	0.117	0.099	0.095	3	2	1
	ppm	Maximum 8-hour concentration	State	0.070	0.098	0.088	0.084	26	21	14
			Federal	0.070	0.098	0.087	0.084	25	20	13
Nitrogen Dioxide (NO2)										
Victorville	ppm	Maximum 1-hour concentration	State	0.18	0.059	0.056	0.053	0	0	0
			Federal	0.100	0.059	0.057	0.054	0	0	0
	ppm	Annual concentration	State	0.030	0.012	0.012	0.012	0	0	0
			Federal	0.053	0.012	0.012	0.012	0	0	0
Barstow	ppm	Maximum 1-hour concentration	State	0.18	0.062	0.062	0.059	0	0	0
			Federal	0.100	0.062	0.062	0.060	0	0	0
	ppm	Annual concentration	State	0.030	0.014	0.015	0.014	0	0	0
			Federal	0.053	0.014	0.014	0.014	0	0	0
Carbon Monoxide (CO)										
Victorville	ppm	Maximum 1-hour concentration	State	20	1.7	1.5	–	0	0	–
			Federal	35	1.7	1.5	–	0	0	–
	ppm	Maximum 8-hour concentration	State	9.0	1.4	1.0	–	0	0	–
			Federal	9	1.4	1.0	–	0	0	–
Barstow	ppm	Maximum 1-hour concentration	State	20	5.5	1.0	–	0	0	–
			Federal	35	5.5	1.0	–	0	0	–
	ppm	Maximum 8-hour concentration	State	9.0	1.0	0.7	–	0	0	–
			Federal	9	1.0	0.7	–	0	0	–
Sulfur Dioxide (SO_2)										
Victorville	ppm	Maximum 1-hour concentration	Federal	0.075	0.003	0.004	–	0	0	–
	ppm	Maximum 24-hour concentration	Federal	0.14	0.002	0.002	–	0	0	–
	ppm	Annual concentration	Federal	0.030	0.001	0.001	–	0	0	–

Table 4.1-2. Local Ambient Air Quality Data

Monitoring Station	Unit	Averaging Time	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
					2020	2021	2022	2020	2021	2022
Coarse Particulate Matter (PM_{10})[a]										
Victorville	µg/m³	Maximum 24-hour concentration	State	50	—	—	—	—	—	—
			Federal	150	261.4	591.6	372.1	1.9 (2)	1.0 (1)	2.1 (2)
	µg/m³	Annual concentration	State	20	—	—	—	—	—	—
Barstow	µg/m³	Maximum 24-hour concentration	State	50	—	—	—	—	—	—
			Federal	150	213.5	372.7	225.1	1.0 (1)	1.0 (1)	6.3 (6)
	µg/m³	Annual concentration	State	20	—	—	—	—	—	—
Fine Particulate Matter ($PM_{2.5}$)[a]										
Victorville	µg/m³	Maximum 24-hour concentration	Federal	35	48.4	87.1	24.6	4.0 (4)	1.0 (1)	0.0 (0)
	µg/m³	Annual concentration	State	12	10.4	10.3	9.0	0	0	0
			Federal	12.0	9.7	10.2	8.9	0	0	0

Sources: CARB 2023h; EPA 2023b.
Notes: ppm = parts per million; µg/m³ = micrograms per cubic meter; — = not available.
Data taken from CARB iADAM and EPA AirData represent the highest concentrations experienced over a given year.
Exceedances of federal and state standards are only shown for O_3 and particulate matter. Daily exceedances for particulate matter are estimated days because PM_{10} and $PM_{2.5}$ are not monitored daily. All other criteria pollutants did not exceed federal or state standards during the years shown. There is no federal standard for 1-hour ozone, annual PM_{10}, or 24-hour SO_2, nor is there a state 24-hour standard for $PM_{2.5}$.

[a] Measurements of PM_{10} and $PM_{2.5}$ are usually collected every 6 days and every 1 to 3 days, respectively. Number of days exceeding the standards is a mathematical estimate of the number of days concentrations would have been greater than the level of the standard had each day been monitored. The numbers in parentheses are the measured number of samples that exceeded the standard.

4.1.2 Regulatory Framework

Federal

Criteria Air Pollutants

The federal Clean Air Act, passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The EPA is responsible for implementing most aspects of the Clean Air Act, including setting NAAQS for major air pollutants; setting hazardous air pollutant (HAP) standards; approving state attainment plans; setting motor vehicle emission standards; issuing stationary source emission standards and permits; and establishing acid rain control measures, stratospheric O_3 protection measures, and enforcement provisions. Under the Clean Air Act, NAAQS are established for the following criteria pollutants: O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead.

The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the public. The NAAQS (other than for O_3, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for O_3, NO_2, SO_2, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over 1- to 3-year periods, depending on the pollutant. The Clean Air Act requires the EPA to reassess the NAAQS at least every 5 years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed the NAAQS must prepare a state implementation plan that demonstrates how those areas will attain the standards within mandated time frames.

Hazardous Air Pollutants

The 1977 federal Clean Air Act amendments required the EPA to identify national emission standards for HAPs to protect public health and welfare. HAPs include certain volatile organic chemicals, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. Under the 1990 federal Clean Air Act amendments, which expanded the control program for HAPs, 189 substances and chemical families were identified as HAPs.

State

Criteria Air Pollutants

The federal Clean Air Act delegates the regulation of air pollution control and the enforcement of the NAAQS to the states. In California, the task of air quality management and regulation has been legislatively granted to CARB, with subsidiary responsibilities assigned to air quality management districts and air pollution control districts at the regional and county levels. CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for ensuring implementation of the California Clean Air Act of 1988, responding to the federal Clean Air Act, and regulating emissions from motor vehicles and consumer products.

CARB has established the CAAQS, which are generally more restrictive than the NAAQS. As stated previously, an ambient air quality standard defines the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without harm to the public's health. For each pollutant, concentrations must be below the relevant CAAQS before a basin can attain the corresponding CAAQS. Air quality is considered “in attainment” if pollutant levels are continuously below the CAAQS and violate the standards no more than once each year. The CAAQS for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, PM_{10}, and $PM_{2.5}$ and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded.

California air districts have based their thresholds of significance for California Environmental Quality Act (CEQA) purposes on the levels that scientific and factual data demonstrate that the air basin can accommodate without affecting the attainment date for the NAAQS or CAAQS. Since an ambient air quality standard is based on maximum pollutant levels in outdoor air that would not harm the public’s health, and air district thresholds pertain to attainment of the ambient air quality standard, this means that the thresholds established by air districts are also protective of human health. The NAAQS and CAAQS are presented in Table 4.1-3.

Table 4.1-3. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	Primary[c,d]	Secondary[c,e]
O_3	1 hour	0.09 ppm (180 µg/m³)	–	Same as primary standard[f]
	8 hours	0.070 ppm (137 µg/m³)	0.070 ppm (137 µg/m³)[f]	
NO_2[g]	1 hour	0.18 ppm (339 µg/m³)	0.100 ppm (188 µg/m³)	Same as primary standard
	Annual arithmetic mean	0.030 ppm (57 µg/m³)	0.053 ppm (100 µg/m³)	
CO	1 hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)	None
	8 hours	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)	
SO_2[h]	1 hour	0.25 ppm (655 µg/m³)	0.075 ppm (196 µg/m³)	–
	3 hours	–	–	0.5 ppm (1,300 µg/m³)
	24 hours	0.04 ppm (105 µg/m³)	0.14 ppm (for certain areas)[g]	–
	Annual	–	0.030 ppm (for certain areas)[g]	–
PM_{10}[i]	24 hours	50 µg/m³	150 µg/m³	Same as primary standard
	Annual arithmetic mean	20 µg/m³	–	
$PM_{2.5}$[i]	24 hours	–	35 µg/m³	Same as primary standard
	Annual arithmetic mean	12 µg/m³	12.0 µg/m³	15.0 µg/m³
Lead[j,k]	30-day average	1.5 µg/m³	–	–
	Calendar quarter	–	1.5 µg/m³ (for certain areas)[k]	Same as primary standard
	Rolling 3-month average	–	0.15 µg/m³	
Hydrogen sulfide	1 hour	0.03 ppm (42 µg/m³)	–	–
Vinyl chloride[j]	24 hours	0.01 ppm (26 µg/m³)	–	–
Sulfates	24 hours	25 µg/m³	–	–
Visibility-reducing particles	8 hours (10:00 a.m. to 6:00 p.m. PST)	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to the number of particles when the relative humidity is less than 70%	–	–

Source: CARB 2016.

Notes: O_3 = ozone; ppm = parts per million by volume; µg/m³ = micrograms per cubic meter; NO_2 = nitrogen dioxide; CO = carbon monoxide; mg/m³ = milligrams per cubic meter; SO_2 = sulfur dioxide; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; PST = Pacific Standard Time.

[a] California standards for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, suspended particulate matter (PM_{10}, $PM_{2.5}$), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] National standards (other than O_3, NO_2, SO_2, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once per year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 μg/m³ is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

[c] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[d] National primary standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

[e] National secondary standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[f] On October 1, 2015, the national 8-hour O_3 primary and secondary standards were lowered from 0.075 to 0.070 ppm.

[g] To attain the national 1-hour standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (ppb). Note that the national 1-hour standard is in units of ppb. California standards are in units of ppm. To directly compare the national 1-hour standard to the California standards, the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

[h] On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the national 1-hour standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment of the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

[i] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 μg/m³ to 12.0 μg/m³. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 μg/m³, as was the annual secondary standard of 15 μg/m³. The existing 24-hour PM_{10} standards (primary and secondary) of 150 μg/m³ were also retained. The form of the annual primary and secondary standards is the annual mean averaged over 3 years.

[j] CARB has identified lead and vinyl chloride as TACs with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[k] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 μg/m³ as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

Toxic Air Contaminants

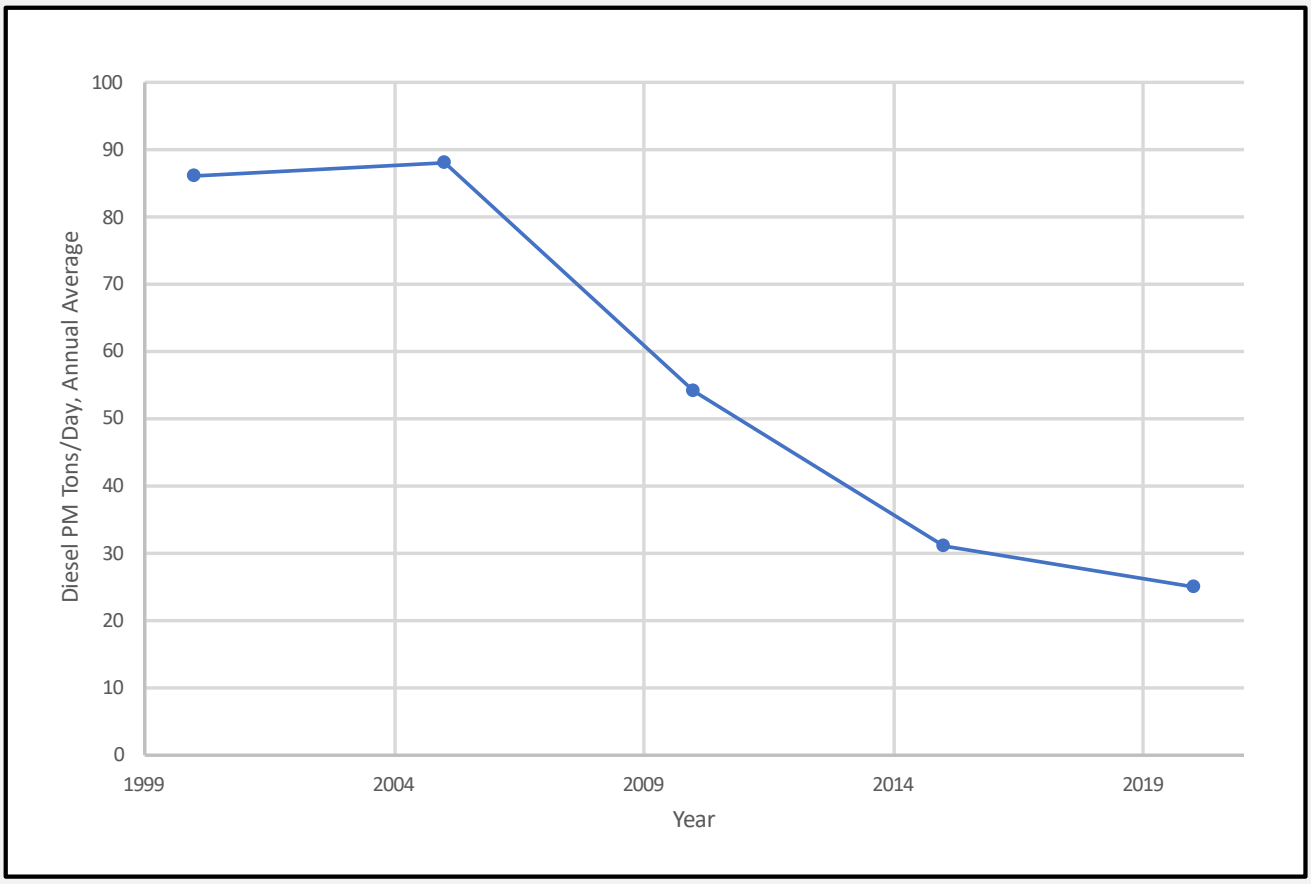
The state Air Toxics Program was established in 1983 under AB 1807 (Tanner). The California TAC list identifies more than 200 pollutants, of which carcinogenic and noncarcinogenic toxicity criteria have been established for a subset of these pollutants pursuant to the California Health and Safety Code. In accordance with AB 2728, the state list includes the (federal) HAPs. In 1987, the Legislature enacted the Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588) to address public concern over the release of TACs into the atmosphere. AB 2588 law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years. TAC emissions from individual facilities are quantified and prioritized. "High-priority" facilities are required to perform a health risk assessment (HRA), and if specific thresholds are exceeded, the facility operator is required to communicate the results to the public in the form of notices and public meetings.

In 2000, CARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines (CARB 2000). Additional regulations apply to new trucks and diesel fuel, including the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty (New) Vehicle

Program, the In-Use Off-Road Diesel Vehicle Regulation, and the New Off-Road Compression-Ignition (Diesel) Engines and Equipment Program. These regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel-powered equipment. There are several Airborne Toxic Control Measures that reduce diesel emissions, including In-Use Off-Road Diesel-Fueled Fleets (13 CCR 2449 et seq.) and In-Use On-Road Diesel-Fueled Vehicles (13 CCR 2025).

In 2013 CARB published the California Almanac of Emissions and Air Quality. The Almanac contains 20-year trend summaries of air quality and emissions data for five criteria pollutants: O_3, PM_{10}, CO, NO_2, and SO_2. Data are summarized for the State as a whole and for the five most populated air basins (South Coast, San Francisco Bay Area, San Joaquin Valley, San Diego, and Sacramento Valley). In addition to information on criteria pollutants, the Almanac provides information on air quality and emissions for DPM. Figure 4.1- 3 provides a graphical depiction of the diesel particulate matter emissions trend for the State based on the CARB California Almanac of Emissions and Air Quality 2013 report. As shown the trend of DPM is decreasing significantly since 2005 to report projected year 2020, 88 tons per day, annual average to 25 tons per day, annual average, respectively.

Figure 4.1-3. Statewide Diesel Particulate Matter Trends



Source: CARB 2013.

California Health and Safety Code Section 41700

Section 41700 of the California Health and Safety Code states that a person shall not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or that endanger the comfort, repose, health, or safety of any of those persons or the public; or that cause, or have a natural tendency to cause, injury or damage to business or property. This section also applies to sources of objectionable odors.

Local

Mojave Desert Air Quality Management District

The MDAQMD is the regional agency responsible for the regulation and enforcement of federal, state, and local air pollution control regulations in the San Bernardino County portion of the MDAB. The MDAQMD operates monitoring stations in the MDAB, develops rules and regulations for stationary sources and equipment, prepares emissions inventory and air quality management planning documents, and conducts source testing and inspections. The MDAQMD's air quality management plans include control measures and strategies to be implemented to attain state and federal AAQS in the MDAB. The MDAQMD then implements these control measures as regulations to control or reduce criteria pollutant emissions from stationary sources or equipment. The MDAQMD's most recent air quality plans are the PM_{10} attainment demonstration and maintenance plan (MDAQMD 1995) and the O_3 attainment plan (MDAQMD 2008).

Applicable Rules. Emissions that would result from mobile, area, and stationary sources during construction and operation of the Project are subject to the rules and regulations of the MDAQMD. The MDAQMD rules applicable to the Project may include, but are not limited to, the following:

- **Rule 219 – Equipment Not Requiring a Permit:** The rule identifies equipment exempt from permit requirements of District Rules 201 and 203.
  - District permit required for Internal combustion engines with manufacturer's maximum continuous rating greater than or equal to 50 brake horsepower.
- **Rule 401 – Visible Emissions:** This rule establishes the limit for visible emissions from stationary sources.
- **Rule 402 – Nuisance:** This rule prohibits the discharge of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any such persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property.
- **Rule 403 – Fugitive Dust Control for the Mojave Desert Planning Area:** This rule ensures that the NAAQS for PM_{10} will not be exceeded due to anthropogenic sources of fugitive dust within the Mojave Desert Planning Area and implements the control measures contained in the Mojave Desert Planning Area Federal PM_{10} Attainment Plan. Rule 403 includes requirements for a Dust Control Plan, signage and fencing requirements, as well as surface watering and stabilization with chemicals, gravel and asphaltic pavement to eliminate visible fugitive dust from vehicular travel and wind erosion.
- **Rule 431 – Sulfur Content of Liquid Fuels:** The purpose of this rule is to limit the sulfur content in diesel and other liquid fuels for the purpose of reducing the formation of SO_x and particulates during combustion and of enabling the use of add-on control devices for diesel-fueled internal combustion engines. The rule applies to all refiners, importers, and other fuel suppliers such as distributors, marketers, and retailers, as

well as to users of diesel, low-sulfur diesel, and other liquid fuels for stationary-source applications in the MDAQMD. The rule also affects diesel fuel supplied for mobile sources.

- **Rule 442 – Usage of Solvents:** The purpose of this rule is to reduce VOC emissions from VOC-containing materials or equipment that is not subject to limits of any rule found in District Regulation XI – Source Specific Standards.
- **Rule 1113 – Architectural Coatings.** This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. SCAG serves as the federally designated metropolitan planning organization for the Southern California region and is the largest metropolitan planning organization in the United States.

With respect to air quality planning and other regional issues, SCAG has most recently developed Connect SoCal, the 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. Connect SoCal charts a path toward a more mobile, sustainable, and prosperous region by making connections between transportation networks, planning strategies, and the people whose collaboration can improve the quality of life for Southern Californians. Connect SoCal embodies a collective vision for the region's future and is developed with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses, and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. SCAG's 2020–2045 RTP/SCS was adopted on September 3, 2020 (SCAG 2020).

San Bernardino Countywide Plan

The San Bernardino Countywide Plan contains the following goals and policies applicable to air quality and the Project (San Bernardino County 2020):

Natural Resources Element

Goal NR-1: Air Quality. Air quality that promotes health and wellness of residents in San Bernardino County through improvements in locally-generated emissions.

Policy NR-1.3: Coordination on air pollution**.** We collaborate with air quality management districts and other local agencies to monitor and reduce major pollutants affecting the county at the emission source.

Policy NR-1.6: Fugitive dust emissions. We coordinate with air quality management districts on requirements for dust control plans, revegetation, and soil compaction to prevent fugitive dust emissions.

Policy NR-1.8: Construction and operations. We invest in County facilities and fleet vehicles to improve energy efficiency and reduce emissions. We encourage County contractors and other builders and developers to use low - emission construction vehicles and equipment to improve air quality and reduce emissions.

4.1.3 Thresholds of Significance

The significance criteria used to evaluate the Project impacts to air quality are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to air quality would occur if the Project would:

A. Conflict with or obstruct implementation of the applicable air quality plan.
B. 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.
C. Expose sensitive receptors to substantial pollutant concentrations.
D. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

CEQA Guidelines Appendix G indicates that, where available, significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to determine whether the Project would have a significant impact on air quality. As outlined in the MDAQMD CEQA Guidelines (MDAQMD 2020), a project would result in a significant environmental impact if it:

1. Would generate total emissions (direct and indirect) in excess of the established significance thresholds (presented as Table 4.1-4).
2. Would generate a violation of any ambient air quality standard when added to the local background.
3. Does not conform with the applicable attainment or maintenance plan.
4. Would expose sensitive receptors to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to 10 in a million (10×10^{-6}) and/or a hazard index (noncarcinogenic) greater than or equal to 1.

The MDAQMD CEQA Guidelines (MDAQMD 2020) sets forth quantitative emission significance thresholds for criteria air pollutants below which a project would not have a significant impact on ambient air quality. Project-related air quality emissions estimated in this environmental analysis would be considered significant if any of the applicable significance thresholds presented in Table 4.1-4 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. MDAQMD recommends that its quantitative air pollution thresholds be used to determine the significance of Project emissions.

Table 4.1-4. Mojave Desert Air Quality Management District Daily 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

Table 4.1-4. Mojave Desert Air Quality Management District Daily Air Quality Significance Thresholds

Pollutant	Annual Threshold (tons per year)	Daily Threshold (pounds per day)
SO_x	25	137
PM_{10}	15	82
$PM_{2.5}$	12	65
Hydrogen sulfide[a]	10	54
Lead[a]	0.6	3

Source: MDAQMD 2020.
Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter.
[a] The Project includes typical 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.

Based on the multi-year construction schedule, the MDAQMD advised to compare Project emissions to the annual significance thresholds (MDAQMD 2024). Project emissions were also compared to the daily thresholds for the peak-day activity for disclosure.

4.1.4 Impact Analysis

Methodology

The California Emissions Estimator Model (CalEEMod) Version 2022.1.1.21 was used to estimate emissions from construction of the Project (CAPCOA 2022). CalEEMod is a statewide computer model developed in cooperation with air districts throughout the state to quantify criteria air pollutant and GHG emissions associated with construction activities and operation of a variety of land use projects, such as residential, commercial, and industrial facilities. CalEEMod input parameters, including the construction schedule and anticipated use of construction equipment, were based on information provided by LADWP or default model assumptions if Project specifics were unavailable. In addition, helicopter emission factors from the Guidance on the Determination of Helicopter Emissions (FOCA 2015) were used in a spreadsheet model, assuming a Hughes 500 and Sikorsky CH-53G would be representative for the Project per input from LADWP. Detailed assumptions for the modeling are described in Chapter 3, Project Description, of this EIR.

For the purpose of estimating Project emissions, construction was modeled beginning in April 2025 and concluding in January 2029[5] and lasting approximately 45 months. The analysis contained herein is based on the following assumptions (duration of phases is approximate):

- Grading (Access Road Rehabilitation): April 2025 – September 2026
- Grading (Laydown/Staging/Site Grading): May 2026 – September 2028
- Building Construction (Line 1 - Foundation, Conductor Replacement, Ground Wire Replacement, Insulators, Hardware Assemblies, Structure Modification/Raising): September 2026 – August 2027

[5] The analysis assumes a construction start date of April 2025, which represents the earliest date construction would initiate. Assuming the earliest start date for construction represents the worst-case scenario for criteria air pollutant and greenhouse gas emissions, because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years.

- Building Construction (Line 2 - Foundation, Conductor Replacement, Ground Wire Replacement, Insulators, Hardware Assemblies, Structure Modification/Raising): September 2027 – September 2028
- Grading (Line 1 - Restoration, Recontouring, Revegetation, and Removal of Best Management Practices): August 2027 – January 2029
- Grading (Line 2 - Restoration, Recontouring, Revegetation, and Removal of Best Management Practices): September 2028 – January 2029

Two CalEEMod scenarios were modeled to estimate annual average and peak day emissions (see Table 3-2, Construction Phasing, in Chapter 3, Project Description) to compare to the respective MDAQMD significance thresholds. Unpaved roads were modeled separately to estimate on-road vehicle movement on the unpaved road portion of travel, with an annual average of 5 miles unpaved and peak day of 15 miles unpaved. Annual average and peak day helicopter operations were assumed to be 3 hours per day per helicopter (for approximately 10 weeks total) and 8 hours per day per helicopter, respectively.

Emissions were not estimated for long-term operations since the proposed Project would not change the routine inspection and maintenance of the existing transmission lines or result in a net increase in emissions.

Impacts

Threshold AQ-1: Would the Project conflict with or obstruct implementation of the applicable air quality plan?

Significant and Unavoidable Impact. The Federal Particulate Matter Attainment Plan and Ozone Attainment Plan for the Mojave Desert set forth a comprehensive set of programs that will lead the MDAB into compliance with federal and state air quality standards. The control measures and related emission reduction estimates within the Federal Particulate Matter Attainment Plan and Ozone Attainment Plan are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. 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 that do not increase dwelling unit density, do not increase vehicle trips, and do not increase vehicle miles traveled (VMT) are also deemed to comply with the applicable air quality plan (MDAQMD 2020).

The Project would be required to comply with all applicable MDAQMD Rules and Regulations, including, but not limited, to Rules 401 (Visibile Emissions), 402 (Nuisance), and 403 (Fugitive Dust Control for the Mojave Desert Planning Area). As the Project consists of improvements to an existing transmission line corridor, the Project would not result in a land use change that could conflict with existing land use policies or plans adopted by the agencies with jurisdiction over local land uses. Additionally, the proposed Project would not directly or indirectly promote population growth in the region and would not include long-term operational employment.

As discussed under Threshold AQ-2 below, unmitigated criteria air pollutant emissions from Project construction would result in exceedances of regional thresholds for emissions of NO_x, PM_{10}, and $PM_{2.5}$, primarily from off-road equipment, helicopter exhaust, and vehicular travel over unpaved roads. With implementation of Mitigation Measure (MM)-AQ-1 (Fugitive Dust Controls) and MM-AQ-2 (Exhaust Controls), emissions of NO_x, PM_{10}, and $PM_{2.5}$ would be substantially reduced but would still exceed the respective MDAQMD significance thresholds. As such, NO_x, PM_{10}, and $PM_{2.5}$ emissions during short-term construction are considered significant and unavoidable, and the

Project would have the potential to increase the frequency or severity of a violation in the federal or state ambient air quality. The health effects of criteria air pollutants are discussed in depth under the next impact criterion.

Based on the preceding considerations, the Project would conform to local land use plans and would comply with all applicable MDAQMD Rules and Regulations. However, Project construction-source emissions have the potential to increase the frequency or severity of a violation in the federal or state AAQS. On this basis, the Project would be considered to potentially conflict with the Federal Particulate Matter Attainment Plan and Ozone Attainment Plan for the MDAB. Therefore, impacts associated with the conflicting MDAQMD would be significant and unavoidable during construction. However, for long-term operations, the Project would not result in a net increase in emissions and would result in no impact, as discussed under Threshold AQ-2.

Threshold AQ-2: 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?

Significant and Unavoidable Impact. Construction of the Project would result in emissions of criteria air pollutants from off-road equipment, on-road vehicles, fugitive dust, and helicopters, which may cause exceedances of federal and state AAQS or contribute to existing nonattainment of AAQS. The following discussion identifies potential short-term construction that would result from implementation of the Project.

Air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and the MDAQMD develops and implements plans for future attainment of AAQS. Although the area of the MDAB where the Project is located is currently designated a nonattainment area for federal and state O_3 standards and federal and state PM_{10} standards, the MDAB has experienced a substantial reduction in maximum 8-hour concentrations of O_3 over the past 30 years, as well as reductions in PM_{10} over time, as described in the respective MDAQMD O_3 and PM_{10} attainment plans. CEQA thresholds are established at levels that the air basin can accommodate without affecting the attainment date for the AAQS. Based on these considerations, Project-level thresholds of significance for criteria pollutants are relevant in the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality.

Short-Term Construction Impacts

Construction of the Project would result in the temporary addition of pollutants to the local airshed caused by on-site sources (i.e., off-road construction equipment and soil disturbance) and off-site sources (i.e., on-road haul trucks, vendor trucks, worker vehicle trips, and helicopters). Entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM_{10} and $PM_{2.5}$ emissions. The Project would be required to comply with MDAQMD Rule 403 to control dust emissions generated during the grading activities. Internal combustion engines used by construction equipment, haul trucks, vendor trucks (i.e., delivery trucks), worker vehicles, and helicopters would result in emissions of VOCs, NO_x, CO, PM_{10}, and $PM_{2.5}$. 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.

CalEEMod calculates annual and maximum daily emissions, which are summarized in Table 4.1-5 and Table 4.1-6, respectively, for the unmitigated scenario. Detailed construction model outputs are presented in Appendix B.

Table 4.1-5. Estimated Annual Average Construction Criteria Air Pollutant Emissions – Unmitigated

Year	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Tons per Year					
2025	0.49	4.14	4.56	0.01	84.68	9.41
2026	1.68	14.81	13.71	0.02	297.61	31.30
2027	2.66	23.78	24.73	0.04	601.61	61.89
2028	2.53	22.01	23.23	0.04	536.28	56.18
2029	0.07	0.58	0.74	0.00	14.97	1.66
Maximum Annual Emissions	**2.66**	**23.78**	**24.73**	**0.04**	**601.61**	**61.89**
MDAQMD Threshold	*25*	*25*	*100*	*25*	*15*	*12*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**Yes**	**Yes**

Source: Appendix B.
Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; MDAQMD= Mojave Desert Air Quality Management District
Helicopter emissions were added to the CalEEMod emissions inventory for years 2026 through 2028, which are the years that Line 1 and Line 2 construction are anticipated to occur.

Table 4.1-6. Estimated Maximum Daily Construction Criteria Air Pollutant Emissions – Unmitigated

Year	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Summer						
2025	6.05	53.05	58.01	0.10	1,972.99	209.20
2026	52.72	495.81	294.80	0.49	11,414.27	1,163.45
2027	52.26	490.04	290.69	0.49	11,414.03	1,163.23
2028	51.89	484.12	288.18	0.50	11,422.58	1,167.27
2029	--	--	--	--	--	--
Winter						
2025	5.95	53.28	55.56	0.10	1,972.99	209.20
2026	46.71	448.42	228.19	0.40	9,441.50	954.45
2027	51.92	491.20	278.44	0.49	11,414.03	1,163.23
2028	50.87	481.45	276.65	0.49	11,413.83	1,162.65
2029	10.22	83.95	103.07	0.19	3,944.89	417.40
Maximum Daily Emissions	**52.72**	**495.81**	**294.80**	**0.50**	**11,422.58**	**1,167.27**
MDAQMD Threshold	*137*	*137*	*548*	*137*	*82*	*65*
Threshold Exceeded?	**No**	**Yes**	**No**	**No**	**Yes**	**Yes**

Source: Appendix B.
Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; MDAQMD= Mojave Desert Air Quality Management District

Helicopter emissions were added to the CalEEMod emissions inventory for years 2026 through 2028, which are the years that Line 1 and Line 2 construction are anticipated to occur.

As shown in Table 4.1-5 and Table 4.1-6, annual average and peak day construction emissions would exceed the MDAQMD thresholds for PM_{10} and $PM_{2.5}$. In addition, the Project would also result in peak day NO_x emissions that would exceed the MDAQMD threshold. The primary sources of particulate and NO_x emissions would be generated by vehicular travel over unpaved roads and heavy-duty helicopter use, respectively. This impact would be potentially significant without mitigation.

MM-AQ-1 requires the development and submittal of a dust control plan to the MDAQMD for approval that outlines best management practices (BMPs) to reduce fugitive dust. In addition, MM-AQ-2 would be implemented to reduce Project-generated equipment exhaust, primarily by requiring all 75 horsepower (hp) or greater equipment to have CARB-compliant Tier 4 Final engines, which are the cleanest engines currently available. The estimated annual and maximum daily construction emissions with mitigation are summarized in Table 4.1-7 and Table 4.1-8, respectively.

Table 4.1-7. Estimated Annual Average Construction Criteria Air Pollutant Emissions – Mitigated

Year	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Tons per Year					
2025	0.13	0.59	4.46	0.01	8.33	1.17
2026	1.02	8.37	14.69	0.02	28.14	3.44
2027	1.78	14.96	27.64	0.04	55.95	6.44
2028	1.51	12.27	25.47	0.04	50.59	6.15
2029	0.03	0.17	0.79	0.00	1.48	0.21
Maximum Annual Emissions	**1.78**	**14.96**	**27.64**	**0.04**	**55.95**	**6.44**
MDAQMD Threshold	*25*	*25*	*100*	*25*	*15*	*12*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**Yes**	**No**

Source: Appendix B.
Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; MDAQMD= Mojave Desert Air Quality Management District
Mitigated emissions account for implementation of MM-AQ-1 (Fugitive Dust Controls) and MM-AQ-2 (Exhaust Controls).
Helicopter emissions were added to the CalEEMod emissions inventory for years 2026 through 2028, which are the years that Line 1 and Line 2 construction are anticipated to occur.

Table 4.1-8. Estimated Maximum Daily Construction Criteria Air Pollutant Emissions – Mitigated

Year	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Summer						
2025	1.47	7.51	56.65	0.10	185.99	22.92
2026	41.32	381.90	320.85	0.49	1,051.42	114.78
2027	41.42	383.65	318.04	0.49	1,051.62	114.97
2028	41.27	382.06	320.28	0.51	1,055.03	116.64
2029	--	--	--	--	--	--

Table 4.1-8. Estimated Maximum Daily Construction Criteria Air Pollutant Emissions – Mitigated

Year	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Winter						
2025	1.38	7.74	54.20	0.10	185.99	22.92
2026	39.58	375.71	253.80	0.40	865.44	91.86
2027	41.07	384.82	305.80	0.49	1,051.62	114.97
2028	40.26	380.06	303.72	0.49	1,051.21	114.63
2029	3.75	25.42	110.36	0.20	372.49	46.33
Maximum Daily Emissions	**41.42**	**384.82**	**320.85**	**0.51**	**1,055.03**	**116.64**
MDAQMD Threshold	*137*	*137*	*548*	*137*	*82*	*65*
Threshold Exceeded?	**No**	**Yes**	**No**	**No**	**Yes**	**Yes**

Source: Appendix B.
Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; MDAQMD= Mojave Desert Air Quality Management District
Mitigated emissions account for implementation of MM-AQ-1 (Fugitive Dust Controls) and MM-AQ-2 (Exhaust Controls).
Helicopter emissions were added to the CalEEMod emissions inventory for years 2026 through 2028, which are the years that Line 1 and Line 2 construction are anticipated to occur.

With mitigation, emissions of NO_x, PM_{10}, and $PM_{2.5}$ would be substantially reduced but would still exceed the respective annual and/or daily MDAQMD significance thresholds. As such, the Project would result in a short-term, cumulatively considerable net increase of criteria pollutants for which the Project region is non-attainment. This impact would be considered significant and unavoidable.

Long-Term Operational Impacts

For long-term operations, the proposed maintenance activities to service the upgraded transmission lines would be similar in nature and scale to the maintenance activities that are currently conducted for the existing lines. Therefore, the Project would not result in a net increase in emissions and would result in no impact pertaining to operations.

Threshold AQ-3: Would the Project expose sensitive receptors to substantial pollutant concentrations?

Significant and Unavoidable Impact. The potential impact of Project-generated air pollutant emissions at sensitive receptors has been considered. The Project would require upgrading insulators and hardware on the 1,740 existing transmission towers that span 162 miles from Boulder City, Nevada to the Victorville Switching Station in Victorville, California. As discussed in Section 4.1.1, the land surrounding the proposed Project work areas consists primarily of undeveloped open space areas in the Mojave Desert. Scattered rural residential land uses are also located in the vicinity of the transmission lines, mostly between Harvard, California and Victorville, California, in the Western Mojave Desert.

Local Carbon Monoxide Concentrations

Mobile source impacts occur on two scales of motion. Regionally, Project-related travel would add to regional trip generation and increase VMT within the local airshed and the MDAB. Locally, Project-generated traffic would be added to the roadway system near the Project transmission line corridor. If such traffic occurs during periods of poor atmospheric ventilation, is composed of a large number of vehicles "cold-started" and operating at pollution-inefficient speeds and operates on roadways already crowded with non-Project traffic, there is a potential for the formation of microscale CO hotspots in the area immediately around points of congested traffic. However, because of continued improvement in vehicular emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hotspots in the MDAB is steadily decreasing.

The MDAQMD thresholds of significance for local CO emissions is the 1-hour and 8-hour CAAQS of 20 ppm and 9 ppm, respectively. By definition, these thresholds represent levels that are protective of public health. As noted previously, the MDAB is currently designated attainment for both state and national CO ambient air quality standards.

Title 40 of the Code of Federal Regulations, Section 93.123(c)(5), Procedures for Determining Localized CO, PM_{10}, and $PM_{2.5}$ Concentrations (Hot-Spot Analysis), states that "CO, PM_{10}, and $PM_{2.5}$ hot-spot analyses are not required to consider construction-related activities, which cause temporary increases in emissions. Each site which is affected by construction-related activities shall be considered separately, using established 'Guideline' methods. Temporary increases are defined as those which occur only during the construction phase and last five years or less at any individual site" (40 CFR 93.123). While Project construction would involve on-road vehicle trips from trucks and workers during construction, construction activities would last less than 4 years and would not require a Project-level construction hotspot analysis. Therefore, impacts associated with CO hotspots would be less than significant.

Health Effects of Criteria Air Pollutants

Construction of the Project would result in emissions that would exceed the MDAQMD thresholds for NO_x, PM_{10}, and $PM_{2.5}$, even after implementation of all feasible reduction measures identified.

As discussed in Section 4.1.1 Existing Conditions, under the heading *Pollutants and Effects*, health effects associated with O_3 include respiratory symptoms, worsening of lung disease leading to premature death, and damage to lung tissue (CARB 2023b). VOCs and NO_x are precursors to O_3, for which the MDAB is designated as nonattainment with respect to the NAAQS and CAAQS. The contribution of VOCs and NO_x to regional ambient O_3 concentrations is the result of complex photochemistry. The increases in O_3 concentrations in the MDAB due to O_3 precursor emissions tend to be found downwind of the source location because of the time required for the photochemical reactions to occur. Further, the potential for exacerbating excessive O_3 concentrations would also depend on the time of year that the VOC emissions would occur, because exceedances of the O_3 NAAQS and CAAQS tend to occur between April and October when solar radiation is highest. Due to the lack of quantitative methods to assess this complex photochemistry, the holistic effect of a single project's emissions of O_3 precursors is speculative. That being said, because the Project would exceed the MDAQMD NO_x threshold during Project construction, the Project could contribute to health effects associated with O_3.

Health effects associated with NO_x and NO_2 (which is a constituent of NO_x) include lung irritation and enhanced allergic responses (CARB 2023c). Because the Project would exceed the MDAQMD NO_x threshold during Project construction, the Project could contribute to health effects associated with NO_x and NO_2.

Health effects associated with CO include chest pain in patients with heart disease, headache, light-headedness, and reduced mental alertness (CARB 2023d). CO tends to be a localized impact associated with congested intersections. The potential for CO hotspots is discussed above and determined to be less than significant. Thus, the Project's CO emissions would not contribute to significant health effects associated with CO.

Health effects associated with PM_{10} and $PM_{2.5}$ include premature death and hospitalization, primarily for worsening of respiratory disease (CARB 2023f). Construction of the Project would exceed the MDAQMD threshold for PM_{10} and $PM_{2.5}$. As such, the Project would potentially contribute to exceedances of the NAAQS and CAAQS for particulate matter and obstruct the MDAB from coming into attainment for these pollutants. Because the Project has the potential to contribute substantial particulate matter during construction, the Project could result in associated health effects.

The California Supreme Court's *Sierra Club v. County of Fresno* (2018) 6 Cal. 5th 502 decision (referred to herein as the Friant Ranch decision; issued on December 24, 2018), addresses the need to correlate mass emission values for criteria air pollutants to specific health consequences, and contains the following direction from the California Supreme Court: "The Environmental Impact Report (EIR) must provide an adequate analysis to inform the public how its bare numbers translate to create potential adverse impacts or it must explain what the agency *does* know and why, given existing scientific constraints, it cannot translate potential health impacts further" (italics original). Currently, MDAQMD, CARB, and EPA have not approved a quantitative method to reliably, meaningfully, and consistently translate the mass emission estimates for the criteria air pollutants resulting from the Project to specific health effects. In addition, there are numerous scientific and technological complexities associated with correlating criteria air pollutant emissions from an individual project to specific health effects or potential additional nonattainment days.

In connection with the judicial proceedings culminating in issuance of the Friant Ranch decision, the SCAQMD and the SJVAPCD filed amicus briefs attesting to the extreme difficulty of correlating an individual project's criteria air pollutant emissions to specific health impacts. Both the SJVAPCD and the SCAQMD have among the most sophisticated air quality modeling and health impact evaluation capabilities of the air districts in the state. The key, relevant points from the SCAQMD and SJVAPCD briefs are summarized herein, and the full amicus briefs are provided in Appendix B.

In requiring a health impact type of analysis for criteria air pollutants, it is important to understand how O_3 and PM are formed, dispersed, and regulated. The formation of O_3 and PM in the atmosphere, as secondary pollutants,[6] involves complex chemical and physical interactions of multiple pollutants from natural and anthropogenic sources. The O_3 reaction is self-perpetuating (or catalytic) in the presence of sunlight because NO_2 is photochemically reformed from nitric oxide (NO). In this way, O_3 is controlled by both NO_x and VOC emissions (NRC 2005). The complexity of these interacting cycles of pollutants means that incremental decreases in one emission may not result in proportional decreases in O_3 (NRC 2005). Although these reactions and interactions are well understood, variability in emission source operations and meteorology creates uncertainty in the modeled O_3 concentrations to which downwind populations may be exposed (NRC 2005). Once formed, O_3 can be transported long distances by wind and due to atmospheric transport, contributions of precursors from the surrounding region can also be important (EPA 2008). Because of the complexity of O_3 formation, a specific tonnage of VOCs or NO_x emitted in a particular area does not equate to a particular concentration of O_3 in that area (SJVAPCD 2015). PM can be divided into two categories: directly emitted PM and secondary PM. Secondary PM, like O_3, is formed via complex chemical reactions in the atmosphere between precursor chemicals such as SO_x and NO_x (SJVAPCD 2015). Because of the complexity of secondary PM formation, including the potential to be transported long distances by wind, the tonnage

[6] Air pollutants formed through chemical reactions in the atmosphere are referred to as secondary pollutants.

of PM-forming precursor emissions in an area does not necessarily result in an equivalent concentration of secondary PM in that area (SJVAPCD 2015). This is especially true for individual projects, like the Project, where Project-generated criteria air pollutant emissions are not derived from a single "point source," but from construction equipment and mobile sources (passenger cars and trucks) driving to, from and around the Project site.

Another important technical nuance is that health effects from air pollutants are related to the concentration of the air pollutant that an individual is exposed to, not necessarily the individual mass quantity of emissions associated with an individual project. For example, health effects from O_3 are correlated with increases in the ambient level of O_3 in the air a person breathes (SCAQMD 2015). However, it takes a large amount of additional precursor emissions to cause a modeled increase in ambient O_3 levels over an entire region (SCAQMD 2015). The lack of link between the tonnage of precursor pollutants and the concentration of O_3 and $PM_{2.5}$ formed is important because it is not necessarily the tonnage of precursor pollutants that causes human health effects; rather, it is the concentration of resulting O_3 that causes these effects (SJVAPCD 2015). Indeed, the ambient air quality standards, which are statutorily required to be set by EPA at levels that are requisite to protect the public health, are established as concentrations of O_3 and $PM_{2.5}$ and not as tonnages of their precursor pollutants. Because the ambient air quality standards are focused on achieving a particular concentration region-wide, the tools and plans for attaining the AAQS are regional in nature. For CEQA analyses, project-generated emissions are typically estimated in pounds per day or tons per year and compared to mass daily or annual emission thresholds. While CEQA thresholds are established at levels that the air basin can accommodate without affecting the attainment date for the AAQS, even if a project exceeds established CEQA significance thresholds, this does not mean that one can easily determine the concentration of O_3 or PM that will be created at or near the Project site on a particular day or month of the year, or what specific health impacts will occur (SJVAPCD 2015).

Regarding regional concentrations and air basin attainment, the SJVAPCD emphasized that attempting to identify a change in background pollutant concentrations that can be attributed to a single project, even one as large as the entire Friant Ranch Specific Plan, is a theoretical exercise. The SJVAPCD brief noted that it "would be extremely difficult to model the impact on NAAQS attainment that the emissions from the Friant Ranch project may have" (SJVAPCD 2015). The situation is further complicated by the fact that background concentrations of regional pollutants are not uniform either temporally or geographically throughout an air basin but are constantly fluctuating based upon meteorology and other environmental factors. SJVAPCD noted that the currently available modeling tools are equipped to model the impact of all emission sources in the San Joaquin Valley Air Basin on attainment (SJVAPCD 2015). The SJVAPCD brief then indicated that, "Running the photochemical grid model used for predicting O_3 attainment with the emissions solely from the Friant Ranch project (which equate to less than one-tenth of one percent of the total NO_x and VOC in the Valley) is not likely to yield valid information given the relative scale involved" (SJVAPCD 2015).

SCAQMD and SJVAPCD have indicated that it is not feasible to quantify project-level health impacts based on existing modeling (SCAQMD 2015; SJVAPCD 2015). Even if a metric could be calculated, it would not be reliable because the models are equipped to model the impact of all emission sources in an air basin on attainment and would likely not yield valid information or a measurable increase in O_3 concentrations sufficient to accurately quantify O_3-related health impacts for an individual project.

Nonetheless, following the Supreme Court's Friant Ranch decision, some EIRs where estimated criteria air pollutant emissions exceeded applicable air district thresholds have included a quantitative analysis of potential project-generated health effects using a combination of a regional photochemical grid model (PGM)[7] and the EPA Benefits Mapping and Analysis Program (BenMAP or BenMAP–Community Edition [CE]).[8] The publicly available health impact assessments (HIAs) typically present results in terms of an increase in health incidences and/or the increase in background health incidence for various health outcomes resulting from a project's estimated increase in concentrations of O_3 and $PM_{2.5}$.[9] To date, the five publicly available HIAs reviewed have concluded that the evaluated projects' health effects associated with the estimated project-generated increase in concentrations of O_3 and $PM_{2.5}$ represent a small increase in incidences and a very small percentage of the number of background incidences, indicating that these health impacts are negligible and potentially within the models' margin of error. It is also important to note that while the results of the five available HIAs conclude that project emissions do not result in a substantial increase in health incidences, the estimated emissions and assumed toxicity is also conservatively inputted into the HIA and thus, overestimate health incidences, particularly for $PM_{2.5}$.

As explained in the SJVAPCD brief and noted previously, running the PGM used for predicting O_3 attainment with the emissions solely from an individual project like the Friant Ranch project or the Project is not likely to yield valid information given the relative scale involved. The five examples reviewed support the SJVAPCD's brief contention that consistent, reliable, and meaningful results may not be provided by methods applied at this time. Accordingly, additional work in the industry and more importantly, air district participation, is needed to develop a more meaningful analysis to correlate project-level mass criteria air pollutant emissions and health effects for decision makers and the public. Furthermore, at the time of writing, no HIA has concluded that health effects estimated using the PGM and BenMAP approach are substantial provided that the estimated project-generated incidences represent a very small percentage of the number of background incidences, potentially within the models' margin of error.

Notably, there are numerous scientific and technological complexities associated with correlating criteria air pollutant emissions from an individual project to specific health effects or potential additional nonattainment days, and methods available to quantitatively evaluate health effects may not be appropriate to apply to emissions associated with the Project, which cannot be estimated with a high-level of accuracy. Notwithstanding, because construction of the Project could result in exceedances of MDAQMD significance thresholds for NO_x, PM_{10} and $PM_{2.5}$ after implementation of mitigation, and no additional feasible mitigation measures beyond those already identified exist that would reduce these emissions to levels that are less than significant, the potential health effects associated with these criteria air pollutants are considered significant and unavoidable.

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7 The first step in the publicly available HIAs includes running a regional PGM, such as the Community Multiscale Air Quality (CMAQ) model or the Comprehensive Air Quality Model with extensions (CAMx) to estimate the increase in concentrations of O_3 and $PM_{2.5}$ as a result of project-generated emissions of criteria and precursor pollutants. Air districts use photochemical air quality models for regional air quality planning. These photochemical models are large-scale air quality models that simulate the changes of pollutant concentrations in the atmosphere using a set of mathematical equations characterizing the chemical and physical processes in the atmosphere (EPA 2023c).

8 After estimating the increase in concentrations of O_3 and $PM_{2.5}$, the second step in the five examples includes use of BenMAP or BenMAP-CE to estimate the resulting associated health effects. BenMAP estimates the number of health incidences resulting from changes in air pollution concentrations. The health impact function in BenMAP-CE incorporates four key sources of data: (i) modeled or monitored air quality changes, (ii) population, (iii) baseline incidence rates, and (iv) an effect estimate. All of the five example HIAs focused on O_3 and $PM_{2.5}$.

9 The following CEQA documents included a quantitative HIA to address Friant Ranch: (1) California State University Dominguez Hills 2018 Campus Master Plan EIR (CSUDH 2019), (2) March Joint Powers Association K4 Warehouse and Cactus Channel Improvements EIR (March JPA 2019), (3) Mineta San Jose Airport Amendment to the Airport Master Plan EIR (City of San Jose 2019), (4) City of Inglewood Basketball and Entertainment Center Project EIR (City of Inglewood 2019), and (5) San Diego State University Mission Valley Campus Master Plan EIR (SDSU 2019).

Toxic Air Contaminant Exposure

TACs are defined as substances that may cause or contribute to an increase in deaths or in serious illness, or that may pose a present or potential hazard to human health. State law has established the framework for California's TAC identification and control program, which is generally more stringent than the federal program and aimed at TACs that are a problem in California. The state has formally identified more than 200 substances as TACs, including the federal HAPs, and is adopting appropriate control measures for sources of these TACs. During Project construction, DPM would be the primary TAC emitted from diesel-fueled equipment and trucks. The following measures are required by state law to reduce DPM emissions:

- Fleet owners of mobile construction equipment are subject to the CARB Regulation for In-Use Off-Road Diesel Vehicles (Title 13 California Code of Regulations, Chapter 9, Section 2449), the purpose of which is to reduce DPM and criteria pollutant emissions from in-use (existing) off-road diesel-fueled vehicles.
- All commercial diesel vehicles are subject to Title 13, Section 2485 of the California Code of Regulations, limiting engine idling time. Idling of heavy-duty diesel construction equipment and trucks during loading and unloading shall be limited to 5 minutes; electric auxiliary power units should be used whenever possible.

The closest sensitive receptors to Project construction would be scattered rural residents located along the alignment. However, Project construction would occur at 1,740 existing towers along 162 miles of linear transmission corridors and would not require the extensive use of heavy-duty construction equipment or diesel trucks in any one location over the duration of development, which would limit the exposure of any proximate individual sensitive receptor to TACs. In addition, the Project would implement MM-AQ-2 (Exhaust Controls), which requires all 75 hp or greater equipment to have CARB-compliant Tier 4 Final engines, which can reduce potential DPM emissions from construction equipment by up to 93% to 96% compared to equipment with engines meeting Tier 1 or Tier 2 emission standards.[10] For long-term operations, the Project would not change the routine inspection and maintenance of the existing transmission lines or result in a net increase in TAC emissions.

Due to the relatively short period of exposure at any individual sensitive receptor along the alignment, as well as implementation of MM-AQ-2 to substantially reduce DPM emissions from off-road equipment, TACs emitted during construction would not be expected to result in concentrations causing significant health risks. Therefore, this impact would be less than significant.

Valley Fever

As discussed in Section 4.1.1 Existing Conditions, under the subsection Valley Fever, Valley Fever is not highly endemic to San Bernardino County with an incident rate of 11.4 cases per 100,000 people (CDPH 2021). In contrast, in 2021 the statewide annual incident rate was 20.1 per 100,000 people. The California counties considered highly endemic for Valley Fever include Kern (306.2 per 100,000), Kings (108.3 per 100,000), Tulare

[10] Particulate matter emissions benefits are estimated by comparing off-road particulate matter emission standards for Tier 1 and Tier 2 with Tier 4 final emissions standards. Tier 1 particulate matter emissions standards were established for equipment with 25 to <50 horsepower and equipment with horsepower <175. Tier 1 emissions standards for these engines were compared against Tier 4 final emissions standards, resulting in a 96% reduction in particulate matter. The EPA established particulate matter standards for engines with horsepower from 50 to <175 as part of the Tier 2 emission standards. For these engines, Tier 2 emissions standards were compared against Tier 4 final emissions standards, resulting in a 93%–95% reduction in particulate matter.

(65.8 per 100,000), San Luis Obispo (61.0 per 100,000), Fresno (39.8 per 100,000), Merced (28.3 per 100,000), and Monterey (27.0 per 100,000), which accounted for 52.1% of the reported cases in 2021 (CDPH 2021).

Even if present at the tower sites, construction activities may not result in increased incidence of Valley Fever. Propagation of Valley Fever is dependent on climatic conditions, with the potential for growth and surface exposure highest following early seasonal rains and long dry spells. Valley Fever spores can be released when filaments are disturbed by earth-moving activities, although receptors must be exposed to and inhale the spores to be at increased risk of developing Valley Fever. Moreover, exposure to Valley Fever does not guarantee that an individual will become ill—approximately 60% of people exposed to the fungal spores are asymptomatic and show no signs of an infection (USGS 2000).

To reduce fugitive dust from the Project and minimize adverse air quality impacts, the Project would employ MM-AQ-1 that requires the development and submittal of a dust control plan to the MDAQMD for approval that outlines BMPs to reduce fugitive dust. These requirements are consistent with California Department of Public Health recommendations for the implementation of dust control measures, including regular application of water during soil-disturbance activities, to reduce exposure to Valley Fever by minimizing the potential that the fungal spores become airborne (CDPH 2013). Further, regulations designed to minimize exposure to Valley Fever hazards are included in Title 8 of the California Code of Regulations and would be complied with during the Project's construction phase (California Department of Industrial Relations 2022).

In summary, the Project would not result in a significant impact attributable to Valley Fever exposure based on its geographic location and compliance with applicable regulatory standards and dust mitigation measures, which will serve to minimize the release of and exposure to fungal spores. Therefore, impacts associated with Valley Fever exposure for sensitive receptors would be less than significant.

Threshold AQ-4: Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less-than-Significant Impact. Based on available information, the Project is not anticipated to result in other emissions that have not been addressed under Threshold AQ-1 through Threshold AQ-3, above. As such, this analysis focuses on the potential for the project to generate odors.

Land uses most commonly associated with odor complaints generally include agricultural uses (livestock and farming), wastewater treatment plants, food-processing plants, chemical plants, composting operations, refineries, landfills, dairies, and fiberglass molding facilities. The Project does not include uses that would be substantive sources of objectionable odors. Potential temporary and intermittent odors may result from construction equipment exhaust. However, based on the rural and primarily undeveloped nature of the transmission corridor, there aren't substantial numbers of people in the vicinity. In addition, the Project would be required to comply with MDAQMD Rule 402 (Nuisance). Rule 402 provides that "[a] person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property" (MDAQMD 1976). Based on the preceding, the potential for the Project to create objectionable odors affecting a substantial number of people would be less than significant.

4.1.5 Mitigation Measures

The following mitigation measures are required to address potentially significant impacts to air quality.

MM-AQ-1 Fugitive Dust Controls. Comply with all applicable Rules and Regulations of the Mojave Desert Air Quality Management District (MDAQMD), including, but not limited to Rules 401 (Visible Emissions), 402 (Nuisance), and 403 (Fugitive Dust). To ensure compliance with these Rules and Regulations, the Project Applicant or successor in interest shall prepare and submit a Dust Control Plan to the MDAQMD for approval. The Dust Control Plan shall document the best management practices (BMPs) that will be implemented during Project construction to prevent, to the maximum extent practicable, wind and soil erosion. BMPs that will be included in the Dust Control Plan shall include, but are not limited to, the following:

- Signage compliant with Rule 403 (Attachment B) shall be erected at each Project site entrance prior to the commencement of construction.
- Use a water truck to maintain moist disturbed surfaces and actively spread water during earthwork to minimize visible fugitive dust emissions. If the Project site has exposed sand or fines deposits, or if the Project exposes such soils through earthmoving, chemical stabilization or covering with a stabilizing layer of gravel will be required to eliminate visible dust/sand from the sand/fines deposits.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- All perimeter fencing shall be wind fencing or the equivalent, to a minimum of four feet of height or the top of all perimeter fencing. The Project Applicant shall maintain the wind fencing as needed to keep it intact and remove windblown dropout. This wind fencing requirement may be superseded by local ordinance, rule, or Project-specific biological mitigation prohibiting wind fencing.
- All maintenance and access vehicular roads and parking areas shall be stabilized with chemical dust suppressants sufficient to eliminate visible fugitive dust from vehicular travel and wind erosion. The Project Applicant shall take actions to prevent Project-related track out onto paved surfaces and clean any Project-related track out within 24 hours. All other disturbed earthen surfaces within the Project area shall be stabilized by natural or irrigated vegetation, compaction, chemical, or other means sufficient to prohibit visible dust from wind erosion.
- Obtain MDAQMD permits for any miscellaneous process equipment that may not be exempt under MDAQMD Rule 219 including, but not limited to, internal combustion engines with a manufacturer's maximum continuous rating greater than 50 brake horsepower.

MM-AQ-2 Exhaust Controls. During Project construction, all internal combustion engines/construction equipment greater than 75 horsepower operating on the Project site shall meet U.S. EPA-certified Tier 4 Final emissions standards. The LADWP and/or its designated construction contractor shall include this requirement in applicable bid documents, purchase orders, and contracts with successful contractors. Successful contractors must demonstrate the ability to supply the compliant construction equipment for use prior to any ground-disturbing and construction activities. An exemption from these requirements may be granted in the event that LADWP and/or its designated construction contractor documents that equipment with the required tier is not reasonably available and corresponding reductions in criteria air pollutant emissions are achieved

from other construction equipment.[11] Before an exemption may be considered by LADWP, the LADWP and/or its designated construction contractor shall be required to demonstrate that at least two construction fleet owners/operators in the High Desert and San Bernardino County Region were contacted and that those owners/operators confirmed Tier 4 Final equipment could not be located within the High Desert and San Bernardino County Region.

4.1.6 Level of Significance After Mitigation

Threshold AQ-1: Would the Project conflict with or obstruct implementation of the applicable air quality plan?

The Project would result in potentially significant impacts with regard to conflicting with or obstructing implementation of an applicable air quality plan. Implementation of MM-AQ-1 and MM-AQ-2 would reduce the Project's impacts; however, impacts would remain significant and unavoidable.

Threshold AQ-2: 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?

Short-Term Construction Impacts

Construction of the Project would result in a potentially significant cumulatively considerable net increase of criteria pollutants (i.e., NO_X, $PM_{2.5}$, and PM_{10}). Implementation of MM-AQ-1 and MM-AQ-2 would reduce the Project's impacts; however, emissions of NO_X, $PM_{2.5}$, and PM_{10} would remain significant and unavoidable.

Long-Term Operational Impacts

For long-term operations, the proposed maintenance activities to service the upgraded transmission lines would be similar in nature and scale to the maintenance activities that are currently conducted for the existing lines. Therefore, the Project's operational criteria air pollutant emissions would be similar to existing baseline conditions. The Project would result in no impact pertaining to long-term operations.

Threshold AQ-3: Would the Project expose sensitive receptors to substantial pollutant concentrations?

Construction and operation of the Project would not expose sensitive receptors to substantial pollutant concentrations, including concentrations of CO emissions, TACs, and spores of the *Coccidioides immitis* fungus (which can result in Valley Fever). However, since Project construction would result in exceedances of MDAQMD significance thresholds for NO_X, $PM_{2.5}$, and PM_{10}, even after implementation of MM-AQ-1 and MM-AQ-2, the potential health effects associated with criteria air pollutants are conservatively considered significant and unavoidable.

[11] For example, if a Tier 4 Final piece of equipment is not reasonably available at the time of construction and a lower tier equipment is used instead, other pieces of equipment with engines less than 75 hp could be upgraded to Tier 4 or replaced with an alternative-fueled (not diesel-fueled) equipment to offset the emissions associated with using a piece of equipment that does not meet Tier 4 Final standards.

Threshold AQ-4: Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The Project would result in a less-than-significant impact associated other emissions (such as those leading to odors) which could adversely affect a substantial number of people. No mitigation is required.

4.1.7 Cumulative Effects

As indicated above, by its nature, air pollution is largely a cumulative impact. The geographic context is the MDAB. The nonattainment status of regional pollutants is a result of past and present development, and the MDAQMD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are relevant in the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality. Individual projects that do not generate operational or construction emissions that exceed the MDAQMD's recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which the MDAB is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact.

The area of the MDAB in which the Project is located is a nonattainment area for O_3 and PM_{10} under the NAAQS and/or 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 discussed under Threshold 2 above, operational emissions would be similar to baseline conditions and would not result in a cumulatively considerable impact. However, construction emissions associated with the Project would exceed the MDAQMD significance thresholds for NO_X, $PM_{2.5}$, and PM_{10} even after implementation of all feasible reduction measures. As such, NO_X, $PM_{2.5}$, and PM_{10} emissions generated during Project short-term construction would exceed applicable MDAQMD regional thresholds would be significant and unavoidable, and thus, cumulatively considerable.

4.1.8 References

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4.2 Biological Resources

This section describes the existing biological resources conditions of the McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project ("Project" or "proposed Project") site and vicinity, identifies associated regulatory requirements, evaluates potential project and cumulative impacts, and identifies mitigation measures related to implementation of the Project. The purpose of the proposed Project is to accommodate incoming renewable energy resources from the East territory region, along the West of River (WOR) Path 46 transmission corridor in order to help the Los Angeles Department of Water and Power (LADWP) achieve state and local requirements for greenhouse gas reductions and an increased renewable energy portfolio.

In addition to the documents incorporated by reference (see Section 4.2.7, References), this analysis is based, in part, on the following sources:

- **Appendix C1** – Biological Resources Technical Report, prepared by Aspen Environmental Group in 2024
- **Appendix C2** – Biological Sensitivity Report, prepared by Aspen Environmental Group in 2020
- **Appendix C3** – Jurisdictional Delineation Report, prepared by Psomas in 2023

Aspen Environmental Group (Aspen) conducted a literature review, geospatial analysis, field surveys, and consultation with local biologists and regional experts. Fieldwork by Aspen was conducted in April through June 2021 and May 2024 within the "Project area" or "Project survey area", which includes a 120-foot buffer around each tower location, access roads along the rights-of-way (ROWs), tower access roads, and a 10-foot buffer from the shoulder of access roads. Results of these field surveys and analyses are provided in the Biological Resources Technical Report completed in May 2024 and the Biological Sensitivity Report completed in February 2020.

Psomas conducted a jurisdictional delineation (JD) in the spring and summer of 2022 to map jurisdictional water resources within the "JD survey area," which includes the entire transmission line ROW. Results of this delineation are provided in the JD Report prepared by Psomas in March 2023. These reports, attached as Appendices C1, C2, and C3, provide a detailed documentation of observed plants and wildlife; existing vegetation communities; special-status species; jurisdictional waters, including wetland; and wildlife corridors. Their results are summarized below.

4.2.1 Relevant Plans, Policies, and Ordinances

Federal

Federal Endangered Species Act

The federal Endangered Species Act of 1973 (16 USC 1531 et seq.) (FESA), as amended, is administered by the U.S. Fish and Wildlife Service (USFWS) for most plant and animal species, and by the National Oceanic and Atmospheric Administration National Marine Fisheries Service for certain marine species. This legislation is intended to provide a means to conserve the ecosystems upon which endangered and threatened species depend, and provide programs for the conservation of those species, thus preventing the extinction of plants and wildlife. FESA defines an endangered species as "any species that is in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as "any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Under FESA, it is unlawful to "take"

any listed species; "take" is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

FESA allows for the issuance of Incidental Take Permits (ITPs) for listed species under Section 7, which is generally available for projects that also require other federal agency permits or other approvals, and under Section 10, which provides for the approval of Habitat Conservation Plans on private property without any other federal agency involvement.

Federal Land Policy and Management Act

The Federal Land Policy and Management Act (FLPMA) provides a regulatory framework for the management and use of Bureau of Land Management (BLM) resources. An important aspect of the FLPMA is that it supports multiple uses on public lands. In addition, under the FLPMA, BLM regulates ROWs for electrical power generation, transmission and distribution systems, systems for the transmission and reception of electronic signals and other means of communication, pipelines (other than oil and gas), railroads, highways, and other facilities or systems developed in the interest of the public.

California Desert Conservation Area Plan

The California Desert Conservation Area (CDCA) is an approximately 25-million-acre expanse of land in Southern California that was designated by Congress in 1976 through the FLPMA. Approximately 10 million acres are administered by BLM, including all BLM lands in the California Desert region (BLM 1980). The CDCA Plan is a comprehensive, long-range plan for the management, use, development, and protection of lands within the CDCA, and it is required as part of the FLPMA and implemented by BLM. CDCA established direction on uses and management actions on BLM lands addressing a range of plan elements, including Cultural, Native American, Wildlife, Vegetation, Wilderness, Wild Horse and Burro, Livestock Grazing, Recreation, Motorized-Vehicle Access, Geology, Energy and Mineral Resources, Energy Production and Utility Corridors, and Land Tenure Adjustment.

The CDCA Plan also established multiple-use classes and Areas of Critical Environmental Concern (ACECs) on BLM lands in the CDCA. 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.

As part of Phase I of the Desert Renewable Energy Conservation Plan (DRECP), BLM adopted the Land Use Plan Amendment (LUPA), which amended the CDCA Plan, in September 2016 (BLM 2016). The LUPA and the DRECP are discussed below.

Desert Renewable Energy Conservation Plan

The DRECP is a planning document developed by the California Energy Commission (CEC) and BLM to advance federal and state natural energy and resource conservation goals and other federal land management goals; meet the requirements of the ESA and FLPMA; and facilitate the timely and streamlined permitting of renewable energy projects in the Mojave and Colorado/Sonoran Desert regions of Southern California. The DRECP covers approximately 22.5 million acres in the desert regions of Imperial, Inyo, Kern, Los Angeles, Riverside, San Bernardino, and San Diego Counties.

The DRECP was planned to be prepared in two phases—Phase I and Phase II. During Phase I, the BLM completed the LUPA, which amended the CDCA and designates development focus areas and conservation areas on BLM lands. DRECP Phase II was intended to focus on better aligning renewable energy development and conservation at the federal, state, and local levels, and it was planned to include a General Conservation Plan for approximately 5.5 million acres of non-federal land and a Conceptual Plan-Wide Natural Community Conservation Plan (NCCP) for the entire DRECP plan area. DRECP Phase II has not been completed and is not currently being planned.

BLM DRECP LUPA

The BLM DRECP LUPA establishes management direction for the permitting of renewable energy and transmission development on nearly 11 million acres of BLM-managed lands in the DRECP area. BLM adopted the LUPA in 2016. The purpose of the LUPA is to conserve biological, environmental, cultural, recreation, scenic, and visual resources; respond to federal renewable energy goals and policies, including state-level renewable energy targets; and comply with the FLPMA. The BLM LUPA prescribes Conservation and Management Actions, which are a specific set of avoidance, minimization, and compensation measures that protect important biological and natural resources in the DRECP area. The Conservation and Management Actions also include allowable and non-allowable actions for siting, design, pre-construction, construction, maintenance, implementation, operation, and decommissioning activities of renewable energy projects on BLM-managed land.

The DRECP LUPA made substantial changes to the CDCA framework and superseded many previous decisions and amendments for BLM lands in the California Desert region. The DRECP LUPA eliminated multiple-use classes and replaced them with conservation and management actions, established new National Conservation Lands (NCLs), revised and added ACECs, and established other designations on BLM lands for renewable energy and recreation, among other changes. The California segment of the proposed project is located within the DRECP LUPA area and extends through 7 ACEC's: Northen Lucerne Wildlife Linkage, Ord-Rodman, Daggert Ridge Monkey Flower, Mojave Fringe-toed Lizard, Superior-Cronese, Shadow Valley, and Ivanpah.

West Mojave Plan

The West Mojave Plan was envisioned to develop management strategies for the Mojave desert tortoise ("desert tortoise"), Mohave ground squirrel, and more than 100 other sensitive plants and animals. The planning area encompassed approximately 9.3 million acres in Inyo, Kern, Los Angeles, and San Bernardino Counties, including approximately 3.3 million acres of public lands administered by BLM, approximately 3 million acres of private lands, and approximately 102,000 acres administered by the State of California. The remaining land is military land administered by the Department of Defense. The West Mojave Plan was proposed to conserve those species throughout the western Mojave Desert, while streamlining the West Mojave Plan for compliance with the regulatory requirements of FESA and the California Endangered Species Act (CESA). Only the BLM elements of the West Mojave Plan were adopted, resulting in a number of amendments to BLM's CDCA Plan. In 2019, the BLM amended the CDCA plan for the West Mojave Route Network Project to address motor vehicle access, recreation, and livestock grazing elements in the West Mojave Planning Area (BLM 2019).

Bald and Golden Eagle Protection Act

The bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*) are federally protected under the Bald and Golden Eagle Protection Act (BGEPA), which was passed in 1940 to protect the bald eagle and amended in 1962 to include the golden eagle (16 USC Section 668a–d). BGEPA prohibits the take, possession, sale, purchase, barter, offering to sell or purchase, export or import, or transport of bald eagles and golden eagles and

their parts, eggs, or nests without a permit issued by USFWS. The definition of "take" includes to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb. BGEPA prohibits any form of possession or take of either eagle species, and imposes criminal and civil sanctions, as well as an enhanced penalty provision for subsequent offenses. Further, BGEPA provides for the forfeiture of anything used to acquire eagles in violation of the statute. Regarding its prohibitions on possession, the statute exempts the use of eagles or eagle parts for exhibition, scientific, and Native American religious uses.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits the intentional and unintentional take of any migratory bird or any part, nest, or eggs of any such bird. Under the MBTA, "take" is defined as pursuing, hunting, shooting, capturing, collecting, or killing, or attempting to do so (16 USC 703 et seq.). Currently, the Migratory Birds Office considers nests that support eggs, nestlings, or juveniles to be active. Additionally, Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds, requires that any project with federal involvement address impacts of federal actions on migratory birds with the purpose of promoting conservation of migratory bird populations (66 FR 3853–3856). Executive Order 13186 requires federal agencies to work with USFWS to develop a memorandum of understanding. USFWS reviews actions that might affect these species.

Clean Water Act

The Clean Water Act (CWA) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. Section 401 requires a project operator for a federal license or permit that allows activities resulting in a discharge to waters of the United States to obtain state certification, thereby ensuring that the discharge will comply with provisions of the CWA. The Regional Water Quality Control Boards (RWQCBs) administer the certification program in California. Section 402 establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the United States. Section 404 establishes a permit program administered by the U.S Army Corps of Engineers (USACE) that regulates the discharge of dredged or fill material into waters of the United States, including wetlands. USACE implementing regulations are found at 33 Code of Federal Regulations (CFR) Parts 320 through 332. Guidelines for implementation are referred to as the Section 404(b)(1) Guidelines, which were developed by the U.S. Environmental Protection Agency (EPA) in conjunction with USACE (40 CFR 230). The guidelines allow the discharge of dredged or fill material into the aquatic system only if there is no practicable alternative that would have less adverse impacts.

Wetlands and Other Waters of the United States

The definition of waters of the United States establishes the geographic scope for authority under Section 404 of the CWA; however, the CWA does not specifically define waters of the United States, leaving the definition open to statutory interpretation and agency rulemaking. The definition of what constitutes "waters of the United States" (provided in 33 CFR Section 328.3[a]) has changed multiple times over the past few decades, starting with the *United States v. Riverside Bayview Homes Inc.* court ruling in 1985. Subsequent court proceedings, rule makings, and congressional acts in 2001 (*Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*), 2006 (*Rapanos v. United States*), 2015 (Clean Water Rule), 2018 (suspension of the Clean Water Rule), 2019 (formal repeal of the Clean Water Rule), 2020 (Navigable Waters Protection Rule), and 2021 (*Pasqua Tribe et al. v. EPA* resulting in remand and vacatur of the Navigable Waters Protection Rule and a return to "the pre-2015 regulatory regime") have attempted to provide greater clarity to the term and its regulatory implementation.

On December 30, 2022, the agencies announced the final Revised Definition of “Waters of the United States” rule (Rule) (88 CFR 3004–3144). The Rule was published in the Federal Register on January 18, 2023, and became effective on March 20, 2023, restoring federal jurisdiction over waters that were protected prior to 2015 under the Clean Water Act for traditional navigable waters, the territorial seas, interstate waters, and upstream water resources that significantly affect those waters. The Rule re-expanded federal jurisdiction over certain water bodies and wetlands previously exempt pursuant to the 2020 Navigable Waters Protection Rule, reinstating the “Significant Nexus” test and adopting the “Relatively Permanent Standard” test. The Significant Nexus test refers to waters that either alone, or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of traditional navigable waters, interstate waters, or the territorial seas (86 FR 69372–69450). The Significant Nexus test attempts to establish a scientific connection between smaller water bodies, such as ephemeral or intermittent tributaries, and larger, more traditional navigable waters such as rivers. Significant Nexus evaluations take into consideration hydrologic and ecologic factors including, but not limited to, volume, duration, and frequency of surface water flow in the resource and its proximity to a traditional navigable water, and the functions performed by the resource on adjacent wetlands. To meet the Relatively Permanent Standard, water bodies must be relatively permanent, standing, or continuously flowing and have a continuous surface connection to such waters.

On May 25, 2023, the Supreme Court issued its long-anticipated decision in Sackett v. EPA., in which it rejected the EPA's claim that "waters of the United States," as defined in the CWA, includes wetlands with an ecologically significant nexus to traditional navigable waters. The Supreme Court held that only those wetlands with a continuous surface water connection to traditional navigable waterways would be afforded federal protection under the CWA. Specifically, to assert jurisdiction over an adjacent wetland under the CWA, a party must establish that (1) the adjacent body of water constitutes water[s] of the United States (i.e., a relatively permanent body of water connected to traditional interstate navigable waters), and (2) the wetland has a continuous surface connection with that water, making it difficult to determine where the water ends and the wetland begins. On August 29, 2023, the EPA and USACE announced the final rule amending the 2023 definition of “waters of the United States”, conforming with the Sackett v. EPA decision. Some of the key changes include removing the significant nexus test from consideration when identifying tributaries and other waters as federally protected and revising the adjacency test when identifying federally jurisdictional wetlands. Under the EPA’s new definition, a “water of the United States” is a relatively permanent, standing, or continuously flowing body of water that has an apparent surface connection to a “traditionally navigable water” to fall within federal purview. The new rule applies to wetlands and streams throughout the U.S. Although the Sackett opinion did not specifically reference streams, the EPA’s new rule extends the “continuous surface connection” standard to streams, thereby removing non-permanent, ephemeral streams that do not meet these standards from federal jurisdiction.

The term “wetlands” (a subset of waters of the United States) is defined in 33 CFR, Section 328.3(c)(16), as “areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.” In the absence of wetlands, the limits of USACE jurisdiction in non-tidal waters, such as intermittent streams, extend to the “ordinary high water mark,” which is defined in 33 CFR 328.3(c)(7) as “that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.”

State

California Environmental Quality Act

California Environmental Quality Act (CEQA) requires identification of a project's potentially significant impacts on biological resources, and ways that such impacts can be avoided, minimized, or mitigated. CEQA also provides guidelines and thresholds for use by lead agencies for evaluating the significance of proposed impacts.

The CEQA Guidelines Section 15380(b)(1) defines endangered animals or plants as species or subspecies whose "survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors." A rare animal or plant is defined in CEQA Guidelines Section 15380(b)(2) as a species that, although not presently threatened with extinction, exists "in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or … [t]he species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered 'threatened' as that term is used in the federal Endangered Species Act." Additionally, an animal or plant may be presumed to be endangered, rare, or threatened if it meets the criteria for listing, as defined further in CEQA Guidelines Section 15380(c).

California Department of Fish and Wildlife (CDFW) has developed a list of "Special Species" as "a general term that refers to all of the taxa the California Natural Diversity Database (CNDDB) is interested in tracking, regardless of their legal or protection status." This is a broader list than those species that are protected under FESA, CESA, and other California Fish and Game Code provisions, and includes lists developed by other organizations, including, for example, the Audubon Watch List. Guidance documents prepared by other agencies, including the California BLM Sensitive Species and USFWS Birds of Conservation Concern (BCC), are also included on this CDFW Special Species list. Additionally, CDFW has concluded that plant species listed as a California Rare Plant Rank (CRPR) 1 and 2 by the California Native Plant Society (CNPS), and potentially some CRPR 3 plants, are covered by CEQA Guidelines Section 15380.

Section IV, Appendix G, Environmental Checklist Form, of the CEQA Guidelines requires an evaluation of impacts to "any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or the USFWS.

California Desert Native Plants Act

The purpose of the California Desert Native Plants Act (CDNPA) is to protect certain species of California desert native plants (i.e., species in the families Agavaceae, Cacti, Fouquieriaceae; species in the genuses *Prosopis* and *Parkinsonia* (*Cercidium*); and the species *Acacia greggii*, *Atriplex hymenelytra*, *Dalea spinosa*, and *Olneya tesota*) from unlawful harvesting. The CDNPA only applies within the boundaries of Imperial, Inyo, Kern, Los Angeles, Mono, Riverside, San Bernardino, and San Diego Counties. Within these counties, the CDNPA prohibits the harvest, transport, sale, or possession of specific native desert plants unless a person has a valid permit or wood receipt, and the required tags and seals. The appropriate permits, tags, and seals must be obtained from the sheriff or commissioner of the county where collecting will occur, and the county will charge a fee. More information on the CDNPA, including the species protected under the law, is available by reading the provisions of the law.

California Endangered Species Act

The California Endangered Species Act (California Fish and Game Code Sections 2050–2068) provides protection and prohibits the take of plant, fish, and wildlife species listed by the State of California. Unlike FESA, under CESA, state-listed plants have the same degree of protection as wildlife, but insects and other invertebrates may not be listed. Take is defined similarly to FESA and is prohibited for both listed and candidate species. Take authorization may be obtained by a project applicant from CDFW under CESA Section 2081, which allows take of a listed species for educational, scientific, or management purposes. In this case, private developers consult with CDFW to develop a set of measures and standards for managing the listed species, including full mitigation for impacts, funding of mitigation implementation, and monitoring of mitigation measures.

Western Joshua Tree

On July 1, 2023, the Western Joshua Tree Conservation Act (WJTCA) was passed. While western Joshua tree is a candidate species, take for western Joshua tree can be received through payment of pre-determined mitigation fees. The WJTCA introduces a streamlined permitting framework that applies to specific development activities and mandates the collection of mitigation fees. These fees are intended to facilitate the acquisition and preservation of western Joshua tree habitat, as well as to support conservation measures aimed at safeguarding the western Joshua tree. The underlying goal is to counterbalance the adverse impacts on western Joshua trees resulting from authorized projects and to promote species conservation on a landscape scale.

Under the WJTCA, CDFW is authorized to perform the following key functions:

- Issue permits for the trimming and removal of hazardous or deceased western Joshua trees.
- Grant permits for the incidental take of western Joshua trees, contingent upon the fulfillment of specific conditions.
- Establish agreements with counties or cities to delegate limited authority for the issuance of the aforementioned permits, provided that predetermined conditions are met.

The WJTCA institutes two categories of mitigation fees: reduced fees and standard fees, depending on the geographical location, as defined in the California Department of Fish and Game Code (Section 1927). It empowers the CDFW to issue permits for the incidental take of one or more western Joshua trees, subject to compliance with stipulated conditions. Permit holders may opt to remit specified fees in lieu of undertaking mitigation activities. Additionally, the WJTCA authorizes the CDFW to issue permits for the removal of deceased western Joshua trees and the trimming of live western Joshua trees under specific circumstances.

Notably, all in-lieu fees collected under the WJTCA are directed to the Western Joshua Tree Conservation Fund, with the explicit purpose of allocation to the CDFW. These funds are designated exclusively for the acquisition, conservation, and management of western Joshua tree conservation lands, as well as the execution of other initiatives designed to safeguard the western Joshua tree.

Permitting

The initial step in the permitting process necessitates the comprehensive survey and documentation of western Joshua trees located on a project site as well as within a 50-foot radius surrounding the Project area. This census must adhere to precise specifications outlined on the CDFW's official website.

Simultaneously, a permit application, available on the CDFW's website, must be completed. The application mandates that the applicant complies with the CEQA. Notably, there are no stipulated statutory deadlines governing the permitting process; however, CDFW is committed to expeditiously processing the applications upon receipt. Upon successful processing of the application by CDFW, the permittee will be issued an invoice for the mandatory mitigation fee. This fee is to be remitted via check or money order, with the invoice securely attached, following the precise instructions provided by CDFW.

California Fish and Game Code

Fully Protected Species

Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code outline protections for fully protected species of mammals, birds, reptiles, amphibians, and fish. Species that are fully protected by these sections may not be taken or possessed at any time. CDFW cannot issue permits or licenses that authorize the "take" of any fully protected species, except under certain circumstances, such as scientific research, under an NCCP, and live capture and relocation of such species pursuant to a permit for the protection of livestock.

Section 1600–1616

CDFW jurisdiction includes ephemeral, intermittent, and perennial watercourses (including dry washes) and lakes characterized by the presence of definable bed and banks, and existing fish or wildlife resources. CDFW takes jurisdiction to the top of bank of the stream or the limit of the adjacent riparian vegetation, which may include oak woodlands in canyon bottoms. Historical court cases have further extended CDFW jurisdiction to include watercourses that seemingly disappear but reemerge elsewhere. Under the CDFW definition, a watercourse need not exhibit evidence of an ordinary high-water mark (OHWM) to be claimed as jurisdictional. CDFW does not have jurisdiction over ocean or shoreline resources.

Under California Fish and Game Code Sections 1600–1616, CDFW has the authority to regulate work that will substantially divert or obstruct the natural flow of, or substantially change or use any material from, the bed, channel, or bank of any river, stream, or lake. CDFW also has the authority to regulate work that will deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. This regulation takes the form of a requirement for a Lake or Streambed Alteration Agreement and is applicable to all projects. Applications to CDFW must include a complete, certified CEQA document.

California Native Plant Protection Act

The Native Plant Protection Act of 1977 (Sections 1900 et seq. of the California Fish and Game Code) directed CDFW to carry out the Legislature's intent to "preserve, protect and enhance rare and endangered plants in this State." The Native Plant Protection Act gave the California Fish and Game Commission the power to designate native plants as "endangered" or "rare," and protect endangered and rare plants from take. CESA expanded on the original Native Plant Protection Act and enhanced legal protection for plants, but the Native Plant Protection Act remains part of the California Fish and Game Code. To align with federal regulations, the categories of "threatened" and "endangered" species were added to CESA. All "rare" animals in CESA were converted to "threatened," but this did not change for rare plants. Thus, there are three listing categories for plants in California: rare, threatened, and endangered. Because rare plants are not included in CESA, mitigation measures for impacts to rare plants are specified in a formal agreement between CDFW and project proponents.

Nesting Birds

Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nests or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 protects all birds of prey (raptors) and their eggs and nests. Section 3511 states that fully protected birds or parts thereof may not be taken or possessed at any time. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the MBTA.

Porter–Cologne Water Quality Control Act

Pursuant to provisions of the Porter–Cologne Act, the RWQCBs regulate discharging waste, or proposing to discharge waste, within any region that could affect a water of the state (California Water Code Section 13260[a]). The State Water Resources Control Board (SWRCB) defines a water of the state as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code, Section 13050[e]). All waters of the United States are waters of the state. Waters of the state include wetlands, and the SWRCB definition of wetlands includes the following:

1. Natural wetlands.
2. Wetlands created by modification of a surface water of the state.
3. Artificial wetlands that meet any of the following criteria:
    a. Approved by an agency as compensatory mitigation for impacts to other waters of the state, except where the approving agency explicitly identifies the mitigation as being of limited duration.
    b. Specifically identified in a water quality control plan as a wetland or other water of the state.
    c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape.
    d. Greater than or equal to 1 acre in size unless the artificial wetland was constructed and is currently used and maintained, primarily for one or more of the following purposes: industrial or municipal wastewater treatment or disposal; settling of sediment; detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial permitting program; treatment of surface waters; agricultural crop irrigation or stock watering; fire suppression; industrial processing or cooling water; active surface mining – even if the site is managed for interim wetlands functions and values; log storage; treatment, storage, or distribution of recycled water; maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or fields flooded for rice growing.

Wetlands that may not meet all of USACE's wetland delineation criteria are considered wetland waters of the state if, "under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation" (SWRCB 2019). Additionally, aquatic resources that USACE determines to not be waters of the United States because they lack a significant nexus to a traditional navigable water or are above the OHWM limit of federal jurisdiction, may also be considered waters of the state. If a CWA Section 404 permit is not required for a project, the RWQCB may still require a permit (waste discharge requirements) for impacts to waters of the state under the Porter–Cologne Act.

Local

San Bernardino County Countywide Plan and County Policy Plan

The Countywide Plan is a collection of planning tools intended to guide future decisions, investments, and improvements throughout San Bernardino County. The County Policy Plan, one of three components of the Countywide Plan, is a legal document, adopted by County Ordinance, and serves as the County's General Plan for unincorporated areas. The Natural Resources Element of the County Policy Plan establishes goals and policies to ensure that San Bernardino County protects and preserves its biological resources. The biological resources goal and policies relevant to the proposed project include the following (County of San Bernardino 2020):

Goal NR-5: Biological Resources. An interconnected landscape of open spaces and habitat areas that promotes biodiversity and healthy ecosystems, both for their intrinsic value and for the value placed on them by residents and visitors.

Policy NR-5.1: Coordinated habitat planning. We participate in landscape-scale habitat conservation planning and coordinate with existing or proposed habitat conservation and natural resource management plans for private and public lands to increase certainty for both the conservation of species, habitats, wildlife corridors, and other important biological resources and functions; and for land development and infrastructure permitting.

Policy NR-5.2: Capacity for resource protection and management. We coordinate with public and nongovernmental agencies to seek funding and other resources to protect, restore, and maintain open space, habitat, and wildlife corridors for threatened, endangered, and other sensitive species.

Policy NR-5.3: Multiple-resource benefits. We prioritize conservation actions that demonstrate multiple resource preservation benefits, such as biology, climate change adaptation and resiliency, hydrology, cultural, scenic, and community character.

Policy NR-5.4: Off-base recovery efforts. We coordinate with military installations to facilitate off-base recovery of threatened and endangered species and landscape-scale conservation.

Policy NR-5.5: Mitigation and future responsibilities. We require that new development satisfy habitat conservation responsibilities without shifting conservation responsibilities onto military property.

Policy NR-5.6: Mitigation banking. We support the proactive assemblage of lands to protect biological resources and facilitate development through private or public mitigation banking. We require public and private conservation lands or mitigation banks to ensure that easement and fee title agreements provide funding methods sufficient to manage the land in perpetuity.

Policy NR-5.7: Development review, entitlement, and mitigation. We comply with state and federal regulations regarding protected species of animals and vegetation through the development review, entitlement, and environmental clearance processes.

Policy NR-5.8: Invasive species. We require the use of non-invasive plant species with new development and encourage the management of existing invasive plant species that degrade ecological function.

The Policy Plan provides the basis for and is implemented by San Bernardino County's Development Code (County of San Bernardino 2007). San Bernardino County Development Code Chapter 88.01, Plant Protection and Management, provides regulations and guidelines for the management of plant resources in the unincorporated areas of the County, and includes the following relevant sections.

Section 88.01.060 Desert Native Plant Protection

Chapter 88.01.060, Desert Native Plant Protection, of the San Bernardino County Development Code provides regulations for the removal or harvesting of specified native desert plants to preserve and protect the plants and to provide for the conservation and wise use of desert resources. The following desert native plants or any part of them, except the fruit, shall not be removed except under a Tree or Plant Removal Permit in compliance with Section 88.01.050 (Tree or Plant Removal Permits):

(1) The following desert native plants 6 feet or greater in height or with stems 2 inches or greater in diameter:
   a. Smoke tree (Psorothamnus spinosus [Synonym: Dalea spinosa])
   b. All species of the genus Prosopis (mesquites)
(2) All species of the family Agavaceae (century plants, nolinas, yuccas)
(3) Creosote rings, 10 feet or greater in diameter
(4) All western Joshua trees
(5) Any part of the following species, whether living or dead:
   a. *Olneya tesota (*desert ironwood)
   b. All species of the genus *Prosopis* (mesquites)
   c. All species of the genera *Cercidium* (palos verdes)

Section 88.01.080 Riparian Plant Conservation

Chapter 88.01.080, Riparian Plant Conservation, of the San Bernardino County Development Code provides regulations to promote healthy and abundant riparian habitats that protect watersheds; control transmission and storage of natural water supplies; provide unique wildlife habitats for rare, endangered and threatened plants and animals; provide attractive environments; control natural soil erosion and sedimentation to protect stream banks subject to erosion and undercutting; and provide sufficient shade to reduce temperature and evaporation and the growth of algae in streams. The removal of vegetation within 200 feet of the bank of a stream, or in an area indicated as a protected riparian area on an overlay map or Specific Plan, shall require approval of a Tree or Plant Removal Permit in compliance with Section 88.01.050 (Tree or Plant Removal Permits) and shall be subject to environmental review:

City of Victorville General Plan 2030

The City's Resource Element is intended to function as a guide to the protection, use and maintenance of the City's natural and cultural resources, including biological resources (City of Victorville 2008). Goal #4 (Conservation of Important Habitat), contains the following goals and policies to preserve land containing native habitat that sustains rare, threatened, or endangered plants and wildlife species (City of Victorville 2008).

Objective 4.1. Preservation of natural communities that support rare, threatened, and or endangered plant and wildlife species throughout the Planning Area.

Policy 4.1.1. Encourage natural habitat that supports rare, threatened, or endangered plants and wildlife (i.e., "sensitive" species), or require restoration of the same type of impacted habitat within an existing, planned, or potential conservation area.

Objective 4.2. Permanent Conservation of Mojave River Corridor Ecological Values.

Policy 4.2.1. Generally prohibit private or public development projects or major infrastructure facilities on land within the Mojave River Corridor, where biological surveys have determined there is habitat that supports rare, threatened, and/or endangered plants or wildlife. Allow minor encroachments into such habitat for critical public facilities and recreational trails, where reliable assurances are provided that no loss of sensitive species would occur.

City of Victorville Municipal Code

Chapter 13.33, Preservation and Removal of Joshua Trees, of the City of Victorville Municipal Code provides protections for western Joshua tree to protect and preserve, to the greatest extent possible, Joshua trees in all areas of the City to preserve the unique natural desert environment throughout the City and for the health, safety, and welfare of the community (Victorville Municipal Code 13.33.010). Section 13.33.040 of the Victorville Municipal Code prohibits any person to cut, damage, destroy, dig up, or harvest any Joshua tree without the prior written consent of the Director of Parks and Recreation or their designee. Furthermore, Section 16-5.02.060 of the Victorville Municipal Code states the following regarding western Joshua trees and as a requirement of the grading and permit requirements of Article 2, Grading Regulations Victorville Municipal Code:

> All Joshua trees, as per Chapter 13.33 of the Victorville Municipal Code, shall be indicated by showing the exact center of its trunk as established by a licensed surveyor. Its tag number, trunk diameter and height must be indicated. The health and proposed disposition of the tree must be indicated. Where a tree or trees are to be removed, the applicant shall meet all current requirements and standards as set forth by the California Department of Fish and Wildlife, and proof shall be submitted to the Building Department prior to issuance of a permit. Alternatively, the Applicant may provide a detailed report, from a licensed Arborist or Biologist, for protecting and preserving, the tree or trees in accordance with applicable California Department of Fish and Wildlife standards, which may be affected by the proposed grading.

Town of Apple Valley Multi-Species Conservation Plan MSHCP/NCCP

An ongoing planning effort is underway to develop the Town of Apple Valley Multiple Species Habitat Conservation Plan (MSHCP) and Natural Community Conservation Plan (NCCP). A 2017 Planning Agreement between the Town of Apple Valley, CDFW, and USFWS identified the geographic scope of the planning area, which included the Town of Apple Valley, its Sphere of Influence, and unincorporated lands within the County of San Bernardino to the north and east of the Town of Apple Valley, covering a total of approximately 221,180 acres within the western Mojave Desert. The 2017 Planning Agreement also preliminary identified conservation objectives for the planning area, covered activities, and covered species (Town of Apple Valley 2017). The proposed Project passes through unincorporated portions of the planning area, north of the Town of Apple Valley. However, as of the writing of this DEIR, a draft MSHCP/NCCP has not been prepared and conservation strategies have not been identified.

4.2.2 Existing Conditions

The proposed Project would upgrade two existing transmission lines of the McCullough-Victorville transmission alignment (MCC-VIC), Transmission Line 1 (MCV1) and Transmission Line 2 (MCV2), which run parallel to each other within a utility corridor owned and maintained by LADWP. The utility corridor is entirely within the Mojave Desert and spans 162 miles from Boulder City, Nevada in Clark County, Nevada, to the Victorville Switching Station in Victorville, California within San Bernardino County, California. The tower numbering uses mileage from the source of the energy feed. For example, Tower 27-5 represents the fifth tower of the 27th mile of the transmission line. The Project is divided into the Nevada segment, which runs for 24 miles from the McCullough Substation to Line 1 Tower 27-5 (MCV1_27-5) and Line 2 Tower 26-7 (MCV2_26-7) at the California Border, and the California segment, which runs for 138 miles from MCV1_27-6 and MCV2_27-1 to the Victorville Switching Station. For purposes of CEQA, only biological resources within the California segment are analyzed in this EIR.

4.2.2.1 Vegetation Communities and Land Covers

The Project Area primarily supports xeric and desert vegetation communities, but also includes disturbed/unvegetated land cover types and scattered agricultural land. Nineteen different vegetation alliances and land cover types were identified within the California segment of the Project Area, as described in Appendix C1. A summary of the acreage of vegetation communities and land cover types within the Proposed Project is provided below in Table 4.2-1, and a brief description of each community and land cover is provided further below. The spatial distribution of vegetation communities and land cover types are depicted on Figures 4.2-1-1 through 4.2-1-136, Vegetation Communities. In general, the Project area is vegetated by desert shrubs that are typical for this region, such as creosote bush (*Larrea tridentata*), brittle bush (*Encelia farinosa*), white bursage (*Ambrosia dumosa*), cheesebush (*Ambrosia salsola*), Joshua tree (*Yucca brevifolia*), and Mojave yucca (*Yucca schidigera*).

Vegetation classifications and descriptions were based on nomenclature from A Manual of California Vegetation (Sawyer et al. 2009). Boundaries of vegetation and land covers were mapped in the field using high-resolution aerial imagery in Esri Collector, a mobile data collection application, on an iPad equipped with a sub-meter Eos Arrow GNSS receiver. Digital mapping was finalized on Esri ArcGIS (Version 10).

Table 4.2-1. Summary of Vegetation Communities and Land Cover Types within the California Segment of the Project Area

Vegetation Community or Land Cover Type	Area (acres)
Vegetation Alliances	
Acton's and Virgin River brittle brush–net-veined goldeneye scrub[3]	0.65
Allscale scrub	19.40
Black brush scrub	2.51
Catclaw acacia–desert lavender–chuparosa scrub	5.41
Cheesebush–sweetbush scrub	9.11
Creosote bush scrub	1,429.73
Creosote bush–white bursage scrub	302.50
Desert almond–Mexican bladdersage scrub	0.50
Desert holly scrub	1.16
Rigid spineflower–hairy desert sunflower desert pavement	14.83
Fremont's smokebush–Nevada smokebush scrub[3]	0.15

Table 4.2-1. Summary of Vegetation Communities and Land Cover Types within the California Segment of the Project Area

Vegetation Community or Land Cover Type	Area (acres)
Vegetation Alliances	
Fremont cottonwood forest and woodland[3]	0.16
Joshua tree woodland[3]	172.22
Mojave yucca scrub	133.77
Needleleaf rabbitbrush scrub	4.99
Nevada joint fir–Anderson's boxthorn–spiny hop sage scrub[3]	4.88
Tamarisk thickets	2.58
White bursage scrub	10.53
Other Land Cover Types[1]	
Agriculture	15.15
Developed/disturbed	539.30
Dry lakebed	5.16
Open water	0.04
Sparsely vegetated wash	6.96
Total[2]	**2,693.20**

Source: Appendix C1.
Notes:
1 These land cover types are not defined in Sawyer et al. (2009) or Holland (1986) but are included in this table because it best describes existing site conditions.
2 Total does not sum due to rounding.
3 These vegetation communities are considered sensitive vegetation communities by CDFW.

Acton's and Virgin River Brittle Brush–Net-Veined Goldeneye Scrub

Acton's and Virgin River brittle brush–net-veined goldeneye scrub (*Encelia* [*actonii*, *virginensis*]–*Viguiera reticulata* shrubland alliance) features Acton's brittle bush (*Encelia actonii*), Virgin River brittle bush (*Encelia virginensis*), and net-veined goldeneye (*Viguiera reticulata*) as dominant or co-dominant species within the shrub canopy. Other species observed within the community were Dorr's sage (*Salvia dorrii*), white bursage, cheesebush, California croton (*Croton californicus*), and wire lettuce (*Stephanomeria pauciflora*). This vegetation community was observed within the northeastern portion of the California segment along a desert wash from MCV1_32-5 through 33-1. The Acton's and Virgin River brittle brush–net-veined goldeneye scrub alliance is recognized as sensitive by the California Department Fish and Wildlife (CDFW) (2023a).

Allscale Scrub

Allscale scrub (*Atriplex polycarpa* shrubland alliance) features allscale (*Atriplex polycarpa*) as the dominant species in the shrub canopy. Cheesebush and fourwing saltbush (*Atriplex canescens*) were also observed within this community. This vegetation community was mapped in areas with sandy soils on alluvial fans and along the shores of dry lakebeds and washes. The allscale scrub alliance is not considered sensitive by CDFW (2023a).

Black Brush Scrub

Black brush scrub (*Coleogyne ramosissima* shrubland alliance) features black brush (*Coleogyne ramosissima*) as the dominant or co-dominant species in the shrub canopy. Other species such as fourwing saltbush, needleleaf rabbitbrush (*Ericameria teretifolia*), California buckwheat (*Eriogonum fasciculatum*), California barrel cactus (*Ferocactus cylindraceus*), creosote bush, and Mojave yucca (*Yucca schidigera*) were also observed within this community. This vegetation community was found on rocky slopes at MCV1_33-3. The black brush scrub alliance is not considered sensitive by CDFW (2023a).

Catclaw Acacia–Desert Lavender–Chuparosa Scrub

Catclaw acacia–desert lavender–chuparosa scrub (*Senegalia greggii–Hyptis emoryi–Justicia californica* shrubland alliance) is a desert wash vegetation community that features catclaw acacia (*Senegalia greggii*) as the dominant species in the shrub canopy. Other species observed within the community include cheesebush, buckhorn cholla (*Cylindropuntia acanthocarpa*), Nevada joint fir (*Ephedra nevadensis*), beavertail cactus (*Opuntia basilaris*), and Mojave yucca. This vegetation community was observed within arroyos and washes located in the western portion of the Ivanpah Valley. The catclaw acacia–desert lavender–chuparosa scrub alliance is not considered sensitive by CDFW (2023a).

Cheesebush–Sweetbush Scrub

Cheesebush–sweetbush scrub (*Ambrosia salsola–Bebbia juncea* shrubland alliance) is a desert wash community that features cheesebush and sweetbush (*Bebbia juncea*) as dominant or co-dominant species in the shrub canopy. Other species observed within the community include creosote bush, beavertail cactus, silver cholla (*Cylindropuntia echinocarpa*), California buckwheat, and Mexican bladdersage (*Salazaria mexicana*). This vegetation community was observed within arroyos and washes present in the Ivanpah Valley. The cheesebush–sweetbush scrub alliance is not considered sensitive by CDFW (2023a).

Creosote Bush Scrub

Creosote bush scrub (*Larrea tridentata* shrubland alliance) features creosote bush as the dominant or co-dominant species in the shrub canopy. Other species observed at low covers within the community include white bursage, brittle bush, fourwing saltbush, Nevada joint fir and Anderson's boxthorn (*Lycium andersonii*). This vegetation community is present on uplands along much of the Project Area. The creosote bush scrub alliance is not considered sensitive by CDFW (2023a).

Creosote Bush–White Bursage Scrub

Creosote bush–white bursage scrub (*Larrea tridentata–Ambrosia dumosa* shrubland alliance) features creosote bush and white bursage as co-dominants in the shrub canopy. Other species observed within the community include cheesebush, fourwing saltbush, allscale, brittle bush, and Anderson's boxthorn. This vegetation community was observed within alluvial fans and upland slopes along the much of the Project Area. The creosote bush–white bursage scrub alliance is not considered sensitive by CDFW (2023a).

Desert Almond–Mexican Bladdersage Scrub

Desert almond–Mexican bladdersage scrub (*Prunus fasciculata–Salazaria mexicana* shrubland alliance) is a desert wash community that features desert almond (*Prunus fasciculata*) and Mexican bladdersage as co-dominant species in the shrub canopy. Other species observed within the community include cheesebush, fourwing saltbush, creosote bush, Anderson's boxthorn, and Mojave yucca. This vegetation community was observed within arroyos and washes at MCV1_33-4 through 33-5 and MCV2_32-5. The desert almond–Mexican bladdersage scrub alliance is not considered sensitive by CDFW (2023a).

Desert Holly Scrub

Desert holly scrub (*Atriplex hymenelytra* shrubland alliance) features desert holly (*Atriplex hymenelytra*) and/or shrubby honeysweet (*Tidestromia suffruticosa* var. *oblongifolia*) as the dominant or co-dominant species in the shrub canopy. Other species observed within the community include white bursage, shadscale (*Atriplex confertifolia*), downy dalea (*Dalea mollissima*), brittlebush, and creosote bush. This vegetation community was observed within dry arroyos and washes north of Afton and east of Fort Irwin. The desert holly scrub alliance is not considered sensitive by CDFW (2023a).

Rigid Spineflower–Hairy Desert Sunflower Desert Pavement

Rigid spineflower–hairy desert sunflower desert pavement (*Chorizanthe rigida–Geraea canescens* desert pavement sparsely vegetated alliance) is an herbaceous community in which rigid spineflower (*Chorizanthe rigida*) and/or hairy desert sunflower (*Geraea canescens*) are typically present in the herbaceous layer. Other herbaceous species observed at low cover include pebble pincushion (*Chaenactis carphoclinia*), desert plantain (*Plantago ovata*), and Texas stork's bill (*Erodium texanum*). This vegetation community is characterized by sparse or absent vegetative cover, which varies depending on seasonal precipitation. The substrate in this community consists of a surface covered with closely packed, interlocking rock fragments of pebble- to cobble-size on level to gently sloping topography. A large extent of this vegetation community was observed near Alvord Mountain Road. The rigid spineflower–hairy desert sunflower desert pavement alliance is not considered sensitive by CDFW (2023a).

Fremont's Smokebush–Nevada Smokebush Scrub

Fremont's smokebush–Nevada smokebush scrub (*Psorothamnus fremontii–Psorothamnus polydenius* shrubland alliance) features Mojave indigobush (*Psorothamnus arborescens*), Fremont's smokebush (*Psorothamnus fremontii*), or Nevada smokebush (*Psorothamnus polydenius*) as the dominant or co-dominant species in the shrub canopy. Other species observed within the community include catclaw acacia, cheesebush, sweetbush, winterfat (*Krascheninnikovia lanata*), and Mojave cottonthorn (*Tetradymia stenolepis*). This vegetation community was observed within a wash in the central portion of the Clark Mountains. The Fremont's smokebush–Nevada smokebush scrub alliance is recognized as sensitive by CDFW (2023a).

Fremont Cottonwood Forest and Woodland

Fremont cottonwood forest and woodland (*Populus fremontii–Fraxinus velutina–Salix gooddingii* forest and woodland alliance) features Fremont cottonwood (*Populus fremontii*) as the dominant or co-dominant species in the tree canopy. Other species observed within the community include sandbar willow (*Salix exigua*), red willow (*Salix laevigata*), mulefat (*Baccharis salicifolia*), and tule (*Schoenoplectus acutus* var. *occidentalis*). This vegetation

community was observed northeast of the Victorville Substation along the Mojave River. The Fremont cottonwood forest and woodland alliance is recognized as sensitive by CDFW (2023a).

Joshua Tree Woodland

Joshua tree woodland (*Yucca brevifolia* woodland alliance) features Joshua tree evenly distributed at greater than 1% cover, and less than 1% juniper (*Juniperus* spp.) and/or pines (*Pinus* spp.) in the tree canopy. Other species observed within the community include white bursage, cheesebush, California barrel cactus, California buckwheat, and Mojave yucca. This vegetation community was observed within alluvial fans, ridges, and slopes in the Clark Mountains west to Excelsior Mine Road. The Joshua tree woodland alliance is recognized as sensitive by CDFW (2023a).

Mojave Yucca Scrub

Mojave yucca scrub (*Yucca schidigera* shrubland alliance) features Mojave yucca as the dominant shrub in the shrub or small tree canopy. Other species observed within the community include white bursage, black brush, buckhorn cholla, brittle bush, and creosote bush. This vegetation community was observed within alluvial fans and rocky slopes within the western Ivanpah Valley, Clark Mountains and within the Granite Mountains. The Mojave yucca scrub alliance is not considered sensitive by CDFW (2023a).

Needleleaf Rabbitbrush Scrub

Needleleaf rabbitbrush scrub (*Ericameria teretifolia* shrubland alliance) features needleleaf rabbitbrush (*Ericameria teretifolia*) as the dominant species in the shrub canopy. Other species observed within the community include buckhorn cholla, California buckwheat, desert almond, desert mallow (*Sphaeralcea ambigua*), and Mexican bladdersage. This vegetation community is found on rocky slopes on the southwestern portion of the California segment at MCV1_156-2 through 156-3 and MCV2_155-2 through 155-3. The needleleaf rabbitbrush scrub alliance is not considered sensitive by CDFW (2023a).

Nevada Joint Fir–Anderson's Boxthorn–Spiny Hop Sage Scrub

Nevada joint fir–Anderson's boxthorn–spiny hop sage scrub (*Ephedra nevadensis–Lycium andersonii–Grayia spinosa* shrubland alliance) features Nevada joint fir, hop sage (*Grayia spinosa*), and/or Anderson's boxthorn as dominant or co-dominant species in the shrub canopy. Other species observed within the community include spiny desert olive (*Menodora spinescens*), cheesebush, black bush, California buckwheat, and Mexican bladdersage. This vegetation community was observed within arroyos and washes within the western Ivanpah Valley at MCV1_33-5 through 34-1 and MCV2_33-1 through 33-2. The Nevada joint fir–Anderson's boxthorn–spiny hop sage scrub alliance is recognized as sensitive by CDFW (2023a).

Tamarisk Thickets

Tamarisk thickets (*Tamarix* spp. shrubland semi-natural alliance) features tamarisk (*Tamarix ramosissima*) or other tamarisk species (*Tamarix* spp.) as dominant species in the tree canopy. Other species observed within the community were limited to California croton and Russian thistle (*Salsola tragus*). This vegetation community was observed within the dry riverbed of the Mojave River. The tamarisk thickets alliance is not considered sensitive by CDFW (2023a).

White Bursage Scrub

White bursage scrub (*Ambrosia dumosa* shrubland alliance) features white bursage as the dominant species in the shrub canopy. Other species observed within the community consists of black brush, brittle bush, creosote bush, beavertail, and buckhorn cholla. This vegetation community was observed within alluvial fans and rocky hills at between MCV1_96-5 and 97-1, as well as MCV1_104-4 through 105-6. The white bursage scrub alliance is not considered sensitive by CDFW (2023a).

Agriculture

The agriculture land cover type consists of fallow agricultural fields located within the developed areas on the southern side of the Mojave River near Barstow. Native vegetation within these areas has been removed; therefore, observed vegetation primarily consisted of non-native annuals, including red-stemmed filaree (*Erodium cicutarium*), Russian thistle, London rocket (*Sisymbrium irio*), and Arabian schismus (*Schismus arabicus*). The agriculture land cover type is not considered sensitive by CDFW (2023a).

Developed/Disturbed

The developed or disturbed land cover type consists of paved or graded areas comprised of existing access roads, public roads, private residences, railroad ROW. Scattered areas of this land cover type were mapped along the entire length of the Project Area. The developed or disturbed land cover type is not considered sensitive by CDFW (2023a).

Dry Lakebed

Dry lakebed consists of dry lakes and playas and are largely devoid of vegetation. Vegetation present generally consists of non-native, ruderal annuals, including red-stemmed filaree, mustards (*Brassicaceae*), and annual grasses. Dry lakebeds are located in Silver Lake and playas located to the west of California State Route (SR) 127. Dry lakebed is not included as a sensitive natural community by CDFW but may be regulated as a jurisdictional aquatic resource by CDFW, USACE, and/or the RWQCB. Therefore, areas mapped as this land cover type is likely be afforded protection under CEQA (2023a).

Open Water

The open water land cover type was used to map areas that are covered by fresh water and usually lack vegetation. Vegetation when water levels subside in the late summer and fall may include American bulrush (*Schoenoplectus americanus*), tall flatsedge (*Cyperus eragrostis*), smooth beggartick (*Bidens laevis*), and salt heliotrope (*Heliotropium curassavicum*). This land cover type occurs within the Mojave River, immediately northeast of the Victorville Substation. The open water land cover type is not included as a sensitive natural community by CDFW (2023a) but may be regulated as a jurisdictional aquatic resource by CDFW, USACE, and/or RWQCB. Therefore, areas mapped as this land cover type is likely afforded protection under CEQA.

Sparsely Vegetated Wash

The sparsely vegetated wash land cover type was used to map areas that are largely unvegetated washes with seedling sweetbush and cheesebush shrubs present but in very low numbers. These washes can have a high abundance of spring annuals, though not meeting the definition of a vegetation alliance recognized in Sawyer et al. (2009). This cover type was observed within the dry riverbed of the Mojave River at MCV1_123-2 and MCV2_122-2.

The sparsely vegetated wash land cover type is not included as a sensitive natural community by CDFW (2023a) but may be regulated as a jurisdictional aquatic resource by CDFW, USACE, and/or RWQCB. Therefore, areas mapped as this land cover type is likely afforded protection under CEQA.

4.2.2.2 Plants Species Observed

Over 300 genera, species, subspecies, or varieties of plant species were recorded within both California and Nevada segments of the Project Area during the 2021 and 2024 surveys. Of these, nineteen are non-native species, while the remainder are native to California or Nevada. Attachment C of Appendix C1 provides a list of all plants recorded in the Project area.

4.2.2.3 Wildlife Species Observed

The Project Area supports a wide variety of common wildlife, many of which were routinely observed during surveys. Attachment D of Appendix C1 provides a list of all the wildlife species that were detected in the Project area. In total, eleven invertebrates, eleven reptile species, 27 bird species, twelve mammal species were recorded within the California segment of the Project area. Each clade is discussed in further detail below.

Invertebrates

Some common invertebrate orders identified during surveys include Odonata (dragonflies, damselflies), Hemiptera (true bugs), Coleoptera (beetles), Diptera (flies), Lepidoptera (moths and butterflies), and Hymenoptera (wasps, bees, and ants).

Reptiles

Common reptile species observed in the Project area include Great Basin fence lizard (*Sceloporus occidentalis longipes*), western side-blotched lizard (*Uta stansburiana elegans*), desert iguana (*Dipsosaurus dorsalis*), Great Basin collared lizard (*Crotaphytus bicinctores*), longnosed leopard lizard (*Gambelia wislizenii*), common chuckwalla (*Sauromalus ater*), western zebra-tailed lizard (*Callisaurus draconoides rhodostictus*), southern desert horned lizard (*Phrynosoma platyrhinos calidiarum*), yellow-backed spiny lizard (*Sceloporus uniformis*), Great Basin whiptail (*Aspidoscelis tigris tigris*), red racer (*Coluber flagellum piceus*), and southwestern speckled rattlesnake (*Crotalus mitchellii pyrrhus*).

Birds

A total of 33 bird species were recorded during the 2021 and 2024 surveys. Common bird species observed in the Project area include Ash-throated flycatcher (*Myiarchus cinerascens*), black-throated sparrow (*Amphispiza bilineata*), cactus wren (*Campylorhynchus brunneicapillus*), mourning dove (*Zenaida macroura*), common raven (*Corvus corax*), ladder-backed woodpecker (*Dryobates scalaris*), northern flicker (*Colaptes auratus*), red-tailed hawk (*Buteo jamaicensis*), Cooper's hawk (*Accipiter cooperii*), barn owl (*Tyto* alba*),* and great horned owl (*Bubo virginianus*). Several exotic species including the house sparrow (*Passer domesticus*), Eurasian-collared dove (*Streptopelia decaocto*), and feral pigeon or rock dove (*Columba livia*) were also observed.

Mammals

Small mammals or their sign were commonly observed during most of the surveys, primarily at bases of large shrubs. Species detected or observed included round-tailed ground squirrel (*Xerospermophilus tereticaudus*), white-tailed antelope squirrel (*Ammospermophilus leucurus*), kangaroo rat (*Dipodomys* spp.), and desert woodrat (*Neotoma lepida*). Mid- to large-sized mammals detected or observed within the Project Area included black-tailed jackrabbit (*Lepus californicus*), striped skunk (*Mephitis mephitis*), coyote (*Canis latrans*), mule deer (*Odocoileus hemionus*), and feral burro (*Equus asinus*). While not detected during the 2021 and 2024 surveys, western spotted skunk (*Spilogale gracilis*), gray fox (*Urocyon cinereoargenteus*), and bobcat (*Lynx rufus*) are other common mammal species that would be expected to occur within the Project Area. Foraging bats were detected on several occasions during the 2021 surveys and are likely to forage over most of the Project Area, particularly along desert washes.

Amphibians

No amphibians were detected in the Project area during 2021 and 2024 surveys. Although a portion of the Mojave River with perennially available water is located approximately 350 feet from MCV1_162-2, upland dispersal of juvenile, sub-adult, and adult amphibians from the Mojave River riparian corridor into the surrounding uplands of the Project area is unlikely. Common amphibian species known to occur within the Mojave River and the Mojave Desert region in general include western toad (*Anaxyrus boreas*), red-spotted toad (*Anaxyrus punctatus*), Baja California treefrog (*Pseudacris hypochondriaca*), and American bullfrog (*Lithobates catesbeianus*).

Fish

No fish were recorded during 2021 and 2024 surveys due to lack of suitable aquatic habitat. Permanent aquatic habitat within the Mojave Desert is rare and is limited to the Mojave River within the region. The section of the Mojave River within the Project area is ephemeral and does not provide sufficient habitat for any fish species.

4.2.2.4 Special-Status Vegetation, Species, and Habitat

This section provides information on special-status plants and animals that were observed or have a potential to be present within the Project area. The specific habitat requirements and the locations of known occurrences of each special-status species were the principal criteria used for inclusion in the lists of special-status species potentially occurring within the Project area. In this report, “special-status species” is generally used to include all plants and animals listed as threatened or endangered under CESA or FESA; plants listed as rare by the state; recognized by the California BLM as sensitive; or identified as a special animal by CDFW. Specifically, special-status species include the following designations:

- Listed, proposed for listing, or candidates for listing as threatened or endangered under the FESA (federally threatened or endangered).
- Listed, or candidates for listing as threatened or endangered under the CESA (state threatened or endangered).
- Designated as sensitive by the California BLM (California BLM Sensitive).
- Designated as a special animal by CDFW (includes species also designated as federally threatened or endangered, state threatened or endangered, CDFW fully protected species [FP], CDFW Species of Special Concern [SSC], CDFW watch list species [WL], California BLM Sensitive, USFWS BCC).
- Designated by California Fish and Game Code Section 4000 as fur-bearing mammals.

- Plants assigned a CRPR by CNPS.[1]
- Plants listed as rare under the California Native Plant Protection Act.
- Plants considered sensitive or special-status species in local or regional plans, policies, or regulations.

This section also provides an overview of sensitive vegetation types and other land cover types present in the Project area. Lastly, it provides information on habitats within the Project area that support special-status species.

Sensitive Natural Communities

Sensitive vegetation communities are defined by CDFW (2023a) as, "communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects." More recently CDFW stated that sensitive natural communities with state ranks of S1–S3 (S1=critically imperiled; S2=imperiled; S3=vulnerable) should be addressed in the environmental review processes of CEQA and its equivalents (CDFW 2023a; NatureServe 2024).

Five sensitive natural communities were identified within the California Segment of the Project area: Acton's and Virgin River brittle brush - net-veined goldeneye (S3); Fremont's smokebush–Nevada smokebush scrub (S3); Fremont cottonwood forest and woodland (S3); Joshua tree woodland (S3); and Nevada joint fir–Anderson's boxthorn–spiny hop sage scrub (S3S4). These communities are recognized as sensitive vegetation communities by CDFW, although not documented in CNDDB (CDFW 2023a). The literature review identified two sensitive vegetation community documented in the Project vicinity: mesquite bosque and crucifixion thorn woodland (CDFW 2024a). Neither community is present within the Project area.

Special-Status Plants

Based upon the literature review and 2021 and 2024 surveys, a list of special-status plant species that are known to occur in the region was compiled. Appendix C1 provides a table that summarizes plant species observed or known to occur in the Project area, their habitat, distribution, conservation status, and probability of occurrence in the Project area based on geographic and elevational ranges, habitat conditions, and proximity to known locations. Locations of special-status plant species observed during 2021 surveys are depicted on Figures 4.2-2-1 through 4.2-2-35, Special-Status Plants.

One plant species that is a candidate for listing under CESA, Western Joshua tree (*Yucca brevifolia* var. *brevifolia*; candidate state threatened), was observed during 2021 and 2024 surveys within the western portion of the California segment of the Project area. No other listed plant species were observed or have a potential to occur within the Project alignment.

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[1] California Rare Plant Rank (CRPR) (CNPS 2024a):
CRPR 1A: Plants presumed extirpated in California and either rare or extinct elsewhere.
CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere.
CRPR 2A: Plants presumed extirpated in California but common elsewhere.
CRPR 2B: Plants rare, threatened, or endangered in California but more common elsewhere.
CRPR 3: Plants about which more information is needed – a review list.
CRPR 4: Plants of limited distribution – a watch list
–.1: Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
–.2: Moderately threatened in California (20%–80% of occurrences threatened/moderate degree and immediacy of threat)
–.3: Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat)

The following non-listed plant species considered special status in California were also observed within the California segment of the Project area:

- Tidestrom's milkvetch (*Astragalus tidestromii*; CRPR 2B.2)
- Three-awned grama (*Bouteloua trifida*; CRPR 2B.3)
- Desert pincushion (*Coryphantha chlorantha*; CRPR 2B.1)
- Viviparous foxtail cactus (*Coryphantha vivipara* var. *rosea*; CRPR 2B.2)
- Harwood's eriastrum (*Eriastrum harwoodii*; California BLM Sensitive, CRPR 1B.2)
- Parish's club-cholla (*Grusonia parishii*; CRPR: 2B.2)
- Polished blazing star (*Mentzelia polita*; California BLM Sensitive, CRPR 1B.2)
- Rosy two-toned beardtongue (Penstemon bicolor ssp. roseus; California BLM Sensitive, CRPR 1B.1)
- Rusby's desert-mallow (*Sphaeralcea rusbyi* var. *eremicola*; California BLM Sensitive, CRPR: 1B.2)

In addition, the following special-status plant species recognized as sensitive by the BLM or ranked by the CNPS and have at least a moderate potential to be present on the California segment:

- Desert wing-fruit (*Acleisanthes nevadensis*; CRPR 2B.1)
- Nevada onion (*Allium nevadense*; CRPR 2B.3)
- White bear poppy (*Arctomecon merriamii*; CRPR 2B.2)
- Mojave milkweed (*Asclepias nyctaginifolia*; CRPR 2B.1)
- Scaly cloak fern (*Astrolepis cochisensis* ssp. *cochisensis*; CRPR 2B.3)
- Emory's crucifixion thorn (*Castela emoryi*; CRPR 2B.2)
- Gilman's cymopterus (*Cymopterus gilmanii*; CRPR 2B.3)
- Purple-nerve cymopterus (*Cymopterus multinervatus*; CRPR 2B.2)
- Mojave monkeyflower (*Diplacus mohavensis*; California BLM Sensitive, CRPR 1B.2)
- Nine-awned pappus grass (*Enneapogon desvauxii*; CRPR 2B.2)
- Desert bedstraw (*Galium proliferum*; CRPR 2B.2)
- Darlington's blazing star (*Mentzelia puburula*; CRPR 2B.2)
- Creamy blazing star (*Mentzelia tridentata*; CRPR 1B.3)
- Cave evening-primrose (*Oenothera cavernae*; CRPR 2B.1)
- Sky-blue phacelia (*Phacelia coerulea*; CRPR 2B.3)
- Parish's phacelia (*Phacelia parishii*; California BLM Sensitive, CRPR 1B.1)
- Abert's sanvitalia (*Sanvitalia abertii*; CRPR 2B.2)
- Mormon needle grass (*Stipa arida*; CRPR 2B.3)

Plants with a CRPR of 4 are on a watch list indicating limited distribution and do not qualify as rare, threatened, or endangered. Therefore, impacts to CRPR 4 plant species are not usually considered significant under CEQA and should be analyzed based on local distribution and trends. Due to their stable distribution within the region, the following CRPR 4 plant species that were observed or have a moderate or higher potential to occur within the Project area are not addressed further below:

- Clark Mountain agave (*Agave utahensis* var. *nevadensis*; CRPR 4.2)
- Black grama (*Bouteloua eriopoda*; CRPR 4.2)
- Ashen forget me not (*Johnstonella costata* [Synonym: *Cryptantha costata*]; CRPR 4.3)
- Clark Mountain buckwheat (*Eriogonum heermannii* var. *floccosum*; CRPR 4.3)
- Utah mortonia (*Mortonia utahensis*; CRPR 4.3)
- Mojave fishhook cactus (*Sclerocactus polyancistrus*; CRPR: 4.2)
- New York Mountains catseye (*Cryptantha tumulosa*; CRPR 4.3)

Western Joshua tree and other special-status plant species with a CRPR 1 or 2 that were observed or have at least a moderate potential to occur within the Project area are discussed further below.

Western Joshua Tree

Western Joshua tree is a candidate for listing as a threatened species under CESA and afforded the protection of the act while the California Fish and Game Commission decides if listing the species is warranted (CDFW 2020). This monocot tree in the asparagus family (*Agavaceae*) typically blooms between April and May but is a conspicuous tree identifiable at any time of year. It is found within Joshua tree woodland, Great Basin grassland and scrub, Mojavean desert scrub, pinyon and juniper woodland, Sonoran desert scrub, and valley and foothill grassland between 1,310 and 6,560 feet above mean sea level (amsl) (CNPS 2024b). This species occurs on desert flats and slopes in San Bernardino County and other southern and eastern counties of California (Calflora 2024; Jepson Flora Project 2024).

A total of 23 western Joshua tree individuals were mapped within the Project area during 2021 and 2024 surveys, located in the southwest portion of the alignment, south of Dale Evans Parkway and northwest of the North D Street (Figures 4.2-2-31 through 4.2-2-35). Tree individuals were recorded as clusters of trunks; therefore, the count of individuals by trunk as required by the Western Joshua Tree Conservation Act census requirements would likely render a higher western Joshua tree count within the Project area.

Tidestrom's Milkvetch

Tidestrom's milkvetch has a CRPR of 2B.2. This perennial herb blooms from April through July and occurs in sandy or calcareous gravelly washes within Mojavean desert scrub between 1,900 and 5,300 feet amsl. This species is primarily found in the Mojave Desert and desert mountains in Cushenbury Canyon, the northeastern corner of San Bernardino County, and the southeastern corner of Inyo County (Calflora 2024; CNPS 2024b; Jepson Flora Project 2024).

During 2021 surveys, 25 individuals were observed at 10 locations within the California segment, approximately 6.8 miles west of the state line, and sporadically along 9 miles of tower alignment north of Halloran Springs, CA. Due to the presence in the California segment and suitable habitat, Tidestrom's milkvetch has a high potential to occur in other areas of the Project area where suitable habitat is present.

Three-Awned Grama

Three-awned grama has a CRPR of 2B.3. This perennial grass blooms from May through September and occurs on dry, rocky slopes, crevices, or washes, often with calcareous soils, within Mojavean desert scrub communities between 600 and 5,300 feet amsl. This species is generally found in desert mountains of the northern and eastern portions of the Mojave Desert (Calflora 2024; CNPS 2024b; Jepson Flora Project 2024).

During 2021 surveys, 43 individuals were observed at five locations near towers L1 34-6, L1 33-3, and L2 32-5 within the California segment of the Project area. Based on the presence in the California segment and suitable habitat, three-awned grama has a high potential to occur in other areas of the Project area where suitable habitat is present.

Desert Pincushion

Desert pincushion has a CRPR of 2B.1. This perennial stem succulent blooms from April through September and occurs in calcareous soils within Mojavean desert scrub, Joshua tree woodland, and pinyon-juniper woodland communities between 3,200 and 7,900 feet amsl. This species is found within the mountains of eastern San Bernardino County (e.g. Clark Mountains and Kingston Range) (Calflora 2024; CNPS 2024b; Jepson Flora Project 2024).

During 2021 surveys, 315 individual cacti were observed in two general locations (north of Halloran Springs and north of Mountain Pass) in the California segment of the Project area, entirely within the Clark Mountains, Kingston Range, and the Ivanpah Valley. Based on presence in both Project segments and suitable habitat, desert pincushion has a high potential to occur in other areas of the Project area where suitable habitat is present.

Viviparous Foxtail Cactus

Viviparous foxtail cactus has a CRPR 2B.2. This perennial stem succulent blooms from May through June and occurs on gravelly limestone or volcanic slopes within Mojavean desert scrub or pinyon-juniper woodland communities between 4,900 and 8,900 feet amsl. This species is found within the Clark and New York Mountains in eastern San Bernardino County (Calflora 2024; CNPS 2024b; Jepson Flora Project 2024).

During 2021 surveys, a total of 253 individual cacti were observed within the California segment, restricted to the Clark Mountains, Kingston Range, and the Ivanpah Valley. Based on presence within the Project area and suitable habitat, Viviparous foxtail cactus has a high potential to occur in other areas of the Project area where suitable habitat is present.

Harwood's Eriastrum

Harwood's eriastrum is a California BLM sensitive species and has a CRPR of 1B.2. This annual herb blooms in May and June and occurs on sandy soils and desert dunes within creosote bush scrub communities between 410 and 3,000 feet amsl in the Mojave and Sonoran Deserts (Calflora 2024; CNPS 2024b; Jepson Flora Project 2024).

During 2021 surveys, this species was observed at two general locations (north side of the Mojave River and east of Barstow at L1 122-5 and L2 121-4) in the California segment. Based on presence within the Project area and suitable habitat, Harwood's eriastrum has a high potential to occur in other areas of the Project area where suitable habitat is present.

Parish's Club-Cholla

Parish's club-cholla has a CRPR of 2B.2. This perennial stem succulent blooms from May through June and occurs in sandy soils or gravelly flats within Mojavean desert scrub and Joshua tree woodland communities between 900 and 4,000 feet amsl. This species is generally found in the desert mountains of Riverside and San Bernardino Counties (e.g., Clark and New York Mountains) (Calflora 2024; CNPS 2024b; Jepson Flora Project 2024).

During 2021 surveys, 40 individuals were observed in the California segment of the Project area, entirely restricted to the Ivanpah Valley and west of the Clark Mountains. Based on presence within the Project area and suitable habitat, Parish's club-cholla has a high potential to occur in other areas of the Project area where suitable habitat is present.

Polished Blazing Star

Polished blazing star is a California BLM sensitive species and has a CRPR of 1B.2. This annual herb blooms from May through June and occurs in washes or areas with limestone- or gypsum-rich soils within Mojavean desert scrub communities between 3,900 and 5,000 feet amsl. This species is generally found in the northeast extent of the Clark Mountain range of the eastern Mojave Desert (Calflora 2024; CNPS 2024b; Jepson Flora Project 2024).

During 2021 surveys, 12 individuals were observed at a single location in the California segment of the Project area along the access road to L1 34-3. Based on presence within the Project area and suitable habitat, Polished blazing star has a high potential to occur in other areas of the Project area where suitable habitat is present.

Rosy Two-Toned Beardtongue

Rosy two-toned beardtongue is a California BLM sensitive species and has a CRPR of 1B.1. This perennial herb blooms in May and occurs in rocky or gravelly areas within Mojavean desert scrub and Joshua tree woodland communities between 2,800 and 4,900 feet amsl. This species is found in the easternmost extent of the Mojave desert (Calflora 2024; CNPS 2024b; Jepson Flora Project 2024).

During 2021 surveys, 134 individuals were observed in the California segment of the Project area, within the Clark Mountains and the Ivanpah Valley. Based on presence within the Project area and suitable habitat, Rosy two-toned beardtongue has a high potential to occur in other areas of the Project area where suitable habitat is present.

Rusby's Desert-Mallow

Rusby's desert-mallow is a California BLM sensitive species and has a CRPR of 1B.2. This perennial herb blooms in May and occurs on carbonate soils and washes within creosote bush scrub, black brush scrub, and Joshua tree woodland communities between 3,300 and 4,900 feet amsl. This species is found in the Clark Mountains in Inyo and San Bernardino Counties (Calflora 2024; CNPS 2024b; Jepson Flora Project 2024).

During 2021 surveys, 285 individuals were observed in the California segment of the Project area at 61 locations within the Clark Mountains and the Ivanpah Valley. Based on presence within the Project area and suitable habitat, Rusby's desert-mallow has a high potential to occur in other areas of the Project area where suitable habitat is present.

Desert Wing-Fruit

Desert wing-fruit has a CRPR of 2B.1. This perennial herb blooms from June through September and occurs on rocky slopes and shale outcrops within Joshua tree woodland and Mojavean desert scrub communities between 2,500 and 3,800 feet amsl. This species is found in the desert mountains of southeastern California (i.e., northeastern portion of the Kingston Range and southeastern Inyo County) (Calflora 2024; CNPS 2024b; Jepson Flora Project 2024).

This species was not detected during 2021 surveys; however, there are CNDDB records of this species within 5 miles of the Project area (CDFW 2024a). Recent CNDDB records are located near the Project area along Excelsior Mine Road approximately 1.4 miles north of MCV1_45-5. Based on presence suitable habitat within the Project area and recent records in the Project vicinity, desert wing-fruit has a high potential to occur within the Project area where suitable habitat is present.

Nevada Onion

Nevada onion has a CRPR of 2B.3. This perennial herb blooms from April through May and occurs on sandy or gravelly slopes within Joshua tree woodland and Mojavean desert scrub communities between 4,200 and 5,600 feet amsl. This species is found in the desert mountains of San Bernardino and Inyo Counties (Calflora 2024; CNPS 2024b; Jepson Flora Project 2024).

This species was not detected during 2021 surveys; however, there are CNDDB records of this species within 5 miles of the Project area (CDFW 2024a). A recent CNDDB record is located near the Project area approximately 300 feet south of MCV2_56-2. Based on presence suitable habitat within the Project area and recent records in the Project vicinity, Nevada onion has a high potential to occur within the Project area where suitable habitat is present.

White Bear Poppy

White bear poppy is a California BLM sensitive species and has a CRPR of 2B.2. This perennial herb blooms from April through May and occurs on rocky slopes, calcareous soil, loose shale, or sandy washes within chenopod scrub and Mojavean desert scrub communities between 2,600 and 5,300 feet amsl. This species is found in the Clark Mountains and the Kinston Range within San Bernardino and Inyo Counties (Calflora 2024; CNPS 2024b; Jepson Flora Project 2024).

This species was not detected during 2021 surveys; however, there are CNDDB records and iNaturalist observations of this species within 5 miles of the Project area (CDFW 2024a; iNaturalist 2024). A recent CNDDB record is located 2 miles north of MCV1_29-3 within the Clark Mountains. Based on presence suitable habitat within the Project area and recent records in the Project region, white bear poppy has a moderate potential to occur within the Project area where suitable habitat is present.

Mojave Milkweed

Mojave milkweed has a CRPR of 2B.1. This perennial herb blooms from May through June and occurs in arroyos and on dry slopes within pinyon-juniper woodland and Mojavean desert scrub communities between 3,200 and 5,600 feet amsl. This species is found in the Clark and New York Mountains in San Bernardino County (Calflora 2024; CNPS 2024b; Jepson Flora Project 2024).

This species was not detected during 2021 surveys; however, there are CNDDB records and iNaturalist observations of this species within 5 miles of the Project area (CDFW 2024a; iNaturalist 2024). Recent records are located along the Project alignment, approximately 350 feet from MCV2_32-3. Based on presence suitable habitat within the Project area and recent records in the Project vicinity, Mojave milkweed has a high potential to occur within the Project area where suitable habitat is present

Scaly Cloak Fern

Scaly cloak fern has a CRPR of 2B.3. This fern blooms from April through October and occurs on limestone slopes and crevices within Joshua tree and pinyon-juniper woodland communities between 3,300 and 5,300 feet amsl. This species is found in the desert mountains of San Bernardino and Inyo Counties (Calflora 2024; CNPS 2024b; Jepson Flora Project 2024).

This species was not detected during 2021 surveys; however, there are CNDDB records and iNaturalist observations of this species within 5 miles of the Project area (CDFW 2024a; iNaturalist 2024). A recent record is located approximately 2 miles southeast of MCV2_34-4. Based on presence suitable habitat within the Project area and recent records in the Project vicinity, scaly cloak fern has a high potential to occur within the Project area where suitable habitat is present.

Emory's Crucifixion Thorn

Emory's crucifixion thorn has a CRPR of 2B.2. This shrub blooms from June through July and occurs on dry, gravelly slopes, washes, and plains within Mojavean desert scrub, Sonoran desert scrub, and playa communities between 350 and 2,100 feet amsl. This species is found in the southern Mojave Desert, excluding the desert mountains, and the Sonoran Desert (Calflora 2024; CNPS 2024b; Jepson Flora Project 2024).

This species was not detected during 2021 surveys; however, there are CNDDB records and iNaturalist observations of this species within 5 miles of the Project area (CDFW 2024a; iNaturalist 2024). A recent record is located approximately 3.6 miles southeast of MCV2_83-3. Based on presence suitable habitat within the Project area and recent records in the Project vicinity, Emory's crucifixion thorn has a high potential to occur within the Project area where suitable habitat is present.

Gilman's Cymopterus

Gilman's cymopterus has a CRPR of 2B.3. This perennial herb blooms from April through May and occurs on limestone and gypsum slopes within Mojavean desert scrub communities between 2,900 and 6,600 feet amsl. This species is found in the desert mountains of northeastern San Bernardino County and eastern Inyo County (Calflora 2024; CNPS 2024b; Jepson Flora Project 2024).

This species was not detected during 2021 surveys; however, there are CNDDB records of this species within 5 miles of the Project area (CDFW 2024a). Recent records are located approximately 1.5 miles to the north of MCV1_29-4. Based on presence suitable habitat within the Project area and recent records in the Project vicinity, Gilman's cymopterus has a high potential to occur within the Project area where suitable habitat is present.

Purple-Nerve Cymopterus

Purple-nerve cymopterus has a CRPR of 2B.2. This perennial herb blooms from March through April and occurs sandy and rocky slopes within pinyon-juniper woodland and Mojavean desert scrub communities between 2,000 and 5,900 feet amsl. This species is found in the desert mountains of San Bernardino County and Inyo County (Calflora 2024; CNPS 2024b; Jepson Flora Project 2024).

This species was not detected during 2021 surveys; however, there are CNDDB records of this species within 5 miles of the Project area (CDFW 2024a). Recent records are located along Excelsior Mine Road approximately 4.3 miles north of MCV1_45-5. Based on presence suitable habitat within the Project area and recent records in the Project vicinity, purple-nerve cymopterus has a high potential to occur within the Project area where suitable habitat is present.

Mojave Monkeyflower

Mojave monkeyflower is a California BLM sensitive species and has a CRPR of 1B.2. This annual herb blooms from April through June and occurs on gravelly banks of washes within Joshua tree woodland and Mojavean desert scrub communities between 1,900 and 3,300 feet amsl. This species is found in the western and central portions of the Mojave Desert (Calflora 2024; CNPS 2024b; Jepson Flora Project 2024).

This species was not detected during 2021 surveys; however, there are CNDDB records and iNaturalist observations of this species within 5 miles of the Project area (CDFW 2024a; iNaturalist 2024). A recent CNDDB record is located approximately 2.6 miles to the east of MCV2_129-1 south of Interstate 40. Based on presence suitable habitat within the Project area and recent records in the Project vicinity, Mojave monkeyflower has a high potential to occur within the Project area where suitable habitat is present.

Nine-Awned Pappus Grass

Nine-awned pappus grass has a CRPR of 2B.2. This perennial grass blooms from August through September and occurs on rocky slopes and crevices with decomposed granite or gravelly, limestone soils within pinyon-juniper woodland communities between 4,100 and 6,000 feet amsl. This species is found in eastern Mojave Desert within San Bernardino County (Calflora 2024; CNPS 2024b; Jepson Flora Project 2024).

This species was not detected during 2021 surveys; however, there are CNDDB records of this species within 5 miles of the Project area (CDFW 2024a). Recent CNDDB records are located within the MCV1_43-3 Project Area east of Excelsior Mine Road. Based on presence suitable habitat within the Project area and recent records in the Project vicinity, nine-awned pappus grass has a high potential to occur within the Project area where suitable habitat is present.

Desert Bedstraw

Desert bedstraw has a CRPR of 2B.2. This annual herb blooms from April through May and occurs on rocky banks and limestone ledges within Joshua tree woodland and creosote bush scrub communities between 3,600 and 4,600 feet amsl. This species is found in the desert mountains of southeastern California (Calflora 2024; CNPS 2024b; Jepson Flora Project 2024).

This species was not detected during 2021 surveys; however, there are CNDDB records of this species within 5 miles of the Project area (CDFW 2024a). A recent CNDDB record is located approximately 1.8 miles north of MCV1_34-3 in the Clark Mountains. Based on presence suitable habitat within the Project area and recent records in the Project region, desert bedstraw has a moderate potential to occur within the Project area where suitable habitat is present.

Darlington's Blazing Star

Darlington's blazing star has a CRPR of 2B.2. This perennial herb blooms from February through October and occurs in sandy crevices in cliffs or rocky slopes within creosote bush scrub communities between 295 and 4200 feet amsl. This species is found in the southeastern extent of the Mojave Desert and the eastern extent of the Sonoran Desert (Calflora 2024; CNPS 2024b; Jepson Flora Project 2024).

This species was not detected within the California segment during 2021 surveys; however, several observations have been made in California including an observation on BLM land in Clark Mountains area along a powerline road on the north side of the range (part of Herbarium of Rancho Santa Ana Botanic Garden 2016) (Calfora 2024). Based on presence suitable habitat within the Project area and recent records in the Project vicinity, Darlington's blazing star has a high potential to occur within the Project area where suitable habitat is present.

Creamy Blazing Star

Creamy blazing star has a CRPR of 1B.3. This annual herb blooms from March through May and occurs on gravelly, rocky, or sandy substrates within Mojavean desert scrub communities, usually creosote bush scrub, between 2,200 and 4,300 feet amsl. This species is found in the central and northwestern extent of the Mojave Desert (Calflora 2024; CNPS 2024b; Jepson Flora Project 2024).

This species was not detected during 2021 surveys; however, there are CNDDB records and iNaturalist observations of this species within 5 miles of the Project area (CDFW 2024a; iNaturalist 2024). A recent record is located within the Project area at MCV2_132-2. Based on presence suitable habitat within the Project area and recent records in the Project vicinity, creamy blazing star has a high potential to occur within the Project area where suitable habitat is present.

Cave Evening-Primrose

Cave evening-primrose has a CRPR of 2B.1. This perennial herb blooms from April through May and occurs on dry, gravelly, often calcareous slopes, cliffs, and ridges within Great Basin scrub, Joshua tree woodland, and Mojavean desert scrub communities between 6,200 and 7,600 feet amsl. This species is found in the desert mountains of southeastern California (i.e., eastern portion of the Clark Mountain Range and base of the range in Ivanpah Valley) (Calflora 2024; CNPS 2024b; Jepson Flora Project 2024).

This species was not detected during 2021 surveys; however, there are CNDDB records of this species within 5 miles of the Project area (CDFW 2024a). Recent records are located 2.5 miles north of MCV1_32-1 within the Clark Mountains. Based on presence suitable habitat within the Project area and recent records in the Project vicinity, cave evening-primrose has a high potential to occur within the Project area where suitable habitat is present.

Sky-Blue Phacelia

Sky-blue phacelia has a CRPR of 2B.3. This annual herb blooms from April through May and occurs on open, sandy to rocky areas within pinyon-juniper woodland and Mojavean desert scrub communities between 4,500 and 6,600 feet amsl. This species is found in the eastern extent of the Mojave Desert (Calflora 2024; CNPS 2024b; Jepson Flora Project 2024).

This species was not detected during 2021 surveys; however, there are CNDDB records of this species within 5 miles of the Project area (CDFW 2024a). Recent records are located 2.4 miles north of MCV1_32-5 within the Clark Mountains. Based on presence suitable habitat within the Project area and recent records in the Project vicinity, sky-blue phacelia has a high potential to occur within the Project area where suitable habitat is present.

Parish's Phacelia

Parish's phacelia has a CRPR of 1B.1. This annual herb blooms from April through July and occurs clay or alkaline substrates within Mojavean desert scrub communities or dry lake margins between 1,700 and 4,000 feet amsl. This species is found in the northern and western extent of the Mojave Desert (i.e., northwestern San Bernardino County, southeastern Inyo County) (Calflora 2024; CNPS 2024b; Jepson Flora Project 2024).

This species was not detected during 2021 surveys; however, there are CNDDB records of this species within 5 miles of the Project area (CDFW 2024a). Recent records are located approximately 600 feet north of MCV1_112-4. Based on presence suitable habitat within the Project area and recent records in the Project vicinity, Parish's phacelia has a high potential to occur within the Project area where suitable habitat is present.

Abert's Sanvitalia

Abert's sanvitalia has a CRPR of 2B.2. This annual herb blooms from August through October and occurs on dry, rocky limestone slopes and washes within pinyon-juniper woodland and blackbrush scrub communities between 4,700 and 5,800 feet amsl. This species is found in the southeastern desert mountains of the Mojave Desert (i.e., Clark, Mescal, and New York Mountains) (Calflora 2024; CNPS 2024b; Jepson Flora Project 2024).

This species was not detected during 2021 surveys; however, there are CNDDB records of this species within 5 miles of the Project area (CDFW 2024a). A recent record is located one mile south of MCV2_34-3 in the Clark Mountains. Based on presence suitable habitat within the Project area and recent records in the Project vicinity, Abert's sanvitalia has a high potential to occur within the Project area where suitable habitat is present.

Mormon Needle Grass

Mormon needle grass has a CRPR of 2B.3. This perennial grass blooms from May through August and occurs on carbonate outcrops within pinyon-juniper woodland and Joshua tree woodland communities between 3,600 and 6,100 feet amsl. This species is generally found in the northeastern extent of the Mojave Desert (Calflora 2024; CNPS 2024b; Jepson Flora Project 2024).

This species was not detected during 2021 surveys; however, there are CNDDB records and iNaturalist observations of this species within 5 miles of the Project area (CDFW 2024a; iNaturalist 2024). Recent records are located approximately 1.5 miles north of MCV1_34-1 in the Clark Mountains. Based on presence suitable habitat within the Project area and recent records in the Project vicinity, creamy blazing star has a high potential to occur within the Project area where suitable habitat is present.

California Desert Native Plants

According to the list of observed plants observed provided in Appendix C1, California desert native plants are present within the California segment of the Project area, including 19 species of Cactaceae, paloverde (*Parkinsonia* sp.), catclaw (*Senegalia greggii*), desert holly (*Atriplex hymenelytra*), and six species of Agavaceae (also known as Asparagaceae). Of these, the following seven plant species or taxa are considered special-status: desert pincushion (CRPR 2B.1), viviparous foxtail cactus (CRPR 2B.1), Parish's club-cholla (CRPR 2B.2), Johnson's bee-hive cactus (CRPR 2B.2), Mojave fish hook cactus (CRPR 4.2), western Joshua tree (state candidate for listing as threatened), and Clark Mountain agave (CRPR 4.2).

Although the CDNPA is codified in state law (California Food and Agricultural Code Division 23), enforcement powers and administrative responsibilities are given to the subject County commissioner, sheriff, and board of supervisors as stipulated in Chapter 4 of the CDNPA (Enforcement Powers and Administrative Responsibilities). Therefore, potential impacts to desert native plant species are analyzed in the context of Project consistency with local policies or ordinances.

Special-Status Wildlife

Based upon the literature review and 2021 and 2024 surveys, a list of special-status wildlife species that are known to occur in the Project area or the broader region was compiled. Appendix C1 provides a table that summarizes wildlife species observed or known to occur in the Project area, their habitat, distribution, conservation status, and probability of occurrence in the Project area based on geographic and elevational ranges, habitat conditions, and proximity to known locations. Locations of special-status wildlife species observations during 2021 surveys are depicted on Figures 4.2-3-1 through 4.2-3-112, Special-Status Wildlife.

A total of nine wildlife species considered special status in California were detected within the California segment of the Project area during 2021 and 2024 surveys including the two mammal species, six bird species, and one reptile species.

The one special-status reptile species, desert tortoise (*Gopherus agassizii*; state threatened, California BLM Sensitive), is the only listed wildlife species observed within the California segment during 2021 and 2024 surveys. The following eight non-listed wildlife species considered special status in California were also observed within the California segment of the Project area.

- Burrowing owl (*Athene cunicularia*; CDFW SSC, California BLM Sensitive)
- Golden eagle (BGEPA, USFWS BCC, California BLM Sensitive, CDFW FP, CDFW WL)
- Costa's hummingbird (*Calypte costae*; USFWS BCC)
- Loggerhead shrike (*Lanius ludovicianus*; CDFW SSC, California BLM Sensitive, USFWS BCC)
- Desert bighorn sheep (*Ovis canadensis nelsoni*; CDFW FP, California BLM Sensitive)
- Le Conte's thrasher (*Toxostoma lecontei*; CDFW SSC, California BLM Sensitive, USFWS BCC),
- Desert kit fox (*Vulpes macrotis arsipus*; CDFW FM)
- Yellow-headed blackbird (*Xanthocephalus xanthocephalus*; CDFW SSC)

The following nine listed or candidate for listing wildlife species were determined to have a moderate or high potential to occur within the California segment of the Project area.

- Tricolored blackbird (*Agelaius tricolor*; state threatened, USFWS BCC, CDFW SSC, California BLM Sensitive)
- Crotch's bumble bee (*Bombus crotchii*; candidate state endangered)
- Swainson's hawk (*Buteo swainsoni*; state threatened, California BLM Sensitive, USFWS BCC)
- Gilded flicker (*Colaptes chrysoides*; state endangered, California BLM Sensitive, USFWS BCC)
- Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*; federally threatened and state endangered, California BLM Sensitive)
- Southwestern willow flycatcher (*Empidonax traillii extimus*; state and federally endangered)
- Mountain lion (*Puma concolor*; specially protected mammal, candidate state threatened)
- Least Bell's vireo (*Vireo bellii pusillus*; state and federally endangered)
- Mohave ground squirrel (*Xerospermophilus mohavensis*; state threatened, California BLM Sensitive)

The following 16 wildlife species considered special status in California were determined to have a moderate or high potential to occur within the California segment of the Project area.

- Cooper's hawk (*Accipiter cooperii*; CDFW WL)
- Ringtail (*Bassariscus astutus*; CDFW FP)
- Morrison bumble bee (*Bombus morrisoni*; CDFW special animal)
- Townsend's big-eared bat (*Corynorhinus townsendii*; CDFW SSC, California BLM Sensitive)
- Western pond turtle (*Emys marmorata*; CDFW SSC, California BLM Sensitive)
- Prairie falcon (*Falco mexicanus*; CDFW WL, USFWS BCC)
- American peregrine falcon
- Victorville shoulderband snail (*Helminthoglypta mohaveana*; CDFW special animal)
- Banded Gila monster (*Heloderma suspectum cinctum*; CDFW SSC, California BLM Sensitive)
- Yellow-breasted chat (*Icteria virens*; CDFW SSC)
- San Emigdio blue butterfly (*Plebulina emigdionis*; CDFW special animal)
- Vermilion flycatcher (*Pyrocephalus rubinus*; CDFW SSC)
- Yellow warbler (*Setophaga petechia*; CDFW SSC)
- American badger (*Taxidea taxus*; CDFW SSC)
- Bendire's thrasher (*Toxostoma bendirei*; CDFW SSC, California BLM Sensitive, USFWS BCC)
- Crissal Thrasher (*Toxostoma crissale*; CDFW SSC, California BLM Sensitive)
- Mojave fringe-toed lizard (*Uma scoparia*; CDFW SSC, California BLM Sensitive)

Desert Tortoise

Desert tortoise is listed under FESA and CESA as threatened and is a California BLM sensitive species. A total of two adult individuals were observed within the California segment of the Project area. In addition, a total of 962 burrows, five pieces of scat, eight carcasses, three pallets, and two drinking depressions were observed in the Project area. In the California segment, the highest concentration of tortoise sign occurred approximately 20 miles west of the state line. Tortoise sign occurred fairy infrequently from Victorville to Yermo, with consistent tortoise

sign beginning approximately 20 miles northeast of the City of Yermo, continuing to the state line. Based on presence of suitable habitat throughout the Project area and observations of individuals and signs during 2021 surveys, desert tortoise has a high potential to occur throughout the Project area.

Burrowing Owl

Burrowing owl is a CDFW SSC, a California BLM sensitive species, and a USWFS BCC. During 2021 surveys, a single burrowing owl burrow, believed to be inactive, was observed within the Project area in California at MCV1_150-3. Although no other signs of burrowing owl or burrowing owl individuals were observed in the Project area, there are 29 CNDDB records dating from 1891 through 2017 within 5 miles of the Project area (CDFW 2024a). There are also several iNaturalist and eBird observations of this species within 5 miles of the Project area (eBird 2024; iNaturalist 2024). Based on presence of suitable foraging and nesting habitat, recent records, and the observation of previously occupied burrow during 2021 surveys, burrowing owl has a high potential to nest, forage, and overwinter throughout the Project area.

Golden Eagle

Golden eagle is a CDFW fully protected species, a California BLM sensitive species, a CDFW watch list species, a USWFS BCC, and protected under BGEPA. Although no suitable natural nesting habitat is present within the Project area, artificial nesting sites such as electrical transmission towers within the vicinity of the Project alignment have been used by golden eagles. Additionally, suitable foraging habitat is present throughout the Project alignment and there is a high potential for golden eagles to forage on the route. During 2021 surveys, a golden eagle was observed soaring overhead, likely foraging, within the Project area at MCV1_109-1 east of the City of Yermo. There are also several CNDDB records of golden eagles within 5 miles of the Project area (CDFW 2024a). Based on presence of suitable habitat within the Project area, recent records of nesting in the Project vicinity, and direct observations of foraging during 2021 surveys, golden eagle has a high potential to nest and forage in the Project area where suitable habitat is present.

Costa's Hummingbird

Costa's hummingbird is a USWFS BCC. During 2021 surveys, one adult female Costa's hummingbird was observed within the Project area, southwest of State Route 247 near Barstow. Suitable nesting and foraging habitat are present throughout the Project area. There no CNDDB records of the species within 5 miles of the Project area; however, there are several iNaturalist and eBird records are present within that vicinity (eBird 2024; iNaturalist 2024). Based on presence of suitable habitat within the Project area, recent records in the Project vicinity, and direct observations during 2021 surveys, Costa's hummingbird has a high potential to nest and forage in the Project area where suitable habitat is present.

Loggerhead Shrike

Loggerhead shrike is a CDFW SSC and a California BLM sensitive species. During 2021 surveys, a loggerhead shrike call was heard along with a shrike larder (impaled prey item) at MCV1_44-2 and 121-2. Suitable nesting and foraging habitat are present throughout the Project area. There are four recent CNDDB records and several iNaturalist observations of this species within 5 miles of the Project area (CDFW 2024a; iNaturalist 2024). Based on presence of suitable habitat within the Project area and direct observations during 2021 surveys, loggerhead shrike has a high potential to nest and forage throughout the Project area.

Desert Bighorn Sheep

Desert bighorn sheep is a CDFW fully protected species and a California BLM sensitive species. During 2021 surveys, a horn fragment was observed within the Project area at MCV1-93-5 near the Soda Mountains where desert bighorn sheep have been documented to occur. In general, CNDDB records show that desert bighorn sheep are documented to occur within the Clark, Soda, and Newberry Mountains (CDFW 2024a). There is one CNDDB record of this species within 5 miles of the Project area, which dates back to 1986 (CDFW 2024a); however, there are also several iNaturalist observations of this species within 5 miles of the Project area (iNaturalist 2024). Based on direct observation of remains during the 2021 surveys, presence of suitable habitat, and records in the Project vicinity, desert bighorn sheep have a high potential to occur within the Project area.

Le Conte's Thrasher

Le Conte's thrasher is a CDFW SSC, a California BLM sensitive species, and a USWFS BCC. During 2021 surveys, this species was observed foraging within the Project area at MCV1_146-5 and 151-2. There are several CNDDB records and several iNaturalist observations within 5 miles of the Project area (CDFW 2024a; iNaturalist 2024). Based on presence of suitable foraging and nesting habitat, direct observations during 2021 surveys, and recent records in the Project vicinity, Le Conte's thrashers have a high potential to forage and nest within the Project area.

Desert Kit Fox

Desert kit fox is considered a "fur-bearing mammal," protected from take under the California Fish and Game Commission's Mammal Hunting Regulations (Subdivision 2, Chapter 5), which effectively protects it from hunting pressure. Desert kit fox is not listed under FESA or CESA, or under any other special-status designation (NPS 2015). A total of seven desert kit fox den complexes, including five natal den locations, were observed during surveys within the Project area. Additionally, desert kit fox signs and potential dens were observed throughout the entire length of the Project area. Due to the presence of suitable habitat and observations of sign and suitable dens during 2021 surveys, desert kit fox are known to occur and have a high potential to occur year-round throughout the Project area and vicinity.

Yellow-Headed Blackbird

Yellow-headed blackbird is a CDFW SSC. Although there are no CNDDB records of the species within 5 miles of the Project area; several recent non-breeding season eBird observations have been made in that vicinity and along with one iNaturalist observation (eBird 2024; iNaturalist 2024). During 2021 surveys, a single yellow-headed blackbird was observed within the Project area at MCV2_47-2. Based on the presence of suitable foraging habitat, yellow-headed blackbird is expected to occur within the Project area as a migrant; however, they are not expected to nest in the region, as it is located outside of the breeding range of the species.

Tricolored Blackbird

Tricolored blackbird is listed under CESA as threatened, a CDFW SSC, a California BLM sensitive species, and a USWFS BCC. This species was not detected during 2021 and 2024 surveys; however, there is one CNDDB record of this species in the Mojave River within 0.5 mile of the Project area, and two iNaturalist observations are shown south of I-15 with one record being within 5 miles of the Project area (CDFW 2024a; iNaturalist 2024). Although suitable breeding or foraging habitat is not present within the Project area, riparian vegetation within 500 feet of the Project area in the Mojave River may support this species. Based on nearby historical CNDDB records and the

presence suitable foraging habitat in the vicinity of the Project area, tricolored blackbird has a low potential to breed and a high potential to pass through the Project area.

Crotch's Bumblebee

Crotch's bumblebee is a candidate for listing under CESA as endangered. This species was not detected during 2021 and 2024 surveys; however, there is one CNDDB record from Victorville near Sidewinder Mountain (CDFW 2024a). Based on the suitable habitat and recent records within the vicinity of the Project, Crotch's bumble bee has a moderate potential to occur within the Project area.

Swainson's Hawk

Swainson's hawk is listed under CESA as threatened, a CDFW SSC, a California BLM sensitive species, and a USWFS BCC. This species was not detected during 2021 and 2024 surveys and the Project area is located outside of their breeding range. As such, Swainson's hawks are not expected to nest within the Project area. Still, suitable foraging habitat is present within the Project area for migrating Swainson's hawks. Three CNDDB records within 5 miles date from 1920 through 1939 and recent iNaturalist observations occur near Mojave Narrows Regional Park southeast of the Project area (CDFW 2024a; iNaturalist 2024). Therefore, Swainson's hawk has a high potential to forage within the Project area during migration.

Gilded Flicker

Gilded flicker is listed under CESA as endangered, a California BLM sensitive species, and a USWFS BCC. This species was not detected during 2021 and 2024 surveys; however, there are three CNDDB records within 5 miles of the Project area (CDFW 2024a) and several recent eBird observations within the Ivanpah Valley and in the foothills of the Clark Mountains (eBird 2024). Based on the suitable habitat and recent records within the vicinity of the Project, gilded flickers have a high potential to occur within the Project area (i.e., Joshua tree woodland near Ivanpah Valley and foothills of the Clark Mountains).

Western Yellow-Billed Cuckoo

Western yellow-billed cuckoo is listed under FESA as threatened, listed under CESA as endangered, and a California BLM sensitive species. This species was not detected during 2021 and 2024 surveys; however, there are two CNDDB records within 5 miles of the Project area along the Mojave River, including a historical record in the Upper Narrows Area, and a recent iNaturalist observation near Clark Mountain approximately 2 miles from the Project area (CDFW 2024a; iNaturalist 2024). Riparian vegetation within 500 feet of the Project area in the Mojave River near the Victorville Switching Station would provide marginal breeding habitat and suitable foraging habitat for the species. Based on the presence of suitable habitat along the Mojave River and historical CNDDB records, western yellow-billed cuckoo has a low potential to breed and a high potential to forage within the Project area.

Southwestern Willow Flycatcher

Southwestern willow flycatcher is listed under FESA and CESA as endangered. This species was not detected during 2021 and 2024 surveys; however, there is one CNDDB record within 5 miles of the Project area dated from 1990 (CDFW 2024a), and recent eBird observations along the Mojave River in Victorville (eBird 2024). Riparian vegetation within 500 feet of the Project area in the Mojave River near the Victorville Switching Station would provide marginal breeding habitat and suitable foraging habitat for the species. Based on the presence suitable

habitat along the Mojave River and historical CNDDB records, southwestern willow flycatcher has a low potential to breed and a high potential to forage within the Project area where suitable habitat is present.

Mountain Lion

Mountain lion is a candidate for listing under CESA as threatened and a "specially protected mammal," protected under California Wildlife Protection Act of 1990, which effectively prohibits capture or hunting of the species. This species was not directly observed during 2021 and 2024 surveys; however, several iNaturalist observations include mountain lions tracks in the Mojave National Preserve near the border with Nevada and a direct observation of an individual near Hesperia (iNaturalist 2024). Additionally, suitable habitat is present throughout the Project area. Based on the presence of suitable habitat, individuals' broad home ranges, the species' known geographic range, and recent observations, mountain lion has a high potential to occur within the Project area.

Least Bell's Vireo

Least Bell's vireo is listed under FESA and CESA as endangered. This species was not detected during 2021 and 2024 surveys; however, there are seven CNDDB records within 5 miles of the Project area, a few iNaturalist observations within 5 miles of the Project area, and several recent eBird observations along the Mojave River in Victorville (CDFW 2024a; eBird 2024; iNaturalist 2024). Riparian vegetation within 500 feet of the Project area in the Mojave River near the Victorville Switching Station would provide marginal breeding habitat and suitable foraging habitat for the species. Based on the presence suitable foraging habitat along the Mojave River and historical CNDDB records, least Bell's vireo has a low potential to breed and a high potential to forage within the Project area.

Mohave Ground Squirrel

Mohave ground squirrel is listed under CESA as threatened and is a California BLM sensitive species. The distribution range for this species is restricted to the Mojave Desert in San Bernardino, Los Angeles, Kern, and Inyo Counties (Zeiner et al. 1990).

No Mohave ground squirrel individuals or their burrows were documented within the Project area during the 2021 and 2024 surveys. The Project area is located outside of all identified Mohave ground squirrels core areas as well as potential movement corridors. The Project is largely located outside of the current range of the species; however, the easternmost extent of the current known range of the species overlaps with the Project area between the Victorville Landfill to the Victorville Switching Station. In addition, the California Wildlife Habitat Relationship (CWHR) predicted habitat for the species extends from Death Valley Road (SR-127) southwest to 5 miles south of Interstate 40 and from the Mojave River to the Victorville Switching Station. These areas are generally ranked as low-quality habitat, with the exception of high-quality habitat areas mapped south of Interstate 40 and from the Victorville Landfill to the Victorville Switching Station (CDFW 2024b).

Two recent CNDDB records from 2005 and 2007 are present along the Project area: one CNDDB occurrence is located approximately 900 feet east of the Project area near MCV2_159-6, south of the Victorville Landfill, and another CNDDB occurrence is located 3.6 miles northwest of the Project area near MCV1_136-6 (CDFW 2024a). These CNDDB records indicate that vegetation present where Mohave ground squirrels were observed consists of creosote bush scrub consisting of widely spaced creosote bush, white bursage, cheese bush, saltbush species (*Atriplex* spp.), and ephedra (*Ephedra* spp.) in areas with gentle topography (1% to 2% slopes) and sandy soils with

scattered rocks. Similar site conditions are present within the Project area located near the Victorville switching Station and in the Stoddard Valley.

Based on the presence of suitable habitat and nearby records, Mohave ground squirrel has a moderate potential for to occur within the Project area near the Victorville Switching Station from MCV1_154-2/MCV2_153-3 through MCV1_137-4/MCV2_136-5 and in the Stoddard Valley from MCV1_154-2/MCV2_153-3 through MCV1_139-5/MCV2_139-1. Outside of these areas, there is low potential for the species to occur because of a lack of records and low-quality habitat.

Cooper's Hawk

Cooper's hawk is a CDFW watch list species. This species was not detected during 2021 and 2024 surveys; however, there is one historical CNDDB record and several recent iNaturalist and eBird observations within 5 miles of the Project area (CDFW 2024a; eBird 2024; iNaturalist 2024). Although not occurring directly within the Project area, suitable nesting habitat (i.e., riparian woodland) associated with the Mojave River near the Victorville Switching Station is located within 500 feet of the Project area. Additionally, there is suitable foraging habitat within the vicinity of the riparian corridor. Based on the presence of suitable foraging habitat in close proximity to suitable nesting habitat, as well as recent nearby records, Cooper's hawk has a high potential to forage within the Project area and nest within 500 feet of the Project area.

Ringtail

Ringtail is a CDFW fully protected species. This species was not detected during 2021 and 2024 surveys; however, there are several iNaturalist observations of potential ringtail scat in the desert regions along the transmission line alignment, mountainous regions near Barstow, and Granite Mountains (iNaturalist 2024). Suitable habitat is present along the alignment where rocky outcrops, canyons or talus occur near perennial sources of water. Therefore, ringtail has a high potential to occur within the Project area where suitable habitat is present.

Morrison Bumble Bee

Morrison bumble bee is a CDFW special animal due to its inclusion in the current CDFW Special Animals List as a S1S2 "Critically Imperiled" or "Imperiled" species. Morrison bumble bee is not listed under FESA or CESA and is not designated as a CDFW fully protected species, a CDFW SSC, a CDFW watch list species, or a California BLM sensitive species. This species was not detected during 2021 and 2024 surveys; however, there is one iNaturalist observations near Victorville within 5 miles of the Project area (iNaturalist 2024). Additionally, suitable habitat is present throughout the Project area. Therefore, Morrison bumble bee has a moderate potential to occur within the Project area.

Townsend's Big-Eared Bat

Townsend's big-eared bat is a CDFW SSC and a California BLM sensitive species. This species was not detected during 2021 and 2024 surveys; however, there are seven CNDDB records within 5 miles of the Project area (CDFW 2024a). The Project area contains suitable foraging habitat but only marginal habitat for roosting. Therefore, Townsend's big-eared bat has a high potential to forage within the Project area and a low potential to roost.

Western Pond Turtle

Western pond turtle is a CDFW SSC and a California BLM sensitive species. This taxon is not listed as threatened or endangered; however, the USFWS has proposed to list the southwestern pond turtle as threatened under FESA. This species was not detected during 2021 and 2024 surveys; however, there are several CNDDB records found in or near the Mojave River, including Afton Canyon (CDFW 2024a). While the eastern boundary of the western pond turtle range occurs along the Mojave River, the CWHR Western Pond Turtle Predicted Habitat indicates that primarily moderate-quality habitat occurs in Mojave Valley near Harvard Road and Yermo, along with a few areas of low-quality habitat and even fewer areas of high-quality habitat (CDFW 2024b). Based on nearby records and presence of limited suitable habitat, western pond turtle has a moderate potential to occur within the Project area where it crosses the Mojave River.

Prairie Falcon

Prairie falcon is a CDFW watch list species and a USFWS BCC. This species was not detected during 2021 and 2024 surveys; however, there are 14 CNDDB records and several recent eBird observations within 5 miles of the Project area (CDFW 2024a; eBird 2024). Limited marginal nesting habitat is present in rocky, mountainous stretches of the Project; however, there is suitable foraging habitat throughout the Project alignment. Therefore, prairie falcon has a low potential to nest and a high potential to forage within the Project area.

American Peregrine Falcon

American peregrine falcon has been delisted under CESA and FESA and removed as a fully protected species because its status has been determined to be recovered. This species was not detected during 2021 and 2024 surveys; however, there are several recent eBird observations within 5 miles of the Project area (eBird 2024). Limited marginal nesting habitat is present within the mountains of the McCullough Range and on manmade structures throughout the Project; however, there is a lack of nesting records (CDFW 2024a; eBird 2024; iNaturalist 2024). Still, suitable foraging habitat is present throughout the Project alignment. Therefore, American peregrine falcon has a low potential to nest and a high potential to forage within the Project area. Due to its de-listed status, impacts to this species will not be analyzed further outside of MBTA considerations.

Victorville Shoulderband

Victorville shoulderband is a CDFW special animal due to its inclusion in the current CDFW Special Animals List as a State Rank 1 or 2 species. Victorville shoulderband snail is not listed under FESA or CESA and is not designated as a CDFW fully protected species, a CDFW SSC, a CDFW watch list species, or a California BLM sensitive species. This species was not detected during 2021 and 2024 surveys; however, there are two historical CNDDB records along the banks of the Mojave River and one iNaturalist observations in the Mojave River south of the Project area in the Mojave Narrows Regional Park (CDFW 2024a; iNaturalist 2024). The species was found under loose rocks on dry hillsides. Based on the nearby records and presence of suitable habitat, Victorville shoulderband has a high potential to occur within the Project area on rocky outcrops or loose rocks on dry hillsides on the banks of the Mojave River.

Banded Gila Monster

Banded Gila monster is a CDFW SSC and a California BLM sensitive species. This species was not detected during 2021 and 2024 surveys; however, there are three CNDDB records found within 5 miles of the Project area (CDFW 2024a). A recent CNDDB record is approximately 4 miles north of MCV1_13-1 (CDFW 2024a). Based on nearby records and presence of suitable habitat, banded Gila monster has a high potential to occur in portions of its range that overlaps with the Project area (i.e., Clark Mountain Range).

Yellow-Breasted Chat

Yellow-breasted chat is a CDFW SSC. This species was not detected during 2021 and 2024 surveys; however, there is a CNDDB record of the species within the Mojave Narrows Regional Park (CDFW 2024a). Riparian vegetation within 500 feet of the Project area in the Mojave River near the Victorville Switching Station would not support breeding for this species but would provide potential foraging habitat. Based on the presence suitable foraging habitat along the Mojave River and CNDDB records, yellow-breasted chat has a low potential to breed and a high potential to forage within the Project area.

San Emigdio Blue Butterfly

San Emigdio blue butterfly is a CDFW special animal due to its inclusion in the current CDFW Special Animals List as a State Rank 1 or 2 species. San Emigdio blue butterfly is not listed under FESA or CESA and is not designated as a CDFW fully protected species, a CDFW SSC, a CDFW watch list species, or a California BLM sensitive species. This species was not detected during 2021 and 2024 surveys; however, there are four CNDDB records within 5 miles of the Project area with a recent CNDDB record approximately 1.7 miles from the Victorville Switching Station (CDFW 2024a). Fourwing saltbush, a host plant for the species, was observed within the Project area near the Victorville Switching Station. Based on nearby records and presence of their host plant, San Emigdio blue butterfly has a high potential to occur within the Project area.

Vermilion Flycatcher

Vermilion flycatcher is a CDFW SSC. This species was not detected during 2021 and 2024 surveys; however, the Project area contains suitable foraging and nesting habitat in agricultural land and riparian areas along the Mojave River. Additionally, there is one CNDDB record, several iNaturalist observations, and multiple recent breeding season eBird observations within 5 miles of the Project area (CDFW 2024a; eBird 2024; iNaturalist 2024). Based on the prevalence of nearby records and presence suitable nesting and foraging habitat, vermilion flycatcher has a high potential to occur within the Project area.

Yellow Warbler

Yellow warbler is a CDFW SSC. This species was not detected during 2021 and 2024 surveys; however, the Project area contains suitable foraging habitat and marginal nesting habitat in riparian areas along the Mojave River. Additionally, there is one CNDDB record and several iNaturalist observations within 5 miles of the Project area (CDFW 2024a; iNaturalist 2024). Based on the prevalence of nearby records, presence suitable foraging habitat, and presence of marginal nesting habitat, yellow warbler has a low potential to breed but a high potential to forage within the Project area.

American Badger

American badger is a CDFW SSC. No live individuals were observed during 2021 and 2024 surveys; however, the Project area contains suitable foraging habitat and denning sites in desert scrub habitat throughout the alignment. Additionally, there are three CNDDB records and several iNaturalist records within 5 miles of the Project area (CDFW 2024a; iNaturalist 2024). Based on the presence of suitable habitat and recent records, American badger has a high potential to occur within the Project area.

Bendire's Thrasher

Bendire's thrasher is a CDFW SSC, a California BLM sensitive species, and a USWFS BCC. This species was not detected during the 2021 and 2024 surveys; however, the Project area contains suitable nesting and foraging habitat in Joshua tree woodland and desert scrub communities throughout the project alignment. Additionally, there are seven CNDDB records and recent eBird observations within 5 miles of the Project area (CDFW 2024a; eBird 2024). Based on the presence of suitable habitat and recent records, Bendire's thrasher has a high potential to forage or nest within the Project area.

Crissal Thrasher

Crissal thrasher is a CDFW SSC and a California BLM sensitive species. This species was not detected during the 2021 and 2024 surveys; however, the Project area contains suitable nesting and foraging habitat in dense thickets of shrubs or low trees such as honey mesquite (*Prosopis glandulosa*), screwbean mesquite (*Prosopis pubescens*), ironwood (*Olneya tesota*), catclaw acacia, arrow weed (*Pluchea sericea*), and willow (*Salix* spp.) in desert riparian and desert wash habitats. Additionally, there are two CNDDB records within 5 miles of the Project area and recent eBird observations near the Project alignment within the Ivanpah Valley, Clark Mountains, and the McCullough Range (CDFW 2024a; eBird 2024). Based on the presence of suitable habitat and nearby records, crissal thrasher has a high potential to forage or nest within the Project area.

Mojave Fringe-Toed Lizard

Mojave fringe-toed lizard is a CDFW SSC and a California BLM sensitive species. The Biological Resources Technical Report (Appendix C1) determined that this species has a low potential to occur. However, it also states that suitable habitat is present in isolated portions of the Project area along with historical records adjacent to the Project alignment. Therefore, this species will be treated as having a moderate potential to occur and is included in the impact analysis below.

This species was not detected during the 2021 and 2024 surveys; however, the Project area contains isolated pockets of suitable habitat such as fine, loose sand on sand dunes, dry lakebeds, riverbanks, desert washes, and sparse alkali or desert scrub at elevations under 3,000 feet. In addition, the proposed Project alignment overlaps with the CWHR modeling of high-quality Mojave fringe-toed lizard predicted habitat generally between MCV2_62-5 and the Victorville substation (CDFW 2024b). There are five CNDDB records within 5 miles of the Project area between Coyote Lake Road and SR127, ranging from 1949 to 2008 (CDFW 2024a). The nearest recent occurrences are located immediately north of the work areas for MCV1_88-3 at Red Pass Lake and approximately 670 feet northwest of MCV1_84-5 (CDFW 2024a). Based on the presence of suitable habitat and nearby records, Mojave fringe-toed lizard is treated as having a moderate potential to occur within the Project area where suitable habitat is present.

Designated Critical Habitat

FESA Section 4(a)(3) and (b)(2) 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 FESA Section 3(5)(A) 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.

The Project area includes USFWS-designated critical habitat for desert tortoise and southwestern willow flycatcher (USFWS 2024). Figure 4.2-4 (Critical Habitat and Other Significant Wildlife Areas) depicts critical habitat in the Project area. 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.

Southwestern Willow Flycatcher

USFWS designated approximately 599 river miles of critical habitat for the southwestern willow flycatcher in Arizona, California, and New Mexico in a final rule published on July 22, 1997. After a correction and a first revised critical habitat rule, the USFWS published a second revised critical habitat rule on February 3, 2013, for portions of Arizona, California, New Mexico, Nevada, Utah, and Colorado, totaling approximately 208,973 acres, or 1,227 river miles (USFWS 2024). Approximately 0.22-acre of the Project area are located within critical habitat designated for southwestern willow flycatcher in the Mojave River between MCV1_162-1/MCV2_161-1 and MCV1_162-2/MCV2_161-2.

Desert Tortoise

USFWS designated 12 areas (totaling approximately 6.4 million acres) of critical habitat for the desert tortoise in portions of California, Nevada, Utah, and Arizona in a final rule that was published on February 8, 1994. Approximately 4.8 million of these acres are in California (USFWS 2024). Approximately 415 acres of the Project area are located within critical habitat designated for desert tortoise in the Mojave Desert.

4.2.2.5 Wildlife Corridors and Habitat Linkages

Wildlife corridors are defined as areas that connect suitable habitat for a species in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance and typically contain natural features such as canyons, drainages, ridgelines, or areas with vegetation cover that would facilitate movement. Such resources are necessary for stability of wildlife populations as they provide access to mates, food, and water; allow the dispersal of individuals away from high-population-density areas; and facilitate gene flow between populations. Wildlife corridors are considered sensitive by resource and conservation agencies.

Mountain ranges and valleys overlapping with and surrounding the Project area provide suitable areas for the movement of several wildlife species. In particular, the Mid Hills/Ivanpah Valley/New York Mountains/Calico Mountains Essential Connectivity Area (ECA), identified in the CDFW California Essential Habitat Connectivity Project (CEHC) (Spencer et al. 2010), is located within the central extent of the Project area, approximately between Towers MCV1_90-6 and MCV1_121-4. The San Bernardino Mountains/Calico Mountains ECA also occurs within the western extent of the Project area, approximately between Towers MCV1_126-1 and MCV1_142-2. Wildlife species

that likely use these corridors include large mammals such as desert bighorn sheep and mountain lion, as well as desert tortoise, a small reptile with notably wide home ranges. These corridors would also support stopover habitat for migratory birds that utilize the Pacific Flyway or Audubon Important Birds Areas within or near the Project area.

4.2.2.6 Jurisdictional Aquatic Resources

A Jurisdictional Delineation Report was prepared in March 2023 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 between April and August 2022, and the results are attached to this EIR as Appendix C3. The JD survey area generally co-occurs with areas defined as the Project area in the Biological Resources Report; however, the JD survey includes the entire MCC-VIC transmission line ROW, rather than the anticipated Project footprint. Jurisdictional water resources were found along the transmission line alignment in both the California and Nevada segments, with a total of 2,800 drainage features mapped in the JD survey area.

The resources identified within the JD survey area consist of non-wetland waters of the U.S., regulated by the U.S. Army Corps of Engineers (USACE); non-wetland waters of the State, some of which are regulated by the Regional Water Quality Control Board (RWQCB); and streambeds and associated riparian vegetation 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 the appropriate permits with each respective resource agency prior to proceeding with the Proposed Project. No jurisdictional wetlands as defined by the Clean Water Act Section 404 were identified within the JD survey area.

In total, 269.42 acres of non-wetland waters of the U.S. subject to regulation by USACE and the RWQCB were mapped within the JD survey area. The JD Survey area also includes 1,359.99 acres of non-wetland "isolated" waters of the state subject to regulation by the RWQCB only. Streambeds and riparian habitat subject to regulation by CDFW often overlap with non-wetland waters of the U.S., but also often extend further out to the top of the stream bank and adjacent riparian habitat. As such, 1,757.60 acres of streambed and riparian habitat subject to regulation by CDFW were also mapped within the Project area. Table 4.2.2 summarizes these jurisdictional aquatic resources is below.

Table 4.2-2. Summary of Potential Jurisdictional Aquatic Resources in the Jurisdictional Delineation Survey Area

Aquatic Resource Type	Total Acreage[1]
USACE	
Wetland Waters of the U.S.	0.00
Non-Wetland Waters of the U.S.	269.42
Total under USACE Jurisdiction	**269.42**
RWQCB	
Wetland Waters of the U.S. and State	0.00
Non-Wetland Waters of the U.S. and State	269.42
Non-Wetland "Isolated" Waters of the State	1,359.99
Total under RWQCB Jurisdiction[1]	**1,629.42**
CDFW	
Streambed and Riparian Habitat	1,757.60

Table 4.2-2. Summary of Potential Jurisdictional Aquatic Resources in the Jurisdictional Delineation Survey Area

Aquatic Resource Type	Total Acreage[1]
USACE	
Total under CDFW Jurisdiction	1,757.60

Notes: USACE = U.S. Army Corps of Engineers; RWQCB = Regional Water Quality Control Board; CDFW = California Department of Fish and Wildlife; survey area = MCC-VIC transmission line right-of-way.
1 Total does not sum due to rounding.

4.2.3 Thresholds of Significance

The significance criteria used to evaluate the Project impacts to biological resources are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to biological resources would occur if the Project would:

1. 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 CDFW and Game or USFWS.
2. 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 USFWS.
3. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
4. 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.
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

4.2.4 Impacts Analysis

This section evaluates the potential impacts to biological resources that may result directly or indirectly from implementation of the Project.

Temporary impacts include impacts from Project activities that do not result in the installation of permanent facilities or do not otherwise permanently remove fish and wildlife habitat. Project activities are solely related to maintenance and upgrades of existing transmission line equipment and facilities, and most impacts would occur within the existing ROWs and existing facilities and/or pre-disturbed tower sites and access roads. Activities that would involve temporary impacts outside of existing facilities include conductor pulling and re-tensioning, and site preparations for tower crane pads, laydown areas, staging areas, helicopter landing areas, helicopter fly yards and staging areas, guard structures at major crossings, and access road pullouts.

Existing Impacts are characterized by Project activities that are occurring within pre-disturbed existing tower sites, access roads, and ROWs. Activities occurring within existing disturbance areas include replacing conductors and ground wire, repairing/retrofitting existing main access roads and spur roads, and replacing or reinforcing tower

foundations, modifications and/or replacement of existing insulators and hardware assemblies, raising existing transmission towers as needed to mitigate any ground clearance violations, replacing towers within existing tower site footprints where needed, and repairing or replacing damaged structural members of towers.

Permanent impacts are characterized by Project activities that result in the conversion of habitat to a facility footprint or generally removes fish and wildlife habitat permanently. Activities that would result in permanent impacts are not anticipated as part of the Project.

As part of its standard practice, LADWP would implement best management practices (BMPs), which would partially avoid and minimize impacts to state-listed and other special-status species, sensitive natural communities, and jurisdictional stream and water features, as described in the relevant subsections that follow. In cases where implementation of BMPs would not result in less than potentially significant impacts, LADWP would implement the mitigation measures specified in Section 4.2.5 to reduce potential impacts to below a level of significance. Estimated Project impact areas are depicted on Figures 4.2-5-1 through 4.2-5-172, Impacts to Biological Resources.

4.2.4.1 Impact Discussion

Threshold BIO-1: 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 Wildlife or U.S. Fish and Wildlife Service?

Less-than-Significant Impact with Mitigation Incorporated. The following section evaluates the Project's potential direct and indirect effects on plant and wildlife species identified as candidate, sensitive, or special -status species in local or regional plans, policies, or regulations, or by CDFW or USFWS.

Candidate Species, Listed Species, and Critical Habitat

Plants

One plant species that is a state candidate for listing, Western Joshua tree (candidate state threatened), was observed during 2021 and 2024 surveys within the Project area. No other state or federally listed or candidate plant species were observed or have a potential to occur within the project alignment.

Western Joshua Tree

A total of 23 western Joshua tree clusters were mapped within the Project area during 2021 and 2024 surveys, south of Dale Evans Parkway and northwest of the North D Street in the southwestern extent of the alignment. Although the surveys conducted in 2021 and 2024 provide a baseline of general Joshua trees locations, additional surveys in accordance with the Western Joshua Tree Conservation Act census instructions involving a count of individuals as stems or trunks rather than clusters would be necessary within 50-feet of all Project impact areas prior to submission of the Western Joshua Tree Conservation Act ITP application.

Most of the western Joshua trees within the Project area can be avoided by Project activities; however, direct take may be necessary in areas where grading activities cannot be avoided. Direct impacts to any Joshua tree individuals would be considered significant absent mitigation. As a candidate species for listing under CESA and a species protected under The Western Joshua Tree Conservation Act, any removal of western Joshua trees would require a

Western Joshua Tree Conservation Act ITP and payment of statutorily prescribed fees. All western Joshua trees mapped within the Project area are in the area described in Fish and Game Code Section 1927.3(e) as a reduced fee area; therefore, impacts to western Joshua tree can be mitigated on a per-tree basis as follows:

- 5 meters or greater in height - $1,000
- 1 meter or greater but less than 5 meters in height - $200
- less than 1 meter in height - $150

As required by Mitigation Measure (MM)-BIO-1 (Western Joshua Tree Census, Permitting, and Avoidance), mitigation for direct impacts to any western Joshua tree individuals (defined by the Western Joshua Tree Conservation Act census instructions as a stem or trunk) would be fulfilled by conservation of western Joshua trees through a payment of fees consistent with the Western Joshua Tree Conservation Act.

Furthermore, the implementation of MM-BIO-2 (Authorized Biologist Authority) gives the Authorized biologist(s) the authority to stop work if construction is not compliant with this CEQA document. MM-BIO-3 (Biological Monitoring) requires that an experienced biologist oversee compliance with the protective measures, including marking sensitive biological resources for avoidance and delineating limits of the Project impact footprint. MM-BIO-4 (Education Program) would provide construction personnel with training related to special-status plants that could potentially occur on or adjacent to the impact footprint. MM-BIO-5 (Delineation of Impact Boundaries) would ensure Project impacts do not occur outside of work areas and avoidance of western Joshua trees to be preserved in place.

Accordingly, implementation of MM-BIO-1, MM-BIO-2, MM-BIO-3, MM-BIO-4, and MM-BIO-5 would reduce potential direct impacts to western Joshua trees to less than significant.

Wildlife

One federally and state listed wildlife species, Mojave desert tortoise, was observed within the Project area. Additionally, the following nine listed or candidate wildlife species were determined to have a potential to occur within the Project area: tricolored blackbird, Crotch's bumble bee, Swainson's hawk, gilded flicker, western yellow-billed cuckoo, southwestern willow flycatcher, mountain lion, least Bell's vireo, and Mohave ground squirrel.

Mojave Desert Tortoise

Mojave desert tortoise (desert tortoise) is the only federally and state-listed reptile species present within the Project area. Suitable habitat for this species occurs throughout the alignment. During 2021 surveys, two live desert tortoise individuals were observed within the California segment of the Project area. In addition, 642 burrows, one piece of scat, seven carcasses, three pallets and two drinking depressions were observed. Tortoise sign occurred less frequently from Victorville to Yermo, with consistent tortoise sign beginning approximately 20 miles northeast of the City of Yermo and continuing to the state line. As such, this species has a high potential to occur throughout the Project area.

Direct impacts on desert tortoise from Project activities could result from vehicle and equipment strikes or crushing or burying of individuals within subterranean habitat during grading activities. Any individuals that are flushed from burrows by construction activities would also be highly vulnerable to stress and vehicle strikes. In addition, Project activities could alter behavior, cause desert tortoise individuals to be displaced from established territories containing necessary resources such as burrows and food, and stress or endanger the desert tortoise.

Indirect impacts to desert tortoise could occur through increasing the opportunities for introduction of invasive non-native plant species that may compete with or replace forage species for the desert tortoise (i.e., grasses and the flowers of annual plants). Human presence in isolated areas of the desert may attract opportunistic predators (e.g., coyote, feral dogs [*Canis lupus familiaris*], and ravens), which are threats to the species. Additionally, temporary increases in human activity and noise could lead to behavioral disruptions. Specifically, project activities would involve the use of helicopters. Helicopter operations within desert tortoise habitat have the potential to disturb or alter the behavior of desert tortoises; however, helicopter deliveries would not typically require hovering in one location or close to the ground for extended periods outside of the designated helicopter fly yards/staging areas.

MM-BIO-6 (Mojave Desert Tortoise Protocol Surveys) would require protocol surveys for Mojave desert tortoise in areas supporting suitable habitat to determine presence and extent of occupied that may occur within the Project area. The measure also requires that the Project acquire an ITP for potential take of desert tortoise that may occur as a result of Project activities. LADWP will adhere to any additional measures and conditions set forth within the ITP and provide compensatory mitigation as determined through the ITP process. MM-BIO-6 has been developed to minimize the potential for injury or killing of desert tortoises to the extent possible and to conform with DRECP requirements.

Suitable habitat for desert tortoise may be impacted by surface-disturbing activities within the Project area. Potential impacts to suitable habitat include temporary disturbances during vegetation clearance and grading at crane pads, conductor pulling tensioning sites, helicopter fly yards, and laydown areas. However, much of the Project activities would occur in areas that have been previously disturbed, such as existing access roads, tower access roads, and transmission tower footprints. In total, project activities have the potential to result in a maximum of 1,242.38 acres of temporary impacts to potentially suitable desert tortoise habitat based on CWHR predicted habitat modeling (CDFW 2024b), 830 acres of which are located outside of desert tortoise critical habitat. Loss of occupied habitat would be significant absent mitigation. MM-BIO-6 would require that LADWP provide compensatory mitigation for any direct impacts to Mojave desert tortoise occupied habitat and critical habitat at ratios pursuant to the DRECP. MM-BIO-6 would also minimize human contact with desert tortoises and would minimize the potential for disruptions in desert tortoise movement and behaviors. MM-BIO-2, MM-BIO-3, MM-BIO-4, and MM-BIO-5 would further ensure avoidance and minimization of impacts to Mojave desert tortoise. Accordingly, implementation of MM-BIO-2, MM-BIO-3, MM-BIO-4, MM-BIO-5, and MM-BIO-6 would reduce potential impacts to Mojave desert tortoise to less than significant.

Mohave Ground Squirrel

The Project is in the southern portion of the Mohave ground squirrel range where Mohave ground squirrel occurrences are rare, and where population densities have historically been low. In addition, the Project area is located outside the core and peripheral population areas of Mohave ground squirrel, as well as outside linkage areas of the species, as described in the 2019 CDFW Mohave Ground Squirrel Conservation Strategy (CDFW 2019). All but two of the ten CNDDB records within 5 miles of the Project are historical, dating between 1919 and 1987. The two recent occurrences from 2005 and 2008 are located 3.6 miles northwest of the Project Area near MCV1_136-6 and 4.7 miles northwest of the Victorville substation, respectively (CDFW 2024a). While the Project is located outside of the core and peripheral population areas, linkage areas, and BLM Conservation Areas for the species, the Project area does contain suitable habitat (e.g., creosote bush scrub with gentle topography and sandy soils) in addition to the nearby recent occurrences. As such, Mohave ground squirrel has a moderate potential to occur where Project areas overlap with suitable habitat is present within the species' current range.

Direct impacts on Mohave ground squirrel from Project activities could result from crushing or burying of individuals within subterranean habitat during grading activities. In addition, any individuals that are flushed from burrows by construction activities would also be highly vulnerable to stress and vehicle strikes.

Indirect impacts to Mohave ground squirrel could occur through increasing the opportunities for introduction of invasive non-native plant species that may compete with or replace forage species for the Mohave ground squirrel (i.e., seeds, fruit, and leafy vegetation of native desert forbs, grasses, and shrubs). Human presence in isolated areas of the desert may attract opportunistic predators, such as coyotes, which are threats to this species.

MM-BIO-7 (Mohave Ground Squirrel Habitat Assessments and Protocol Surveys) would require habitat assessments and protocol level trapping surveys to determine presence and extent of populations that may occur within the Project area. If Mohave ground squirrel is determined to be present within the Project area and impacts to occupied areas cannot be avoided, the Project would acquire an ITP for potential take of Mohave ground squirrel that may occur as a result of Project activities. LADWP will adhere to any additional measures and conditions set forth within the ITP and provide compensatory mitigation as determined through the ITP process.

Suitable Mohave ground squirrel habitat may be impacted by surface-disturbing activities within the Project area. Potential impacts to suitable habitat include temporary disturbances during vegetation clearance and grading at crane pads, conductor pulling tensioning sites, helicopter fly yards, and laydown areas. In total, project activities have the potential to result in a maximum of 48.30 acres of temporary impacts to potentially suitable Mohave ground squirrel habitat based on CWHR predicted habitat modeling (CDFW 2024b). Loss of occupied habitat would be significant absent mitigation. MM-BIO-7 would require that LADWP provide compensatory mitigation for any direct impacts to Mohave ground squirrel occupied habitat at ratios determined in coordination with CDFW.

Furthermore, MM-BIO-2, MM-BIO-3, MM-BIO-4, and MM-BIO-5 would further ensure avoidance and minimization of impacts to Mohave ground squirrel. Accordingly, implementation of MM-BIO-2, MM-BIO-3, MM-BIO-4, MM-BIO-5, and MM-BIO-7 would reduce potential impacts to Mohave ground squirrel to less than significant.

Listed Riparian Birds

The Project area supports riparian vegetation within the Mojave River near the Victorville Switching Station that would provide marginal breeding habitat and potential foraging habitat for the following listed riparian bird species: western yellow-billed cuckoo, southwestern willow flycatcher, and least Bell's vireo. Although the footprint for the conductor pulling and tensioning sites as depicted in the Project design encroach or overlap with riparian vegetation within the Mojave River, these limits are approximate, and the Project would be able to avoid direct take of individuals and impacts to occupied and foraging habitat. However, the Project has the potential to indirectly impact these species if Project activities occur within 500 feet of occupied riparian habitat during their breeding season. Visual disturbance, noise, or vibrations from Project activities such as nearby grading and vegetation removal, helicopter use, overhead line stringing, or crane operations could disrupt breeding activities and cause nest failure.

MM-BIO-8 (Protocol Survey for Listed Riparian Birds and Avoidance) requires protocol surveys for each species in order to determine their presence or absence within the Project area and requires complete avoidance of their occupied habitat and a 500-foot buffer until conclusion of the species' nesting season.

Critical habitat for the southwestern willow flycatcher occurs where the Project alignment crosses the Mojave River. The Project would not impact any riparian habitat within the Mojave River. MM-BIO-2, MM-BIO-3, MM-BIO-4, and MM-BIO-5 would ensure that encroachment of the Mojave River Corridor would not occur. As such, impacts to southwestern willow flycatcher critical habitat is not expected to occur as a result of Project implementation.

Accordingly, implementation of MM-BIO-2, MM-BIO-3, MM-BIO-4, MM-BIO-5, and MM-BIO-8 would reduce potential impacts to listed riparian bird species to less than significant.

Tricolored Blackbird

Areas within 500 feet of the Project area supports marginal breeding habitat with nearby foraging areas within the Mojave River near the Victorville Switching Station. Therefore, tricolored blackbird has a low potential to breed within 500 feet of the Project area. Although the footprint for the conductor pulling and tensioning sites as depicted in the Project design encroach or overlap with riparian vegetation within the Mojave River, these limits are approximate, and the Project would be able to avoid direct take of individuals and impacts to occupied breeding habitat. However, the Project has the potential to indirectly impact these species if Project activities occur within 500-feet of occupied riparian habitat during their breeding season. Visual disturbance, noise, or vibrations from Project activities such as nearby grading and vegetation removal, helicopter use, overhead line stringing, or crane operations could disrupt breeding activities and cause nest failure.

A protocol presence/absence survey for this species has not been developed for this species; however, this conspicuous species is known to nest within wetlands and riparian thickets, and presence of an active nest would be detectable during a general nesting bird survey. MM-BIO-9 (Nesting Bird Surveys and Avoidance) requires a pre-construction nesting bird survey if Project activities occur during the general nesting bird season (February 1 through August 31) and provides avoidance and minimization measures in the case that active nests containing eggs or young are found. Accordingly, implementation of MM-BIO-9 would reduce potential impacts to tricolored blackbird to less than significant.

Crotch's Bumble Bee

Crotch's bumble bee has a moderate potential to occur in open scrub where preferred plant genera occur in the herbaceous layer. There is also potential for the project to support nesting sites for Crotch's bumble bee colonies, which are primarily located underground in abandoned holes made by ground squirrels, mice, and rats, but may be above ground in abandoned bird nests or empty cavities (Williams et al. 2014).

Implementation of the proposed project could result in direct impacts to Crotch's bumble bee through the removal of potentially suitable habitat. However, this impact would be adverse, but not significant due to abundant suitable habitat present in the project region. These areas will continue to provide habitat opportunities for this species. As a result, the loss of suitable habitat would not substantially reduce the habitat for the species and would not cause the species population to drop below self-sustaining levels.

Because Crotch's bumble bee typically nests underground, individuals if present at a given work area would be vulnerable to injury and mortality during construction. Harm to or the loss of an active colony during construction could be significant, absent mitigation. Implementation of MM-BIO-10 (Pre-Construction Crotch's Bumble Bee Survey and Avoidance) would require pre-construction habitat assessments and focused surveys to identify any Crotch's bumble bee nest(s) present within the impact footprint. The measure would require no-impact buffers to

be established around nests if found, thereby avoiding potential direct impacts to Crotch's bumble bee. Accordingly, implementation of MM-BIO-10 would reduce potential direct impacts to Crotch's bumble bee to less than significant.

Swainson's Hawk

Swainson's hawks are not expected to nest within the Project area; therefore, direct impacts to individuals are not expected to occur because of Project activities. Suitable foraging habitat is present, and transient Swainson's hawks have a high potential to forage within the Project area during migration. However, Project activities would primarily occur in areas that have been previously disturbed. Additionally, loss of suitable foraging habitat (e.g., open grasslands or agricultural lands) for migrating Swainson's hawks would not be significant due to abundant suitable habitat present in the Project region. These areas will continue to provide habitat opportunities for this species during and after Project implementation. As a result, the temporary loss of foraging habitat is not expected to have an adverse effect on the species. Therefore, impacts to Swainson's hawk are not expected to occur as a result of Project implementation.

Gilded Flicker

Gilded flicker has a high potential to forage and nest in the Project area within Joshua tree or desert riparian woodlands in the Ivanpah Valley and the foothills of the Clark Mountains. If Project activities occur during the nesting bird season, the Project has the potential to directly take individuals or occupied habitat. Specifically, vegetation removal of suitable nesting habitat could result in loss of active nests. Additionally, increased noise, visual disturbances, and ground vibrations from Project activities in the vicinity have the potential to disturb nesting activities if Project activities are conducted adjacent to occupied habitat.

A protocol presence/absence survey for gilded flicker has not been developed for this species; however, this conspicuous species is known to nest within cavities of large willows (*Salix* spp.), cottonwoods (*Populus* spp.), and western Joshua trees within desert riparian or Joshua tree woodland, and presence of an active nest would be detectable during a general nesting bird survey. MM-BIO-9 (Nesting Bird Surveys and Avoidance) requires a pre-construction nesting bird survey if Project activities occur during the general nesting bird season (February 1 through August 31) and provides avoidance and minimization measures in the case that active nests containing eggs or young are found. Accordingly, implementation of MM-BIO-9 would reduce potential impacts to gilded flicker to less than significant.

Most Project activities are expected to occur in areas that have been previously disturbed, such as existing access roads and tower sites; however, some areas outside of previously disturbed work areas (i.e., conductor pulling and tensioning sites) may require vegetation removal and ground disturbance. Loss of suitable foraging habitat would not be significant due to abundant suitable habitat present in the Project region. These areas will continue to provide habitat opportunities for this species during and after Project implementation. As a result, the temporary loss of foraging habitat is not expected to have an adverse effect on the species.

Accordingly, implementation of MM-BIO-9 would reduce potential impacts to gilded flicker to less than significant.

Mountain Lion

Mountain lion is not expected to den within the Project area; therefore, direct impacts to individuals are not expected to occur as a result of Project activities. Suitable live-in and foraging habitat for mountain lion is present throughout the Project area. However, Project activities would primarily occur in areas that have been previously

disturbed. The Project would not involve building of any barriers that would restrict movement for this species or restrict foraging opportunities. Additionally, the temporary loss of suitable habitat for this species would not be significant due to abundant suitable habitat present in the Project region. These areas will continue to provide habitat opportunities for this species during and after Project implementation. Therefore, impacts to mountain lion are not expected to occur as a result of Project implementation.

Other Special-Status Species

Plants

Of the non-listed, non-candidate special-status plant species analyzed for the Project in Section 4.2.2, a total of 15 special-status plant species were recorded within the Project area during 2021 and 2024 surveys, and 19 special-status plant species have a moderate to high potential to occur within portions of the Project area, depending on the species' ranges and specific habitat requirements.[2]

Grading, vegetation clearance, and vehicle and foot traffic associated with the Project have the potential to result in the direct loss of special-status plant species. Equipment and vehicles may also introduce noxious weeds that would compete with special-status species and negatively affect special-status plant species and habitat quality. In addition, impacts such as increased fugitive dust could reduce the growth and vigor of special-status plant species.

MM-BIO-11 requires focused surveys for special-status plant species to identify existing populations, marking and avoidance of identified populations, avoidance, and compensatory mitigation. Additionally, implementation of MM-BIO-2, MM-BIO-3, MM-BIO-4, MM-BIO-5, and BMPs would reduce potential impacts to non-listed, non-candidate special-status plants to less than significant.

Accordingly, implementation of MM-BIO-2, MM-BIO-3, MM-BIO-4, MM-BIO-5, and MM-BIO-11 would reduce potential impacts to non-listed, non-candidate special-status plants to less than significant.

Other protected plant species include species of California desert native plants (i.e., species in the genera *Prosopis* and *Parkinsonia* (*Cercidium*) and the species *Senegalia greggii*, *Atriplex hymenelytra*, *Dalea spinosa*, and *Olneya tesota*) that could be impacted by the project and for which harvest is prohibited under the CDNPA absent appropriate permits.

For all desert native plants that cannot be avoided, the CDNPA requires that all impacts to protected native desert plants regulated by this law be preceded by issuance of a permit by the County in accordance with Food and Agricultural Code Division 23. MM-BIO-12 (Relocation of Desert Native Plants) would require submittal of a permit application form and an applicable fee to San Bernardino County, proper handling of tags or seals issued with the permit, and additional actions that would ensure successful transplantation of salvaged plants. Therefore, impacts to plant species protected under the CDNPA would be less than significant with implementation of MM-BIO-12.

[2] Additional information on each species' occurrence record locations and respective ranges is provided in Appendix C1, Table 3, Special-Status Plant Occurrence Probabilities in the Project Area.

Wildlife

Of the non-listed, non-candidate special-status wildlife species analyzed for the Project in Section 4.2.2, eight special-status wildlife species were recorded within the Project area during 2021 and 2024 surveys, and 16 special-status wildlife species have a moderate to high potential to occur within portions of the Project area, depending on the species' ranges and specific habitat requirements.[3]

Direct impacts can potentially occur to special-status wildlife species from impacts to habitat and impacts to the species from injury or mortality of individuals from construction activities and the Project could result in significant, direct impacts to non-listed special-status wildlife species.

Golden Eagle

Golden eagles are known to nest in the project area. In areas where nests are close enough to proposed activities the proposed project may directly affect nesting golden eagles. MM-BIO-9 and MM-BIO-13 (Avoidance and Minimization of Impacts to Golden Eagle) would reduce impacts to nesting golden eagles to less than significant.

Burrowing Owl

Burrowing owl sign was observed during 2021 surveys and generally has a high potential to occur throughout the Project area. Direct impacts could occur to burrowing owl if nesting or overwintering individuals occur within the Project area during Project activities. Ground disturbance activities could cause mortality or injury to individuals in burrows and disruptions to breeding activities and if present within the disturbance footprint during Project activities. Harm to or loss of individuals as a result of construction activities would be significant absent mitigation under CEQA. MM-BIO-14 (Pre-Construction Burrowing Owl Surveys) would require that pre-construction avoidance surveys for burrowing owl be conducted in areas supporting suitable habitat with the first survey no less than 14 days prior to the start of construction activities. The measure also provides minimization if avoidance is not feasible. As such, MM-BIO-14 reduce impacts to burrowing owl to less than significant.

Special-Status Birds and Nesting Birds

The following eleven non-listed special-status bird species other than those mentioned above were observed during 2021 and 2024 surveys or have a moderate to high potential to occur: Costa's hummingbird, loggerhead shrike, Le Conte's thrasher, yellow-headed blackbird, Cooper's hawk, prairie falcon, yellow-breasted chat, vermilion flycatcher, yellow warbler, Bendire's thrasher, and Crissal thrasher.

Trees and shrub habitat within the proposed project provides suitable nesting habitat for these special-status bird species, as well as other bird species protected under the MBTA (16 USC 703-712) and California Fish and Game Code Sections 3503.5, 3503, and 3513. Vegetation removal or grading activities conducted during the general nesting bird season (February 1 through August 31) could result in the direct take of a bird (i.e., individuals, active nests, eggs, or young) if nesting within proposed disturbance areas during construction. Harm to or the loss of individuals during construction could be significant, absent mitigation. MM-BIO-9 (Nesting Bird Surveys and Avoidance) requires a pre-construction nesting bird survey if Project activities occur during the general nesting bird season (February 1 through August 31) and provides avoidance and minimization measures in the case that active nests

[3] Additional information on each species' occurrence record locations and respective ranges is provided in Appendix C1, Table 5, Special-Status Wildlife Occurrence Probabilities in the Project Area.

containing eggs or young are found. Accordingly, impacts to special-status birds and nesting birds protected under the MBTA and California Fish and Game Code would be less than significant with implementation of MM-BIO-9.

Desert Bighorn Sheep

Desert bighorn sheep have a high potential to occur within the Project area and are known to lamb along and adjacent to the Project alignment. Visual and aural disturbances associated with the Project's helicopter use could result in mortality during the lambing season. MM-BIO-15 (Desert Bighorn Sheep Avoidance) would require lambing season avoidance, or coordination with CDFW to avoid disturbance of known lambing sites, as well as an avoidance buffer for incidental observations. As such, impacts to desert bighorn sheep would be reduced to less than significant.

Special-Status Meso-Carnivores

Desert kitfox, ringtail, American badger are special-status meso-carnivores known to occur and/or have a high potential to occur year-round throughout the Project area. Ground disturbance activities could cause mortality and injury to individuals in dens if present within work areas. In addition, any individuals that are flushed from burrows by construction activities would also be highly vulnerable to stress and vehicle strikes. Harm to or the loss of individuals during construction could be significant, absent mitigation. MM-BIO-16 (Special-Status Meso-Carnivore Avoidance and Minimization) would require pre-construction surveys and provides avoidance and minimization measures. As such, impacts to desert kitfox, ringtail, American badger would be reduced to less than significant.

Special-Status Invertebrates

Morrison bumble bee, Victorville shoulderband snail, and San Emigdio blue butterfly are special-status invertebrates that have a moderate potential to occur within the Project area. Ground disturbance activities could cause mortality to individuals if present within work areas. Biological monitoring and pre-construction sweeps required in MM-BIO-3 would ensure that impacts to Morrison bumble bee, Victorville shoulderband snail, and San Emigdio blue butterfly would be reduced to less than significant.

Special-Status Bats

Townsend's big-eared bat has a moderate potential to forage within the Project area. Project activities would occur at night and lighting of work areas may cause a reduction in foraging; however, the temporary loss in foraging habitat would not be significant due to abundant suitable habitat present in the Project region. These areas will continue to provide habitat opportunities outside of lit work areas. As a result, the temporary loss of foraging habitat is not expected to have an adverse effect on the species. Impacts to Townsend's big-eared bat or other foraging special-status bats are not expected to occur as a result of Project activities.

Western Pond Turtle

Western pond turtle has a moderate potential to occur within the Mojave River. Although the footprint for the conductor pulling and tensioning sites as depicted in some versions of the Project design encroach or overlap with riparian vegetation within the Mojave River, these limits are approximate, and the Project would be able to avoid direct impacts to suitable habitat. Project areas adjacent to the Mojave River would not provide suitable upland habitat for this species. As such, impacts to western pond turtle are not expected to occur as a result of Project activities.

Terrestrial Reptiles

Mojave fringe-toed lizard and banded Gila monster are special-status terrestrial reptiles that have a moderate or high potential to occur within select portions of the Project area. Specifically, banded Gila monster has a high potential to occur in the Clark Mountain Range and Mojave fringe-toed lizard has a moderate potential to occur in isolated pockets of suitable habitat such as fine, loose sand on sand dunes, dry lakebeds, riverbanks, desert washes, and sparse alkali or desert scrub within its range, generally between MCV2_62-5 and the Victorville substation. These species are cryptic, and Project-associated vehicular traffic and ground disturbance activities could cause mortality and injury to individuals in dens if present within work areas. These species and speed limits would be discussed during the education program required in MM-BIO-4, and MM-BIO-3 would require biological monitoring and pre-construction sweeps. As such, impacts to Mojave fringe-toed lizard and banded Gila monster would be reduced to less than significant.

Threshold BIO-2: 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 Wildlife or U.S. Fish and Wildlife Service?

Less-than-Significant Impact with Mitigation Incorporated. The Project alignment supports 22 natural vegetation communities and 5 unvegetated or developed land cover types, of which there are five sensitive vegetation communities: Acton's and Virgin River brittle brush–net-veined goldeneye; Fremont's smokebush–Nevada smokebush scrub; Fremont cottonwood forest and woodland; Joshua tree woodland; and Nevada joint fir–Anderson's boxthorn–spiny hop sage scrub. Table 4.2-3 summarizes the maximum direct impacts to sensitive vegetation communities within the Project area.

Table 4.2-3. Impacts to Sensitive Vegetation Communities within the Project Area

Sensitive Vegetation Community	State Ranking[1]	Existing Impacts (acres)	Temporary Impacts (acres)	Total Impacts (acres)
Acton's and Virgin River brittle brush–net-veined goldeneye	S3	0.01	0.00	0.01
Fremont's smokebush–Nevada smokebush scrub	S3	0.02	0.13	0.15
Fremont cottonwood forest and woodland	S3	0.00	0.00	0.00
Joshua tree woodland	S3	26.41	38.37	64.78
Nevada joint fir–Anderson's boxthorn–spiny hop sage scrub	S3S4	2.97	0.09	3.06
	Total[2]	**29.42**	**38.59**	**68.01**

Notes:

1 The conservation status of a vegetation community is designated by a number from 1 to 5, preceded by a letter reflecting the appropriate geographic scale of the assessment (S = subnational). The numbers have the following meaning (NatureServe 2024):
3 = vulnerable to extirpation or extinction
4 = apparently secure

2 Total acreages may not sum exactly due to rounding.

Impacts to sensitive natural communities may result from vegetation removal and grading associated with conductor pulling and re-tensioning, tower crane pads, laydown areas, staging areas, helicopter landing areas, helicopter fly yards and staging areas, guard structures, and access road pullouts. Although expected to be small, localized, and temporary in nature, impacts could include the alteration of soils, topography, and/or vegetation, and

ultimately the character and quality of a given sensitive natural community. Some sensitive natural communities are associated with water features and impacts could change the ecological functions of these water features. Surface-disturbing activities can result in indirect effects through increasing the opportunities for introduction of invasive non-native plant species that may degrade sensitive natural communities. Erosion and sedimentation from Project areas may also degrade adjacent sensitive communities.

The extent of impacts to sensitive natural communities is not currently known; however, Project activities have the potential to result in a maximum of 68.01 acres of impacts to sensitive natural communities, which would be significant absent mitigation. Biological monitoring required in MM-BIO-3 and impact boundaries would be demarcated in MM-BIO-5. Additionally, these sensitive resources would be discussed during the education program required in MM-BIO-4. Furthermore, MM-BIO-17 (Compensatory Mitigation for Special-Status Vegetation Communities) requires compensatory mitigation at a 1:1 ratio for impacts to special-status vegetation communities which will be trued up/calculated after final project design and implementation. As such, impacts to riparian habitat or other sensitive natural communities would be less than significant with mitigation incorporated.

Threshold BIO-3: Would the Project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Less-than-Significant Impact with Mitigation Incorporated. The Project area crosses many desert washes and creeks that amounts to a total of 269.42 acres of non-wetland waters of the U.S. subject to regulation by USACE and the RWQCB within the Project area; 1,359.99 acres of non-wetland "isolated" waters of the state subject to regulation by the RWQCB only; and 1,757.60 acres of streambeds and riparian habitat subject to regulation by CDFW. Direct impacts will be trued up/calculated after final project design and implementation These potential direct impacts to jurisdictional waters and wetlands would be significant absent mitigation under CEQA.

Permits would be required from each of the regulatory agencies and entail providing mitigation to offset the impacts and loss of beneficial uses, functions, and values to the jurisdictional waters and habitats. MM-BIO-18 (Aquatic Resources Mitigation) would require obtaining permits from each of the regulatory agencies (USACE, RWQCB, CDFW). The measure also provides minimization measures to maintain water quality and habitat integrity, which would be implemented alongside conditions for the RWQCB Construction General Permit (CGP) Coverage/SWPPP that would be acquired for the Project. Moreover, Project implementation of MM-BIO-2, MM-BIO-3, MM-BIO-4, MM-BIO-5, and Project BMPs would ensure that indirect impacts are reduced to less than significant. As such, impacts to state or federally protected wetlands would be less than significant with mitigation incorporated.

Threshold BIO-4: 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. The Project alignment crosses two essential connectivity areas: Mid Hills/Ivanpah Valley/New York Mountains/Calico Mountains Essential Connectivity Area; and San Bernardino Mountains/Calico Mountains Essential Connectivity Area. Impacts to native wildlife movement may result from temporary disturbance in areas that have been previously disturbed, such as existing ROWs and access roads. These corridors would also support stopover habitat for migratory birds that utilize the Pacific Flyway or Audubon Important Birds Areas within or near the Project. In addition, most of the work locations for the proposed project support natural vegetation communities and are located within sparsely developed to almost completely undeveloped areas that would provide live-in habitat for wildlife and allow for wildlife movement to nearby undeveloped natural spaces.

The repair of facilities, presence of construction equipment and personnel, and associated noise could divert wildlife using linkages. However, most Project activities would be relatively small, short term and localized as compared with the large open spaces that surround the Project area as well as the size of each linkage area. Overall, Project activities will be temporary at any location throughout the project, and wildlife would be able to use temporary construction areas freely after work crews are gone. Since the proposed project is dispersed and occurring within an existing transmission line, typical construction methods would not impede wildlife movement over a large area at any one time. Work areas would remain unfenced during and after construction. Furthermore, incorporation of mitigation measures addressing impacts to wildlife would reduce the amount of disturbance to linkage habitat while also protecting species actively moving through the Project area.

Therefore, the Project would not interfere substantially with the movement of fish and wildlife species through the Project area; any effects would be less than significant.

Threshold BIO-5: Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less-than-Significant Impact with Mitigation Incorporated. Applicable local ordinances protecting biological resources within the biological Project area include the San Bernardino County Countywide Plan and County Policy Plan, San Bernardino Development Code, the City of Victorville General Plan, City of Victorville Municipal Code, Town of Apple Valley Multi-Species Conservation Plan MSHCP/NCCP, and the CDNPA. Although the CDNPA is codified in state law (California Food and Agricultural Code Division 23), enforcement powers and administrative responsibilities are given to the subject County commissioner, sheriff, and board of supervisors as stipulated in Chapter 4 of the CDNPA (Enforcement Powers and Administrative Responsibilities). Western Joshua tree and California desert native plants are the only biological resources protected under these ordinances and policies present within the Project area. The Project would be compliant with all other local policies and ordinances. With implementation of MM-BIO-1 and MM-BIO-11, the Project would maintain consistency with local policies and ordinances protecting biological resources.

Threshold BIO-6: 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 establishes mitigation and habitat compensation ratios for project impacts that would occur within designated ACEC units (including habitat linkage ACECs), 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). MM-BIO-19 (Ground Disturbance Mitigation) requires compensatory mitigation for impacts to ACEC and NCL units at a 3-to-1 ratio in accordance with LUPA, and MM-BIO-6

requires compensatory mitigation for impacts to desert tortoise habitat at a 5-to-1 as required by LUPA. MM-BIO-6 also requires implementation of LUPA-wide CMA measures for desert tortoise. As such, the Project would not conflict with provisions of the DRECP.

The BLM also 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 Project activities to existing access roads, 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-2, MM-BIO-3, MM-BIO-4, MM-BIO-5, and MM-BIO-6, pre-construction surveys, take avoidance measures, biological monitoring, and compensatory mitigation 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. The Project would comply with these goals as Project impacts would only occur within existing ROWs, facilities, and access roads.

The Project occurs within Town of Apple Valley Multi-Species Conservation Plan MSHCP/NCCP; however, a draft MSHCP/NCCP has not been prepared and conservation strategies have not been identified. Therefore, Project activities would not conflict with the provisions of any adopted HCP, NCCP, or other approved local, regional, or state HCP.

Accordingly, the Project would not conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state HCP. Therefore, impacts would be less than significant with mitigation incorporated.

4.2.5 Mitigation Measures

The following mitigation measures are required to address potentially significant impacts to biological resources.

MM-BIO-1 Western Joshua Tree Census, Permitting, and Avoidance. During candidacy or if western Joshua tree is listed under CESA, LADWP shall implement the mitigation measure below.

Western Joshua Tree Conservation Act Census. In sections of the Project area within which western Joshua tree has been documented (i.e., between L1 156-1 and L2 155-1 to the Victorville Substation), an individual stem or trunk of western Joshua tree including dead trees must be mapped by a certified arborist who shall conduct a census within the Project area and a 50-foot

buffer (census area) per the Western Joshua Tree Conservation Act census instructions. The certified arborist shall systematically search the entire census area using parallel transects for all western Joshua trees and their locations using high-accuracy (<1-meter [approximately 3-foot]) GPS technology. Additionally, the size class of each tree must be determined based on measurement methods described in the census instructions (i.e., from the middle of the base of the trunk to the top of the leaf that is furthest away from the base for the entire path of growth of the tree). The western Joshua tree height classes are defined as follows: Size Class A = 0–1 meter in height; Class B = 1 meter or greater but less than 5 meters in height; and Class C = 5 meters or greater in height. Other data must be gathered in accordance with the census instructions, which include but are not limited to tree maturity, presence of flowers and/or fruit, and photos of each stem.

Western Joshua Tree Conservation Act Permitting. If it is determined that certain western Joshua tree individuals cannot be avoided, the Project shall apply for a Western Joshua Tree Conservation Act Incidental Take Permit (ITP) by which mitigation for direct impacts to those western Joshua trees would be fulfilled through payment of the elected fees as described in California Fish and Game Code Section 1927.3. In conformance with the reduced fee schedule prescribed for the Project area, mitigation will consist of payment of $1,000 for each western Joshua tree five meters or greater in height, $200 for each western Joshua tree less than five meters but greater than 1 meter in height; and $150 for each western Joshua tree less than 1 meter in height.

Other local regulations (i.e., City of Victorville Municipal Code, Chapter 13.33 and San Bernardino County Development Code Chapter 88.01) also require permitting or notification prior to removal of western Joshua trees. Therefore, the Project must also receive written consent from the City of Victorville's Director of Parks and Recreation prior to the removal or relocation of western Joshua trees located within the City of Victorville in accordance with City of Victorville Municipal Code, Chapter 13.33, Preservation and Removal of Joshua Trees. Additionally, the Project applicant shall submit an application for a Tree or Plant Removal Permit for all western Joshua trees to be removed within unincorporated areas of San Bernardino County in accordance with San Bernardino County Development Code Chapter 88.01.050.

Western Joshua Tree Avoidance. To ensure avoidance of western Joshua trees to be preserved in place, all western Joshua trees within the census area (Project area between L1-156-1 and L2-155-1 to the Victorville Substation and a 50-foot buffer) for which a permit has not been attained must be clearly marked in the field prior to the start of construction.

MM-BIO-2 Authorized Biologist Authority. The Authorized biologist(s) or biological monitor(s) shall have authority to immediately stop any activity that does not comply with biological mitigation measures and/or to order any reasonable measure to avoid the unauthorized take of Mojave desert tortoise, Mohave ground squirrel, western Joshua tree or other sensitive biological resources. The authorized biologist shall coordinate with the LADWP construction manager and environmental project manager to stop or direct work.

MM-BIO-3 Biological Monitoring. At minimum, biological monitoring shall include the following tasks and responsibilities:

- The Authorized biologist(s) and/or monitor(s) shall be on site daily during Project activities to conduct compliance inspections to prevent unauthorized take of Mojave desert tortoise, Mohave ground squirrel, and western Joshua tree.
- Enforcement of biological mitigation measures, permit conditions, and protective measures associated with Project approvals.
- Ensure that signs, stakes, and fencing are intact
- Ensure that Project activities are only occurring within the direct impact footprint.
- Inspect all open holes and trenches daily and just prior to back-filling or covering. At the end of each workday, LADWP shall place an escape ramp at each end of trenches to allow any animals that may have become trapped in the hole or trench to climb out overnight. The ramp may be constructed of either dirt fill or wood planking or other suitable material that is placed at an angle no greater than 30 degrees. If any worker discovers that special-status wildlife has become trapped, they shall notify the LADWP construction manager and environmental project manager immediately and LADWP shall halt the Project activity and notify the biologist immediately. Project workers and the biologist shall allow the individual to escape unimpeded if possible, or an appropriately permitted biologist may move the individual out of harm's way before allowing work to continue.
- Conduct pre-construction sweeps in areas with suitable habitat to support special-status wildlife. Supervise and conduct regular spot checks during vegetation clearing, grubbing, and grading. If permits are not necessary to handle or harass the species, flush or move wildlife from work areas ahead of ground disturbance activities during pre-construction sweeps.
- If slow-moving and/or fossorial special-status species that do not easily flush are detected in the work area, a biologist possessing an appropriate California scientific collecting permit to handle special-status species will capture and relocate individuals to nearby undisturbed areas with suitable habitat outside of the construction area, but as close to their origin as possible. All wildlife moved during project activities shall be documented by the biologist on site.
- Periodically monitor the construction site to see that dust is minimized. If the biological monitor determines that dust is adversely affecting special-status species, the monitor shall require the construction personnel to implement best available control measures to reduce dust. Examples of such best available control measures include periodic watering of work areas, application of environmentally safe soil stabilization materials, and/or roll compaction (also required by MM-AQ-1 – Fugitive Dust Controls).

MM-BIO-4 Education Program. LADWP shall conduct an education program prior to all Project activities for all employees, agents, or contractors that will be working on behalf of the LADWP in the Project Area. The education program shall include a discussion of the biology and general behavior of desert tortoise and Mohave ground squirrel and the biology of western Joshua tree; information about the distribution and habitat needs of the species; sensitivity of the species to human activity; the legal status of the species under CESA, including their protected status, recovery efforts, penalties for violations; and Project-specific protective measures detailed in the ITP. The education program shall consist of an in-person presentation from the Authorized Biologist or Biological Monitor and/or a digital presentation that can be accessed in the field via cellular phones, tablets,

laptop computers, and/or similar portable devices. LADWP shall prepare and distribute wallet-sized cards or a fact sheet handout (hard copy or digital) detailing the information presented during the education program for workers to carry in the Project Area. In addition, a tail-gate presentation prior to surface-disturbing Project activities shall also be presented by the Authorized Biologist or Biological Monitor prior to the start of any project-specific Project activities to identify specific on-site resources identified for avoidance during pre-activity surveys. For the education program and each tailgate presentation, LADWP shall provide interpretation for non-English speaking workers, and the same instruction shall be provided to any new workers before they are authorized to perform work in the Project Area. Upon completion of the program and after each tail-gate presentation, employees shall sign a form (hard-copy or digital) stating they attended the program and presentation and understand all protection measures. The form shall be made available to CDFW upon request. The program shall:

- Be developed by or in consultation with the Authorized Biologist and consist of an on-site presentation with supporting written material and/or electronic media, including photographs of special-status species, available to all participants.
- Provide an explanation of the function of flagging that designates authorized work areas or resources marked for avoidance and specify the prohibition of soil disturbance or vehicle travel outside designated areas.
- Discuss general safety protocols such as vehicle speed limits (15 miles per hour), hazardous substance spill prevention and containment measures, and fire prevention and protection measures.
- Review avoidance, minimization, and mitigation requirements.
- Explain the sensitivity of the vegetation and habitat within and adjacent to work areas and proper identification of these resources.
- Discuss the relevant policies and plans, and the consequences of non-compliance with these acts and/or any permit conditions
- Discuss the locations and types of special-status resources on the Project sites and adjacent areas and explain the reasons for protecting these resources.
- Inform participants that no snakes, other reptiles, mammals, birds, bats, or any other wildlife will be harmed or harassed.
- Place special emphasis on special-status plant and wildlife species that are known to occur in the Project activity work area.
- Provide contact information for the biologist and instructions for notification of any vehicle-wildlife collisions or dead or injured wildlife species encountered during Project activities.

MM-BIO-5 Delineation of Impact Boundaries. Before beginning activities that would cause impacts, the contractor shall clearly delineate work area boundaries with fencing, stakes, or flags within which the impacts will take place, and in consultation with the Authorized biologist, mark or delineate where sensitive biological resources occur within the impact footprint if being avoided. All impacts outside the fenced, staked, or flagged areas shall be avoided, and all fencing, stakes, and flags shall be maintained until the completion of impacts in that area. LADWP shall avoid direct impacts to vegetation within the Mojave River corridor.

MM-BIO-6 Desert Tortoise Protocol Surveys. LADWP shall conduct protocol level surveys for desert tortoise in all Project impact areas, including areas where impacts are occurring within existing disturbance areas, as outlined in the mitigation measure below.

Desert Tortoise Protocol Surveys. Prior to the start of construction, qualified biologists must conduct protocol level presence or absence surveys in all project impact areas within suitable habitat in accordance with the USFWS Desert Tortoise Field Manual. LADWP shall coordinate with USFWS and CDFW concurrently to ensure consistency and adequacy of surveys and subsequent planning efforts. If it is determined by CDFW and USFWS that an ITP is required for the Project to move forward, LADWP shall acquire an ITP from CDFW for the species and a consistency determination from USFWS or enter into formal consultation with USFWS for issuance of a biological opinion (BO) prior to the start of Project activities. Upon Project implementation, LADWP shall adhere to any additional measures and conditions set forth within the ITP. No take of desert tortoise shall occur without authorization in the form of an ITP pursuant to California Fish and Game Code Section 2081.

Desert Tortoise Compensatory Mitigation. Upon completion of protocol surveys, LADWP will coordinate with USFWS and CDFW to determine what portions of the Project would be considered occupied desert tortoise habitat based on survey results. LADWP shall provide compensatory mitigation as determined through the ITP process. At minimum, LADWP shall provide compensatory mitigation for impacts to desert tortoise critical habitat 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, and the implemented mitigation is nested (mitigation for desert tortoise critical habitat fulfills the ground disturbance mitigation that is required). Compensatory mitigation shall be implemented consistent with the BLM DRECP. LADWP shall complete the required compensation in accordance with 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 provide a minimum of one biological monitor who is authorized by the USFWS and the CDFW to handle desert tortoises for each active work crew.
- 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 construction 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, LADWP and the 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-7 Mohave Ground Squirrel Habitat Assessments and Protocol Surveys. For Project activities taking place in the distribution range of Mohave ground squirrel, A permitted biologist shall conduct habitat assessments and protocol level trapping surveys as outlined in the mitigation measure below.

Mohave Ground Squirrel Habitat Assessments. Prior to the start of construction, permitted biologists shall conduct habitat assessments in all work areas to evaluate each work area's potential to support suitable Mohave ground squirrel habitat. The assessment would consist of meandering pedestrian transects, wherein biologists will note presence or absence of suitable vegetation communities and individual plants that would provide forage (e.g., spiny hopsage, winterfat), as well as presence of burrows and/or friable soils. The habitat assessment would also take into account connectivity with known populations. The determination of the habitat assessment will inform whether where protocol trapping survey would be required.

Mohave Ground Squirrel Protocol Surveys. In areas where a permitted biologist has determined that suitable Mohave ground squirrel habitat is present, a permitted biologist must conduct protocol level surveys per CDFW Mohave Ground Squirrel Survey Guidelines (CDFW 2023b). The protocol surveys will consist of an initial visual survey, and three 5-day live trapping surveys conducted in the following periods at least two weeks apart: March 15 through April 30, May 1 through May 31, and June 1 through July 15. Camera trapping surveys would be conducted simultaneously with live trapping as recommended in CDFW guidelines. If CDFW determines that camera-only methods would be conducive to reducing impacts to Mohave ground-squirrel, LADWP will coordinate with CDFW on an alternative camera-trapping survey protocol that would adequately determine presence or absence of the species.

If it is determined by CDFW that an ITP is required for the Project to move forward, LADWP shall acquire an ITP from CDFW for the species prior to the start of Project activities. Upon Project implementation, LADWP shall adhere to any additional measures and conditions set forth within the ITP. No take of Mohave ground squirrel shall occur without authorization in the form of an ITP pursuant to California Fish and Game Code Section 2081.

Mohave Ground Squirrel Compensatory Mitigation. Upon completion of protocol surveys, LADWP will coordinate with USFWS and CDFW to determine what portions of the Project would be considered occupied Mohave ground squirrel habitat based on survey results. LADWP shall provide compensatory mitigation as determined through the ITP process. Where impacts to Mohave ground-squirrel occupied habitat co-occur within ground disturbance impacts within ACEC and California Desert NCL units that are cumulatively over their respective disturbance caps, the higher mitigation ratio applies, and the implemented mitigation is nested (mitigation for Mohave ground-squirrel occupied habitat fulfills the ground disturbance mitigation that is required). Compensatory mitigation shall be implemented consistent with the BLM DRECP LUPA.

MM-BIO-8 Protocol Survey for Listed Riparian Birds and Avoidance. Prior to Project activities, LADWP will conduct protocol surveys for listed riparian bird species in riparian habitat along the Mojave River located within 500 feet of the Project area as outlined in the mitigation measure below.

The year prior to the start of construction, LADWP shall have a permitted or qualified biologist, as applicable, conduct focused surveys for western yellow-billed cuckoo in accordance with A Natural

History Summary and Survey Protocol for the Western Distinct Population Segment of the Yellow-billed Cuckoo (USFWS 2016), least Bell's vireo in accordance with the USFWS Least Bell's Vireo Survey Guidelines (USFWS 2001), and southwestern willow flycatcher in accordance with A Natural History Summary and Survey Protocol for the Southwestern Willow Flycatcher (Sogge et al. 2010). If a protocol survey determines presence of a given species, LADWP shall avoid Project activities within 500 feet of the habitat during the species' breeding season (i.e., yellow-billed cuckoo – June 15 through August 15; least Bell's vireo – April 10 through July 31; southwestern willow flycatcher – May 15 through July 17.

MM-BIO-9 Nesting Bird Surveys and Avoidance. 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 500-foot 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 active nests containing eggs or young are 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. LADWP shall have a qualified avian biologist document species, baseline behavior, stage of reproduction, and existing site conditions including vertical and horizontal distances from proposed work areas, visual or acoustic barriers, and existing level of disturbance to avoid impacts to nesting birds, eggs, and nests. The biologist shall establish an appropriate nest buffer based on the species and the planned activity's level of disturbance, site conditions, and the observed bird behavior. The on-site biologist shall increase buffer sizes as needed if nesting individuals show signs of disturbance. The buffer zone may be decreased, at the biologist's discretion, based on the individual's sensitivity to visual or audible disturbances but shall not be decreased below 300-feet for special-status avian species or raptor species. The nest buffer area shall be avoided and demarcated in the field with flagging and stakes or construction fencing. Active nests shall be monitored until the biologist has determined the young have fledged or the project is finished. The biologist has the authority to halt or stop work if nesting individuals exhibit signs of disturbance. Established buffers shall remain until the biologist determines the young have fledged or the nest is no longer active, or until Project activities cease.

MM-BIO-10 Crotch's Bumble Bee Protocol Survey and Avoidance. During candidacy or if Crotch's bumble bee is listed under CESA, LADWP shall implement the mitigation measure below.

Within the known distribution range for Crotch's bumble bee, presence/absence surveys for the species shall be conducted prior to construction within the time periods described below in order to evaluate locations and use of Crotch's bumble bee nesting colonies if present within the Project area. The survey shall include 1) a habitat assessment and 2) focused surveys, both of which will be based on recommendations described in the "Survey Considerations for CESA (California Endangered Species Act) Candidate Bumble Bee Species," released by the CDFW on June 6, 2023, or the most current at the time of construction. LADWP will submit a survey plan prior to conducting focused

surveys, which will identify the Project and its location, survey methods, lead surveyors, field assistants. The habitat assessment shall be conducted prior to focused surveys and, at a minimum, include a review of historical and current species occurrences; document potential habitat on site including foraging, nesting, and/or overwintering resources; and identify which plant species are present. For the purposes of this mitigation measure, nest resources are defined as abandoned small mammal burrows, bunch grasses with a duff layer, thatch, hollow trees, brush piles, and man-made structures that may support bumble bee colonies such as rock walls, rubble, and furniture. If nesting resources are present in the impact area, focused surveys will be conducted.

The focused surveys will be performed by a biologist with expertise in surveying for bumble bees and include at least three survey passes that are not on sequential days or in the same week, preferably spaced two to four weeks apart. The timing of these surveys shall coincide with the Crotch's bumble bee colony active period (April 1 through August 31). Surveys may occur between 1 hour after sunrise and 2 hours before sunset. Surveys will not be conducted during wet conditions (e.g., foggy, raining, or drizzling) and surveyors will wait at least 1 hour following rain. Optimal surveys are when there are sunny to partly sunny skies that are greater than 60 degrees Fahrenheit. Surveys may be conducted earlier if other bees or butterflies are flying. Surveys shall not be conducted when it is windy (i.e., sustained winds greater than 8 mph). Within non-developed habitats, the biologist shall look for nest resources suitable for bumble bee use. Ensuring that all nest resources receive 100% visual coverage, the biologist shall watch the nest resources for up to five minutes, looking for exiting or entering worker bumble bees. Worker bees should arrive and exit an active nest site with frequency, such that their presence would be apparent after five minutes of observation. If a bumble bee worker is detected, then a representative shall be identified to species. Biologists should be able to view several burrows at one time to sufficiently determine if bees are entering/exiting them depending on their proximity to one another. It is up to the discretion of the biologist regarding the actual survey viewshed limits from the chosen vantage point which would provide 100% visual coverage; this could include a 30- to 50-foot-wide area. If a nest is suspected, the surveyor can block the entrance of the possible nest with a sterile vial or jar until nest activity is confirmed (no longer than 30 minutes).

Identification will include trained biologists netting/capturing the representative bumble bee in appropriate insect nets, per the protocol in U.S. National Protocol Framework for the Inventory and Monitoring of Bees. The bee shall be placed in a clear container for observation and photographic documentation if able. The bee will be photographed using a macro lens from various angles to ensure recordation of key identifying characteristics. If bumble bee identifying characteristics cannot be adequately captured in the container due to movement, the container will be placed in a cooler with ice until the bumble bee becomes inactive (generally within 15 minutes). Once inert, the bumble bee shall be removed from the container and placed on a white sheet of paper or card for examination and photographic documentation. The bumble bee shall be released into the same area from which it was captured upon completion of identification. Based on implementation of this method on a variety of other bumble bee species, they become active shortly after removal from the cold environment, so photography must be performed quickly.

If Crotch's bumble bee nests are not detected, no further mitigation would be required. The mere presence of foraging Crotch's bumble bees would not require implementation of additional minimization measures because they can forage up to 10 kilometers from their nests. If nest

resources occupied by Crotch's bumble bee are detected within the construction area, no construction activities shall occur within 50 feet of the nest, or as determined, by a qualified biologist through evaluation of topographic features or distribution of floral resources. The nest resources will be avoided for the duration of the Crotch's bumble bee nesting season (February 1 through October 31), which includes the queen flight season, the colony active period, and the daughter-queen (gyne) flight season. Outside of the nesting season, it is assumed that no live individuals would be present within the nest as the gynes usually leave from September through October, and all other individuals (original queen, workers, males) die. The gyne is highly mobile and can independently disperse to outside of the construction footprint to surrounding open space areas that support suitable hibernacula resources.

A written survey report will be submitted to CDFW within 30 days of the survey. The report will include survey methods, weather conditions, and survey results, including a list of insect species observed and a figure showing the locations of any Crotch's bumble bee nest sites or individuals observed. The survey report will include the qualifications/resumes of the surveyor(s) and approved biologist(s) for identification of photo vouchers, detailed habitat assessment, and photo vouchers. If Crotch's bumble bee nests are observed, the survey report will also include recommendations for avoidance, and the location information will be submitted to the California Natural Diversity Database (CNDDB) at the time of, or prior to, submittal of the survey report.

If the above measures are followed, it is assumed that the Project shall not need to obtain authorization from CDFW through the CESA ITP process. If the nest resources cannot be avoided during the nesting period, as outlined in this measure, LADWP will consult with CDFW regarding the need to obtain an ITP. Any measures determined to be necessary through the ITP process to offset impacts to Crotch's bumble bee may supersede measures provided in this CEQA document.

In the event an ITP is needed, mitigation for direct impacts to Crotch's bumble bee will be fulfilled through compensatory mitigation at a ratio determined by the ITP nesting habitat replacement of equal or better functions and values to those impacted by the Project, or as otherwise determined through the ITP process.

MM-BIO-11 Pre-Construction Surveys and Avoidance and Minimization Measures for Special-Status Plants. Prior to Project activities, LADWP shall conduct focused surveys for special-status plants as outlined in the mitigation measure below.

Focused Special-Status Plant Surveys. To mitigate for potential impacts to habitat occupied by special-status plant species, surveys shall be conducted within impact areas where special-status plant species have a moderate or high potential to occur. The following species were documented within the Project area or have a moderate or high potential to occur: desert wing-fruit (*Acleisanthes nevadensis*), Nevada onion (*Allium nevadense*), white bear poppy (*Arctomecon merriamii*), Mojave milkweed (*Asclepias nyctaginifolia*), Tidestrom's milkvetch (*Astragalus tidestromii*), scaly cloak fern (*Astrolepis cochisensis* ssp. *cochisensis*), three-awned grama (*Bouteloua trifida*), Emory's crucifixion thorn (*Castela emoryi*), desert pincushion (*Coryphantha chlorantha*), viviparous foxtail cactus (*Coryphantha vivipara* var. *rosea*), Gilman's cymopterus (*Cymopterus gilmanii*), purple-nerve cymopterus (*Cymopterus multinervatus*), Mojave monkeyflower (*Diplacus mohavensis*), nine-awned pappus grass (*Enneapogon desvauxii*), Harwood's eriastrum (*Eriastrum harwoodii*), desert bedstraw (*Galium proliferum*), Parish's club-cholla (*Grusonia parishii*), polished blazing star

(*Mentzelia polita*), Darlington's blazing star (*Mentzelia puburula*), creamy blazing star (*Mentzelia tridentata*), cave evening-primrose (*Oenothera cavernae*), rosy two-toned beardtongue (*Penstemon bicolor* ssp. *roseus*), sky-blue phacelia (*Phacelia coerulea*), Parish's phacelia (*Phacelia parishii*), Abert's sanvitalia (*Sanvitalia abertii*), Rusby's desert-mallow (*Sphaeralcea rusbyi* var. *eremicola*), and Mormon needle grass (*Stipa arida*).

These focused surveys shall occur during the season prior to construction and shall be conducted during a period when the target species would be observable and identifiable (e.g., blooming period for annuals). Focused surveys for special-status plant species shall be conducted by a qualified biologist according to the CNPS Botanical Survey Guidelines (CNPS 2001); Protocols for Surveying and Evaluating Impacts to Special Status Native Populations and Natural Communities (CDFW 2018); and U.S. Fish and Wildlife Service General Rare Plant Survey Guidelines (Cypher 2002).

Avoidance and Minimization. If special-status plant species are detected during focused survey efforts described above, the full extent of the occurrence within the area shall be recorded. The location of each special-status plant occurrence shall be mapped and number of individuals for each occurrence documented. If impacts to special-status plants cannot be avoided, the following measures shall be implemented:

- Special-status plants in the vicinity of the disturbance will be temporarily fenced or prominently flagged and a buffer established around the populations to prevent inadvertent encroachment by vehicles and equipment during the activity;
- Seeds will be collected and stored in appropriate storage conditions (e.g., cool and dry), and dispersed/transplanted following the construction activity and reapplication of salvaged topsoil; and
- The top 6 inches of topsoil will be salvaged, stockpiled, and replaced as soon as practicable after project completion. Soil stockpiles shall be stabilized, consistent with the project's Stormwater Pollution Prevention Plan. The salvaged topsoil shall be redistributed and contoured to blend with surrounding grades.

In the event that a federally or state-listed plant is observed during focused survey, the Los Angeles Department of Water and Power (LADWP) shall consult with the applicable agency (i.e., CDFW and/or USFWS) and obtain written concurrence for measures required for federally or state-listed plant species, if observed.

MM-BIO-12 Relocation of Desert Native Plants. If it has been determined that protected native desert plants cannot be avoided, LADWP shall apply for a permit with San Bernardino County for removal or relocation of protected native desert plants as required under California Desert Native Plants Act (Food and Agricultural Code, Division 23). The permit application form shall specify information outlined in the California Desert Native Plant Act Section 80114, which includes but is not limited to, the number and species of native plants to be relocated, a description of the real property from which the plants are to be removed, the destination of the native plants, and the manner in which the plants are to be salvaged. Pursuant to the California Desert Native Plants Act, tags or seals issued by the County must be attached to the native plants at the time of harvesting and before transporting to their permanent relocation site(s) and must remain attached to the plant until transplanted into its ultimate destination. Transport of salvaged plants will occur as prescribed by

the County. The following actions shall also be implemented to ensure successful relocation of desert native plants for which salvage is necessary:

- Salvaged plants shall be transplanted expeditiously to either their final on-site location or to an approved off-site area. If the plants cannot be expeditiously taken to their permanent relocation area at the time of excavation, they may be transplanted in a temporary area (stockpiled) prior to being moved to their permanent relocation site(s).
- Transplanted plants shall be watered prior to and at the time of transplantation. Watering of the transplanted plants shall continue for one year.

MM-BIO-13 Avoidance and Minimization of Impacts to Golden Eagle. 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. LADWP shall provide the name(s) and qualifications of each raptor biologist to the CDFW two 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 provided to and approved by the CDFW. Upon approval of a report showing an inactive nest, the CDFW may approve work within 1 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 CDFW shall be contacted for further instructions.

MM-BIO-14 Pre-Construction Burrowing Owl Surveys. LADWP shall conduct take avoidance surveys for burrowing owl in accordance with protocols established in the Staff Report on Burrowing Owl Mitigation (2012 Staff Report; CDFW 2012). A pre-construction burrowing owl survey shall be completed no more than 14 days before initiation of vegetation removal or grading activities. If ground-disturbing activities are delayed or suspended for more than 30 days after the pre-construction surveys, the project site shall be re-surveyed. If burrowing owls are located within or adjacent to an area subject to impact from a Project activity, LADWP shall postpone the activity, if possible, until burrowing owls are no longer present. If postponement of impacts is not feasible due to Project activity urgency, LADWP shall implement the following actions to minimize impacts.

- LADWP shall implement measures consistent with practices identified in the 2012 Staff Report to minimize potential impacts to burrowing owl. Measures may include, but are not limited to, the use of buffer zones, visual screens (e.g., hay bales monitored during the day and removed at night to prevent raptor perching; screens shall not exceed 4 feet in height and shall be at least 30 feet from active burrows), or other measures while Project activities are occurring.
- Buffers will be established around occupied burrows as determined by a qualified biologist, taking into account existing vegetation, human development, and land uses in an area. The buffer zone may be increased or decreased based on the individual owl's sensitivity to visual or audible disturbances. Project activities may occur within 50 meters to 500 meters of an active burrow (based on level of disturbance). No project activities shall be allowed to encroach into established buffers without the consent of a monitoring biologist. The buffer shall remain

in place until it is determined that occupied burrows have been vacated or the nesting season has completed

- LADWP shall make every effort to minimize impacts to occupied owl burrows.
- If LADWP proposes to relocate burrowing owls from an active burrow or if an active burrow will be impacted, a burrowing owl relocation plan shall be prepared for CDFW review and approval that will be performed outside of breeding season and after fledgling independence and any relocation shall be subject to compensatory mitigation.
- Outside of the nesting season, passive owl relocation techniques approved by CDFW shall be implemented. Owls shall be excluded from burrows in the immediate project area and within a buffer zone if there is a threat to the surface or subterranean burrow structure by installing one-way doors in burrow entrances. These doors will be placed at least 48 hours prior to ground-disturbing activities. The project area shall be monitored daily for 1 week to confirm owl departure from burrows prior to any ground-disturbing activities. Compensatory mitigation for permanent loss of owl habitat will be provided following the guidance in the 2012 Staff Report.
- If impacts occur to an occupied burrow or if a burrowing owl relocation plan is implemented, LADWP shall provide compensatory mitigation. Compensatory mitigation shall be implemented consistent with the recommendations in the 2012 Staff Report such that the habitat acreage, number of burrows, and burrowing owls impacted are replaced at a minimum of 1:1 in-kind habitat replacement of equal or better functions and values to those impacted by the Project, or as otherwise determined through coordination with CDFW.

MM-BIO-15 Desert Bighorn Sheep Avoidance. Within suitable bighorn sheep habitat in the Clark, Newberry, and Soda Mountains, helicopter use will be conducted outside of the lambing season (January 1-September 30) to avoid disturbance to desert bighorn sheep during their birthing and rearing period. If avoidance of the lambing season cannot be avoided, LADWP will coordinate with CDFW to modify helicopter operations to avoid disturbance of known lambing sites. If a bighorn sheep is incidentally observed during Project activities, work within 200 feet of the sheep would be halted, and activities would recommence after the animal moves away on its own.

MM-BIO-16 Special-Status Meso-Carnivore Avoidance and Minimization. Within 14 days prior to Project activities, LADWP shall have a qualified biologist conduct a pre-construction survey within planned Project work areas and a 500-foot buffer to determine if active or potential desert kit fox, American badger, or ringtail dens are present. Surveys shall encompass both the Project area and a buffer distance adequate to determine the potential for direct or indirect impacts. Surveys shall attain 100% visual coverage and be conducted using 10-meter (33-foot) transects (or reduced based on topography and vegetation), to determine the presence or absence of individuals, dens, and sign.

If potential desert kit fox, American badger, or ringtail dens are located, LADWP shall have a qualified wildlife biologist monitor the dens using observation and tracking material and/or trail cameras over a three (3) day period to determine the status of the den**.** If non-natal active dens can be avoided and buffered from Project activities, the biologist shall flag a minimum 100-foot disturbance-free buffer zone. A minimum 500-foot disturbance-free buffer shall be place around the natal den and maintained until juvenile independence is determined by the biologist. If the Project requires encroaching within a 500-foot buffer, LADWP shall consult with CDFW. The biologist shall block inactive dens within the Project work area or buffer zone that will not be directly impacted by project activities with rocks and sticks to discourage use. The biologist shall

periodically check and ensure the inactive burrows remain blocked and are not occupied. The biologist shall remove the obstruction when Project activities are complete. The biologist has the authority to halt or stop work in coordination with the LADWP construction manager and environmental project manager if individuals exhibit signs of disturbance. Established buffers shall remain until the biologist determines the young have dispersed or the den is no longer active, or until Project activities cease. If desert kit fox, American badger, or ringtail are proposed to be relocated from an active den or an active den will be impacted, an exclusion plan shall be prepared for CDFW review and approval that will be performed outside of breeding/pupping season and after juvenile dispersal. LADWP shall implement compensatory mitigation such that the habitat acreage, number of dens, and individuals impacted are replaced at a minimum of 1:1 in-kind habitat replacement of equal or better functions and values to those impacted by the Project, or as otherwise determined through coordination with CDFW.

MM-BIO-17 Compensatory Mitigation for Special-Status Vegetation Communities. LADWP shall provide compensatory mitigation for permanent impacts to special-status vegetation communities at a minimum of 1:1 in-kind habitat replacement of equal or better functions and values to those impacted by the Project, or as otherwise determined through coordination with CDFW. MM-BIO-6 and MM-BIO-19 would fulfill compensatory mitigation for special-status vegetation communities if impacts occur within an ACEC, NCL, or desert tortoise critical habitat.

MM-BIO-18 Aquatic Resources Mitigation. Prior to Project initiation, LADWP shall coordinate with the USACE, CDFW, and RWQCB (collectively the resource agencies) to determine which of the following permits for impacts to jurisdictional aquatic resources would be required:

- USACE Section 404 Permit
- RWQCB Section 401 Water Quality Certification
- RWQCB Waste Discharge Requirements
- CDFW Section 1602 Notification of Lake or Streambed Alteration

In addition to conditions of the above applicable permits and the RWQCB Construction General Permit (CGP) Coverage/SWPPP that would be acquired for the Project, LADWP shall implement practices identified below to minimize adverse impacts to streams and watersheds.

- Vehicles and equipment shall not be operated in ponded or flowing water.
- LADWP shall minimize road building and vegetation clearing within ephemeral streams to the extent feasible.
- Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources resulting from Project-related activities shall be prevented from contaminating the soil and/or entering ephemeral streams. LADWP shall ensure that safety precautions specified by this measure, as well as all other safety requirements of other measures and permit conditions, are followed during all phases of the Project.
- No petroleum products or other pollutants from the equipment shall be allowed to enter any state or federal -jurisdictional waters under any flow.
- LADWP shall ensure that Project activities do not impair water flow (velocity and low flow channel width).

- No broken concrete, debris, soil, silt, sand, bark, slash, sawdust, rubbish, or other organic or earthen material from any construction or associated activity of whatever nature shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into any waters of the U.S. or state.
- Stationary equipment such as motors, pumps, generators, and welders located within or adjacent to a drainage shall be positioned over drip pans. Stationary heavy equipment shall have suitable containment to handle a catastrophic spill/leak. Clean up equipment such as brooms, absorbent pads, and skimmers shall be on site prior to the start of construction.
- The resources agencies will calculate and identify the final amount of required compensatory mitigation as provided by this measure prior to issuance of respective permits using the following criteria:
  - For any Project activity that impacts a river, stream, or lake and associated fish and wildlife resources which permanently alters the physical and ecological function of the feature or installs permanent structures or materials into the areas subject to CFGC Section 1602, LADWP shall mitigate impacts to rivers, streams, or lakes at a minimum 1:1 ratio.

MM-BIO-19 Ground Disturbance Mitigation. LADWP shall provide ground disturbance mitigation 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. A portion of these impacts may co-occur with impacts to desert tortoise critical habitat. Where impacts requiring mitigation co-occur, the implemented mitigation is nested. As such, mitigation for desert tortoise critical habitat, as required in MM-BIO-6, 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. LADWP shall initiate and/or complete the required compensation at a time to be determined by the 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).

4.2.6 Level of Significance After Mitigation

Threshold BIO-1: 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 Wildlife or U.S. Fish and Wildlife Service?

The Project could result in potentially significant impacts to species identified as a special-status species or resources in local or regional plans, policies, or regulations, or by CDFW or USFWS. Implementation of MM-BIO-1 through MM-BIO-19 is required to reduce impacts to special-status species to less-than-significant levels.

Threshold BIO-2: 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 Wildlife or U.S. Fish and Wildlife Service?

The Project could result in potentially significant impacts to riparian habitat or other sensitive natural communities. Implementation of MM-BIO-3 through MM-BIO-5 and MM-BIO-17 is required to reduce impacts to riparian habitat or other sensitive natural communities to less-than-significant levels.

Threshold BIO-3: Would the Project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

The Project could result in potentially significant impacts to state or federally protected wetlands. Implementation of MM-BIO-2 through MM-BIO-5 and MM-BIO-18 is required to reduce impacts to state or federally protected wetlands to less-than-significant levels.

Threshold BIO-4: 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?

The Project would result in a less-than-significant impact to the movement of fish and wildlife species through the Project area. No mitigation is required.

Threshold BIO-5: Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Project could result in potentially significant impacts related to conflicts with local policies or ordinances protecting biological resources. Implementation of MM-BIO-1 and MM-BIO-11 is required to reduce impacts to less-than-significant levels.

Threshold BIO-6: 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?

The Project could result in potentially significant impacts related to conflicts with an adopted HCP, NCCP, or other approved local, regional, or state HCP. Implementation of MM-BIO-2 through MM-BIO-6 and MM-BIO-19 is required to reduce impacts to less-than-significant levels.

4.2.7 Cumulative Impacts

Less-than-Significant Impact with Mitigation Incorporated. As described in Section 4.2.4, Impact Analysis, Project activities would have a less-than-significant impact on special-status species, sensitive natural communities, jurisdictional waters, and native wildlife movement. The project would not conflict with local policies or conservation plans, and thus would not contribute to a cumulative impact. LADWP's Project activities required for the existing transmission line would not change from those currently required for the existing system. Temporary disturbances from Project activities include vegetation clearing, soil excavation, soil stockpiling, repair work to the ROW and access roads, conductor pulling and re-tensioning, and grading at some but not all tower crane pads, laydown areas, staging areas, helicopter landing areas, helicopter fly yards and staging areas, guard structures at major crossings, and access road pullouts. Project activities would result in a minimal amount of permanent habitat disturbance. Cumulative impacts to biological resources could occur as a result of increased ground-disturbing activities by multiple projects. These cumulative activities could increase the disruption of normal animal breeding, foraging, and migration behavior; the removal of suitable habitat for multiple special-status plant and wildlife species; and the degradation of jurisdictional water features.

While the proposed project and other planned and proposed projects would have impacts to special-status plant species, any project within the cumulative scenario would be subject to the same permitting requirements under FESA and CESA, which are intended to avoid and minimize impacts to species, both at the project level and in a regional context. Accordingly, the incremental contribution from Project activities to cumulative special-status plant species impacts, caused by other past, present, and probable future projects would not be expected to be cumulatively considerable or significant.

Although LADWP's Project activities are not anticipated to result in increased impacts to desert tortoise from the current baseline, the ongoing activities could contribute to a cumulative impact to desert tortoise due to the extensive coverage of the Project. As such, the planned and proposed projects within the Project area could contribute to habitat fragmentation and degradation, removal of food and shelter resources, changing normal behavior patterns, and attracting predator species such as ravens and coyotes. However, MM-BIO-6 requires that LADWP provide compensatory mitigation for disturbance to desert tortoise habitat, which would be on a landscape level due to the amount of mitigation that will likely be required. This landscape-level approach is more beneficial for the species than mitigating in habitat fragments on a project-by-project basis. Additionally, with incorporation required mitigation measures listed in Section 4.2.5 into the Project activities, potential direct and indirect impacts to special-status wildlife species and their habitat would be avoided and/or minimized. Other projects would likely implement similar measures. These mitigation measures would reduce the Project activities' contribution to cumulative impacts. Other projects in the region would be subject to permitting and mitigation requirements under FESA and CESA, which are intended to minimize and mitigate for impacts to species, both at the project level and in a regional context. Accordingly, the incremental contribution from Project activities to cumulative desert tortoise and its critical habitat impacts, caused by other past, present, and probable future projects would not be expected to be cumulatively considerable or significant.

4.2.8 References

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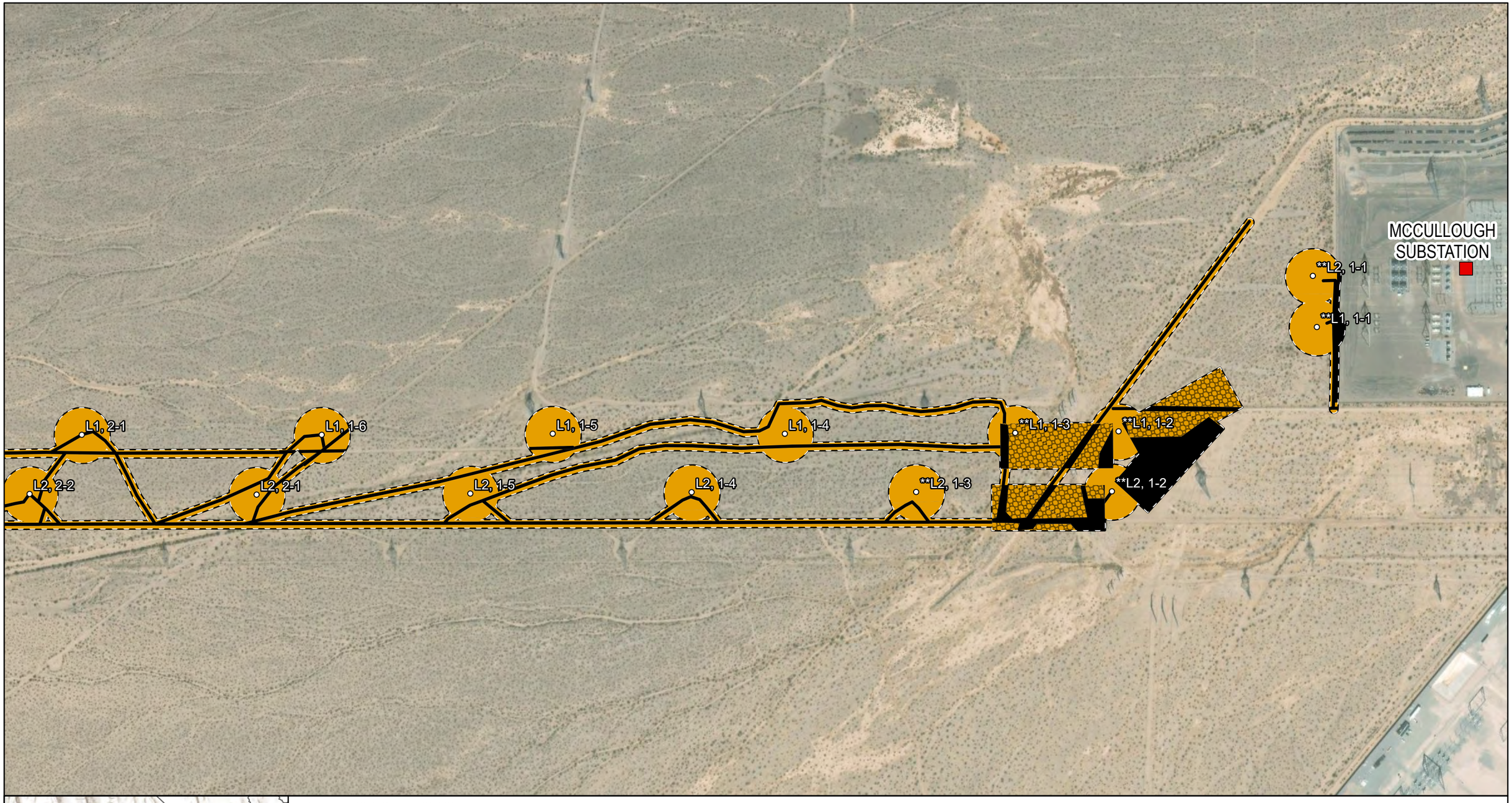
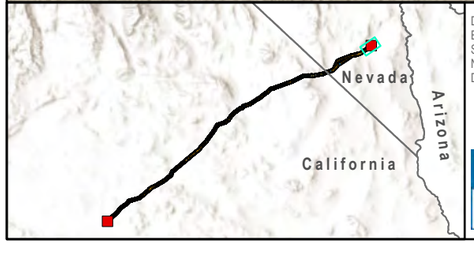




Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

Vegetation and Cover Types

- Creosote bush scrub
- Creosote bush - white bursage scrub
- Developed / disturbed

Figure 4.2-1-1
Vegetation Communities

N

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

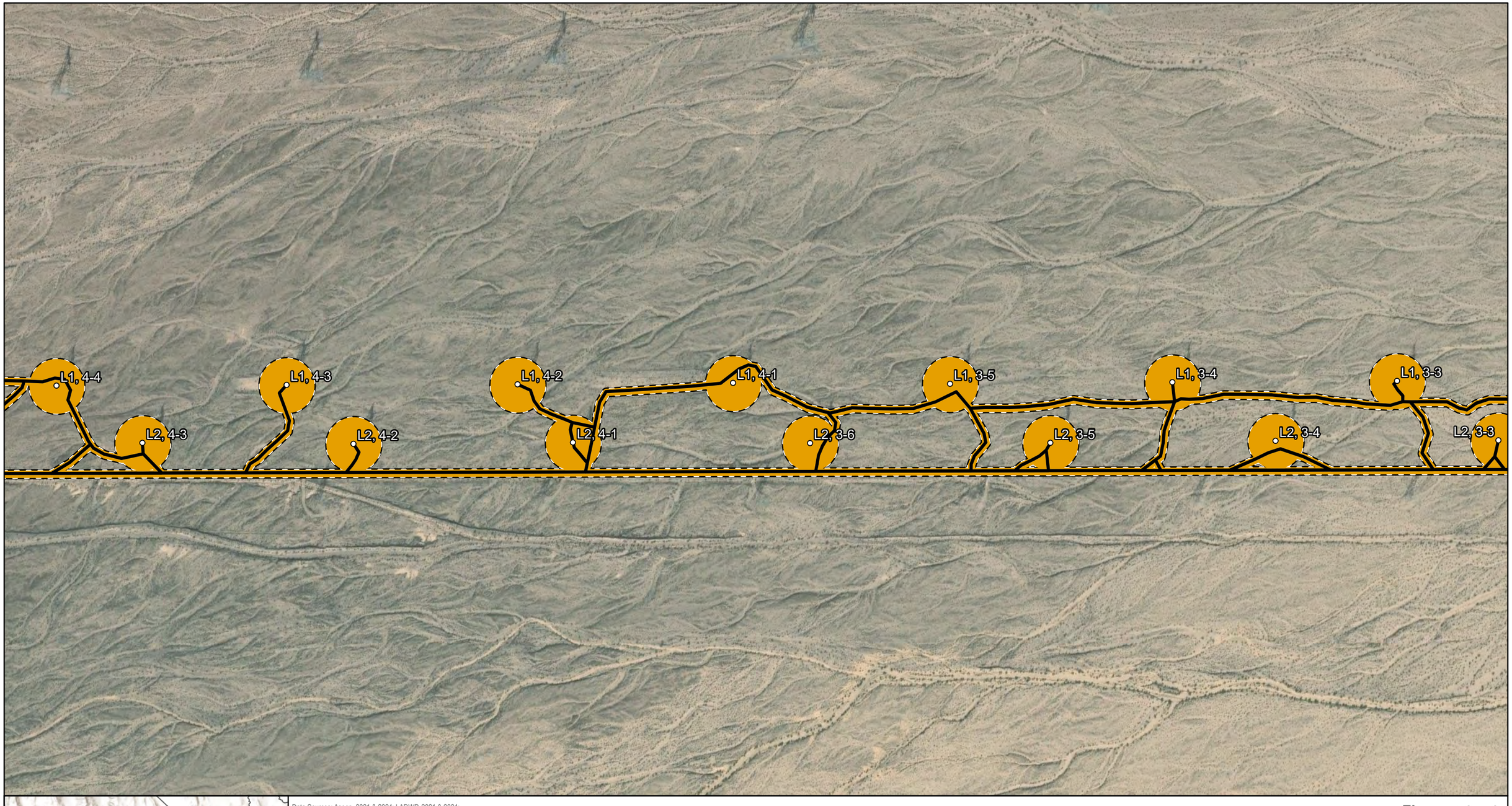
Creosote bush - white bursage scrub

Developed / disturbed

Figure 4.2-1-2
Vegetation Communities

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Creosote bush - white bursage scrub

Developed / disturbed

Figure 4.2-1-3
Vegetation Communities

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

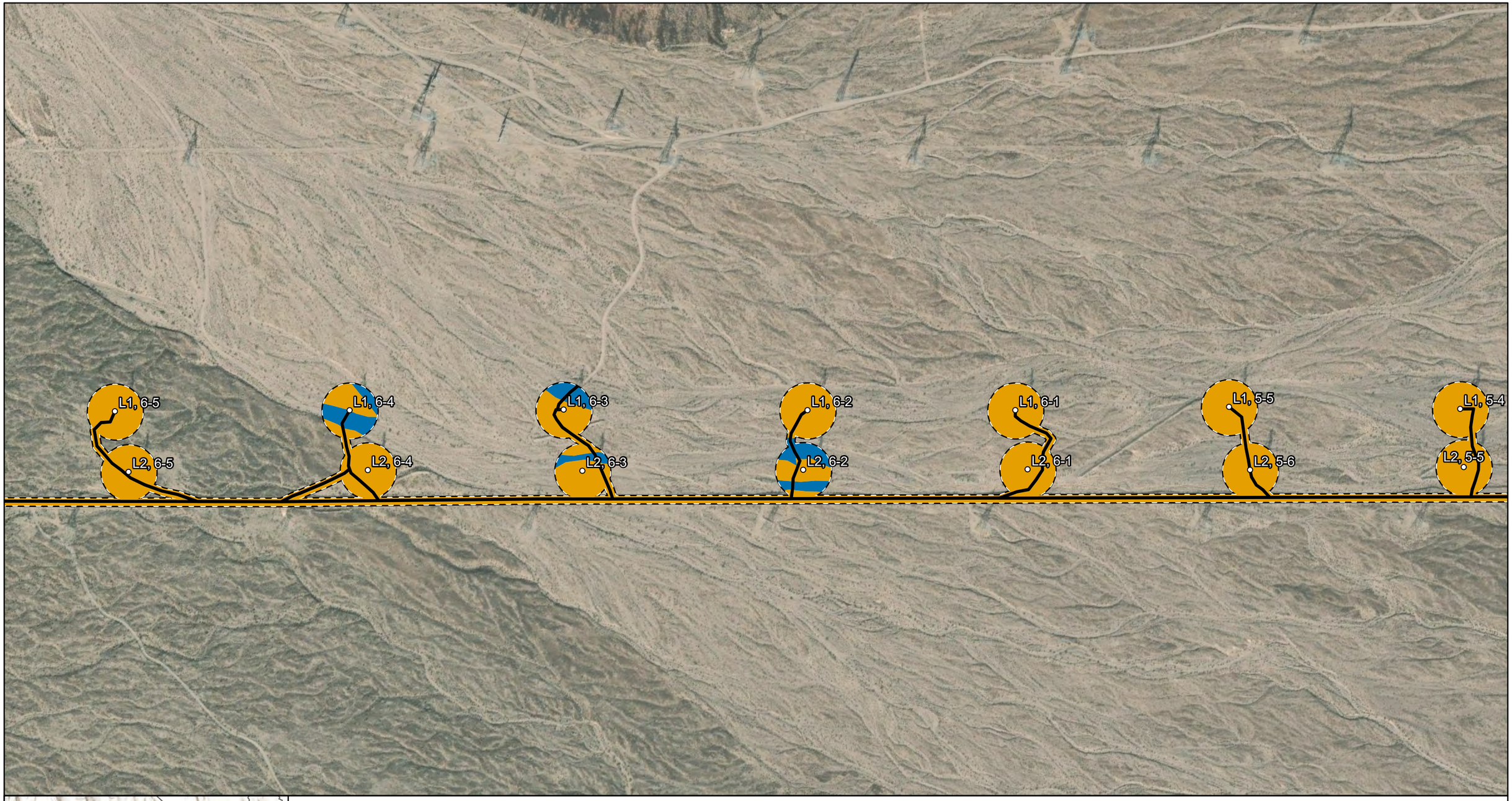
Creosote bush - white bursage scrub

Developed / disturbed

Figure 4.2-1-4
Vegetation Communities

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

- Cheesebush – sweetbush scrub
- Creosote bush - white bursage scrub
- Developed / disturbed

Figure 4.2-1-5
Vegetation Communities

N

500 0 500 Feet

L1, 8-2
L1, 8-1
L2, 8-2
L1, 7-5
L2, 8-1
L1, 7-4
L2, 7-5
L2, 7-4
L1, 7-3
L2, 7-3
L1, 7-2
L2, 7-2
L1, 7-1
L2, 7-1

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

- Buckhorn cholla / big galleta grass scrub
- Catclaw acacia – desert lavender – chuparosa scrub
- Cheesebush – sweetbush scrub
- Creosote bush scrub
- Creosote bush - brittle bush scrub
- Creosote bush - white bursage scrub
- Developed / disturbed
- Teddy bear cholla patches

Figure 4.2-1-6
Vegetation Communities

N

500 0 500 Feet

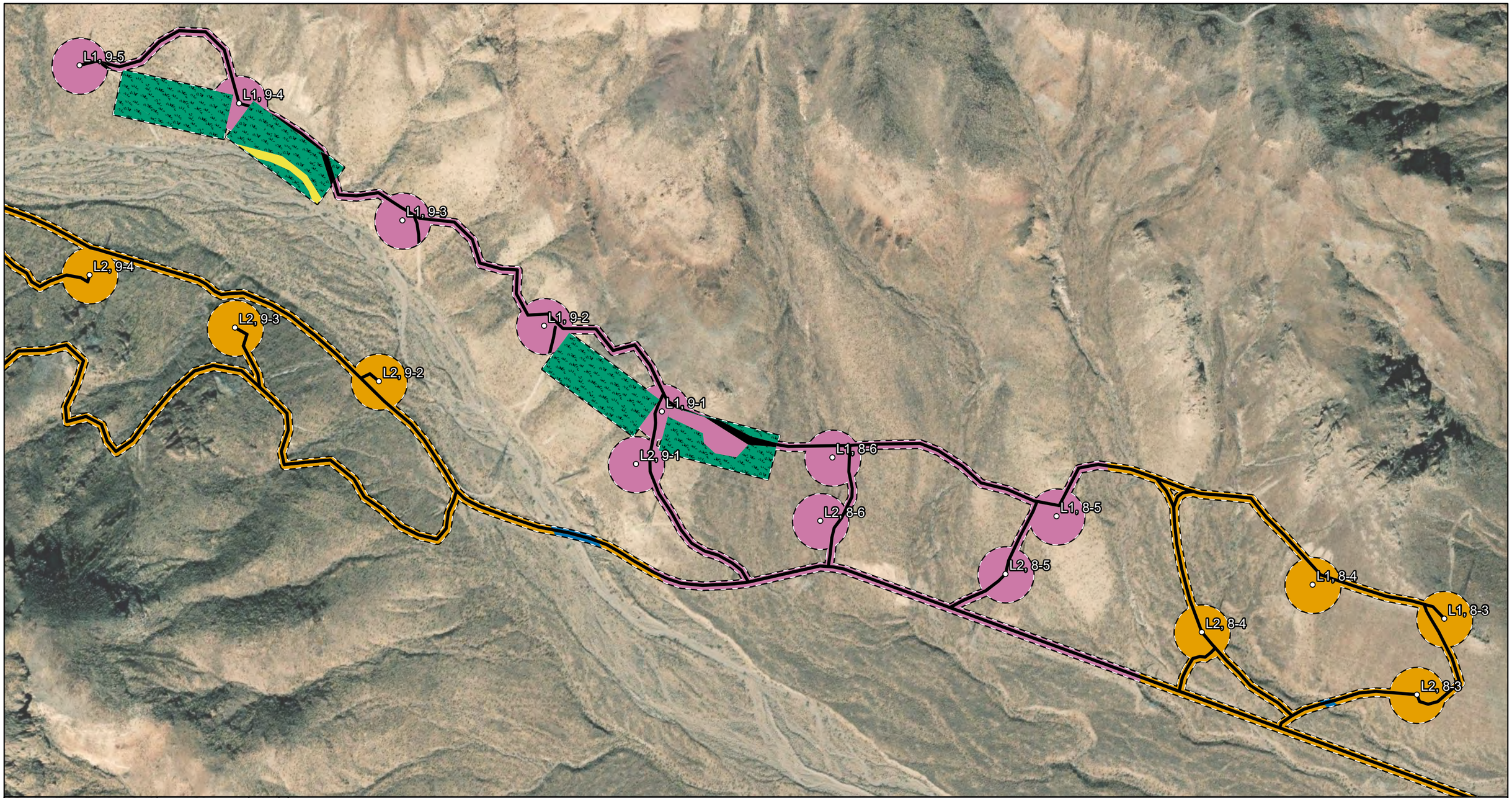


Figure 4.2-1-7
Vegetation Communities

L2, 10-5
L1, 10-3
L2, 10-4
L1, 10-2
L1, 10-1
L2, 10-3
L2, 10-2
L2, 10-1
L1, 9-7
L1, 9-6
L2, 9-6
L2, 9-5

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location
Survey Area

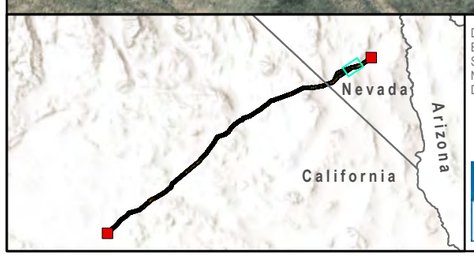
Vegetation and Cover Types
- Cheesebush – sweetbush scrub
- Creosote bush scrub
- Creosote bush - brittle bush scrub
- Creosote bush - white bursage scrub
- Developed / disturbed

Figure 4.2-1-8
Vegetation Communities

N

500 0 500 Feet

L1, 11-5
L1, 11-4
L1, 11-3
L2, 12-1
L2, 11-6
L2, 11-5
L2, 11-4
L1, 11-2
L2, 11-3
L2, 11-2
L1, 11-1
L1, 10-5
L2, 11-1
L1, 10-4
L2, 10-5



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

- Buckhorn cholla / big galleta grass scrub
- Catclaw acacia – desert lavender – chuparosa scrub
- Creosote bush - white bursage scrub
- Developed / disturbed
- Mojave yucca scrub

Figure 4.2-1**-9**
Vegetation Communities

N

500 0 500 Feet

L1, 13-2
L1, 13-1
L1, 12-5
L1, 12-4
L1, 12-3
L1, 12-2
L1, 12-1
L2, 13-2
L2, 13-1
L2, 12-5
L2, 12-4
L2, 12-3
L2, 12-2
L2, 12-1
Nevada
Arizona
California
Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024
MCC-VIC Tower Location
Survey Area
Vegetation and Cover Types
Creosote bush - white bursage scrub
Developed / disturbed
Figure 4.2-**3-10**
Vegetation Communities
N
500 0 500 Feet

L1, 14-3
L1, 14-2
L1, 14-1
L1, 13-6
L1, 13-5
L1, 13-4
L1, 13-3

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush - white bursage scrub
Developed / disturbed

Figure 4.2-1-11
Vegetation Communities

N

500 0 500 Feet

L1, 13-4

L1, 13-3

L2, 14-3

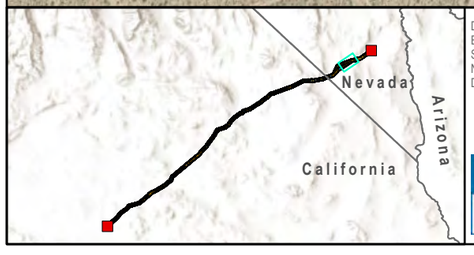
L2, 14-2

L2, 14-1

L2, 13-5

L2, 13-4

L2, 13-3



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Creosote bush - white bursage scrub

Developed / disturbed

Figure 4.2-1-**12**
Vegetation Communities

500 0 500 Feet

L1, 15-5
L1, 15-4
L1, 15-3
L1, 15-2
L1, 15-1
L1, 14-5
L1, 14-4

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

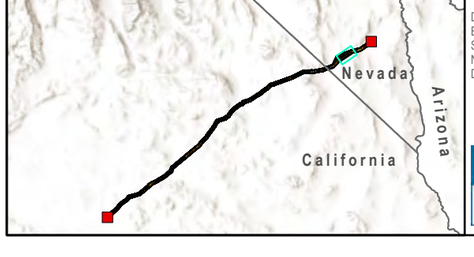
MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush - white bursage scrub
Developed / disturbed

Figure 4.2-1-**13**
Vegetation Communities

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Creosote bush - white bursage scrub

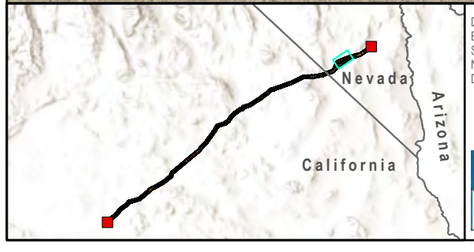
Developed / disturbed

Figure 4.2-1-14
Vegetation Communities

N

500 0 500 Feet

L1, 17-1
L1, 16-5
L1, 16-4
L1, 16-3
L1, 16-2
L1, 16-1
L1, 15-6



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

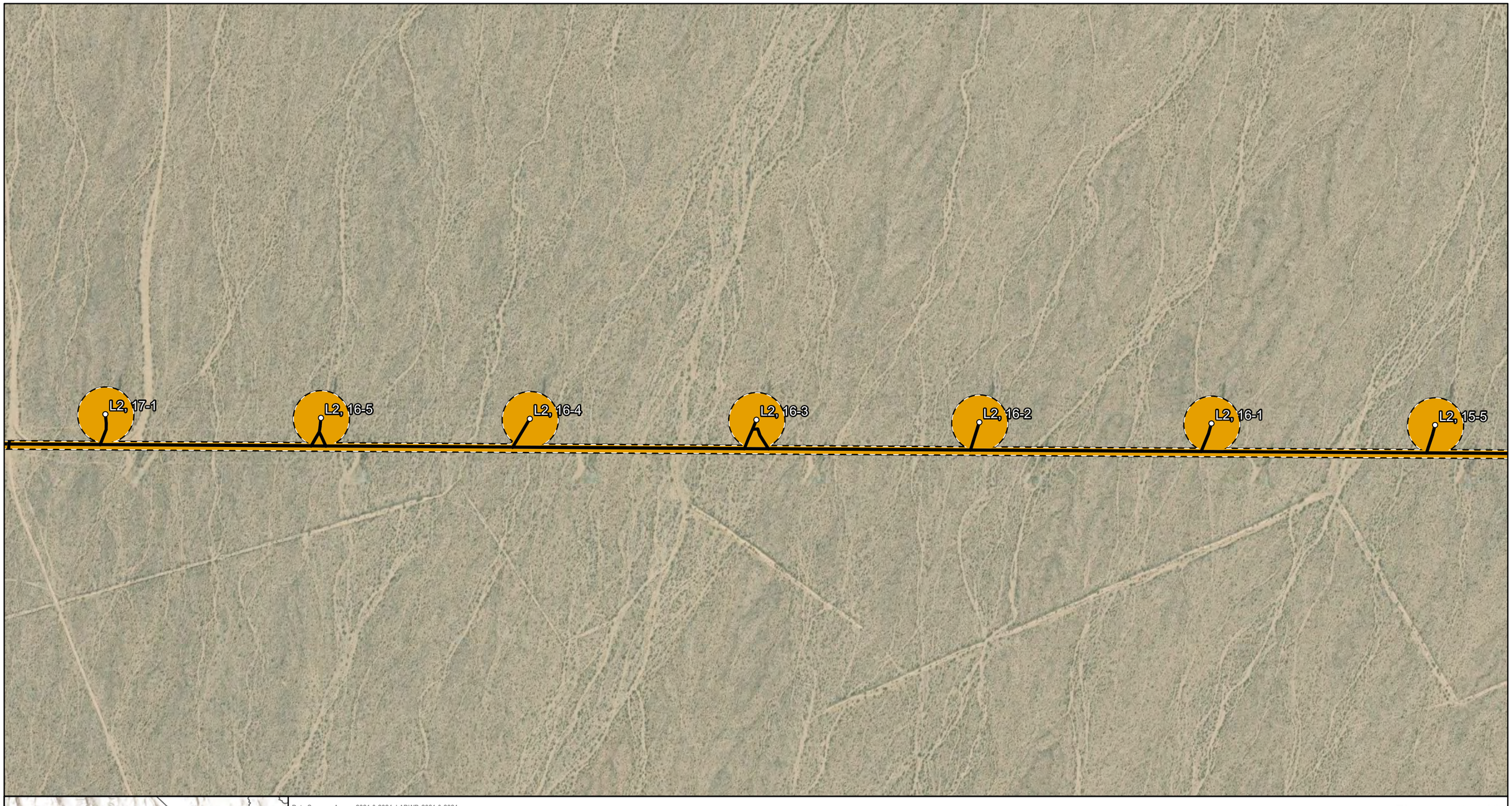
MCC-VIC Tower Location
Survey Area

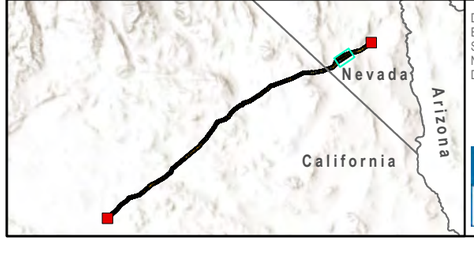
Vegetation and Cover Types
Creosote bush - white bursage scrub
Developed / disturbed

Figure 4.2-1-15
Vegetation Communities

N

500 0 500 Feet





Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

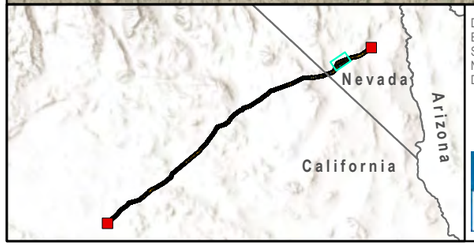
Vegetation and Cover Types

Creosote bush - white bursage scrub

Developed / disturbed

Figure 4.2-1-16
Vegetation Communities

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Creosote bush - white bursage scrub

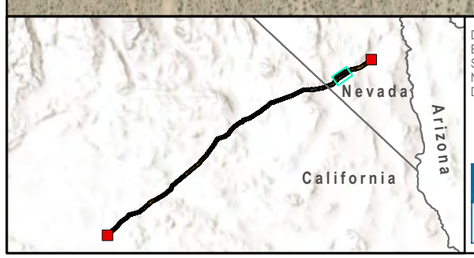
Developed / disturbed

Figure 4.2-1-17
Vegetation Communities

N

500 0 500 Feet

L2, 18-2
L2, 18-1
L2, 17-6
L2, 17-5
L2, 17-4
L2, 17-3
L2, 17-2



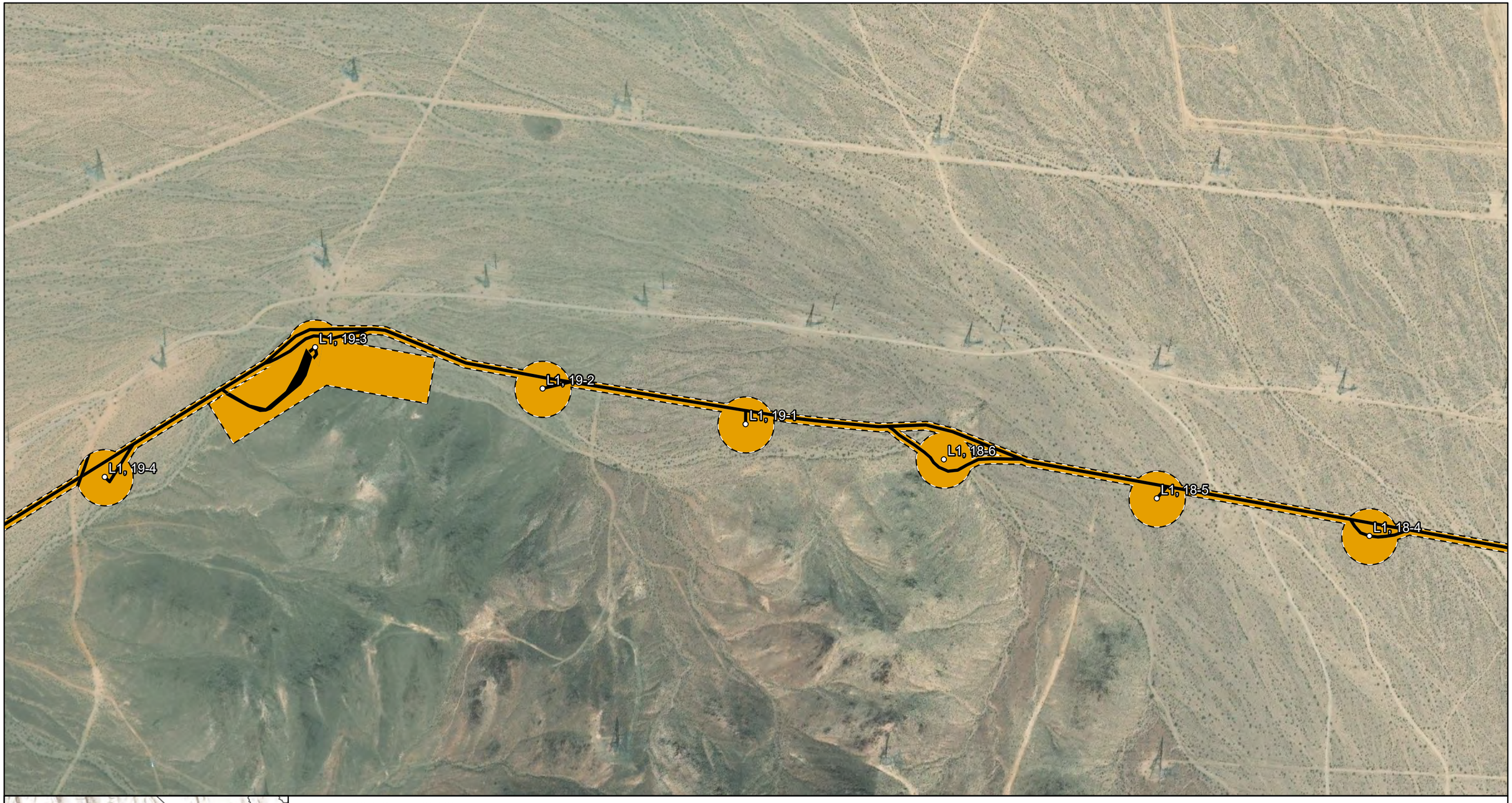
Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush - white bursage scrub
Developed / disturbed

Figure 4.2-1-**18**
Vegetation Communities

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

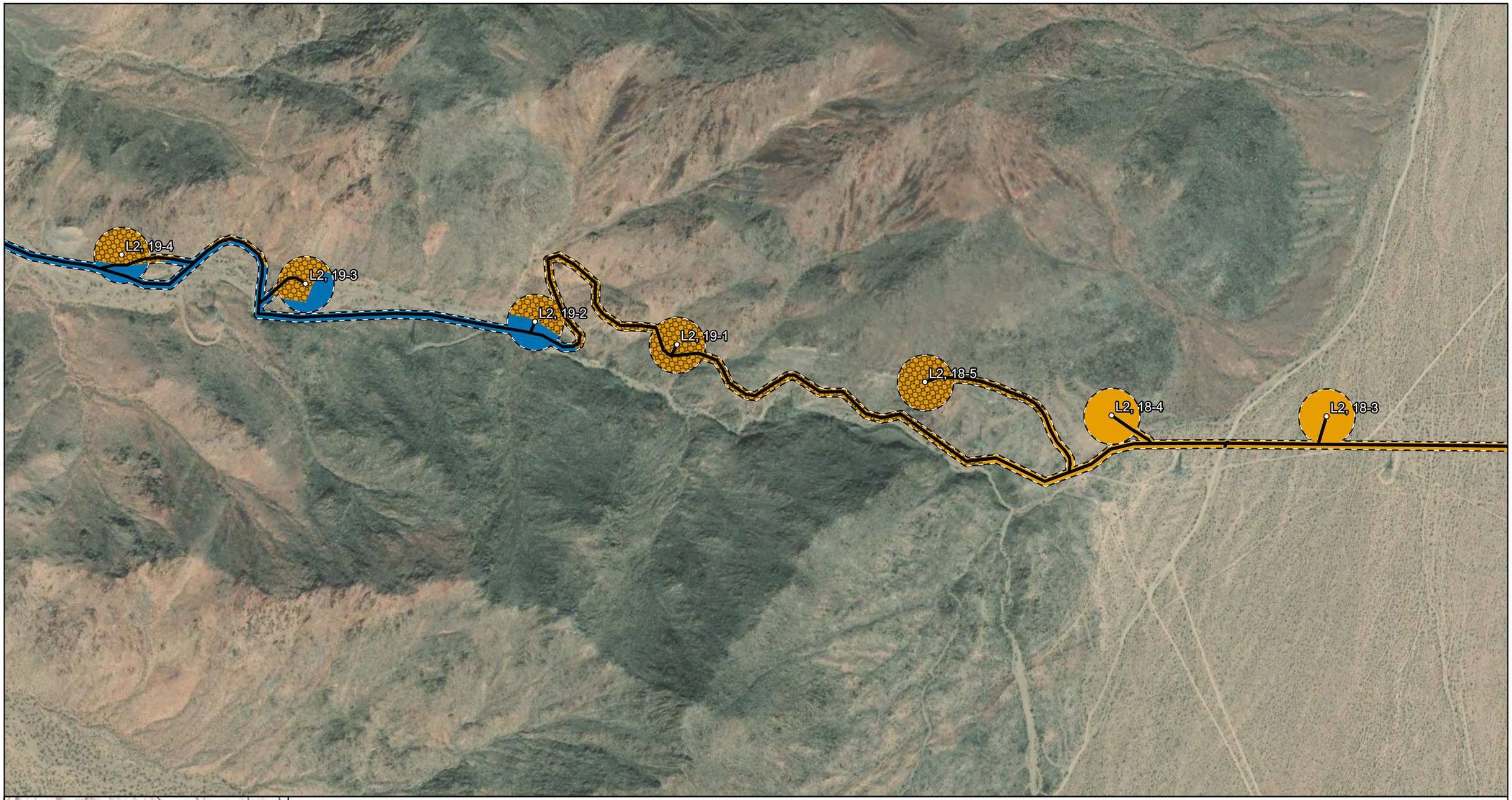
Vegetation and Cover Types

Creosote bush - white bursage scrub

Developed / disturbed

Figure 4.2-1-19
Vegetation Communities

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

- Cheesebush – sweetbush scrub
- Creosote bush scrub
- Creosote bush - white bursage scrub
- Developed / disturbed

Figure 4.2-1-**20**
Vegetation Communities

N

500 0 500 Feet

L1, 19-4
L1, 19-5
L1, 20-1
L1, 20-2
L1, 20-3
L1, 20-4
L1, 20-5

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Creosote bush - white bursage scrub

Developed / disturbed

Figure 4.2-1**-21**
Vegetation Communities

N

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

- Buckhorn cholla / big galleta grass scrub
- Cheesebush – sweetbush scrub
- Creosote bush - white bursage scrub
- Developed / disturbed

Figure 4.2-1**-22**
Vegetation Communities

500 0 500 Feet

Figure 4.2-1-**23**
Vegetation Communities

L1, 22-3
L1, 22-4
L1, 22-5
L2, 21-1
L2, 21-2
L2, 21-3
L2, 21-4
L2, 21-5
**L2, 21-6
**L2, 22-1

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush - white bursage scrub
Developed / disturbed

Figure 4.2-1-24
Vegetation Communities

N

500 0 500 Feet

L1, 22-2
L1, 22-3
L1, 22-4
L1, 22-5
L1, 22-6
L1, 23-1
L1, 23-2
L2, 21-3
L2, 21-4
L2, 21-5

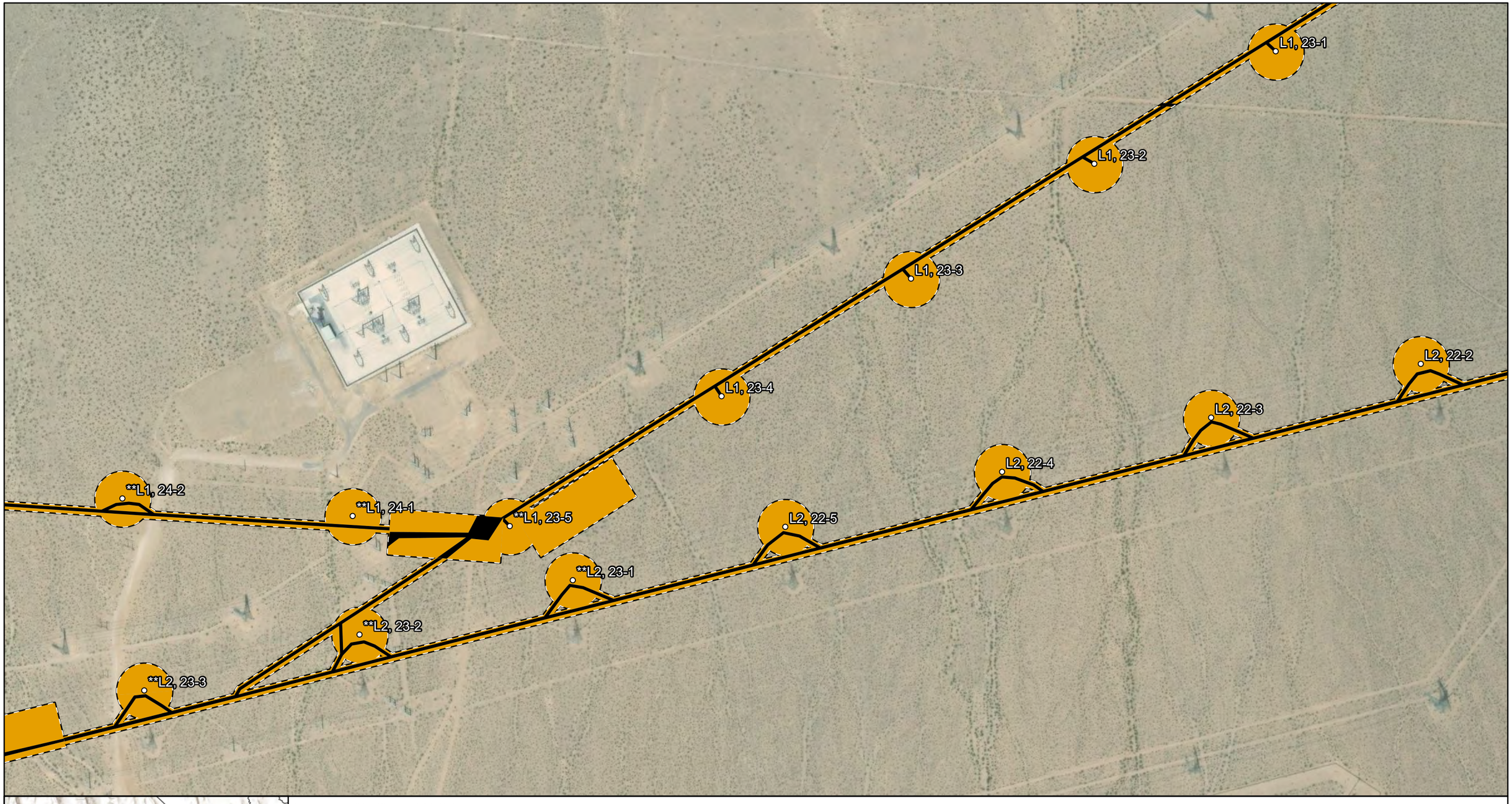
Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush - white bursage scrub
Developed / disturbed

Figure 4.2-1**-25**
Vegetation Communities

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Creosote bush - white bursage scrub

Developed / disturbed

Figure 4.2-1-**26**
Vegetation Communities

500 0 500 Feet

L1, 25-4
L1, 25-3
L1, 25-2
*L1, 25-1
*L1, 24-5
L1, 24-4
L1, 24-3
L2, 24-4
L2, 24-3
*L2, 24-2
*L2, 24-1
**L2, 23-6
**L2, 23-5
**L2, 23-4

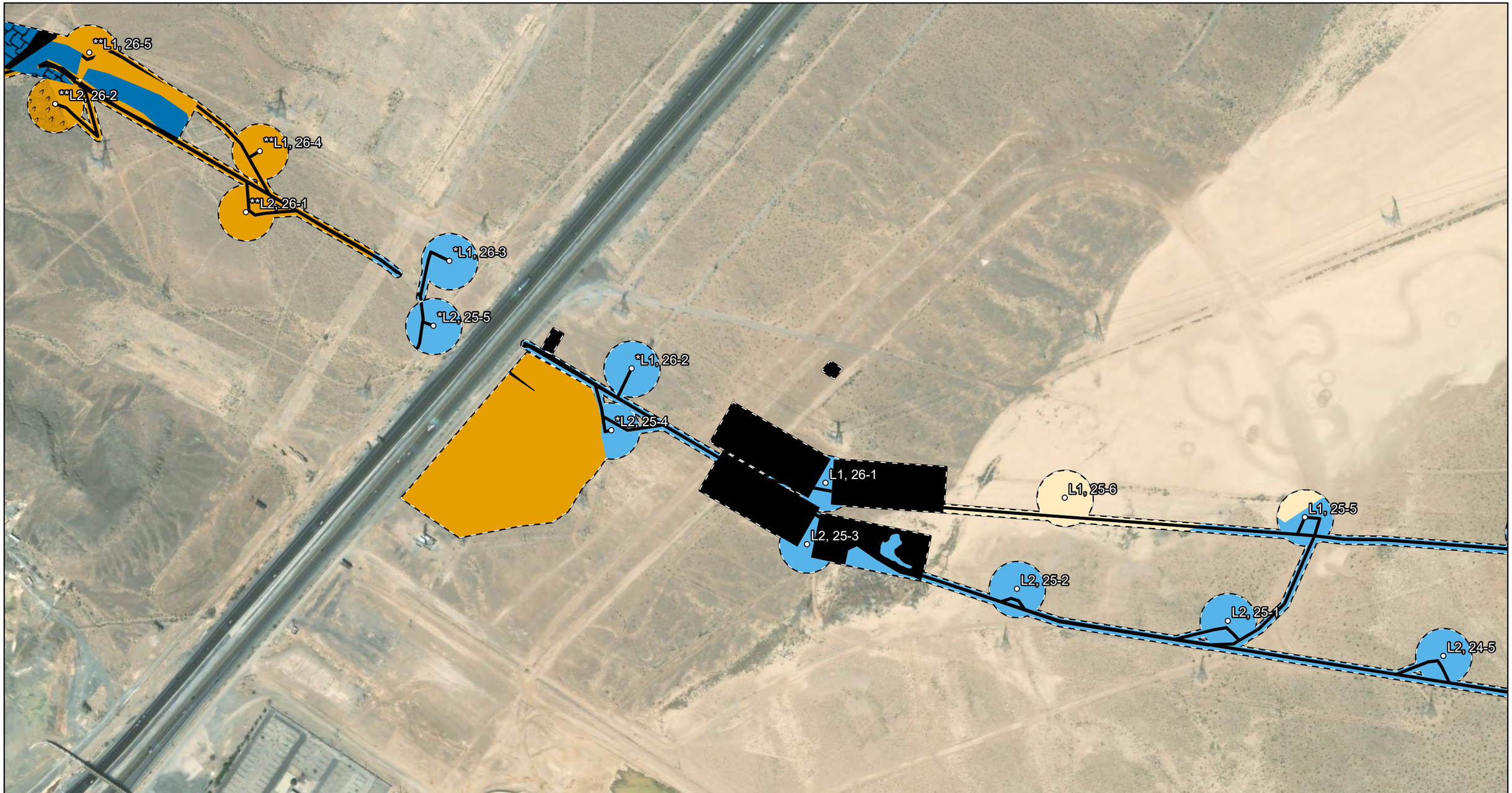
Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

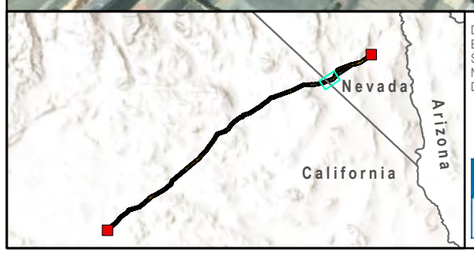
MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
- Allscale scrub
- Creosote bush - white bursage scrub
- Developed / disturbed

Figure 4.2-1-27
Vegetation Communities

500 0 500 Feet





Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

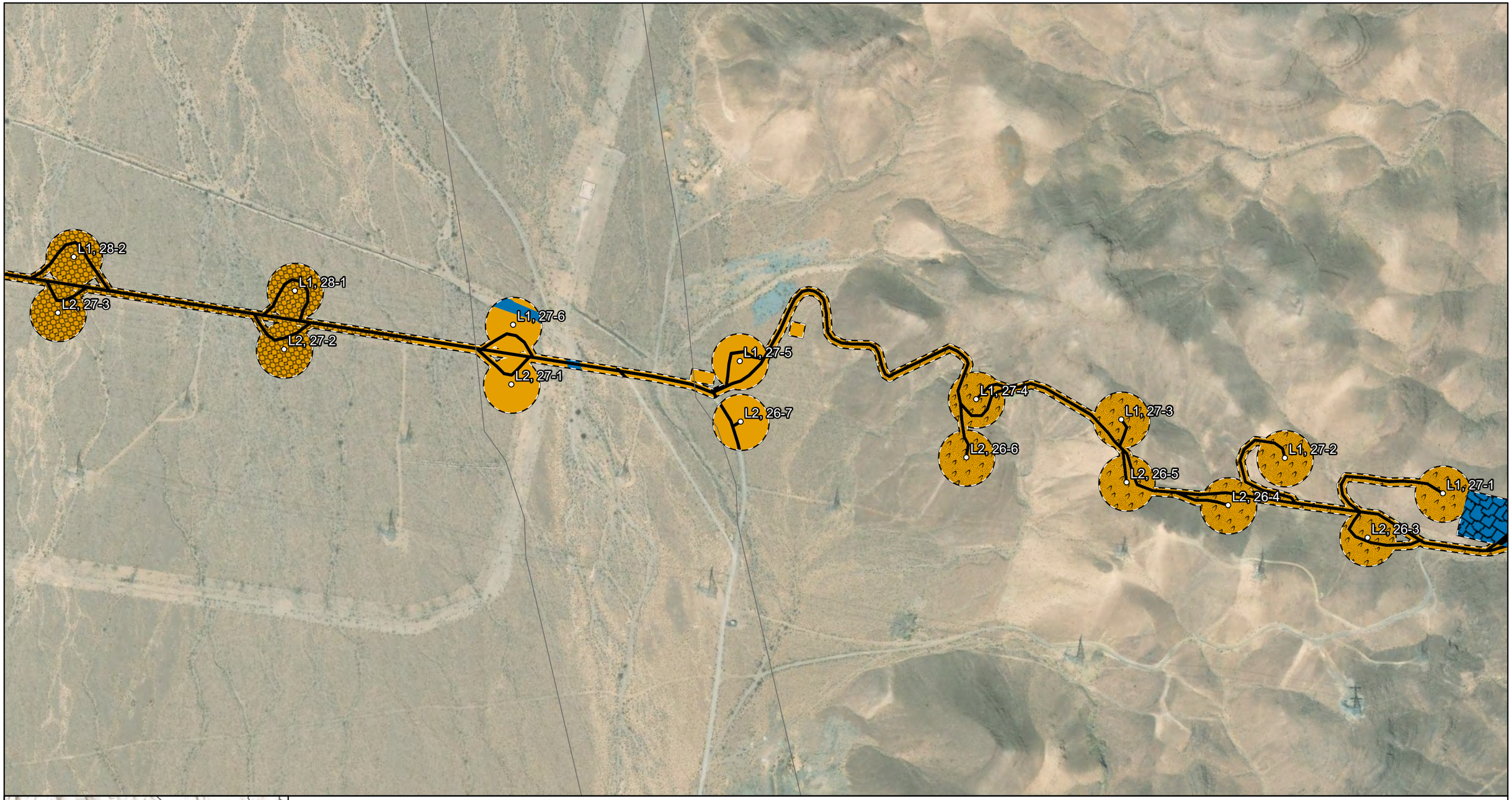
Vegetation and Cover Types

- Allscale scrub
- Cheesebush – sweetbush scrub
- Creosote bush - white bursage scrub
- Death Valley joint fir scrub
- Developed / disturbed
- Dry lake bed
- Nevada joint fir - Anderson's boxthorn - spiny hop sage scrub

Figure 4.2-1-**28**
Vegetation Communities

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

- Cheesebush – sweetbush scrub
- Creosote bush scrub
- Creosote bush - white bursage scrub
- Death Valley joint fir scrub
- Developed / disturbed
- Nevada joint fir - Anderson's boxthorn - spiny hop sage scrub

Figure 4.2-1-29
Vegetation Communities

N

500 0 500 Feet

L1, 29-3
L2, 28-5
L1, 29-2
L2, 28-4
L1, 29-1
L2, 28-3
L1, 28-6
L2, 28-2
L1, 28-5
L2, 28-1
L1, 28-4
L2, 27-5
L1, 28-3
L2, 27-4

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush scrub
Creosote bush - white bursage scrub
Developed / disturbed

Figure 4.2-1**-30**
Vegetation Communities

N

500 0 500 Feet

L1, 30-5
L2, 30-1
L1, 30-4
L2, 29-5
L1, 30-3
L2, 29-4
L1, 30-2
L2, 29-3
L1, 30-1
L2, 29-2
L1, 29-5
L2, 29-1
L1, 29-4
L2, 28-6

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
- Catclaw acacia – desert lavender – chuparosa scrub
- Cheesebush – sweetbush scrub
- Creosote bush scrub
- Creosote bush - white bursage scrub
- Developed / disturbed
- Mojave yucca scrub

Figure 4.2-1-**31**
Vegetation Communities

N

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

- Catclaw acacia – desert lavender – chuparosa scrub
- Cheesebush – sweetbush scrub
- Developed / disturbed
- Mojave yucca scrub

Figure 4.2-1-**32**
Vegetation Communities

N

500 0 500 Feet

L1, 33-3
L2, 32-5
L1, 33-2
L2, 32-4
L1, 33-1
L2, 32-3
L1, 32-6
L2, 32-2
L1, 32-5
L2, 32-1
L1, 32-4
L2, 31-5
L1, 32-3
L2, 31-4

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

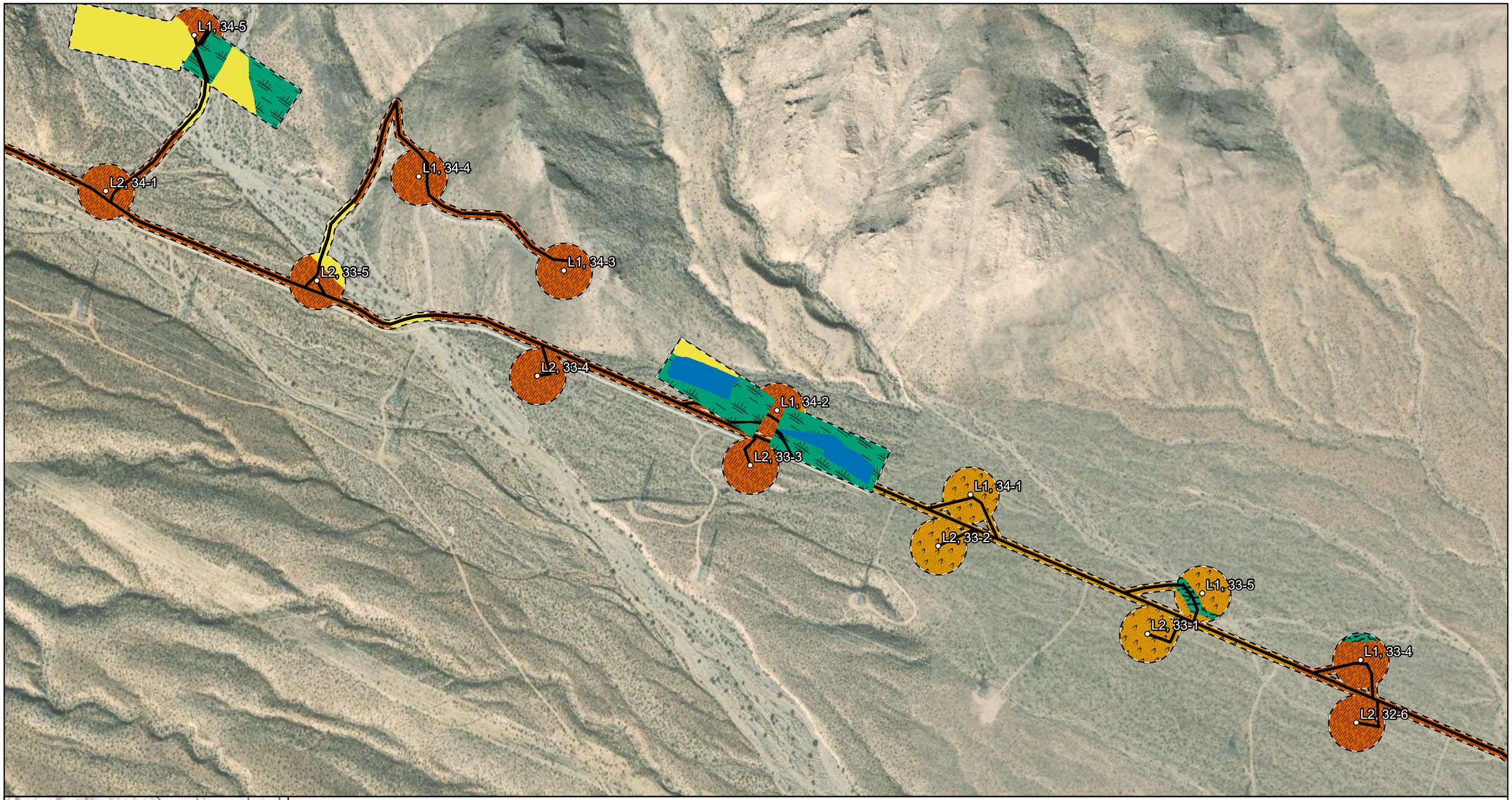
Vegetation and Cover Types

- Acton's and Virgin River brittle brush - net-veined goldeneye scrub
- Black bush scrub
- Cheesebush – sweetbush scrub
- Creosote bush scrub
- Desert almond - Mexican bladdersage scrub
- Developed / disturbed
- Joshua tree woodland
- Mojave yucca scrub

Figure 4.2-1-**33**
Vegetation Communities

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

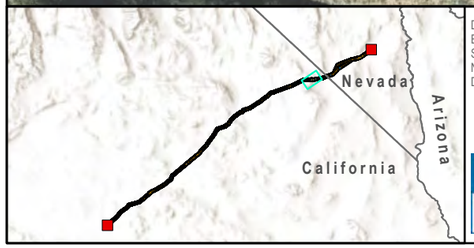
- Catclaw acacia – desert lavender – chuparosa scrub
- Cheesebush – sweetbush scrub
- Desert almond - Mexican bladdersage scrub
- Developed / disturbed
- Joshua tree woodland
- Mojave yucca scrub
- Nevada joint fir - Anderson's boxthorn - spiny hop sage scrub

Figure 4.2-1**-34**
Vegetation Communities

N

500 0 500 Feet

L2, 35-2
L1, 35-5
L2, 35-1
L1, 35-4
L2, 34-6
L1, 35-3
L2, 34-5
L1, 35-2
L1, 35-1
L2, 34-4
L2, 34-3
L1, 34-6
L1, 34-5
L2, 34-2
L2, 34-1



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

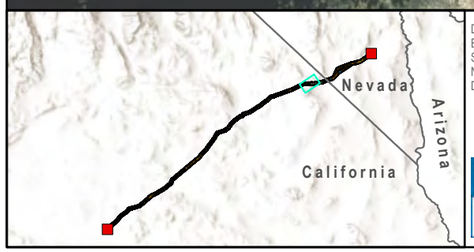
- Black bush scrub
- Catclaw acacia – desert lavender – chuparosa scrub
- Cheesebush – sweetbush scrub
- Developed / disturbed
- Fremont's smokebush – Nevada smokebush scrub
- Joshua tree woodland
- Mojave yucca scrub

Figure 4.2-1**-35**
Vegetation Communities

N

500 0 500 Feet

L2, 36-2
L1, 36-6
L1, 36-5
L2, 36-1
L1, 36-4
L2, 35-7
L1, 36-3
L2, 35-6
L1, 36-2
L2, 35-5
L1, 36-1
L2, 35-4
L1, 35-6
L2, 35-3



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Developed / disturbed
Joshua tree woodland

Figure 4.2-1-**36**
Vegetation Communities

N

500 0 500 Feet

L2, 37-4
L1, 38-1
L2, 37-3
L1, 37-6
L2, 37-2
L1, 37-5
L2, 37-1
L1, 37-4
L2, 36-5
L1, 37-3
L2, 36-4
L1, 37-2
L2, 36-3
L1, 37-1
L2, 36-2

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Developed / disturbed

Joshua tree woodland

Figure 4.2-1-**37**
Vegetation Communities

N

500 0 500 Feet

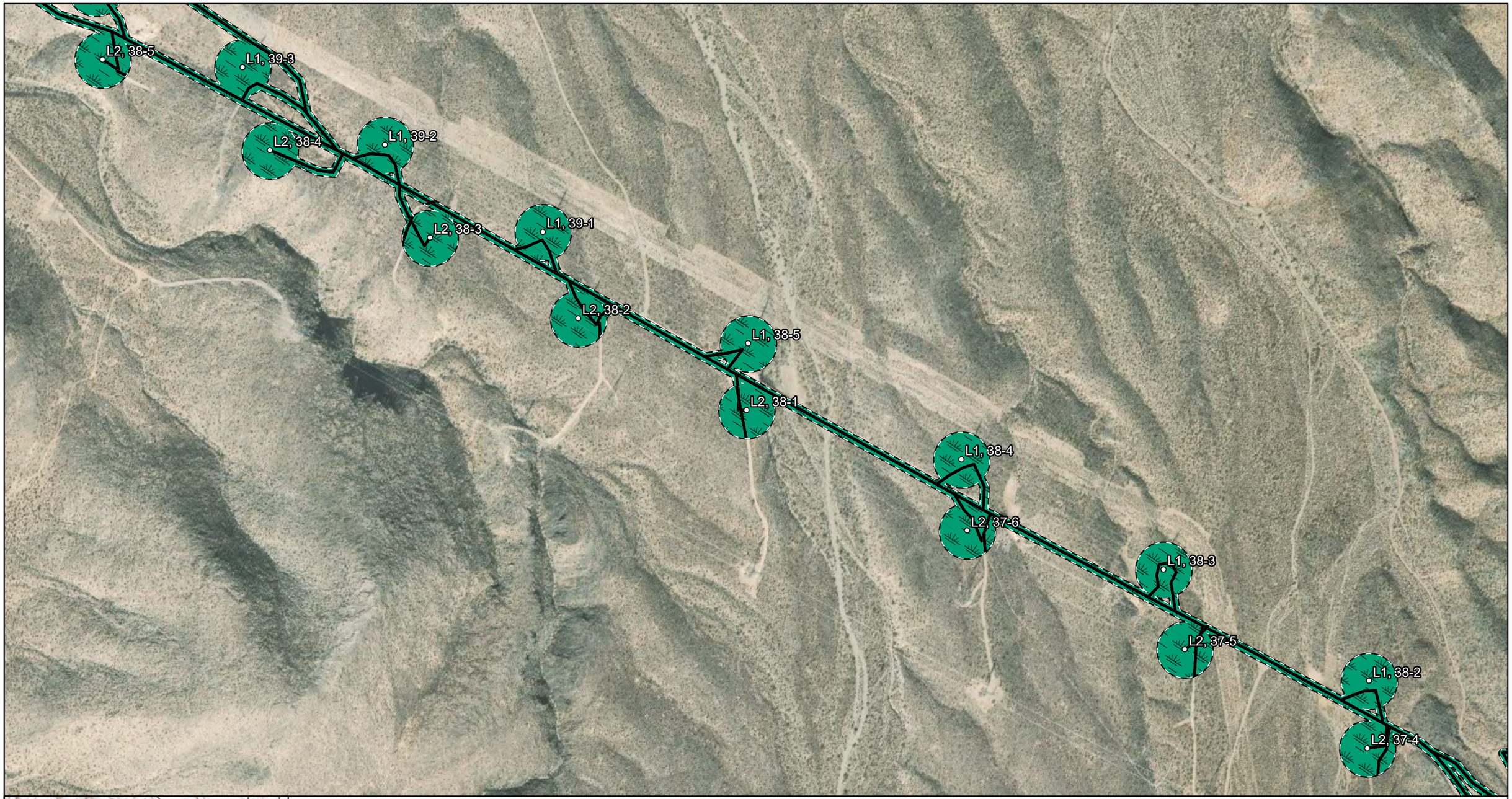


Figure 4.2-1**-38**
Vegetation Communities

L1, 40-4
L1, 40-3
L2, 39-5
L1, 40-2
L2, 39-4
L1, 40-1
L2, 39-3
L1, 39-7
L2, 39-2
L1, 39-6
L2, 39-1
L1, 39-5
L2, 38-6
L1, 39-4
L2, 38-5

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

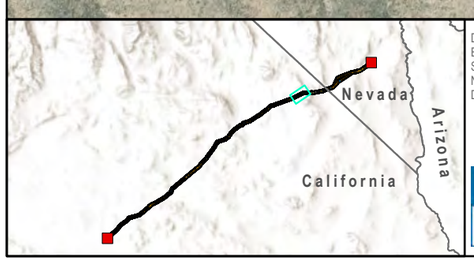
Vegetation and Cover Types

- Catclaw acacia – desert lavender – chuparosa scrub
- Developed / disturbed
- Joshua tree woodland

Figure 4.2-1**-39**
Vegetation Communities

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Developed / disturbed

Joshua tree woodland

Figure 4.2-1**-40**
Vegetation Communities

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Developed / disturbed

Joshua tree woodland

Figure 4.2-1-**41**
Vegetation Communities

500 0 500 Feet

L1, 44-3
L2, 43-4
L1, 44-2
L2, 43-3
L1, 44-1
L2, 43-2
L1, 43-5
L2, 43-1
L1, 43-4
L2, 42-5
L1, 43-3
L2, 42-4

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

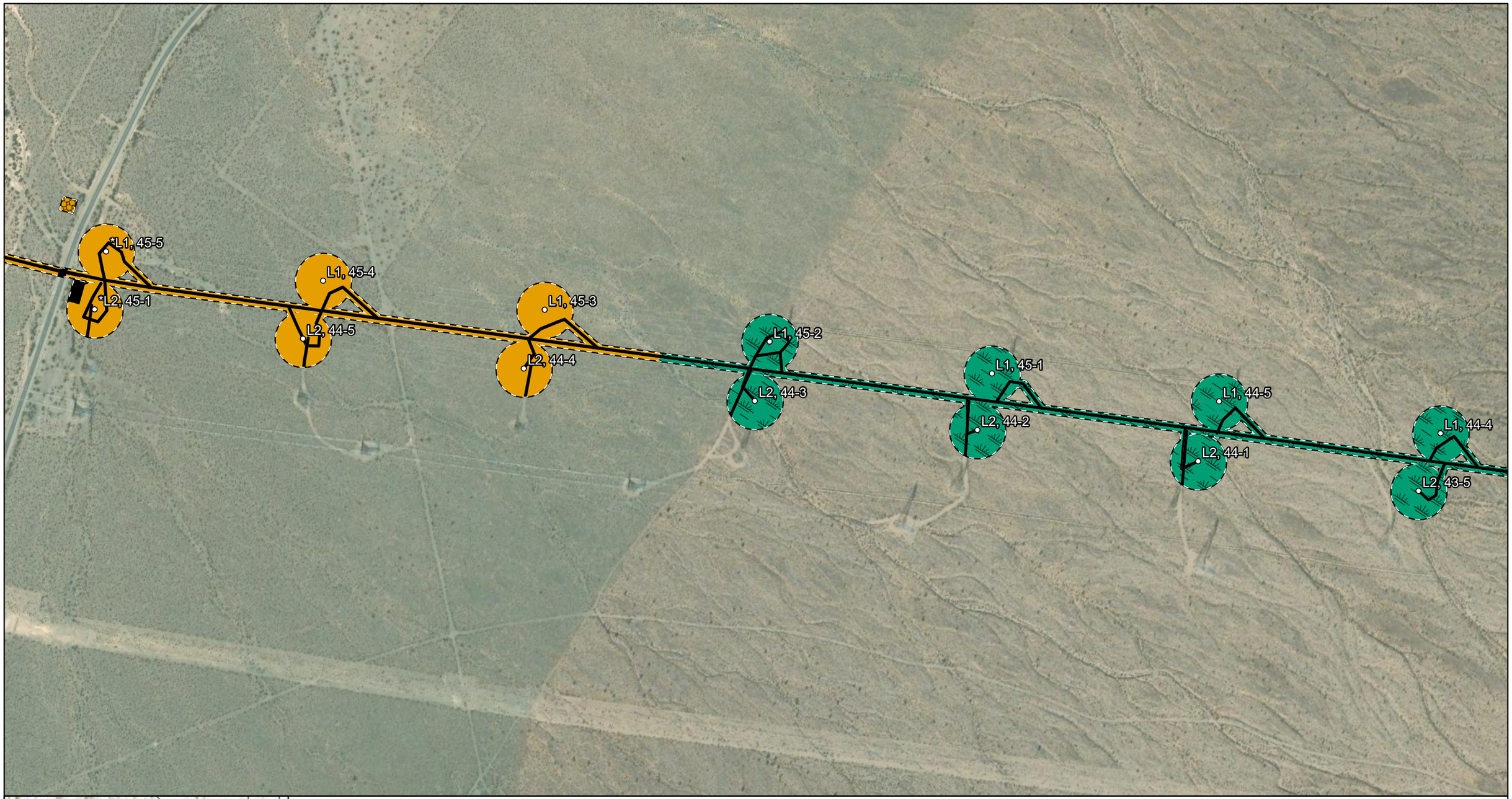
Developed / disturbed

Joshua tree woodland

Figure 4.2-1**-42**
Vegetation Communities

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

- Creosote bush scrub
- Creosote bush - white bursage scrub
- Developed / disturbed
- Joshua tree woodland

Figure 4.2-1-43
Vegetation Communities

500 0 500 Feet

L1, 47-1
L2, 46-2
L1, 46-5
L2, 46-1
L1, 46-4
L2, 45-5
L1, 46-3
L2, 45-4
L1, 46-2
L2, 45-3
*L1, 46-1
*L2, 45-2

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush - white bursage scrub
Developed / disturbed

Figure 4.2-1-**44**
Vegetation Communities

N

500 0 500 Feet

L1, 48-2
L2, 47-4
L1, 48-1
L2, 47-3
L1, 47-6
L2, 47-2
L1, 47-5
L2, 47-1
L1, 47-4
L2, 46-5
L1, 47-3
L2, 46-4
L1, 47-2
L2, 46-3

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush scrub
Creosote bush - white bursage scrub
Developed / disturbed

Figure 4.2-1-**45**
Vegetation Communities

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Creosote bush scrub

Developed / disturbed

Figure 4.2-1-**46**
Vegetation Communities

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

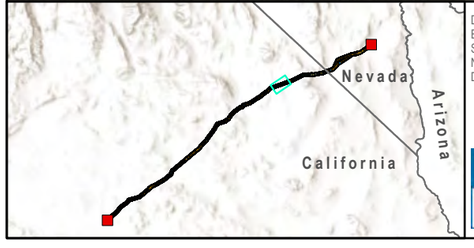
Creosote bush scrub

Developed / disturbed

Figure 4.2-1-**47**
Vegetation Communities

500 0 500 Feet

L1, 52-2
L2, 51-3
L1, 52-1
L2, 51-2
L1, 51-5
L2, 51-1
L1, 51-4
L2, 50-6
L1, 51-3
L2, 50-5
L1, 51-2
L2, 50-4
L1, 51-1
L2, 50-3



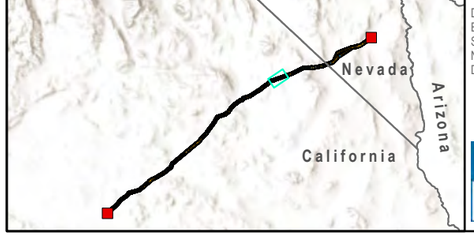
Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush scrub
Developed / disturbed

Figure 4.2-1**-48**
Vegetation Communities

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Creosote bush scrub

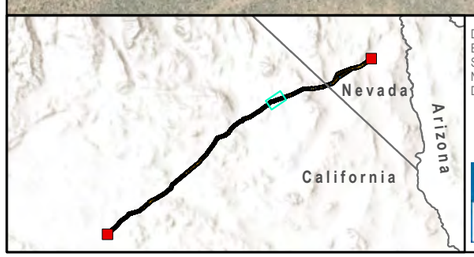
Developed / disturbed

Figure 4.2-1**-49**
Vegetation Communities

N

500 0 500 Feet

L1, 54-4
L2, 54-1
L1, 54-3
L2, 53-5
L1, 54-2
L2, 53-4
L1, 54-1
L2, 53-3
L1, 53-6
L2, 53-2
L1, 53-5
L2, 53-1



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush scrub
Developed / disturbed

Figure 4.2-1**-50**
Vegetation Communities

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

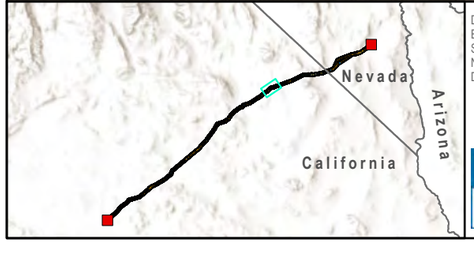
Vegetation and Cover Types

Creosote bush scrub

Developed / disturbed

Figure 4.2-1-**51**
Vegetation Communities

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

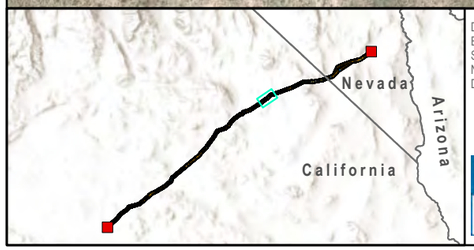
- Creosote bush scrub
- Developed / disturbed
- Joshua tree woodland
- Nevada joint fir - Anderson's boxthorn - spiny hop sage scrub

Figure 4.2-1**-52**
Vegetation Communities

N

500 0 500 Feet

Figure 4.2-1**-53**
Vegetation Communities



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

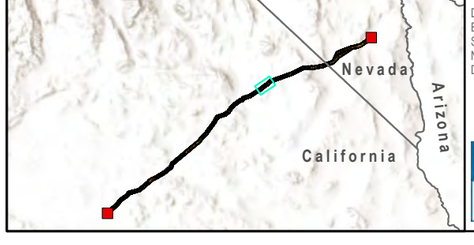
Vegetation and Cover Types

- Cheesebush – sweetbush scrub
- Creosote bush scrub
- Creosote bush - white bursage scrub
- Developed / disturbed
- Joshua tree woodland

Figure 4.2-1-**54**
Vegetation Communities

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Creosote bush scrub

Developed / disturbed

Figure 4.2-1-**55**
Vegetation Communities

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

- Cheesebush – sweetbush scrub
- Creosote bush scrub
- Creosote bush - white bursage scrub
- Developed / disturbed

Figure 4.2-1-**56**
Vegetation Communities

N

500 0 500 Feet

L1, 62-3
L1, 62-4
L2, 61-4
L2, 61-5
L1, 62-5
L1, 62-6
L2, 62-1
L2, 62-2
L1, 63-1
L1, 63-3
L1, 63-2
L2, 62-3
L2, 62-5
L2, 62-4

Nevada
Arizona
California

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
- Allscale scrub
- Cheesebush – sweetbush scrub
- Creosote bush scrub
- Creosote bush - white bursage scrub
- Developed / disturbed

Figure 4.2-1-**57**
Vegetation Communities

N

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Creosote bush scrub

Developed / disturbed

Figure 4.2-1-**58**
Vegetation Communities

500 0 500 Feet

Figure 4.2-1-**59**
Vegetation Communities

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

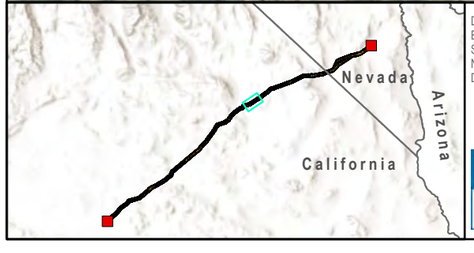
Creosote bush scrub

Developed / disturbed

Figure 4.2-1-**60**
Vegetation Communities

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

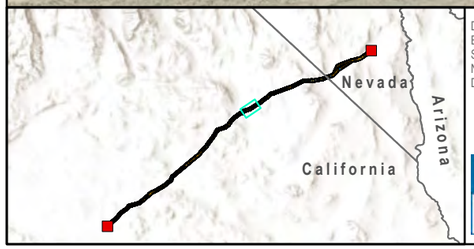
Creosote bush scrub

Developed / disturbed

Figure 4.2-1-**61**
Vegetation Communities

500 0 500 Feet

L1, 69-6
L2, 69-2
L1, 69-5
L2, 69-1
L1, 69-4
L2, 68-5
L1, 69-3
L2, 68-4
L1, 69-2
L2, 68-3
L1, 69-1
L2, 68-2
L1, 68-5
L2, 68-1



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

- Cheesebush – sweetbush scrub
- Creosote bush scrub
- Creosote bush - white bursage scrub
- Desert holly scrub
- Desert Pavement (Rigid spineflower – hairy desert sunflower)
- Developed / disturbed

Figure 4.2-1-**62**
Vegetation Communities

N

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Creosote bush scrub

Creosote bush - white bursage scrub

Developed / disturbed

Figure 4.2-1-**63**
Vegetation Communities

N

500 0 500 Feet

L2, 71-5
L1, 72-3
L2, 71-4
*L1, 72-2
*L2, 71-3
*L1, 72-1
*L2, 71-2
L1, 71-6
L2, 71-1
L1, 71-5
L1, 71-4
L2, 70-6
L1, 71-3
L2, 70-5
L2, 70-4

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush scrub
Creosote bush - white bursage scrub
Developed / disturbed

Figure 4.2-1-**64**
Vegetation Communities

N

500 0 500 Feet

Figure 4.2-1-65
Vegetation Communities

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Creosote bush scrub

Developed / disturbed

Figure 4.2-1**-66**
Vegetation Communities

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

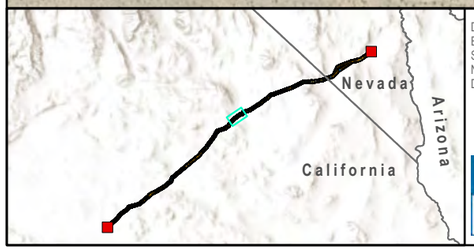
Creosote bush scrub

Developed / disturbed

Figure 4.2-1-**67**
Vegetation Communities

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Creosote bush scrub

Developed / disturbed

Figure 4.2-1-**68**
Vegetation Communities

N

500 0 500 Feet

L1, 79-1
L2, 78-2
L1, 78-5
L2, 78-1
L1, 78-4
L2, 77-5
L1, 78-3
L2, 77-4
L1, 78-2
L2, 77-3
L1, 78-1
L2, 77-2
L1, 77-6
L2, 77-1

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush scrub
Developed / disturbed

Figure 4.2-1-**69**
Vegetation Communities

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

- Creosote bush scrub
- Creosote bush - white bursage scrub
- Developed / disturbed

Figure 4.2-1-**70**
Vegetation Communities

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Creosote bush scrub

Developed / disturbed

Figure 4.2-1-71
Vegetation Communities

N

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

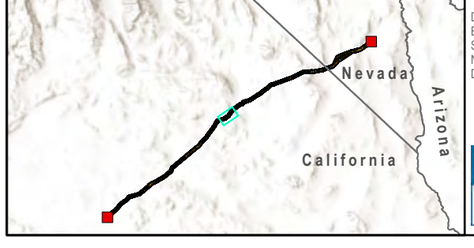
Creosote bush scrub

Developed / disturbed

Figure 4.2-1**-72**
Vegetation Communities

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

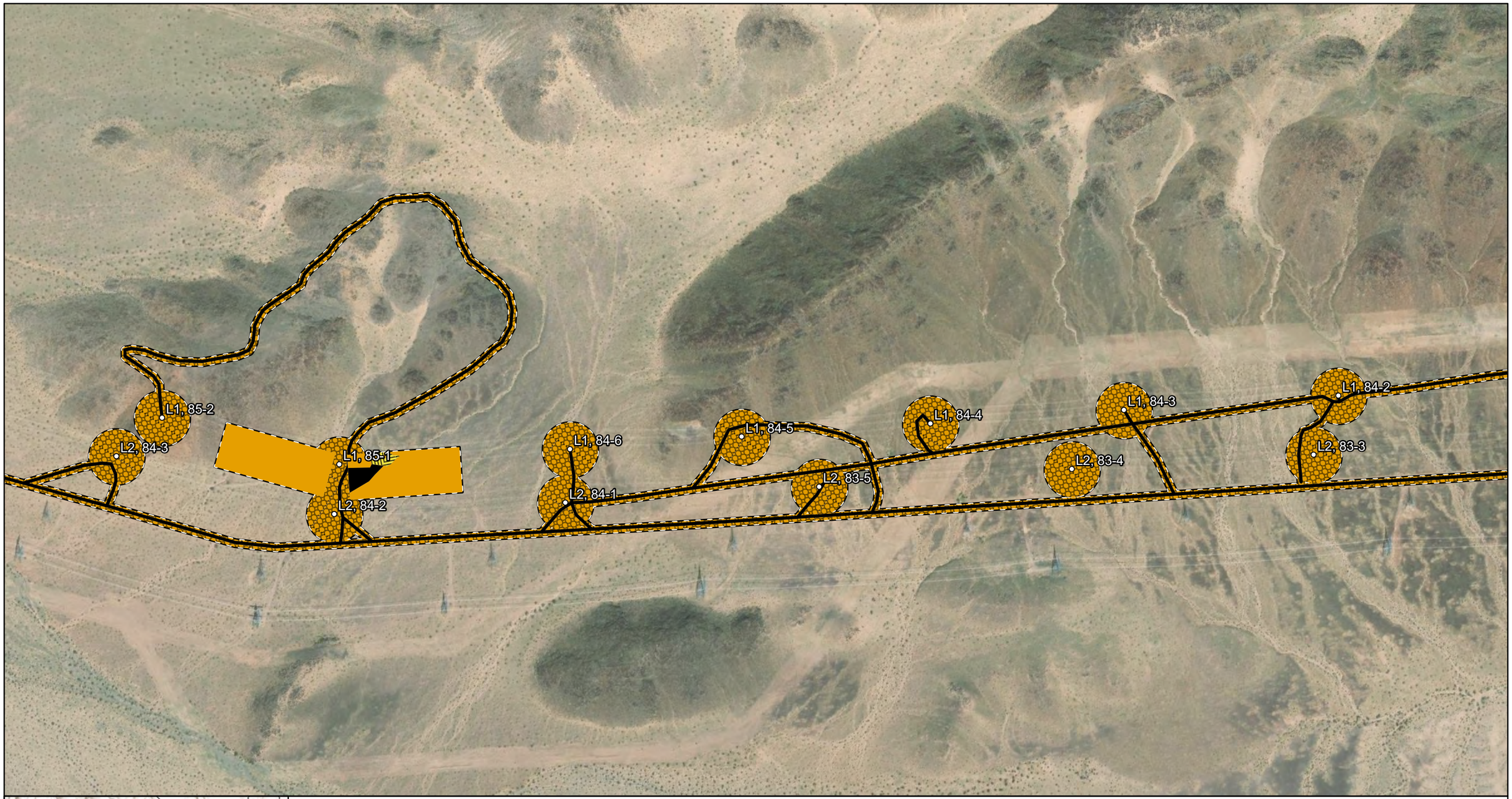
Vegetation and Cover Types

- Creosote bush scrub
- Creosote bush - white bursage scrub
- Desert Pavement (Rigid spineflower – hairy desert sunflower)
- Developed / disturbed

Figure 4.2-1-**73**
Vegetation Communities

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

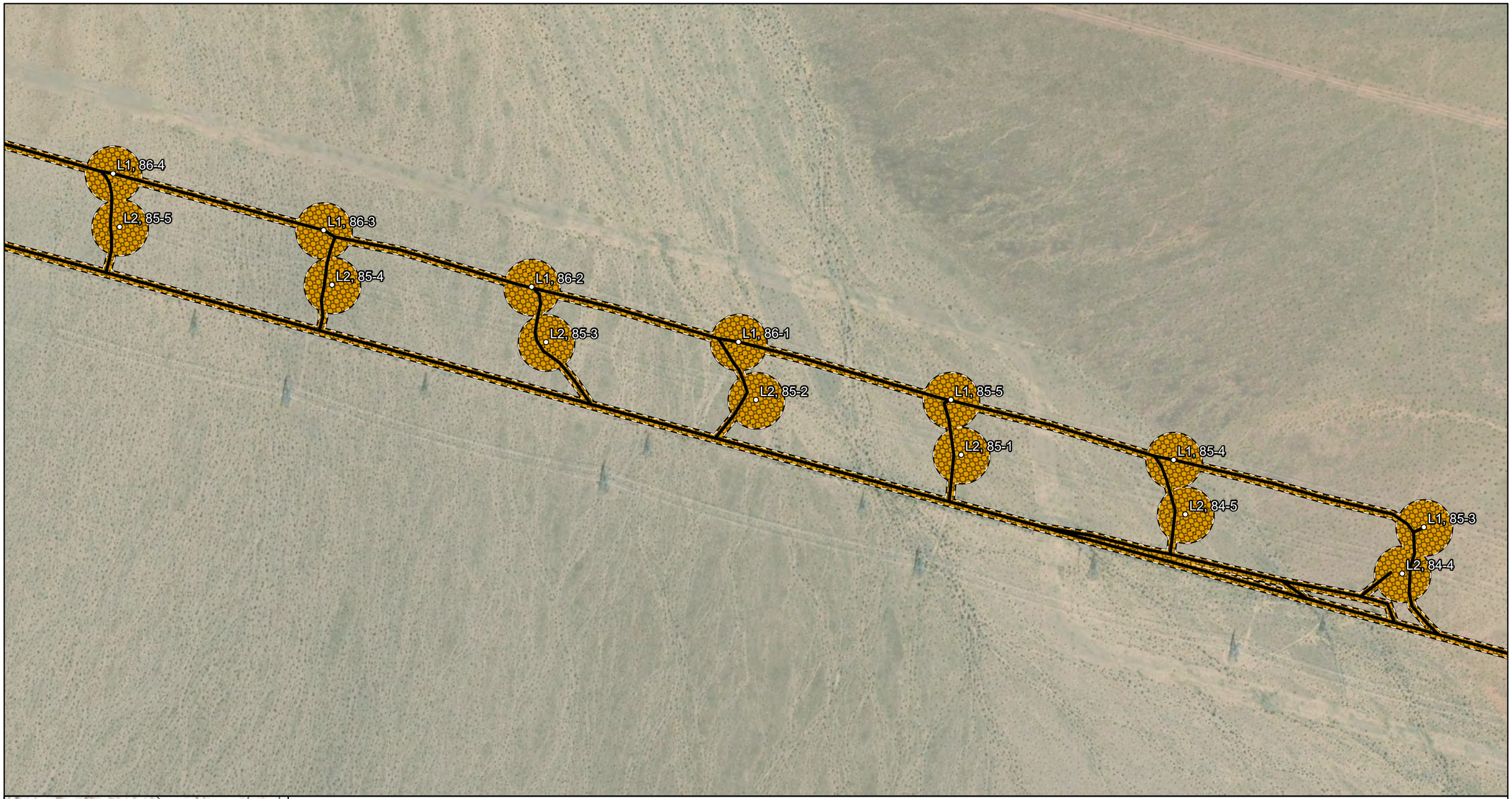
Vegetation and Cover Types

- Creosote bush scrub
- Creosote bush - white bursage scrub
- Desert Pavement (Rigid spineflower – hairy desert sunflower)
- Developed / disturbed

Figure 4.2-1-**74**
Vegetation Communities

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Creosote bush scrub

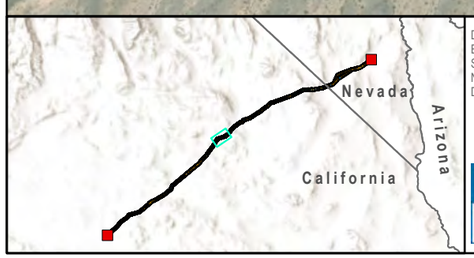
Developed / disturbed

Figure 4.2-1-75
Vegetation Communities

N

500 0 500 Feet

L1, 87-6
L2, 87-1
L1, 87-5
L2, 86-6
L1, 87-4
L2, 86-5
L1, 87-3
L2, 86-4
L1, 87-2
L2, 86-3
L1, 87-1
L2, 86-2
L1, 86-5
L2, 86-1



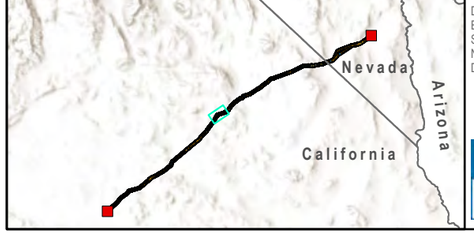
Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush scrub
Developed / disturbed

Figure 4.2-1-**76**
Vegetation Communities

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Creosote bush scrub

Developed / disturbed

Figure 4.2-1-77
Vegetation Communities

500 0 500 Feet

L1, 89-3
L2, 88-4
L2, 88-3
L1, 89-4
L2, 88-5
L1, 89-5
L2, 89-1
L1, 90-1
L2, 89-2
L1, 90-2
L2, 89-3
L1, 90-3
L2, 89-4
L1, 90-4
L2, 89-5

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush scrub
Creosote bush - white bursage scrub
Developed / disturbed

Figure 4.2-1-78
Vegetation Communities

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Creosote bush scrub

Developed / disturbed

Figure 4.2-1-**79**
Vegetation Communities

N

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Creosote bush scrub

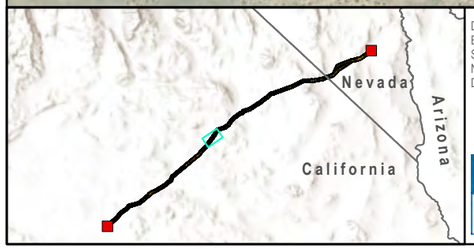
Developed / disturbed

Figure 4.2-1-80
Vegetation Communities

N

500 0 500 Feet

L1, 93-3
L2, 92-4
L1, 93-4
L2, 92-5
L1, 93-5
L2, 93-1
L1, 94-1
L2, 93-2
L1, 94-2
L2, 93-3
L1, 94-3
L2, 93-4
L2, 93-5
L2, 93-6



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush scrub
Developed / disturbed

Figure 4.2-1-**81**
Vegetation Communities

500 0 500 Feet

L1, 94-4
L2, 93-6
L1, 94-5
L2, 94-1
L1, 95-1
L2, 94-2
L1, 95-2
L2, 94-3
L1, 95-3
L2, 94-4
L1, 95-4
L2, 94-5
L1, 95-5
L2, 94-6

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush scrub
Developed / disturbed

Figure 4.2-1-**82**
Vegetation Communities

N

500 0 500 Feet

L1, 95-6
L2, 95-1
L1, 96-1
L2, 95-2
L1, 96-2
L2, 95-3
L1, 96-3
L2, 95-4
L1, 96-4
L2, 95-5
L1, 96-5
L2, 96-1
L1, 97-1
L2, 96-2

Nevada
Arizona
California

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

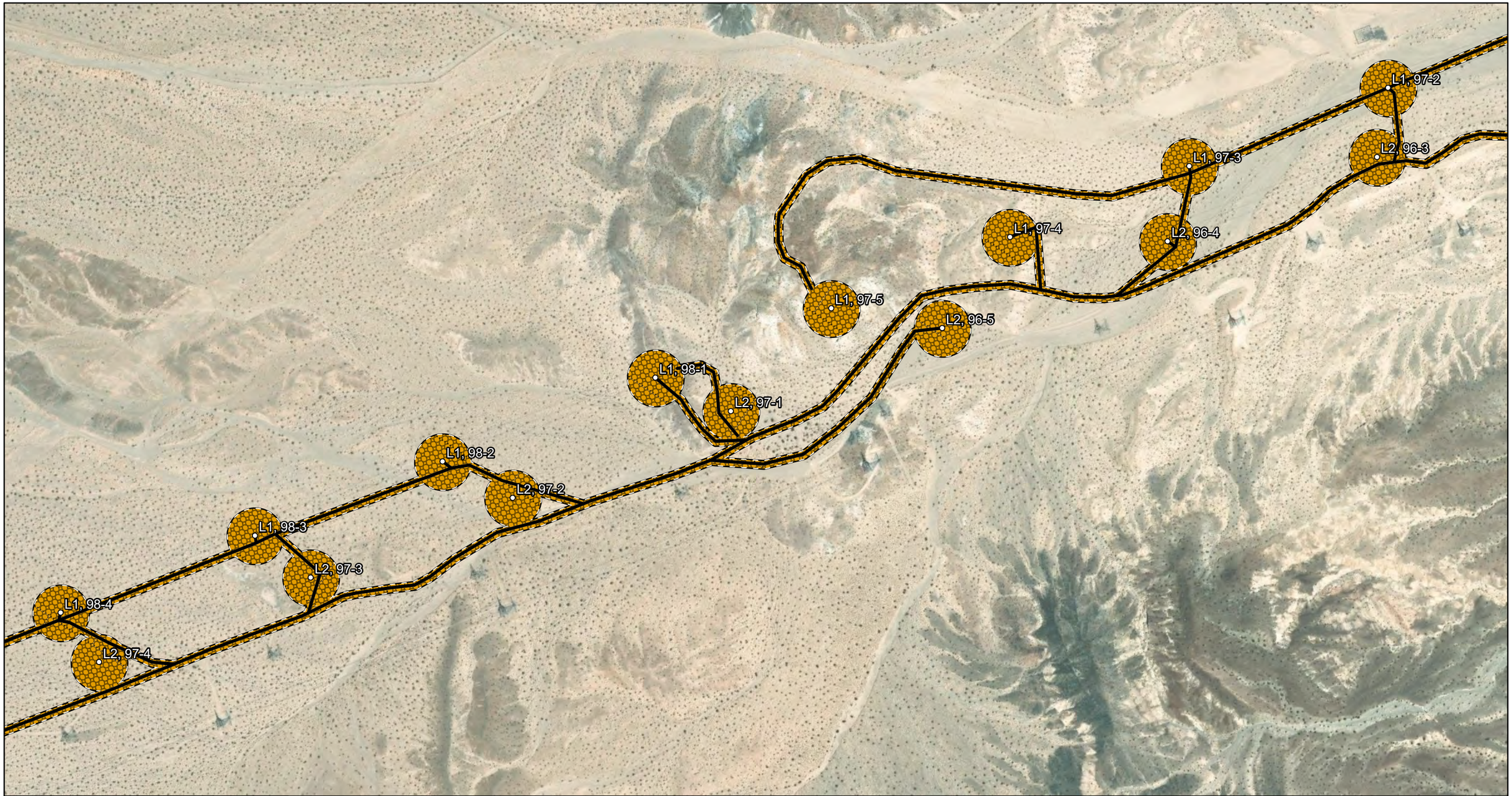
MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush scrub
Developed / disturbed
White bursage scrub

Figure 4.2-1-**83**
Vegetation Communities

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Creosote bush scrub

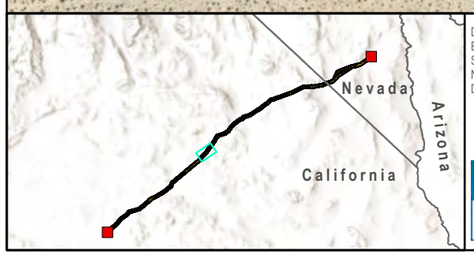
Developed / disturbed

Figure 4.2-1-**84**
Vegetation Communities

N

500 0 500 Feet

L1, 98-5
L2, 97-5
L1, 98-6
L2, 98-1
L1, 99-1
L2, 98-2
L1, 99-2
L1, 99-3
L2, 98-3
L1, 99-4
L1, 99-5
L2, 98-4
L2, 98-5
L2, 99-1



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
- Cheesebush – sweetbush scrub
- Creosote bush scrub
- Creosote bush - white bursage scrub
- Desert holly scrub
- Desert Pavement (Rigid spineflower – hairy desert sunflower)
- Developed / disturbed

Figure 4.2-1-**85**
Vegetation Communities

N

500 0 500 Feet

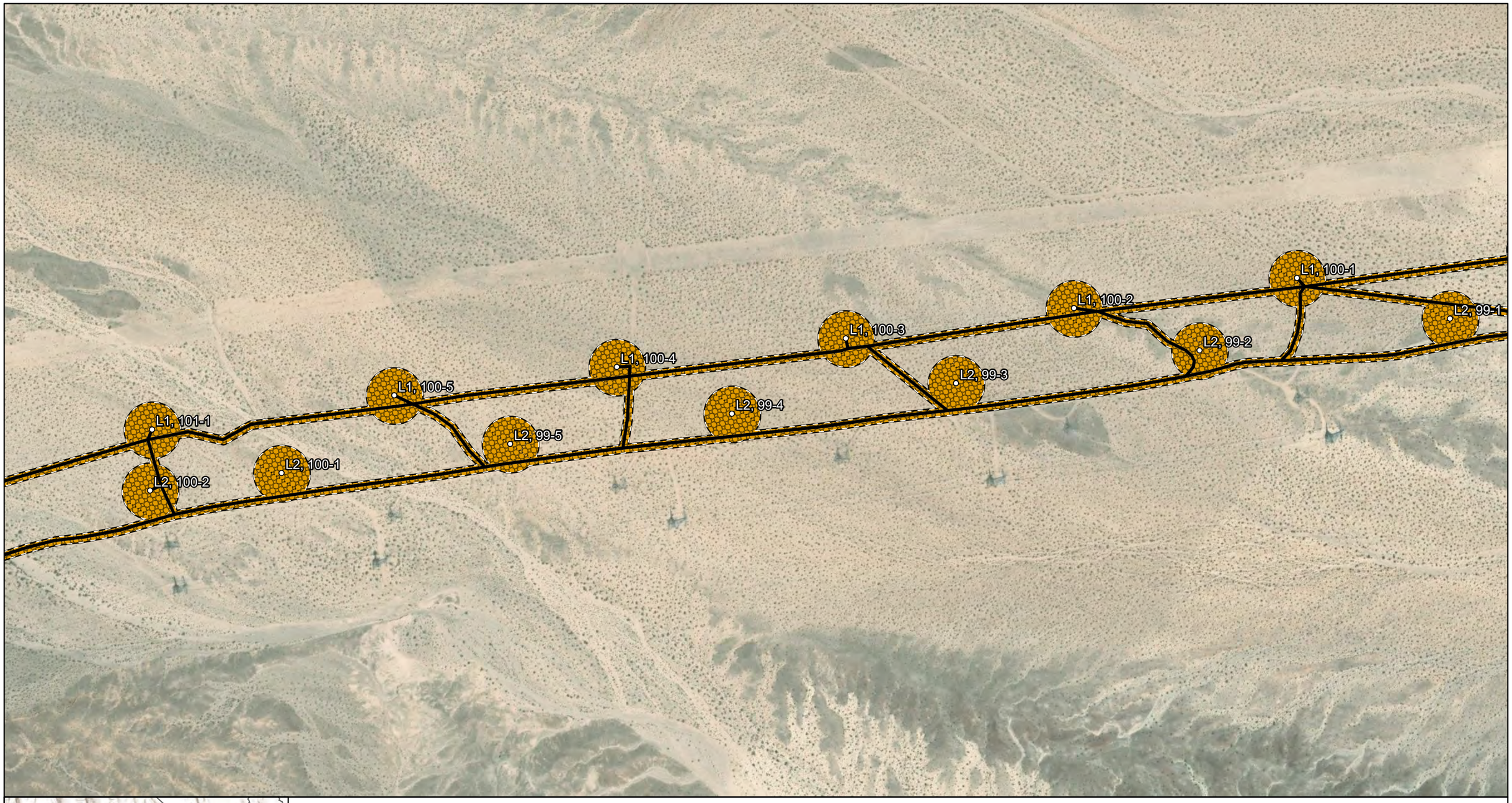


Figure 4.2-1-**86**
Vegetation Communities

L1, 101-2
L1, 101-3
L2, 100-3
L1, 101-4
L2, 100-4
L1, 101-5
L2, 100-5
L1, 101-6
L2, 101-1
L1, 102-1
L2, 101-2
L1, 102-2
L2, 101-3
L2, 101-4

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

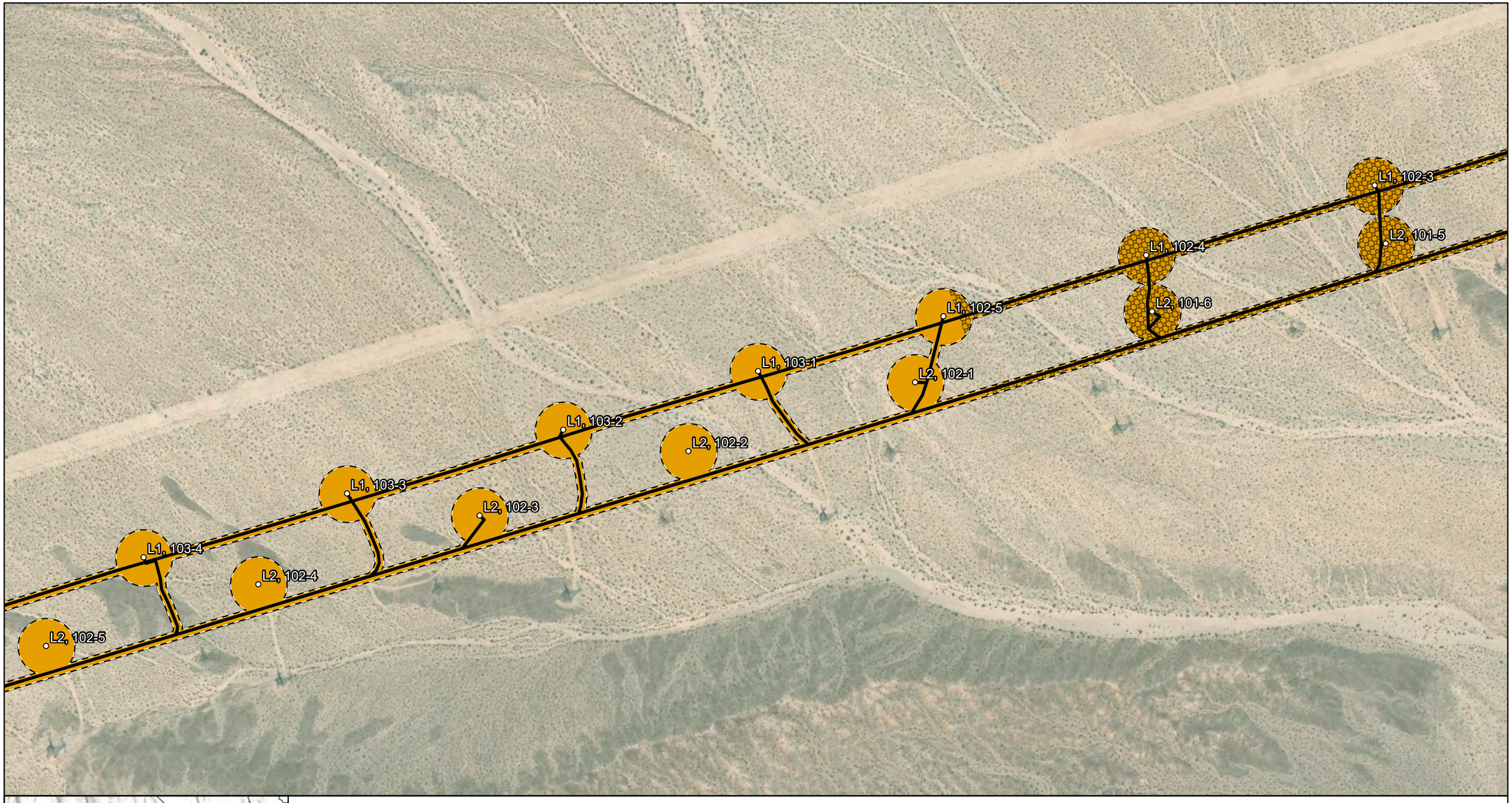
MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush scrub
Developed / disturbed

Figure 4.2-1-**87**
Vegetation Communities

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

- Creosote bush scrub
- Creosote bush - white bursage scrub
- Developed / disturbed

Figure 4.2-1-**88**
Vegetation Communities

N

500 0 500 Feet

L1, 103-5
L1, 103-6
L2, 103-1
L1, 104-1
L2, 103-2
L1, 104-2
L2, 103-3
L1, 104-3
L2, 103-4
L1, 104-4
L1, 104-5
L1, 104-6
L2, 103-5
L2, 103-6
L2, 104-1

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

- Creosote bush - white bursage scrub
- Developed / disturbed
- White bursage scrub

Figure 4.2-1-**89**
Vegetation Communities

N

500 0 500 Feet

L1, 106-2
L1, 106-1
L2, 105-3
L2, 105-2
L1, 105-5
L2, 105-1
L1, 105-4
L2, 104-5
L1, 105-3
L2, 104-4
L1, 105-2
L2, 104-3
L1, 105-1
L2, 104-2

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

- Creosote bush scrub
- Creosote bush - white bursage scrub
- Developed / disturbed
- White bursage scrub

Figure 4.2-1-**90**
Vegetation Communities

500 0 500 Feet

L1, 107-3
L1, 107-2
L1, 107-1
L1, 106-5
L1, 106-4
L1, 106-3
L2, 106-4
L2, 106-3
L2, 106-2
L2, 106-1
L2, 105-6
L2, 105-5
L2, 105-4

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Creosote bush scrub

Creosote bush - white bursage scrub

Developed / disturbed

Figure 4.2-1-**91**
Vegetation Communities

N

500 0 500 Feet

L1, 107-4
L1, 107-5
L2, 106-5
L2, 107-1
**L2, 107-2
**L1, 108-1
**L1, 108-2
L1, 108-3
L1, 108-4
**L2, 107-3
L2, 107-4
L2, 107-5

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Creosote bush - white bursage scrub

Developed / disturbed

Figure 4.2-1-**92**
Vegetation Communities

N

500 0 500 Feet

L1, 109-5
L2, 109-1
L1, 109-4
L2, 108-5
L1, 109-3
L2, 108-4
L1, 109-2
L2, 108-3
L1, 109-1
L2, 108-2
L1, 108-6
L2, 108-1
L1, 108-5
L2, 107-6

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Creosote bush - white bursage scrub

Developed / disturbed

Figure 4.2-1-**93**
Vegetation Communities

N

500 0 500 Feet

L1, 111-1
L2, 110-2
L1, 110-5
L2, 110-1
L1, 110-4
L2, 109-5
L1, 110-3
L2, 109-4
L1, 110-2
L2, 109-3
L1, 110-1
L2, 109-2
L1, 109-5
L2, 109-1

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush - white bursage scrub
Developed / disturbed

Figure 4.2-1-**94**
Vegetation Communities

N

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

- Creosote bush - white bursage scrub
- Desert Pavement (Rigid spineflower – hairy desert sunflower)
- Developed / disturbed
- Dry lake bed

Figure 4.2-1-**95**
Vegetation Communities

N

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

- Creosote bush scrub
- Creosote bush - white bursage scrub
- Desert Pavement (Rigid spineflower – hairy desert sunflower)
- Developed / disturbed
- Dry lake bed

Figure 4.2-1-**96**
Vegetation Communities

500 0 500 Feet

Figure 4.2-1-**97**
Vegetation Communities

L1, 115-6
L1, 115-5
**L1, 115-4
L1, 115-3
L1, 115-2
L1, 115-1
L1, 114-5
L2, 115-2
L2, 115-1
L2, 114-5
L2, 114-4
L2, 114-3
L2, 114-2
L2, 114-1

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush scrub
Developed / disturbed

Figure 4.2-1-**98**
Vegetation Communities

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Creosote bush scrub

Developed / disturbed

Figure 4.2-1-**99**
Vegetation Communities

500 0 500 Feet

L1, 118-3
L1, 118-2
L1, 118-1
L1, 117-5
L1, 117-4
L1, 117-3
L1, 117-2
L2, 117-3
L2, 117-2
L2, 117-1
L2, 116-5
L2, 116-4
L2, 116-3

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

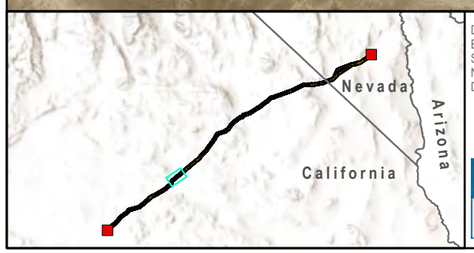
Creosote bush scrub

Developed / disturbed

Figure 4.2-1-**100**
Vegetation Communities

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

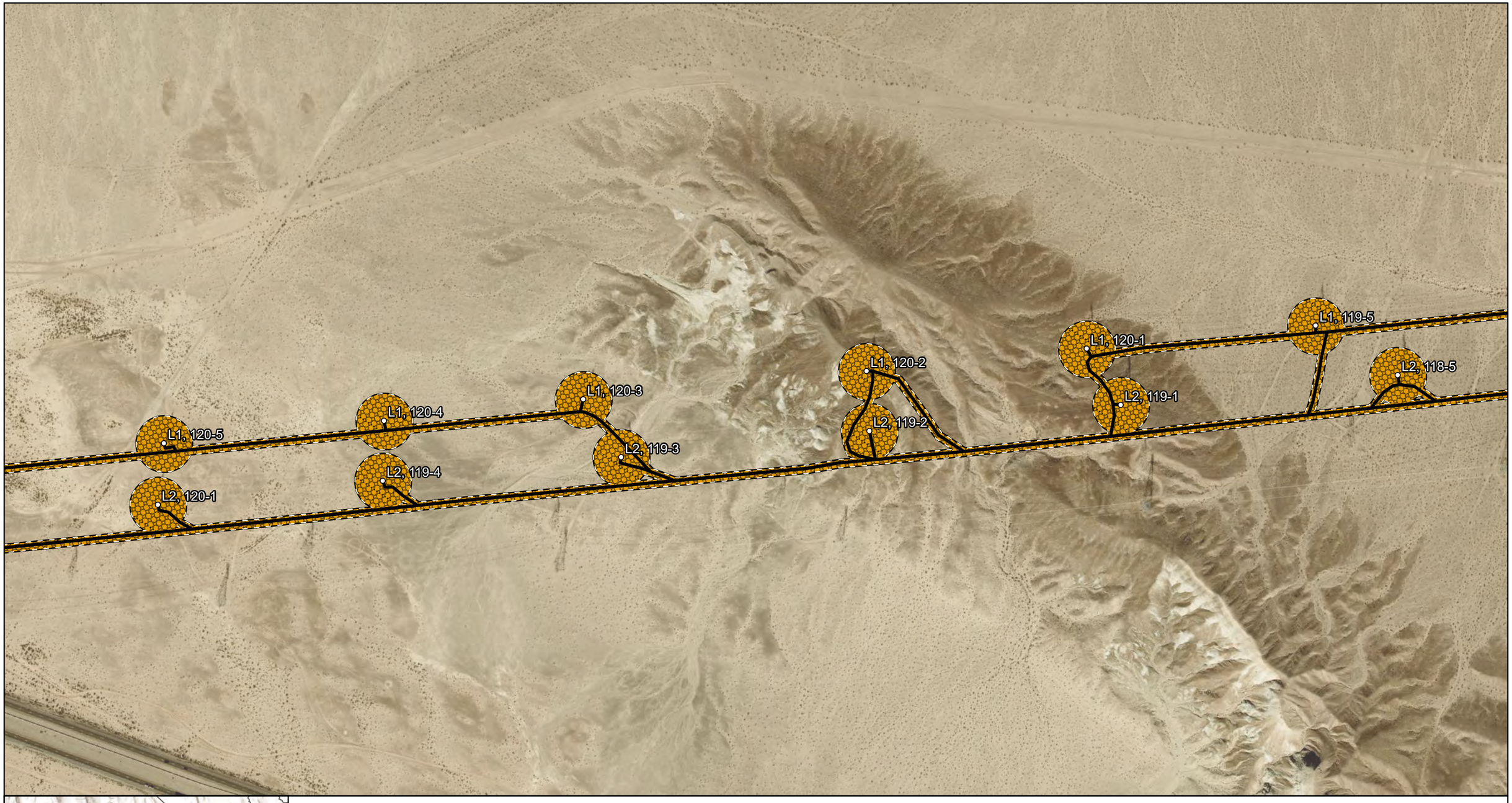
Vegetation and Cover Types

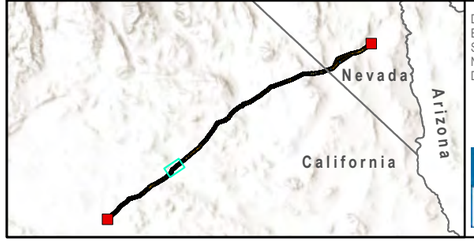
Creosote bush scrub

Developed / disturbed

Figure 4.2-1**-101**
Vegetation Communities

500 0 500 Feet





Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

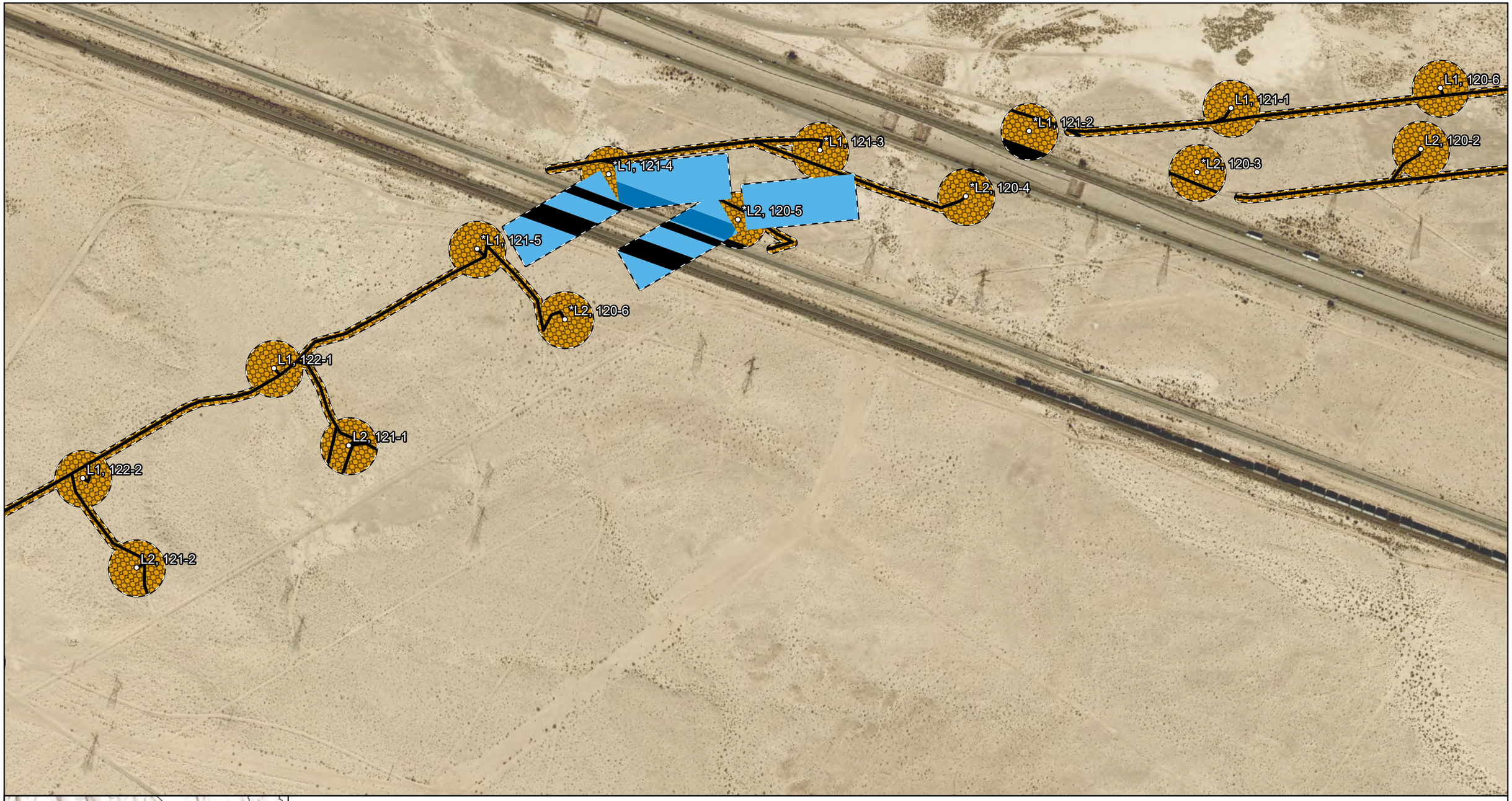
Vegetation and Cover Types

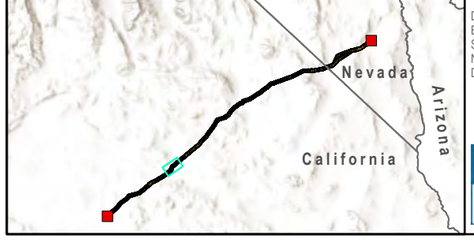
Creosote bush scrub

Developed / disturbed

Figure 4.2-1-**102**
Vegetation Communities

500 0 500 Feet





Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

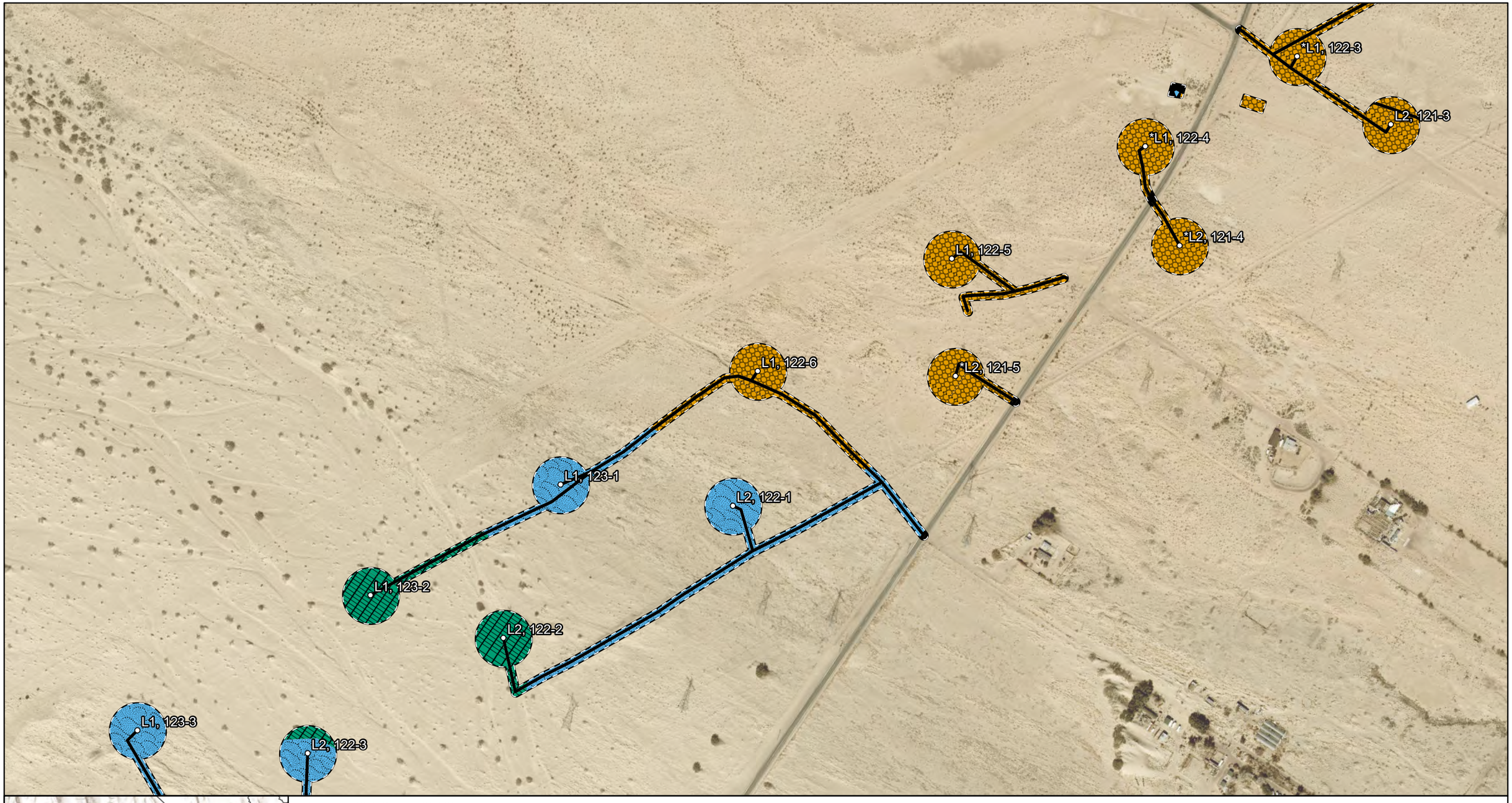
Vegetation and Cover Types

- Allscale scrub
- Cheesebush – sweetbush scrub
- Creosote bush scrub
- Developed / disturbed

Figure 4.2-1-**103**
Vegetation Communities

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

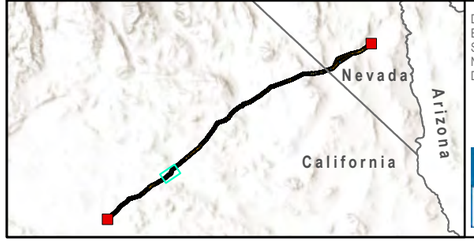
Survey Area

Vegetation and Cover Types

- Allscale scrub
- Creosote bush scrub
- Developed / disturbed
- Sparsely vegetated wash
- Tamarix thickets

Figure 4.2-1-**104**
Vegetation Communities

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

- Creosote bush scrub
- Developed / disturbed
- Sparsely vegetated wash
- Tamarix thickets

Figure 4.2-1-**105**
Vegetation Communities

N

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Agricultural

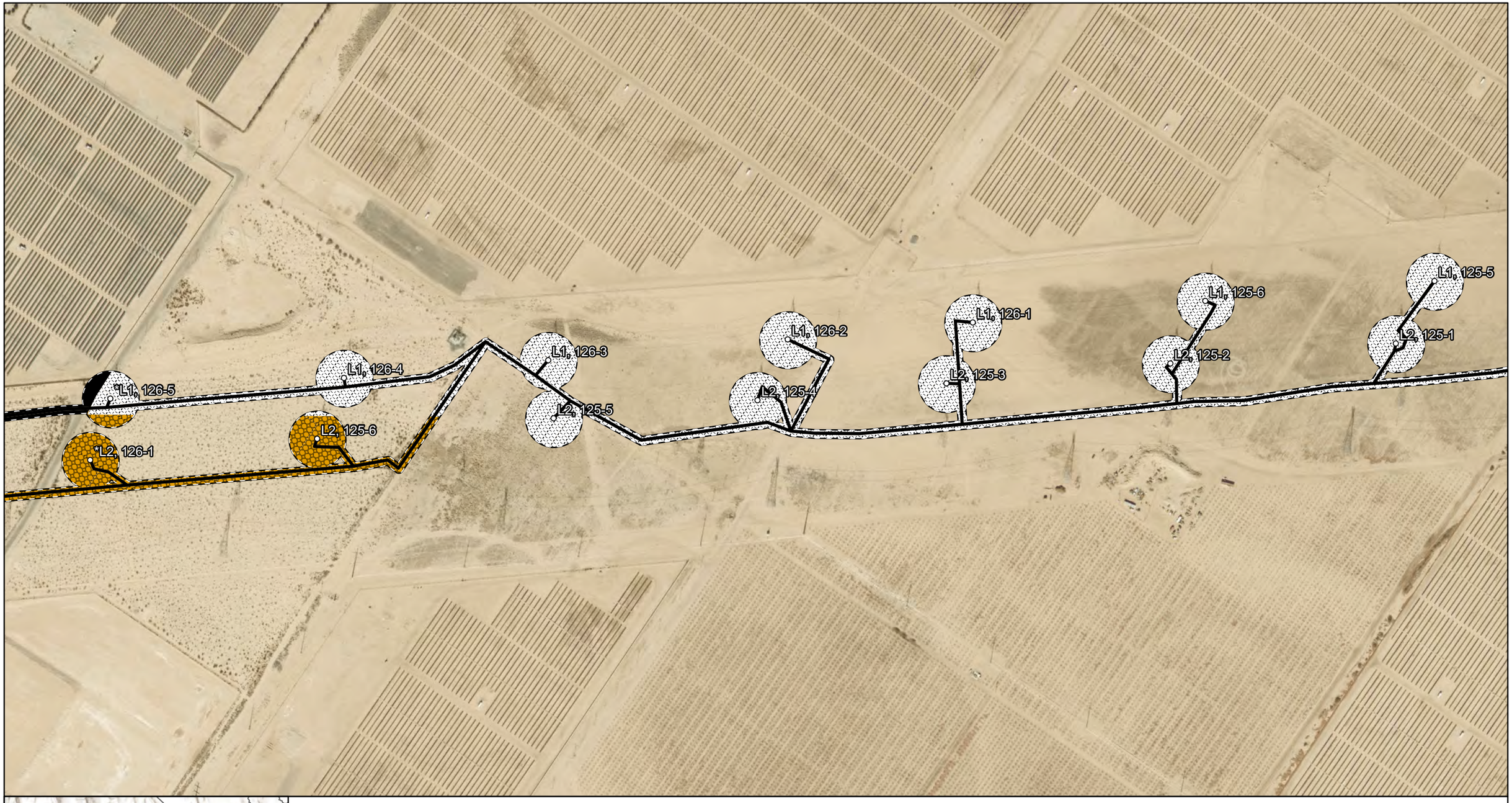
Creosote bush scrub

Developed / disturbed

Figure 4.2-1-106
Vegetation Communities

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

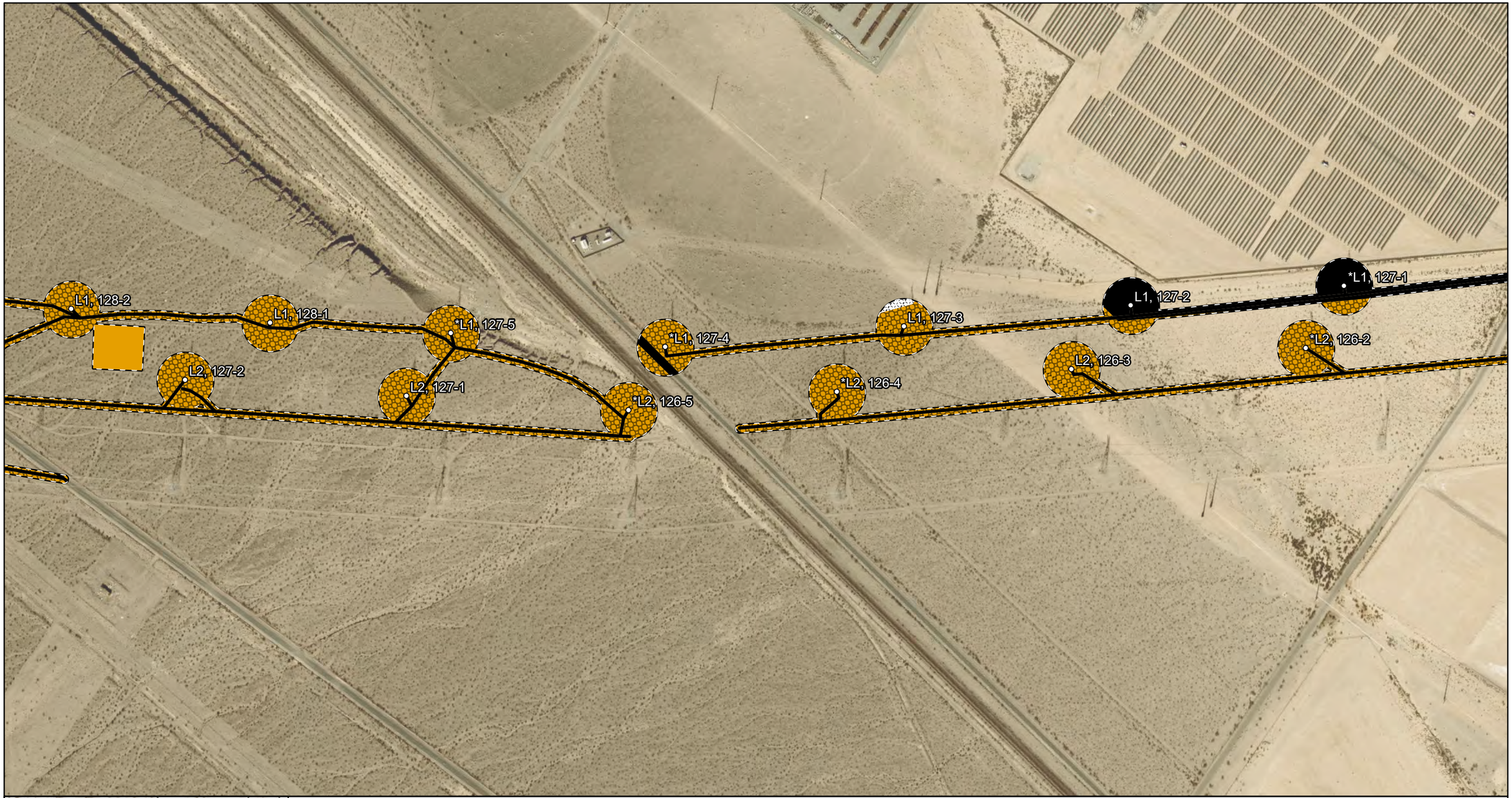
Survey Area

Vegetation and Cover Types

- Agricultural
- Creosote bush scrub
- Developed / disturbed

Figure 4.2-1-**107**
Vegetation Communities

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

- Agricultural
- Creosote bush scrub
- Creosote bush - white bursage scrub
- Developed / disturbed

Figure 4.2-1-**108**
Vegetation Communities

N

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Creosote bush scrub

Developed / disturbed

Figure 4.2-**1**-109
Vegetation Communities

N

500 0 500 Feet

L1, 130-3
L1, 130-2
L1, 130-1
L1, 129-6
*L1, 129-5
*L1, 129-4
L2, 129-6
L2, 129-5
L2, 129-4
L2, 129-3
L2, 129-2
*L2, 129-1
*L2, 128-5

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush scrub
Creosote bush - white bursage scrub
Developed / disturbed

Figure 4.2-1-**110**
Vegetation Communities

500 0 500 Feet

L1, 131-5
L2, 131-1
L1, 131-4
L2, 130-5
L1, 131-3
L2, 130-4
L1, 131-2
L2, 130-3
L1, 131-1
L2, 130-2
L1, 130-5
L2, 130-1
L1, 130-4
L2, 129-6

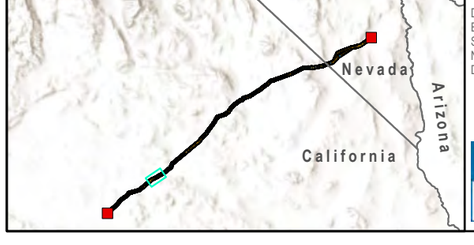
Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush scrub
Developed / disturbed

Figure 4.2-1-**111**
Vegetation Communities

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Creosote bush scrub

Developed / disturbed

Figure 4.2-1-**112**
Vegetation Communities

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

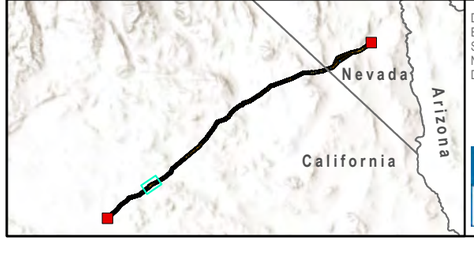
Vegetation and Cover Types

- Creosote bush scrub
- Creosote bush - white bursage scrub
- Developed / disturbed

Figure 4.2-1-**113**
Vegetation Communities

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

- Creosote bush scrub
- Creosote bush - white bursage scrub
- Developed / disturbed

Figure 4.2-1-**114**
Vegetation Communities

N

500 0 500 Feet

L1, 135-3
L2, 135-1
L2, 134-5
L1, 136-1
L1, 136-2
L2, 135-2
L1, 136-3
L2, 135-3
L1, 136-4
L2, 135-4
L2, 135-5
L1, 136-5
L2, 135-6
L2, 136-1

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush scrub
Creosote bush - white bursage scrub
Developed / disturbed

Figure 4.2-1-**115**
Vegetation Communities

500 0 500 Feet

L1, 138-1
L2, 137-2
L1, 137-5
L2, 137-1
L1, 137-4
L2, 136-5
L1, 137-3
L2, 136-4
L1, 137-2
L2, 136-3
L1, 137-1
L2, 136-2
L1, 136-6

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush scrub
Developed / disturbed

Figure 4.2-1-**116**
Vegetation Communities

N

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

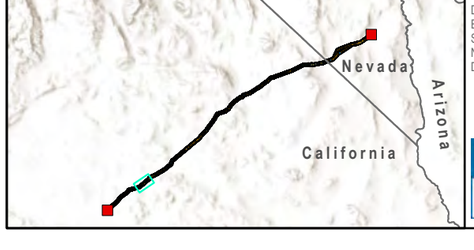
Vegetation and Cover Types

Creosote bush scrub

Developed / disturbed

Figure 4.2-1-**117**
Vegetation Communities

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

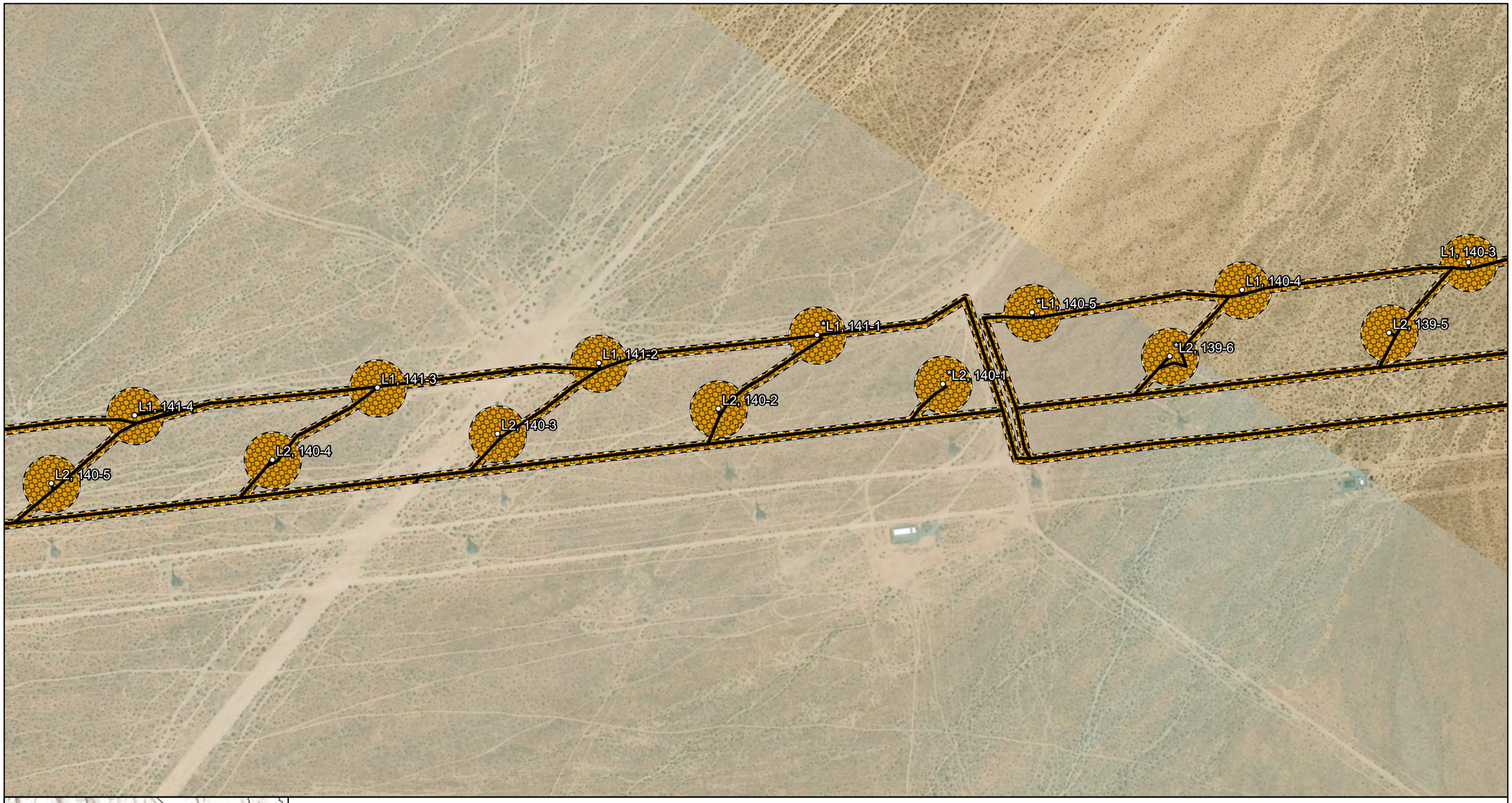
Survey Area

Vegetation and Cover Types

- Creosote bush scrub
- Creosote bush - white bursage scrub
- Developed / disturbed

Figure 4.2-1-118
Vegetation Communities

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Creosote bush scrub

Developed / disturbed

Figure 4.2-1-**119**
Vegetation Communities

N

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

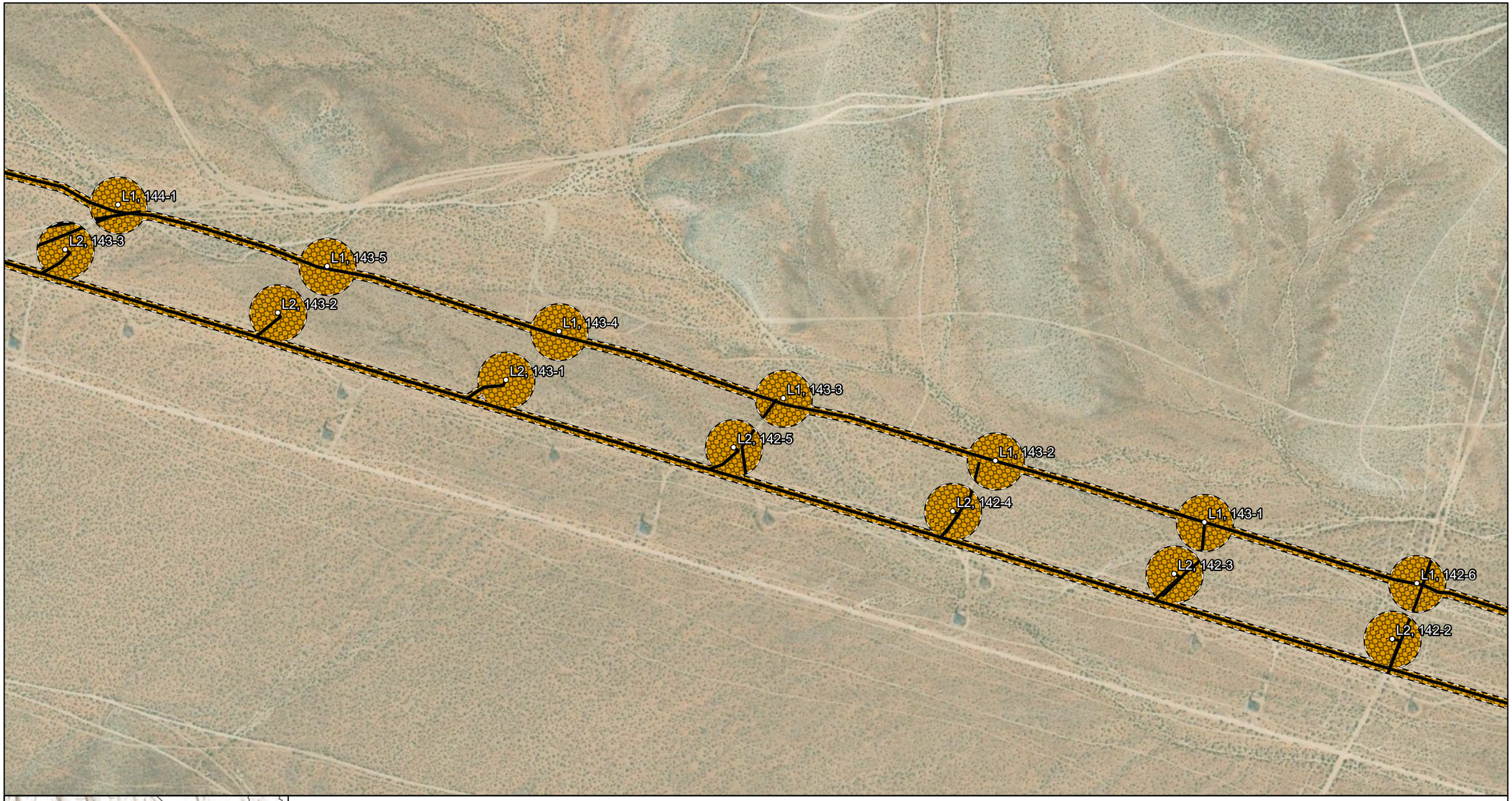
Vegetation and Cover Types

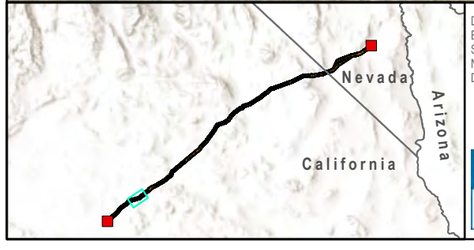
Creosote bush scrub

Developed / disturbed

Figure 4.2-**1**-120
Vegetation Communities

500 0 500 Feet





Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush scrub
Developed / disturbed

Figure 4.2-1-**121**
Vegetation Communities

N

500 0 500 Feet

L1, 145-3
L2, 144-4
L1, 145-2
L2, 144-3
L1, 145-1
L2, 144-2
L1, 144-5
L2, 144-1
L1, 144-4
L2, 143-6
L1, 144-3
L2, 143-5
L1, 144-2
L2, 143-4

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush scrub
Developed / disturbed

Figure 4.2-1-122
Vegetation Communities

N

500 0 500 Feet

L1, 146-4
L2, 146-1
L1, 146-3
L2, 145-5
L1, 146-2
L2, 145-4
L1, 146-1
L2, 145-3
L1, 145-7
L2, 145-2
L1, 145-6
L2, 145-1
L1, 145-5
L1, 145-4
L2, 144-5

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush scrub
Developed / disturbed

Figure 4.2-1-**123**
Vegetation Communities

500 0 500 Feet

L1, 148-1
L1, 147-6
**L1, 147-5
**L1, 147-4
L1, 147-3
L1, 147-2
L1, 147-1
L1, 146-5
L1, 146-4
L1, 146-3
L1, 146-2
L1, 146-1
**L2, 147-2
**L2, 147-1
L2, 146-6
L2, 146-5
L2, 146-4
L2, 146-3
L2, 146-2
L2, 146-1

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush scrub
Developed / disturbed
Mojave yucca scrub

Figure 4.2-1-124
Vegetation Communities

N

500 0 500 Feet

L1, 148-1
L1, 148-2
L2, 147-3
L1, 148-3
L2, 147-4
L1, 148-4
L2, 147-5
L1, 148-5
L2, 147-6
L1, 149-1
L2, 148-1
L1, 149-2
L2, 148-2
L2, 148-3

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush scrub
Developed / disturbed
Mojave yucca scrub

Figure 4.2-1-**125**
Vegetation Communities

N

500 0 500 Feet

L1, 150-4
L1, 150-3
L1, 150-2
L1, 150-1
L1, 149-5
L1, 149-4
L1, 149-3
L2, 149-5
L2, 149-4
L2, 149-3
L2, 149-2
L2, 149-1
L2, 148-5
L2, 148-4

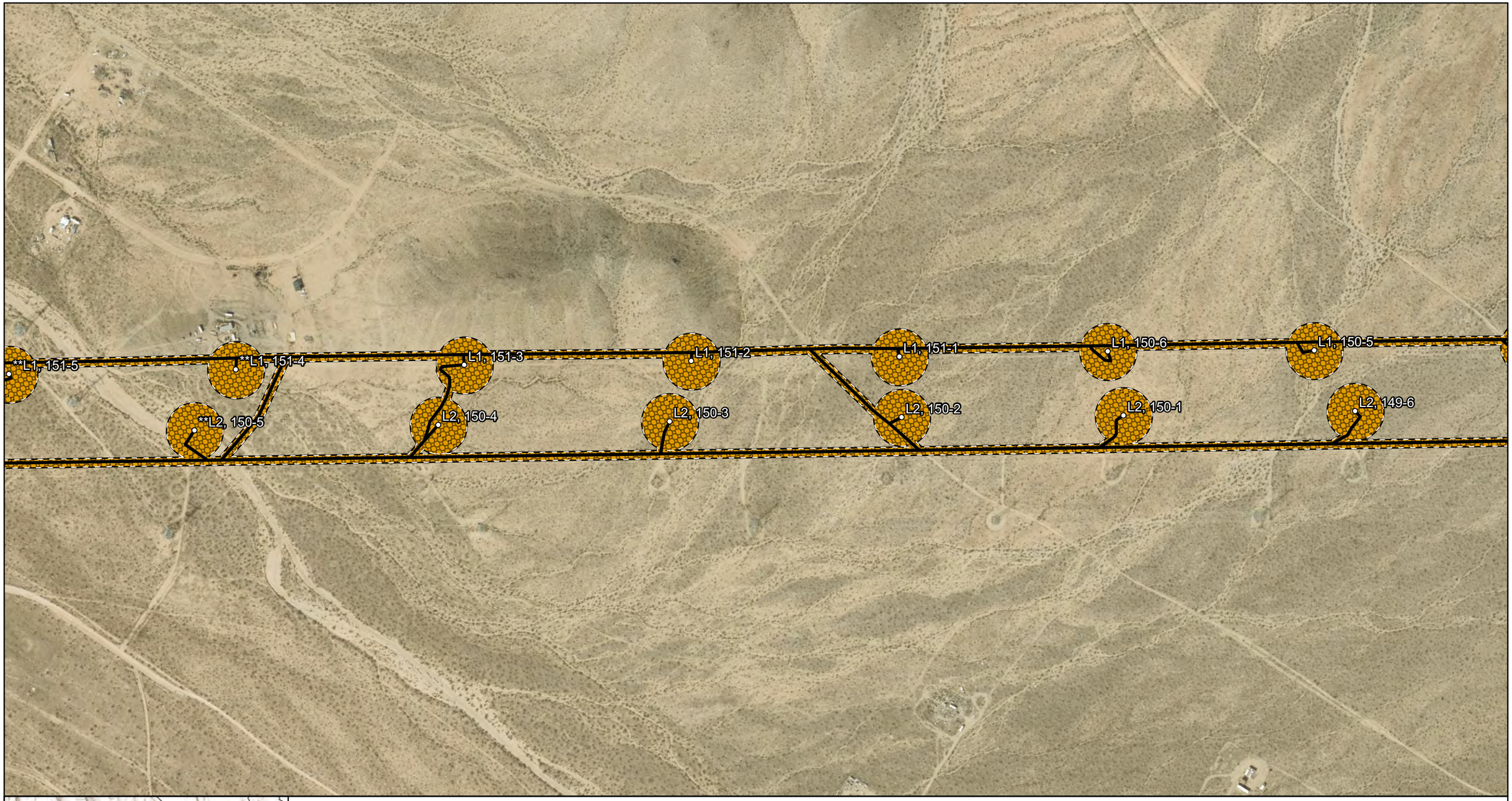
Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

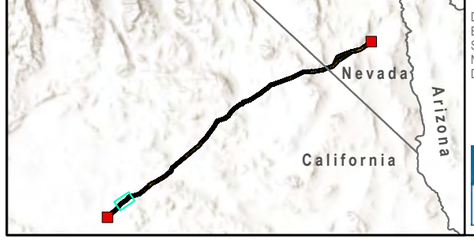
MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush scrub
Developed / disturbed
Mojave yucca scrub

Figure 4.2-1-**126**
Vegetation Communities

500 0 500 Feet





Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Creosote bush scrub

Developed / disturbed

Figure 4.2-1-**127**
Vegetation Communities

500 0 500 Feet

L1, 153-1
L1, 152-5
L1, 152-4
L1, 152-3
L1, 152-2
L1, 152-1
**L1, 151-5
L2, 152-2
L2, 152-1
L2, 151-5
L2, 151-4
L2, 151-3
L2, 151-2
**L2, 151-1

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

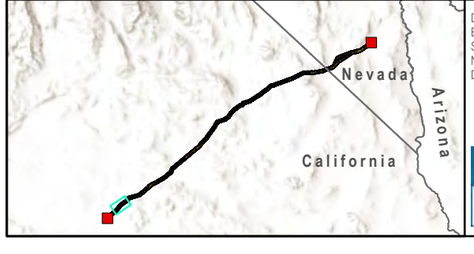
Creosote bush scrub

Developed / disturbed

Figure 4.2-**1**-128
Vegetation Communities

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Creosote bush scrub

Developed / disturbed

Figure 4.2-1-**129**
Vegetation Communities

N

500 0 500 Feet

L1, 154-3
*L1, 154-4
*L2, 153-3
*L1, 154-5
*L2, 153-4
L1, 154-6
*L2, 153-5
L1, 155-1
L2, 154-1
L1, 155-2
L2, 154-2
L1, 155-3
L2, 154-3
L1, 155-4
L2, 154-4

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

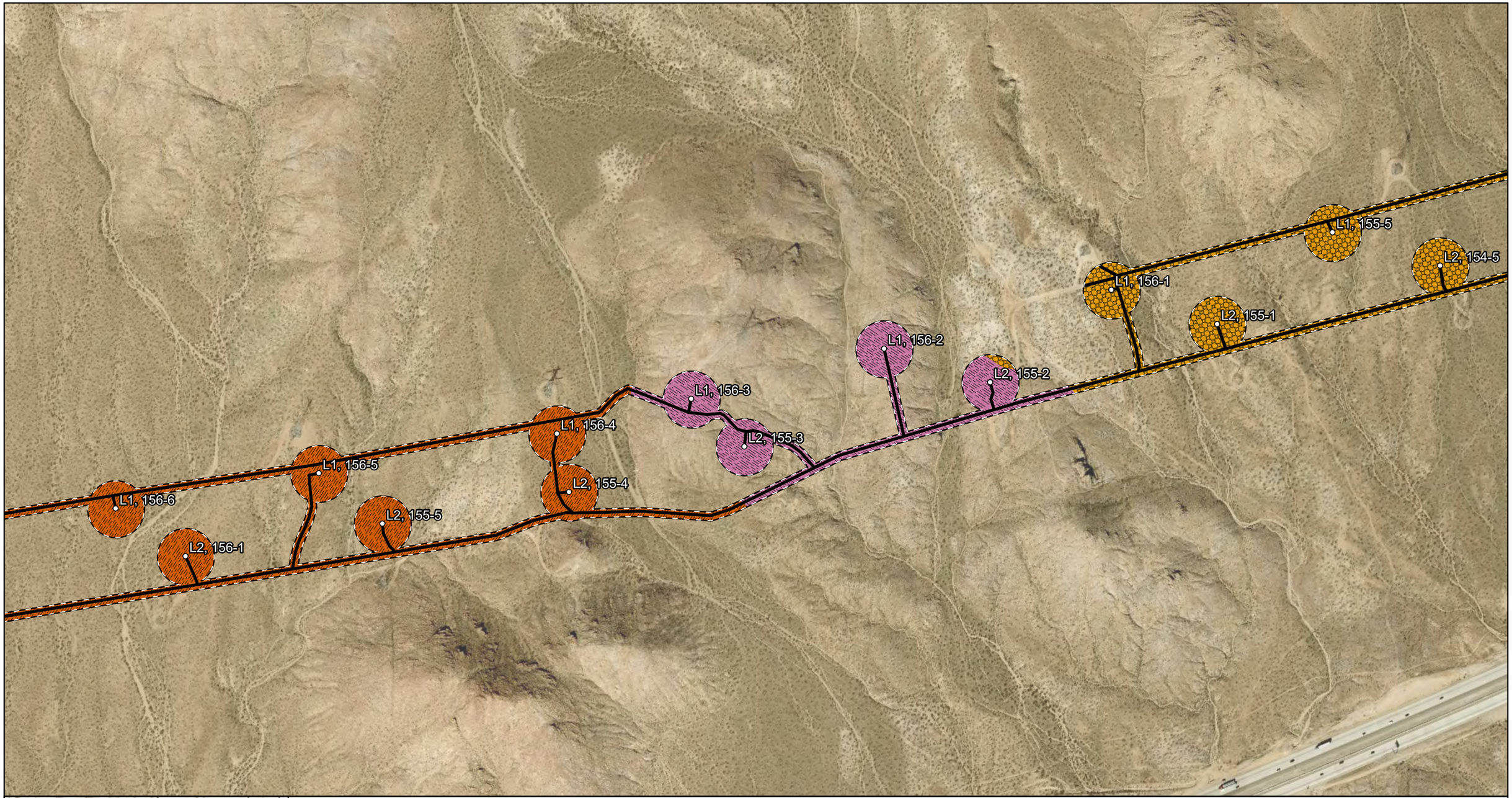
LA DWP

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush scrub
Developed / disturbed

Figure 4.2-1-**130**
Vegetation Communities

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

LA DWP

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

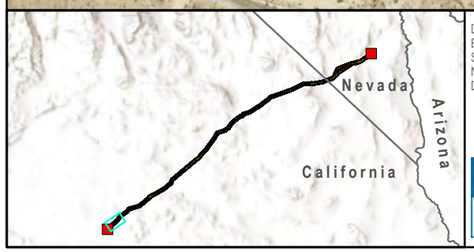
- Creosote bush scrub
- Developed / disturbed
- Mojave yucca scrub
- Needleleaf rabbitbrush scrub

Figure 4.2-1-**131**
Vegetation Communities

N

500 0 500 Feet

L1, 158-1
L2, 157-2
L1, 157-6
L2, 157-1
L1, 157-5
L2, 156-6
L1, 157-4
L2, 156-5
L1, 157-3
L2, 156-4
L1, 157-2
L2, 156-3
L1, 157-1
L2, 156-2



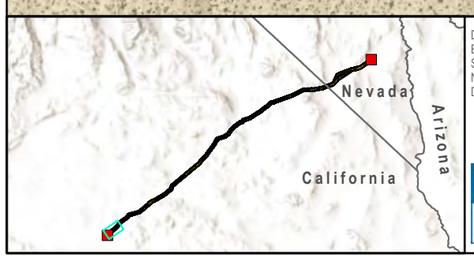
Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush scrub
Developed / disturbed
Mojave yucca scrub

Figure 4.2-**1**-132
Vegetation Communities

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

MCC-VIC Tower Location

Survey Area

Vegetation and Cover Types

Creosote bush scrub

Creosote bush - white bursage scrub

Developed / disturbed

Figure 4.2-1-**133**
Vegetation Communities

500 0 500 Feet

L1, 159-3
L1, 159-4
L2, 158-4
L1, 159-5
L2, 158-5
L1, 159-6
L1, 160-1
L2, 159-1
L1, 160-2
L2, 159-1
L1, 160-3
L2, 159-2
L2, 159-3
L2, 159-4

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/21/2024

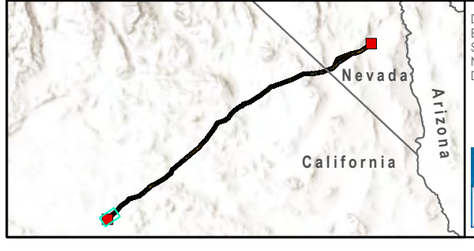
MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush scrub
Creosote bush - white bursage scrub
Developed / disturbed

Figure 4.2-1-**134**
Vegetation Communities

500 0 500 Feet

L1, 161-1
L1, 160-4
L1, 160-5
L2, 159-5
L2, 159-6
L1, 161-2
L1, 161-3
L2, 160-1
L1, 161-4
L2, 160-2
L1, 161-5
L2, 160-3
L2, 160-4



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/21/2024

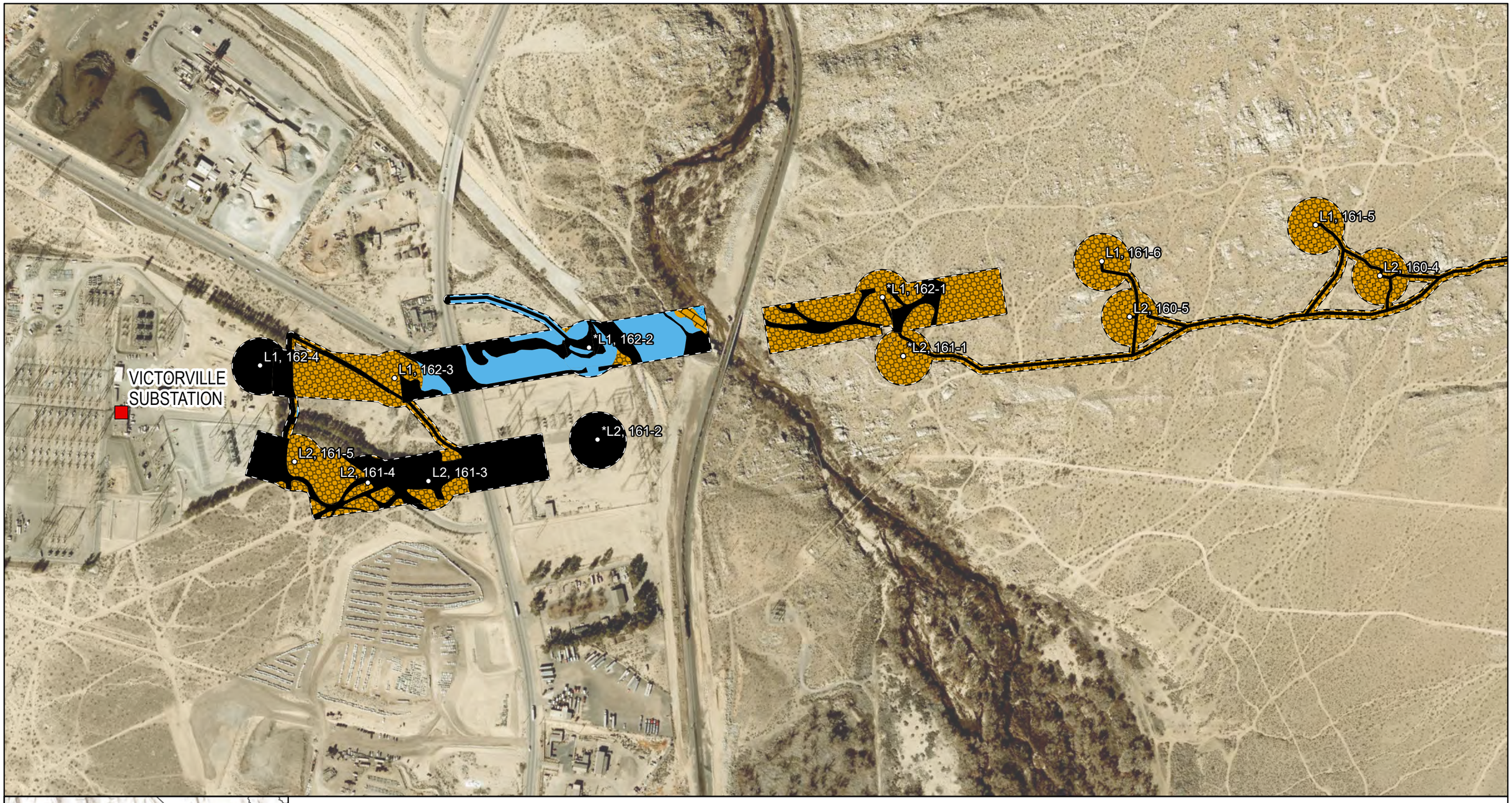
MCC-VIC Tower Location
Survey Area

Vegetation and Cover Types
Creosote bush scrub
Creosote bush - white bursage scrub
Developed / disturbed

Figure 4.2-1-**135**
Vegetation Communities

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/21/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

Vegetation and Cover Types

- Allscale scrub
- Creosote bush scrub
- Developed / disturbed
- Fremont cottonwood forest and woodland
- Open water

Figure 4.2-1-**136**
Vegetation Communities

N

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

Species

- Johnson's bee-hive cactus (2B.2) *Sclerocactus johnsonii*
- Mojave fish hook cactus (CY) *Sclerocactus polyancistrus*

Figure 4.2-2-**1**
Special-Status Plants

500 0 500 Feet

L2, 11-1
L1, 10-5
L1, 10-4
L2, 10-5
L1, 10-3
L2, 10-4
L1, 10-2
L1, 10-1
L2, 10-3
L2, 10-2
L2, 10-1
L1, 9-7
L1, 9-6
L1, 9-5
L2, 9-6
L2, 9-5
L2, 9-4

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

Species

- Blue diamond cholla (CE,CY) *Cylindropuntia multigeniculata*
- Johnson's bee-hive cactus (2B.2) *Sclerocactus johnsonii*
- Mojave fish hook cactus (CY) *Sclerocactus polyancistrus*
- Rosy two-toned beardtongue (BLM S) *Penstemon bicolor ssp roseus*

Figure 4.2-2-2
Special-Status Plants

N

500 0 500 Feet

L1, 12-1
L1, 11-5
L1, 11-4
L1, 11-3
L2, 12-1
L2, 11-6
L2, 11-5
L2, 11-4
L1, 11-2
L2, 11-3
L2, 11-2
L1, 11-1
L2, 11-1
L1, 10-5
L1, 10-4
L2, 10-5
L1, 10-3
L2, 10-4

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

LA DWP

MCC-VIC Tower Location
Substation
Survey Area

Species

Rosy two-toned beardtongue (BLM S)
Penstemon bicolor ssp roseus

Figure 4.2-2-**3**
Special-Status Plants

N

500 0 500 Feet

L1, 13-3
L1, 13-2
L1, 13-1
L1, 12-5
L1, 12-4
L1, 12-3
L1, 12-2
L1, 12-1
L1, 11-5
L2, 13-2
L2, 13-1
L2, 12-5
L2, 12-4
L2, 12-3
L2, 12-2
L2, 12-1
L2, 11-6

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

MCC-VIC Tower Location
Substation
Survey Area

Species

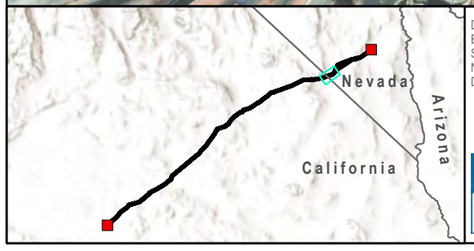
Rosy two-toned beardtongue (BLM S)
Penstemon bicolor ssp roseus

Figure 4.2-2-**4**
Special-Status Plants

N

500 0 500 Feet

L1, 27-1
L2, 26-3
**L1, 26-5
**L2, 26-2
**L1, 26-4
**L2, 26-1
*L1, 26-3
*L2, 25-5
*L1, 26-2
*L2, 25-4
L1, 26-1
L1, 25-6
L1, 25-5
L1, 25-4
L2, 25-3
L2, 25-2
L2, 25-1
L2, 24-5
L2, 24-4



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

LA DWP

MCC-VIC Tower Location
Substation
Survey Area

Species

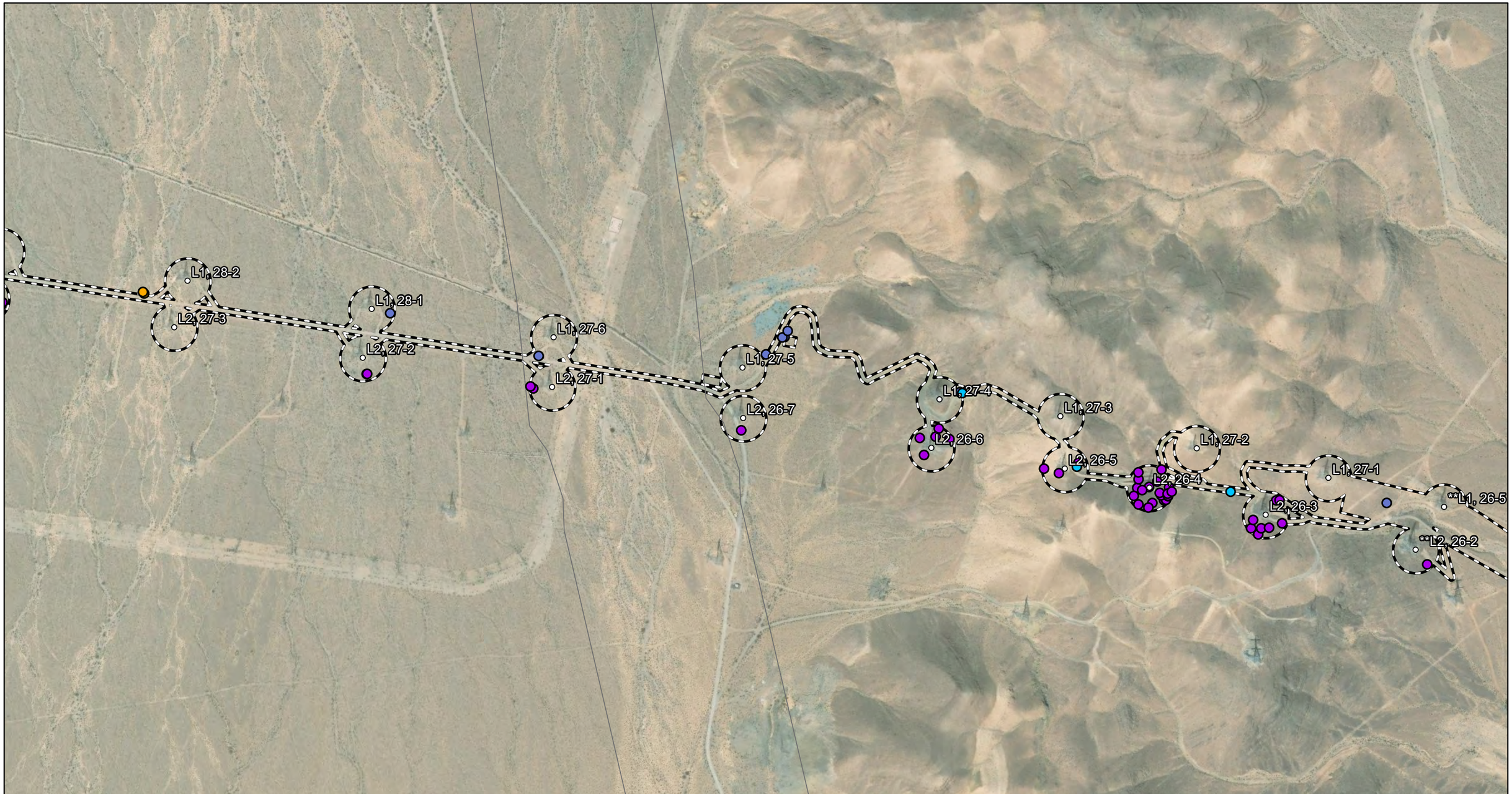
Desert pincushion (2B.1) *Coryphantha chlorantha*

Viviparous foxtail cactus (CY) *Escobaria vivipara var. rosea*

Figure 4.2-2-**5**
Special-Status Plants

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

Species

- Desert pincushion (2B.1) *Coryphantha chlorantha*
- Parish's club-cholla (2B.2) *Grusonia parishii*
- Viviparous foxtail cactus (2B.2) *Escobaria vivipara var. rosea*
- Viviparous foxtail cactus (CY) *Escobaria vivipara var. rosea*
- Naked-stemmed daisy *Enceliopsis nudicaulis var. nudicaulis*

Figure 4.2-2-**6**
Special-Status Plants

N

500 0 500 Feet

L1, 29-4
L2, 28-6
L1, 29-3
L2, 28-5
L1, 29-2
L2, 28-4
L1, 29-1
L2, 28-3
L1, 28-6
L2, 28-2
L1, 28-5
L2, 28-1
L1, 28-4
L2, 27-5
L1, 28-3
L2, 27-4
L1, 28-2
L2, 27-3

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

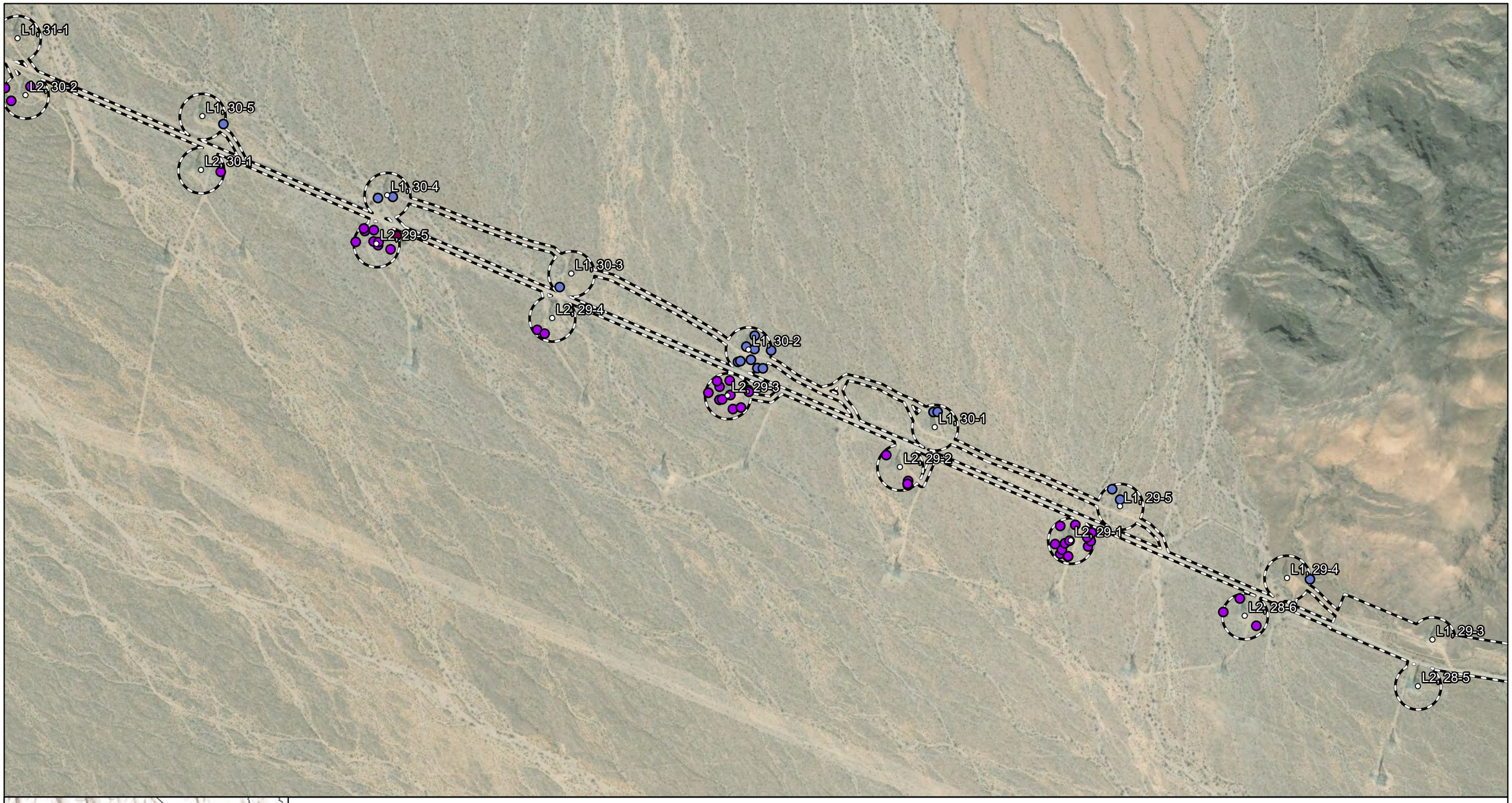
Species

- Desert pincushion (2B.1) *Coryphantha chlorantha*
- Parish's club-cholla (2B.2) *Grusonia parishii*
- Rosy two-toned beardtongue (1B.1, BLM S) *Penstemon bicolor ssp. roseus*
- Rusby's desert-mallow (1B.2, BLM S) *Sphaeralcea rusbyi var. eremicol*
- Viviparous foxtail cactus (2B.2) *Escobaria vivipara var. rosea*

Figure 4.2-2-**7**
Special-Status Plants

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

Species

- Clark Mountain agave (4.2) *Agave utahensis var. nevadensis*
- Desert pincushion (2B.1) *Coryphantha chlorantha*
- Rosy two-toned beardtongue (1B.1, BLM S) *Penstemon bicolor ssp. roseus*
- Viviparous foxtail cactus (2B.2) *Escobaria vivipara var. rosea*

Figure 4.2-2-**8**
Special-Status Plants

N

500 0 500 Feet

L1, 32-3
L2, 31-4
L1, 32-2
L2, 31-3
L1, 32-1
L2, 31-2
L1, 31-5
L2, 31-1
L1, 31-4
L2, 30-5
L1, 31-3
L2, 30-4
L1, 31-2
L2, 30-3
L1, 31-1
L2, 30-2
L1, 30-5
L2, 30-1

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

Species

- Desert pincushion (2B.1) *Coryphantha chlorantha*
- Parish's club-cholla (2B.2) *Grusonia parishii*
- Viviparous foxtail cactus (2B.2) *Escobaria vivipara var. rosea*

Figure 4.2-2-**9**
Special-Status Plants

N

500 0 500 Feet

L1, 33-4
L2, 32-6
L1, 33-3
L2, 32-5
L1, 33-2
L2, 32-4
L1, 33-1
L2, 32-3
L1, 32-6
L2, 32-2
L1, 32-5
L2, 32-1
L1, 32-4
L2, 31-5
L1, 32-3
L2, 31-4
L1, 32-2
L2, 31-3

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

LA DWP

MCC-VIC Tower Location
Substation
Survey Area

Species

Desert pincushion (2B.1) *Coryphantha chlorantha*

Rosy two-toned beardtongue (1B.1, BLM S) *Penstemon bicolor ssp. roseus*

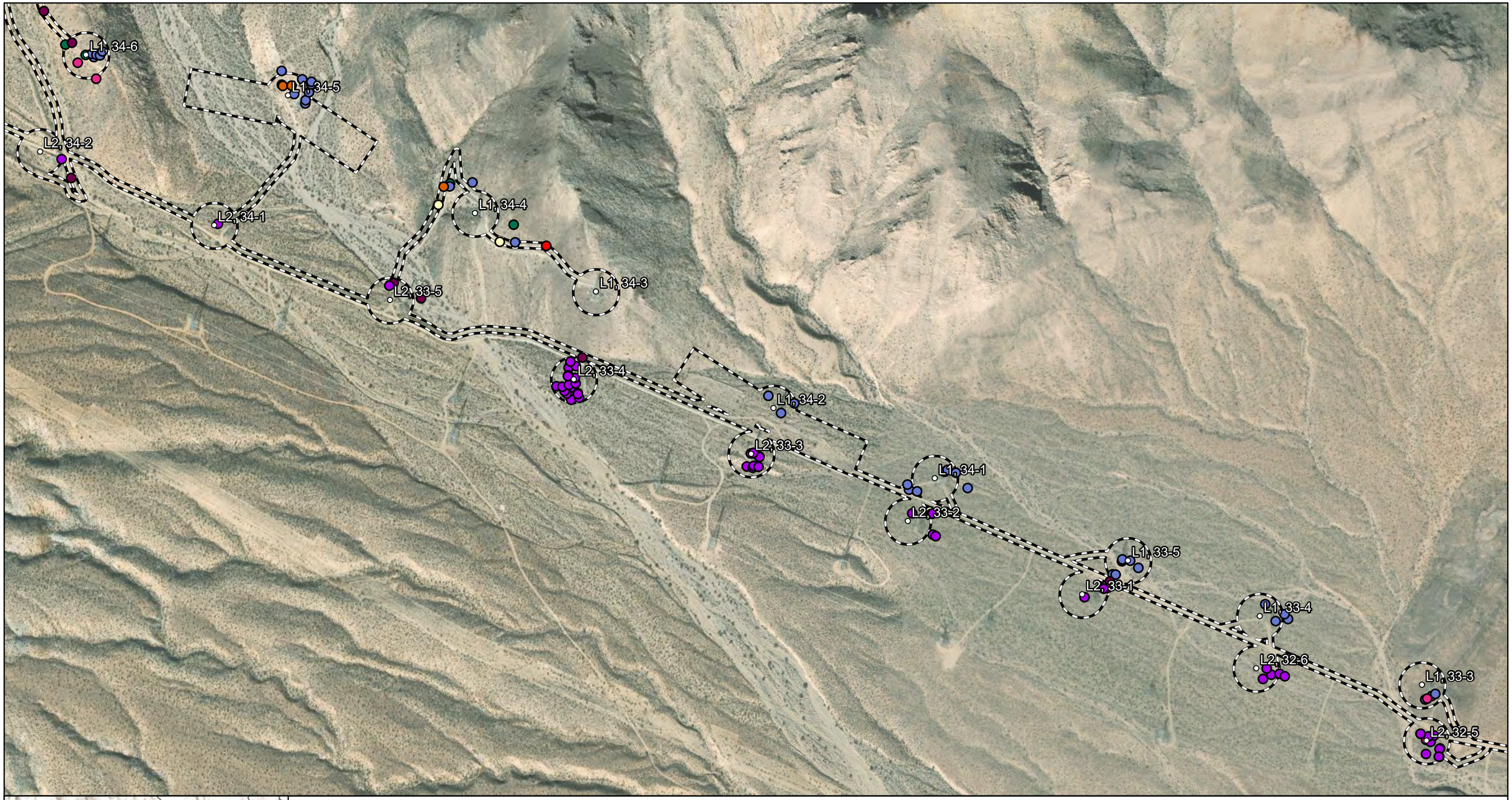
Three-awned grama (2B.3) *Bouteloua trifida*

Viviparous foxtail cactus (2B.2) *Escobaria vivipara var. rosea*

Figure 4.2-2-**10**
Special-Status Plants

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

Species

- Clark Mountain agave (4.2) *Agave utahensis var. nevadensis*
- Desert pincushion (2B.1) *Coryphantha chlorantha*
- Polished blazing star (1B.2, BLM S) *Mentzelia polita*
- Rosy two-toned beardtongue (1B.1, BLM S) *Penstemon bicolor ssp. roseus*
- Rusby's desert-mallow (1B.2, BLM S) *Sphaeralcea rusbyi var. eremicol*
- Three-awned grama (2B.3) *Bouteloua trifida*
- Tidestrom's milkvetch (2B.2) *Astragalus tidestromii*
- Viviparous foxtail cactus (2B.2) *Escobaria vivipara var. rosea*

Figure 4.2-2-**11**
Special-Status Plants

N

500 0 500 Feet

L2, 35-3
L2, 35-2
L1, 35-5
L2, 35-1
L1, 35-4
L2, 34-6
L1, 35-3
L2, 34-5
L1, 35-2
L1, 35-1
L2, 34-4
L1, 34-6
L2, 34-3
L1, 34-5
L2, 34-2
L2, 34-1

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

Species

- Caespitose evening-primrose (4.2) *Oenothera cespitosa ssp. crinita*
- Clark Mountain agave (4.2) *Agave utahensis var. nevadensis*
- Desert pincushion (2B.1) *Coryphantha chlorantha*
- Rosy two-toned beardtongue (1B.1, BLM S) *Penstemon bicolor ssp. roseus*
- Rusby's desert-mallow (1B.2, BLM S) *Sphaeralcea rusbyi var. eremicol*
- Three-awned grama (2B.3) *Bouteloua trifida*
- Tidestrom's milkvetch (2B.2) *Astragalus tidestromii*
- Viviparous foxtail cactus (2B.2) *Escobaria vivipara var. rosea*

Figure 4.2-2-**12**
Special-Status Plants

N

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

Species

- Desert pincushion (2B.1) *Coryphantha chlorantha*
- Rosy two-toned beardtongue (1B.1, BLM S) *Penstemon bicolor ssp. roseus*
- Rusby's desert-mallow (1B.2, BLM S) *Sphaeralcea rusbyi var. eremicol*
- Viviparous foxtail cactus (2B.2) *Escobaria vivipara var. rosea*

Figure 4.2-2-**13**
Special-Status Plants

N

500 0 500 Feet

L2, 37-5
L1, 38-2
L2, 37-4
L1, 38-1
L2, 37-3
L1, 37-6
L2, 37-2
L1, 37-5
L2, 37-1
L1, 37-4
L2, 36-5
L1, 37-3
L2, 36-4
L1, 37-2
L2, 36-3
L1, 37-1
L2, 36-2
L1, 36-6

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

LA DWP

MCC-VIC Tower Location
Substation
Survey Area

Species

Desert pincushion (2B.1) *Coryphantha chlorantha*

Rosy two-toned beardtongue (1B.1, BLM S) *Penstemon bicolor ssp. roseus*

Rusby's desert-mallow (1B.2, BLM S) *Sphaeralcea rusbyi var. eremicol*

Viviparous foxtail cactus (2B.2) *Escobaria vivipara var. rosea*

Figure 4.2-2-**14**
Special-Status Plants

500 0 500 Feet

L2, 38-6
L1, 39-4
L2, 38-5
L1, 39-3
L2, 38-4
L1, 39-2
L2, 38-3
L1, 39-1
L2, 38-2
L1, 38-5
L2, 38-1
L1, 38-4
L2, 37-6
L1, 38-3
L2, 37-5
L1, 38-2
L2, 37-4
L1, 38-1
L2, 37-3

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

Species

- Clark Mountain agave (4.2) *Agave utahensis var. nevadensis*
- Desert pincushion (2B.1) *Coryphantha chlorantha*
- Parish's club-cholla (2B.2) *Grusonia parishii*
- Polished blazing star (1B.2, BLM S) *Mentzelia polita*
- Rosy two-toned beardtongue (1B.1, BLM S) *Penstemon bicolor ssp. roseus*
- Rusby's desert-mallow (1B.2, BLM S) *Sphaeralcea rusbyi var. eremicol*
- Viviparous foxtail cactus (2B.2) *Escobaria vivipara var. rosea*

Figure 4.2-2-**15**
Special-Status Plants

N

500 0 500 Feet

L1, 40-4
L2, 40-1
L1, 40-3
L2, 39-5
L1, 40-2
L2, 39-4
L1, 40-1
L2, 39-3
L1, 39-7
L2, 39-2
L1, 39-6
L2, 39-1
L1, 39-5
L2, 38-6
L1, 39-4
L2, 38-5
L1, 39-3
L2, 38-4

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

Species

- Clark Mountain agave (4.2) *Agave utahensis var. nevadensis*
- Desert pincushion (2B.1) *Coryphantha chlorantha*
- Parish's club-cholla (2B.2) *Grusonia parishii*
- Polished blazing star (1B.2, BLM S) *Mentzelia polita*
- Rosy two-toned beardtongue (1B.1, BLM S) *Penstemon bicolor ssp. roseus*
- Rusby's desert-mallow (1B.2, BLM S) *Sphaeralcea rusbyi var. eremicol*
- Viviparous foxtail cactus (2B.2) *Escobaria vivipara var. rosea*

Figure 4.2-2-**16**
Special-Status Plants

N

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

Species

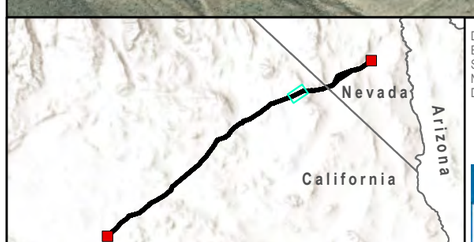
- Desert pincushion (2B.1) *Coryphantha chlorantha*
- Rosy two-toned beardtongue (1B.1, BLM S) *Penstemon bicolor ssp. roseus*
- Viviparous foxtail cactus (2B.2) *Escobaria vivipara var. rosea*

Figure 4.2-2-**17**
Special-Status Plants

N

500 0 500 Feet

L1, 43-2
L2, 42-3
L1, 43-1
L2, 42-2
L1, 42-5
L2, 42-1
L1, 42-4
L2, 41-5
L1, 42-3
L2, 41-4
L1, 42-2
L2, 41-3
L1, 42-1
L2, 41-2
L1, 41-5
L2, 41-1



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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LA DWP

MCC-VIC Tower Location
Substation
Survey Area

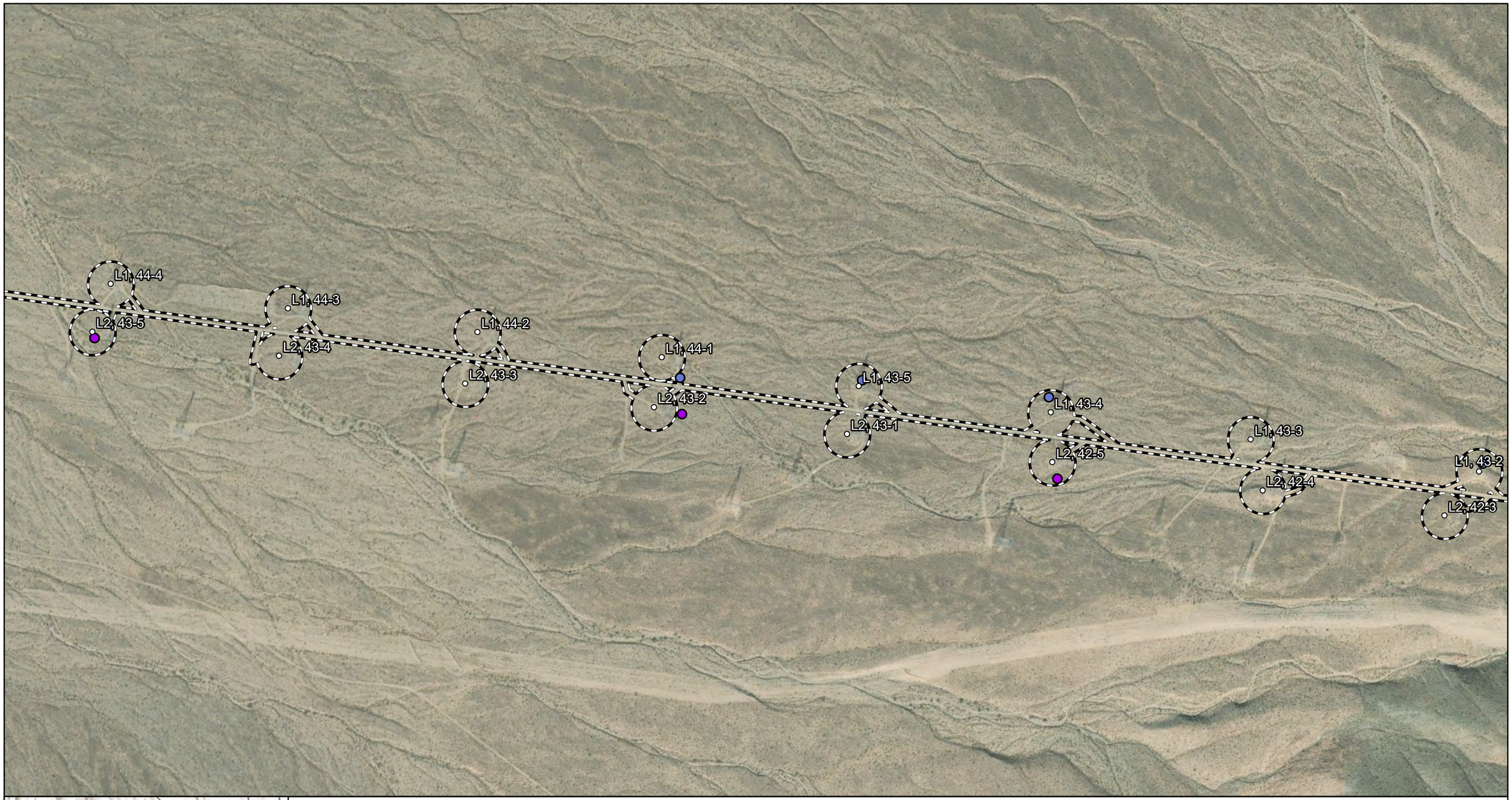
Species

- Desert pincushion (2B.1) *Coryphantha chlorantha*
- Parish's club-cholla (2B.2) *Grusonia parishii*
- Viviparous foxtail cactus (2B.2) *Escobaria vivipara var. rosea*

Figure 4.2-2-**18**
Special-Status Plants

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

LA DWP

MCC-VIC Tower Location

Substation

Survey Area

Species

Desert pincushion (2B.1) *Coryphantha chlorantha*

Viviparous foxtail cactus (2B.2) *Escobaria vivipara var. rosea*

Figure 4.2-2-**19**
Special-Status Plants

N

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

MCC-VIC Tower Location

Substation

Survey Area

Species

Viviparous foxtail cactus (2B.2) *Escobaria vivipara var. rosea*

Figure 4.2-2-**20**
Special-Status Plants

500 0 500 Feet

L1, 49-4
L2, 48-5
L1, 49-3
L2, 48-4
L1, 49-2
L2, 48-3
L1, 49-1
L2, 48-2
L1, 48-5
L2, 48-1
L1, 48-4
L2, 47-6
L1, 48-3
L2, 47-5
L1, 48-2
L2, 47-4

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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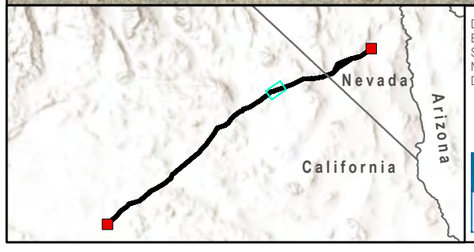
MCC-VIC Tower Location
Substation
Survey Area

Species
Parish's club-cholla (2B.2) *Grusonia parishii*

Figure 4.2-2-**21**
Special-Status Plants

500 0 500 Feet

L1, 55-1
L2, 54-2
L1, 54-4
L2, 54-1
L1, 54-3
L2, 53-5
L1, 54-2
L2, 53-4
L1, 54-1
L2, 53-3
L1, 53-6
L2, 53-2
L1, 53-5
L2, 53-1
L1, 53-4
L2, 52-5



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

LA DWP

MCC-VIC Tower Location
Substation
Survey Area

Species

Desert pincushion (2B.1) *Coryphantha chlorantha*

Rosy two-toned beardtongue (1B.1, BLM S) *Penstemon bicolor ssp. roseus*

Tidestrom's milkvetch (2B.2) *Astragalus tidestromii*

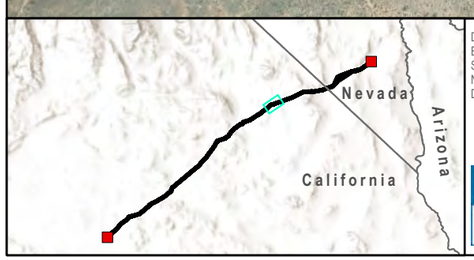
Viviparous foxtail cactus (2B.2) *Escobaria vivipara var. rosea*

Figure 4.2-2-**22**
Special-Status Plants

N

500 0 500 Feet

L1, 56-2
L2, 55-4
L1, 56-1
L2, 55-3
L1, 55-6
L2, 55-2
L1, 55-5
L2, 55-1
L1, 55-4
L2, 54-5
L1, 55-3
L2, 54-4
L1, 55-2
L2, 54-3
L1, 55-1
L2, 54-2
L1, 54-4
L2, 54-1



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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LA DWP

MCC-VIC Tower Location
Substation
Survey Area

Species

Desert pincushion (2B.1) *Coryphantha chlorantha*

Rosy two-toned beardtongue (1B.1, BLM S) *Penstemon bicolor ssp. roseus*

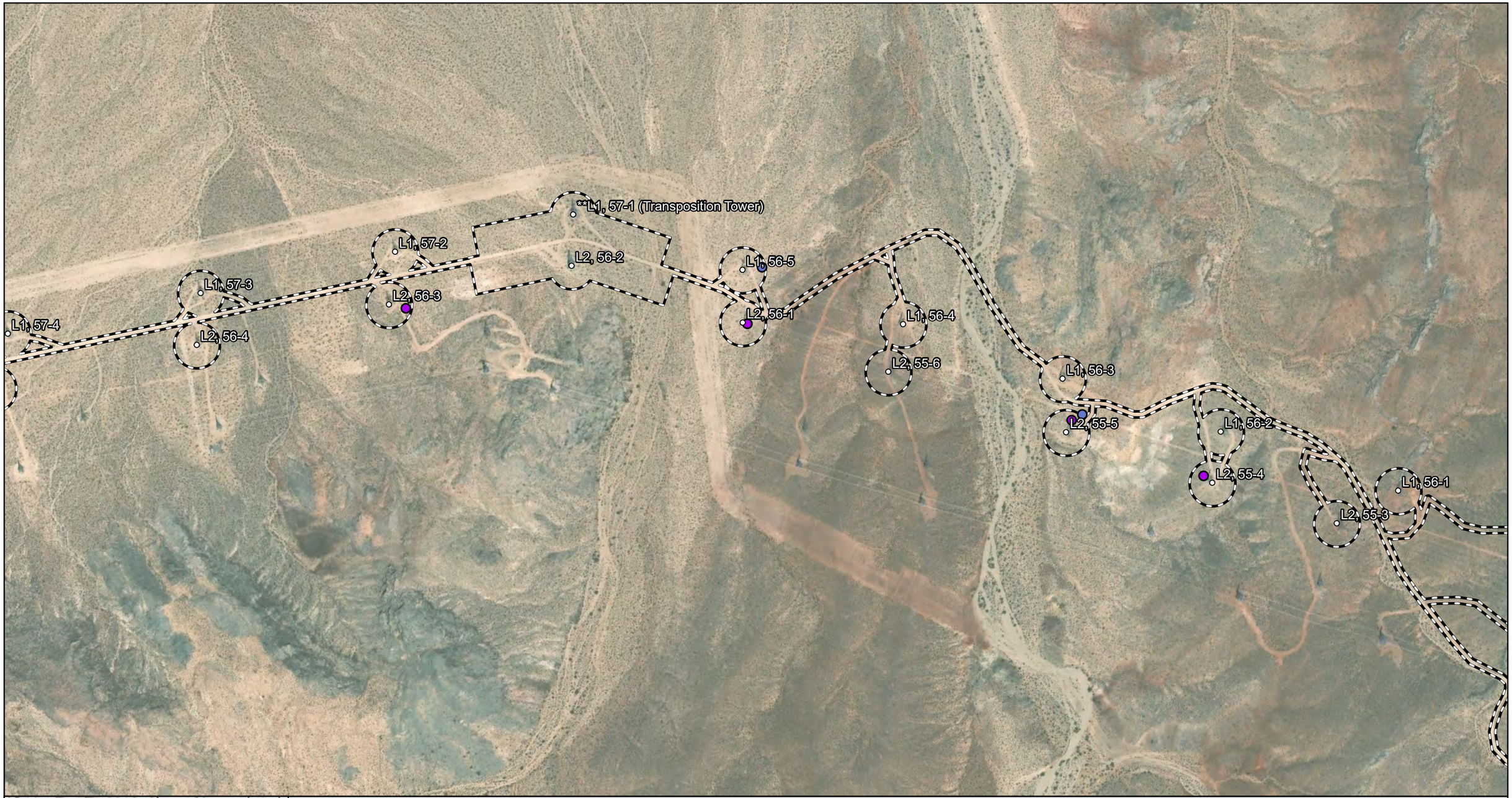
Tidestrom's milkvetch (2B.2) *Astragalus tidestromii*

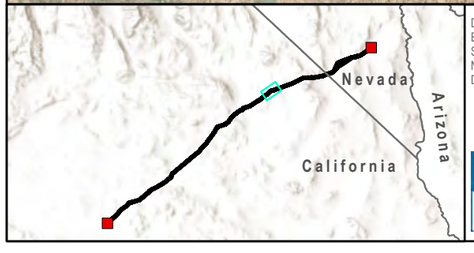
Viviparous foxtail cactus (2B.2) *Escobaria vivipara var. rosea*

Figure 4.2-2-**23**
Special-Status Plants

N

500 0 500 Feet





Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

Species

- Desert pincushion (2B.1) *Coryphantha chlorantha*
- Viviparous foxtail cactus (2B.2) *Escobaria vivipara var. rosea*

Figure 4.2-2-**24**
Special-Status Plants

N

500 0 500 Feet

L1, 57-3
L1, 57-4
L2, 56-4
L1, 57-5
L2, 56-5
L1, 58-1
L2, 57-1
L1, 58-2
L2, 57-2
L1, 58-3
L2, 57-3
L1, 58-4
L2, 57-4
L1, 58-5
L2, 57-5
L2, 58-1

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

LA DWP

MCC-VIC Tower Location
Substation
Survey Area

Species

Desert pincushion (2B.1) *Coryphantha chlorantha*

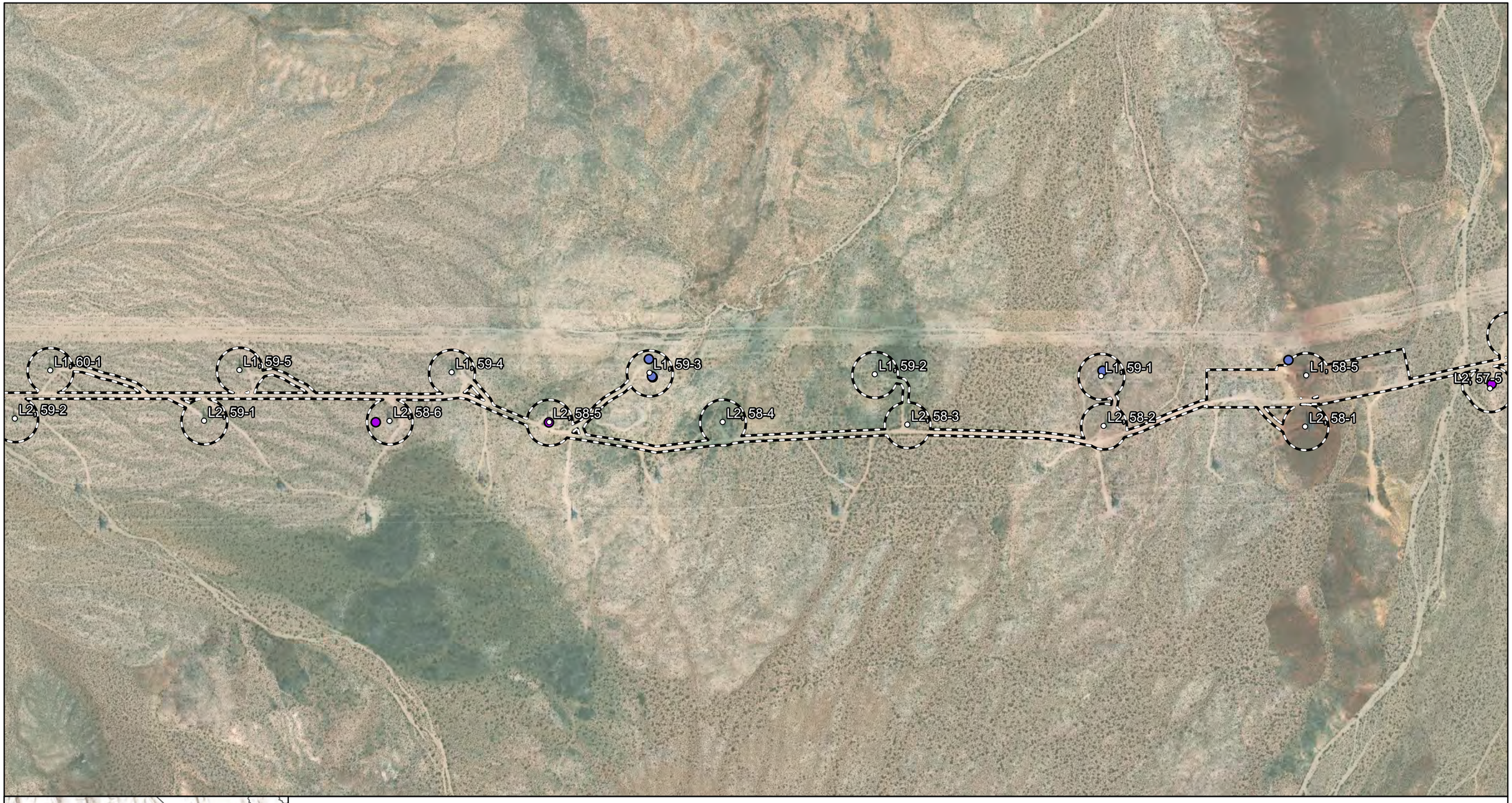
Tidestrom's milkvetch (2B.2) *Astragalus tidestromii*

Viviparous foxtail cactus (2B.2) *Escobaria vivipara var. rosea*

Figure 4.2-2-**25**
Special-Status Plants

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

Species

- Desert pincushion (2B.1) *Coryphantha chlorantha*
- Viviparous foxtail cactus (2B.2) *Escobaria vivipara var. rosea*

Figure 4.2-2-**26**
Special-Status Plants

N

500 0 500 Feet

L1, 61-2
L2, 60-3
L1, 61-1
L2, 60-2
L1, 60-5
L2, 60-1
L1, 60-4
L2, 59-5
L1, 60-3
L2, 59-4
L1, 60-2
L2, 59-3
L1, 60-1
L2, 59-2
L1, 59-5
L2, 59-1

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

LA DWP

MCC-VIC Tower Location
Substation
Survey Area

Species

Desert pincushion (2B.1) *Coryphantha chlorantha*

Tidestrom's milkvetch (2B.2) *Astragalus tidestromii*

Figure 4.2-2-**27**
Special-Status Plants

N

500 0 500 Feet

Figure 4.2-2-**28**
Special-Status Plants

L1, 122-2
L2, 121-2
*L1, 122-3
L2, 121-3
*L1, 122-4
*L2, 121-4
L1, 122-5
*L2, 121-5
L1, 122-6
L1, 123-1
L2, 122-1
L1, 123-2
L2, 122-2
L1, 123-3
L2, 122-3
L1, 123-4
L2, 122-4

Nevada
Arizona
California

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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MCC-VIC Tower Location
Substation
Survey Area

Species
Harwood's eriastrum (1B.2, BLM S)
Eriastrum harwoodii

Figure 4.2-2-**29**
Special-Status Plants

500 0 500 Feet

L1, 135-2
L2, 134-5
L2, 134-4
L1, 135-1
L2, 134-3
L1, 134-7
L1, 134-6
L2, 134-2
L2, 134-1
L1, 134-5
L1, 134-4
L2, 133-5
L1, 134-3
L2, 133-4

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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MCC-VIC Tower Location
Substation
Survey Area

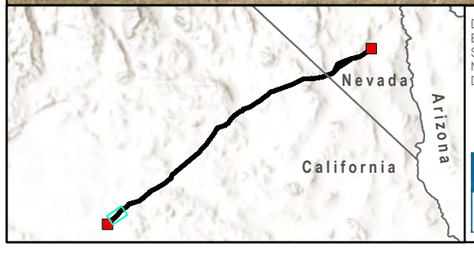
Species

Creamy blazing star (1B.3) *Mentzelia tridentata*

Figure 4.2-2-**30**
Special-Status Plants

500 0 500 Feet

L1, 155-4
L1, 155-5
L2, 154-5
L1, 156-1
L2, 155-1
L1, 156-2
L2, 155-2
L1, 156-3
L1, 156-4
L2, 155-3
L1, 156-5
L2, 155-4
L1, 156-6
L2, 155-5
L1, 157-1
L2, 156-1
L2, 156-2



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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MCC-VIC Tower Location
Substation
Survey Area

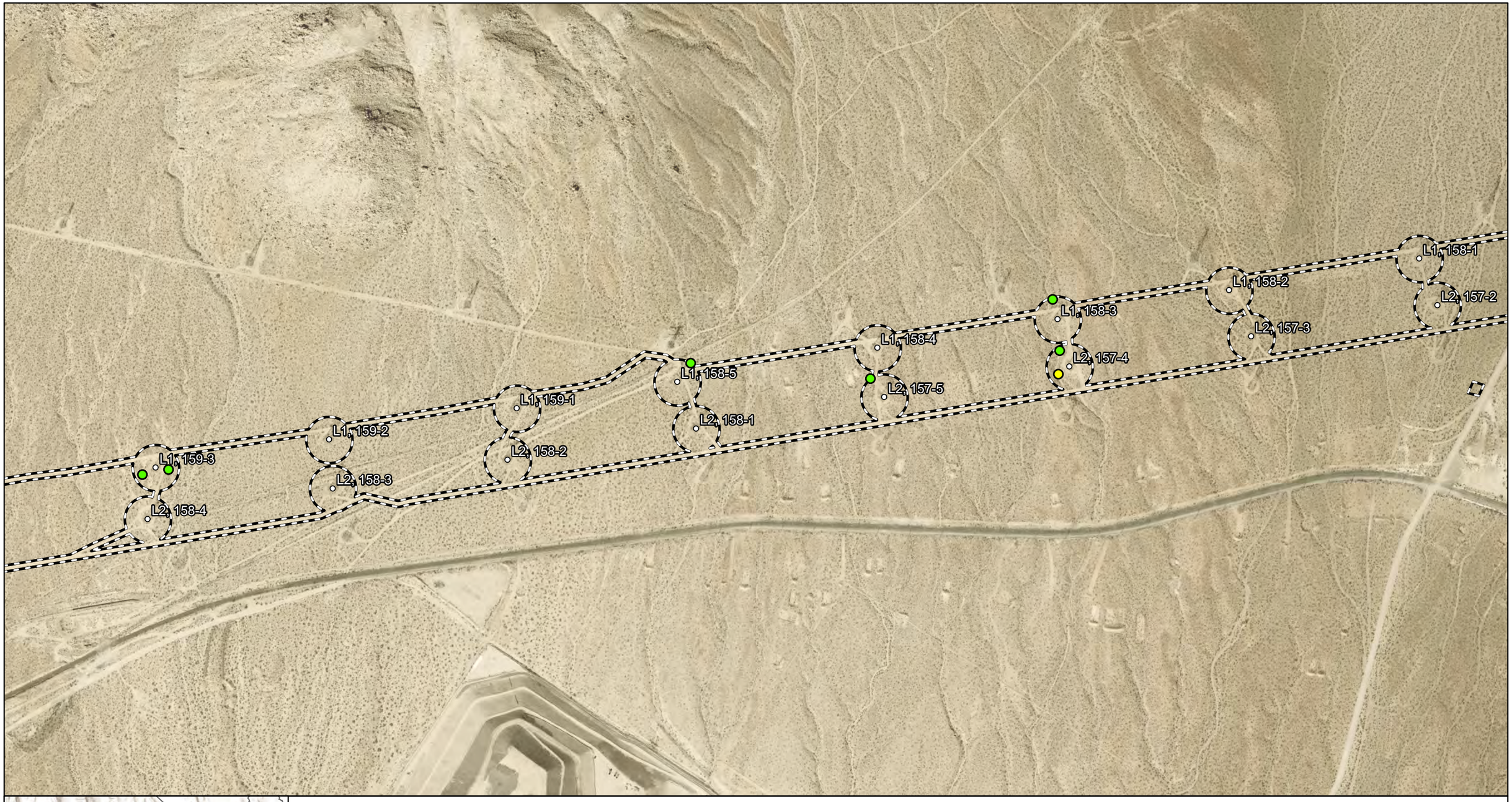
Species

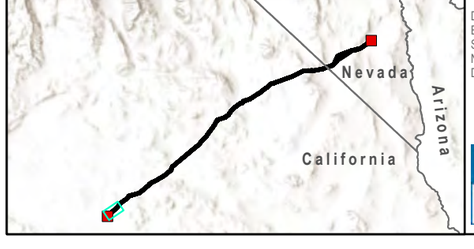
Western Joshua tree (CBR) *Yucca brevifolia*

Figure 4.2-2-**31**
Special-Status Plants

N

500 0 500 Feet





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- MCC-VIC Tower Location
- Substation
- Survey Area

Species

- Mojave fish hook cactus (4.2) *Sclerocactus polyancistrus*
- Western Joshua tree (CBR) *Yucca brevifolia*

Figure 4.2-2-**32**
Special-Status Plants

N

500 0 500 Feet

L1, 159-2
L1, 159-3
L1, 159-4
L1, 159-5
L1, 159-6
L2, 158-4
L2, 158-5
L2, 159-1
L2, 159-1
L1, 160-1
L1, 160-2
L1, 160-3
L1, 160-4
L2, 159-2
L2, 159-3
L2, 159-4
L2, 159-5

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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MCC-VIC Tower Location
Substation
Survey Area

Species

Western Joshua tree (CBR) *Yucca brevifolia*

Figure 4.2-2-**33**
Special-Status Plants

500 0 500 Feet

L1, 160-3
L1, 160-4
L1, 160-5
L2, 159-4
L2, 159-5
L2, 159-6
L1, 161-1
L1, 161-2
L1, 161-3
L1, 161-4
L1, 161-5
L1, 161-6
L2, 160-1
L2, 160-2
L2, 160-3
L2, 160-4
L2, 160-5

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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- MCC-VIC Tower Location
- Substation
- Survey Area

Species

- Western Joshua tree (CBR) *Yucca brevifolia*

Figure 4.2-2-**34**
Special-Status Plants

500 0 500 Feet

VICTORVILLE SUBSTATION

L1, 162-4
L1, 162-3
*L1, 162-2
*L1, 162-1
L1, 161-6
L1, 161-5
L1, 161-4
L2, 161-5
L2, 161-4
L2, 161-3
*L2, 161-2
*L2, 161-1
L2, 160-5
L2, 160-4
L2, 160-3

Nevada
Arizona
California

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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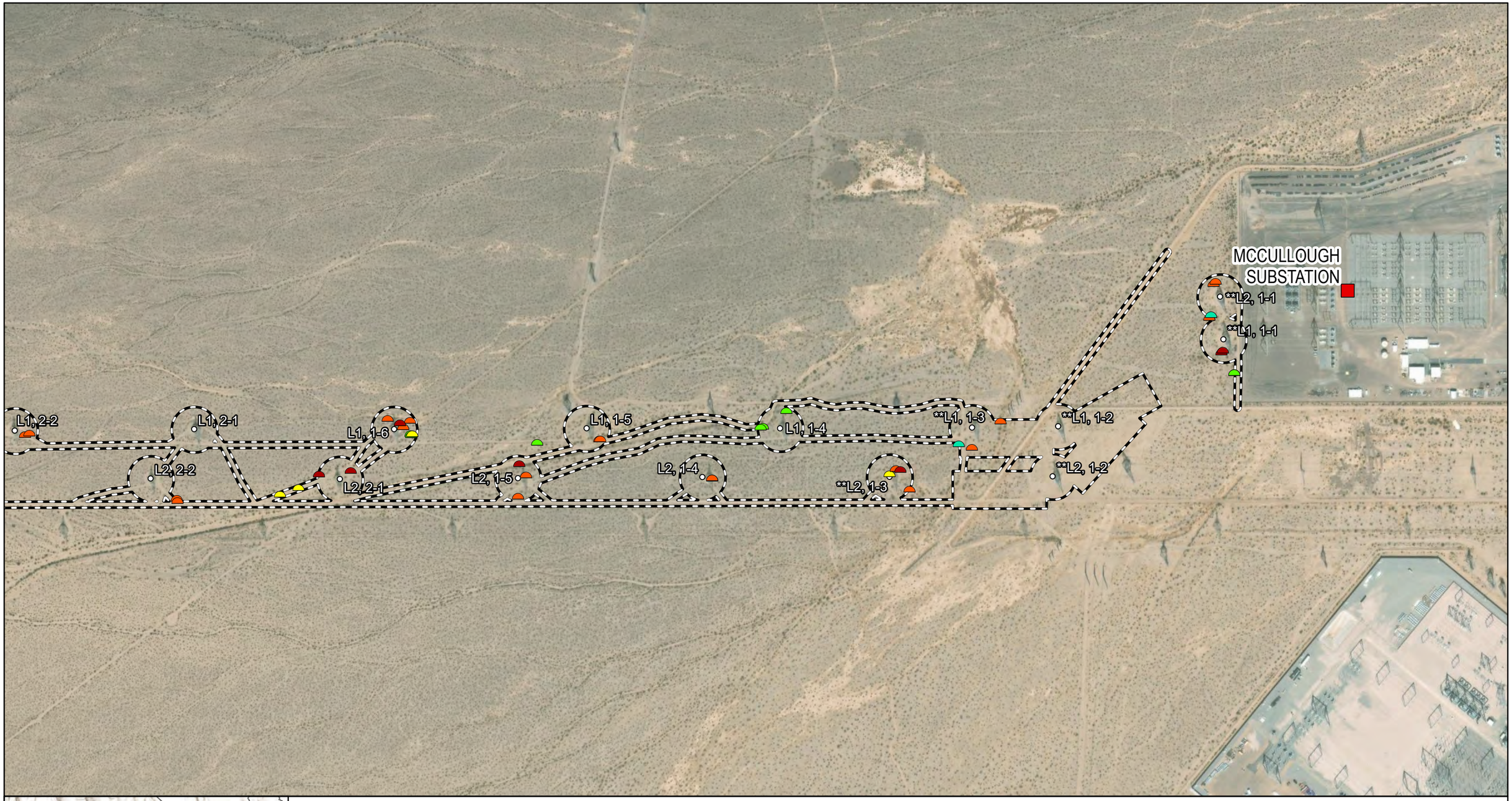
MCC-VIC Tower Location
Substation
Survey Area

Species

Western Joshua tree (CBR) *Yucca brevifolia*

Figure 4.2-2-**35**
Special-Status Plants

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Class 1 desert tortoise burrow: currently active
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-1
Special-Status Wildlife

N

500 0 500 Feet

L1, 3-3
L1, 3-2
L1, 3-1
L1, 2-5
L1, 2-4
L1, 2-3
L1, 2-2
L1, 2-1
L2, 3-3
L2, 3-2
L2, 3-1
L2, 2-5
L2, 2-4
L2, 2-3
L2, 2-2

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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LA DWP

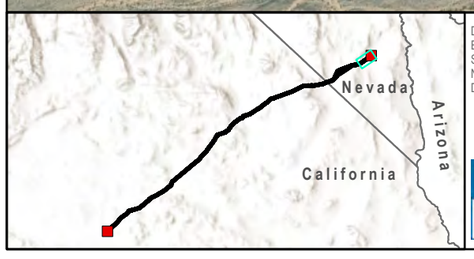
- MCC-VIC Tower Location
- Substation
- Survey Area
- Desert tortoise scat
- Class 1 desert tortoise burrow: currently active
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**2**
Special-Status Wildlife

N

500 0 500 Feet

L1, 4-4
L2, 4-4
L2, 4-3
L1, 4-3
L2, 4-2
L1, 4-2
L2, 4-1
L1, 4-1
L2, 3-6
L1, 3-5
L2, 3-5
L1, 3-4
L2, 3-4
L1, 3-3
L2, 3-3
L1, 3-2



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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LA DWP

MCC-VIC Tower Location
Substation
Survey Area

Desert tortoise Carcass
Class 2 desert tortoise burrow: good condition
Class 3 desert tortoise burrow: deteriorated condition
Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-**3**-3
Special-Status Wildlife

N

500 0 500 Feet

L1, 5-4
L2, 5-5
L1, 5-3
L2, 5-4
L1, 5-2
L2, 5-3
L1, 5-1
L2, 5-2
L1, 4-6
L2, 5-1
L1, 4-5
L2, 4-5
L1, 4-4
L2, 4-4
L2, 4-3

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LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Desert tortoise scat
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**4**
Special-Status Wildlife

N

500 0 500 Feet

L1, 7-1
L2, 7-1
L1, 6-5
L2, 6-5
L1, 6-4
L2, 6-4
L1, 6-3
L2, 6-3
L1, 6-2
L2, 6-2
L1, 6-1
L2, 6-1
L1, 5-5
L2, 5-6
L1, 5-4
L2, 5-5

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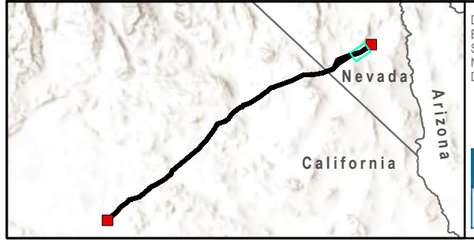
LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Desert kit fox (Fur bearing mammal) *Vulpix macrotis*
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**5**
Special-Status Wildlife

500 0 500 Feet

L1, 8-3
L1, 8-2
L1, 8-1
L2, 8-2
L1, 7-5
L2, 8-1
L1, 7-4
L2, 7-5
L1, 7-3
L1, 7-2
L1, 7-1
L1, 6-5
L2, 7-4
L2, 7-3
L2, 7-2
L2, 7-1
L2, 6-5



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

- Live desert tortoise individual
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**6**
Special-Status Wildlife

N

500 0 500 Feet

L1, 9-6
L1, 9-5
L1, 9-4
L1, 9-3
L2, 9-5
L2, 9-4
L2, 9-3
L1, 9-2
L2, 9-2
L1, 9-1
L2, 9-1
L1, 8-6
L2, 8-6
L1, 8-5
L2, 8-5
L1, 8-4
L1, 8-3
L2, 8-4
L2, 8-3
L1, 8-2
L2, 8-2

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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LA DWP

MCC-VIC Tower Location
Substation
Survey Area

Live desert tortoise individual
Class 3 desert tortoise burrow: deteriorated condition
Class 4 desert tortoise burrow: good condition, possibly other species
Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-7
Special-Status Wildlife

N

500 0 500 Feet

L2, 11-1
L1, 10-5
L1, 10-4
L2, 10-5
L1, 10-3
L2, 10-4
L1, 10-2
L1, 10-1
L2, 10-3
L2, 10-2
L2, 10-1
L1, 9-7
L1, 9-6
L1, 9-5
L2, 9-6
L2, 9-5
L2, 9-4

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

- Desert bighorn sheep (GM, BLM S) *Ovis canadensis nelsoni*
- Live desert tortoise individual
- Class 3 desert tortoise burrow: deteriorated condition
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**8**
Special-Status Wildlife

N

500 0 500 Feet

L1, 12-1
L1, 11-5
L1, 11-4
L1, 11-3
L2, 12-1
L2, 11-6
L2, 11-5
L2, 11-4
L1, 11-2
L2, 11-3
L2, 11-2
L1, 11-1
L2, 11-1
L1, 10-5
L1, 10-4
L2, 10-5
L1, 10-3
L2, 10-4

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

- Desert bighorn sheep (GM, BLM S) *Ovis canadensis nelsoni*
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**9**
Special-Status Wildlife

500 0 500 Feet

L1, 13-3
L1, 13-2
L1, 13-1
L1, 12-5
L1, 12-4
L1, 12-3
L1, 12-2
L1, 12-1
L1, 11-5
L2, 13-2
L2, 13-1
L2, 12-5
L2, 12-4
L2, 12-3
L2, 12-2
L2, 12-1
L2, 11-6

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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LA DWP

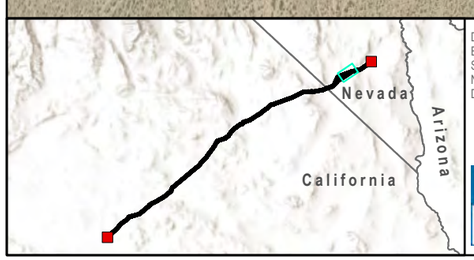
MCC-VIC Tower Location
Substation
Survey Area

Class 1 desert tortoise burrow: currently active
Class 2 desert tortoise burrow: good condition
Class 3 desert tortoise burrow: deteriorated condition
Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**10**
Special-Status Wildlife

500 0 500 Feet

L1, 14-4
L1, 14-3
L1, 14-2
L1, 14-1
L1, 13-6
L1, 13-5
L1, 13-4
L1, 13-3
L1, 13-2



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LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

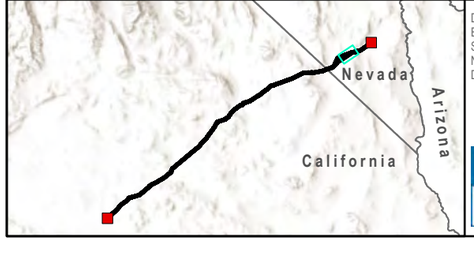
- Class 1 desert tortoise burrow: currently active
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**11**
Special-Status Wildlife

N

500 0 500 Feet

L1, 13-5
L1, 13-4
L1, 13-3
L1, 13-2
L2, 14-4
L2, 14-3
L2, 14-2
L2, 14-1
L2, 13-5
L2, 13-4
L2, 13-3
L2, 13-2



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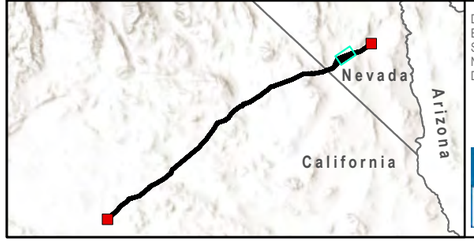
- MCC-VIC Tower Location
- Substation
- Survey Area

- Class 1 desert tortoise burrow: currently active
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-12
Special-Status Wildlife

500 0 500 Feet

L1, 15-6
L1, 15-5
L1, 15-4
L1, 15-3
L1, 15-2
L1, 15-1
L1, 14-5
L1, 14-4
L1, 14-3



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LA DWP

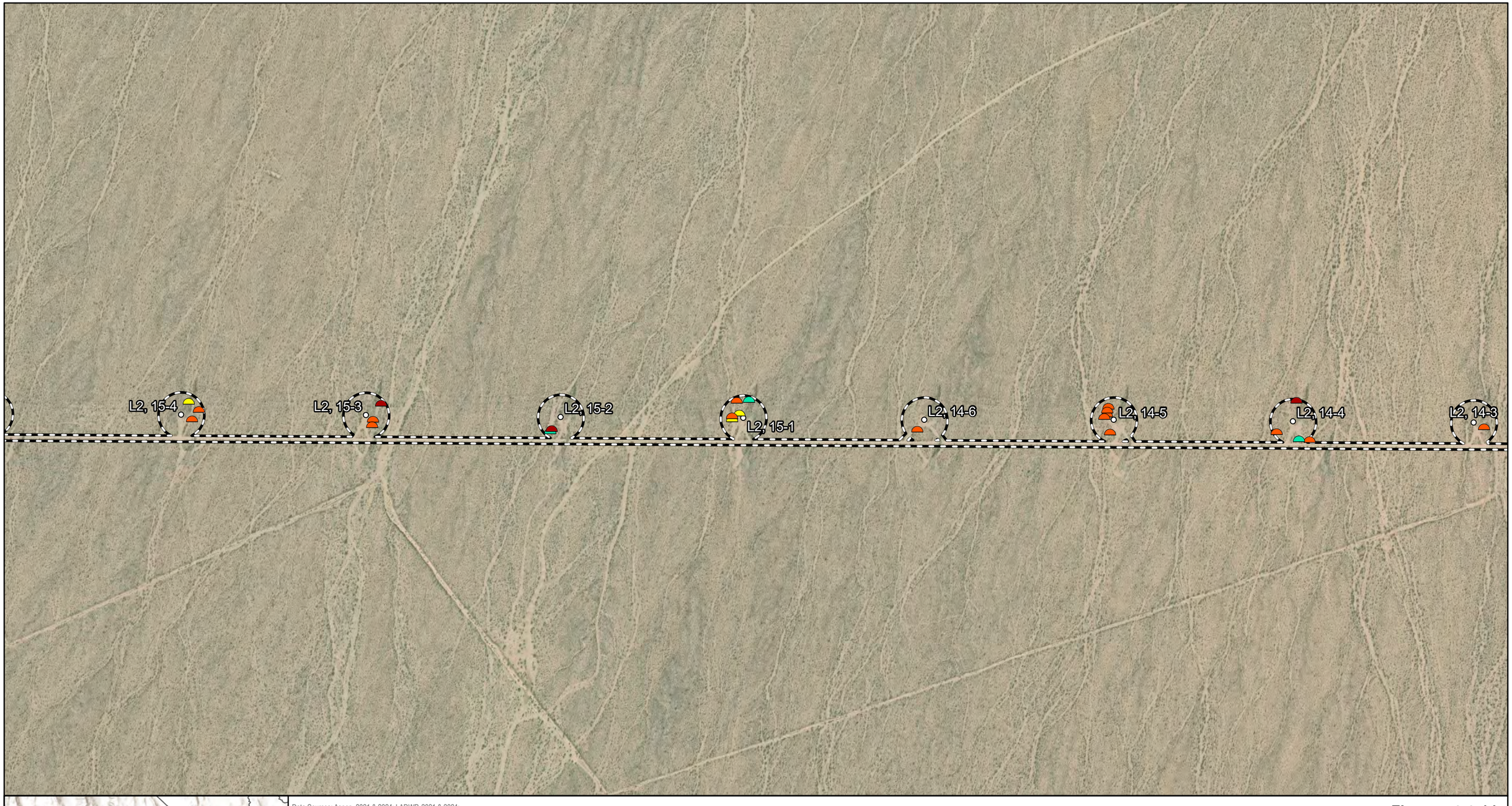
- MCC-VIC Tower Location
- Substation
- Survey Area

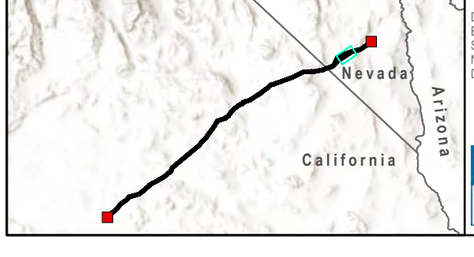
- Red-tailed hawk nest - *Buteo jamaicensis*
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-13
Special-Status Wildlife

N

500 0 500 Feet





Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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- MCC-VIC Tower Location
- Substation
- Survey Area

- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**14**
Special-Status Wildlife

500 0 500 Feet

L1, 17-2
L1, 17-1
L1, 16-5
L1, 16-4
L1, 16-3
L1, 16-2
L1, 16-1
L1, 15-6
L1, 15-5

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

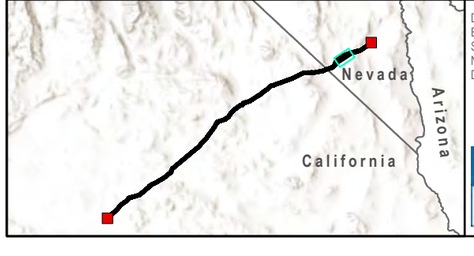
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**15**
Special-Status Wildlife

N

500 0 500 Feet

L2, 17-2
L2, 17-1
L2, 16-5
L2, 16-4
L2, 16-3
L2, 16-2
L2, 16-1
L2, 15-5



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LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**16**
Special-Status Wildlife

500 0 500 Feet

L1, 18-4
L1, 18-3
L1, 18-2
L1, 18-1
L1, 17-5
L1, 17-4
L1, 17-3
L1, 17-2
L1, 17-1

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

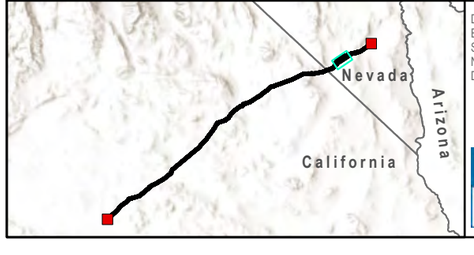
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**17**
Special-Status Wildlife

N

500 0 500 Feet

L2, 18-2
L2, 18-1
L2, 17-6
L2, 17-5
L2, 17-4
L2, 17-3
L2, 17-2
L2, 17-1



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial References:
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LA DWP

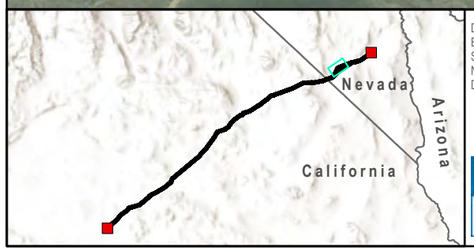
- MCC-VIC Tower Location
- Substation
- Survey Area
- Red-tailed hawk nest - *Buteo jamaicensis*
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**18**
Special-Status Wildlife

N

500 0 500 Feet

L1, 19-3
L1, 19-2
L1, 19-1
L1, 18-6
L1, 18-5
L1, 18-4
L1, 18-3
L1, 19-4
L1, 19-5



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Class 2 desert tortoise burrow: good condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-19
Special-Status Wildlife

N

500 0 500 Feet

L2, 19-5
L2, 19-4
L2, 19-3
L2, 19-2
L2, 19-1
L2, 18-5
L2, 18-4
L2, 18-3
L2, 18-2

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Long-nosed leopard lizard (G5S4) *Gambelia wislizenii*
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-20
Special-Status Wildlife

N

500 0 500 Feet

L1, 19-3
L1, 19-4
L1, 19-5
L1, 20-1
L1, 20-2
L1, 20-3
L1, 20-4
L1, 20-5
L1, 20-6

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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LA DWP

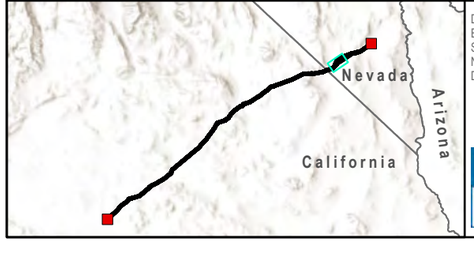
MCC-VIC Tower Location
Substation
Survey Area

Desert tortoise scat
Class 4 desert tortoise burrow: good condition, possibly other species
Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-21
Special-Status Wildlife

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Long-nosed leopard lizard (G5S4) *Gambelia wislizenii*
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-22
Special-Status Wildlife

N

500 0 500 Feet

L1, 20-5
L1, 20-6
L1, 21-1
L1, 21-2
L1, 21-3
L1, 21-4
L1, 21-5
L1, 22-1
L1, 22-2

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Desert tortoise scat
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3**-23**
Special-Status Wildlife

N

500 0 500 Feet

L1, 22-3
L1, 22-4
L1, 22-5
L1, 22-6
L2, 20-5
L2, 21-1
L2, 21-2
L2, 21-3
L2, 21-4
L2, 21-5
**L2, 21-6
**L2, 22-1
L2, 22-2

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Desert kit fox (Fur bearing mammal) *Vulpix macrotis*
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-24
Special-Status Wildlife

500 0 500 Feet

L1, 22-1
L1, 22-2
L1, 22-3
L1, 22-4
L1, 22-5
L1, 22-6
L1, 23-1
L1, 23-2
L1, 23-3
L2, 21-2
L2, 21-3
L2, 21-4
L2, 21-5
**L2, 21-6
**L2, 22-1

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

LA DWP

MCC-VIC Tower Location
Substation
Survey Area

Class 2 desert tortoise burrow: good condition
Class 3 desert tortoise burrow: deteriorated condition
Class 4 desert tortoise burrow: good condition, possibly other species
Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-25
Special-Status Wildlife

N

500 0 500 Feet

L1, 22-6
L1, 23-1
L1, 23-2
L1, 23-3
**L2, 22-1
L1, 23-4
L2, 22-2
L2, 22-3
L1, 24-3
**L1, 24-2
**L1, 24-1
**L1, 23-5
L2, 22-4
L2, 22-5
**L2, 23-1
**L2, 23-2
**L2, 23-3
**L2, 23-4

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Desert kit fox (Fur bearing mammal) *Vulpix macrotis*
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-26
Special-Status Wildlife

N

500 0 500 Feet

L1, 25-4
L1, 25-3
L1, 25-2
*L1, 25-1
*L1, 24-5
L1, 24-4
L1, 24-3
**L1, 24-2
L2, 24-5
L2, 24-4
L2, 24-3
*L2, 24-2
*L2, 24-1
**L2, 23-6
**L2, 23-5
**L2, 23-4

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

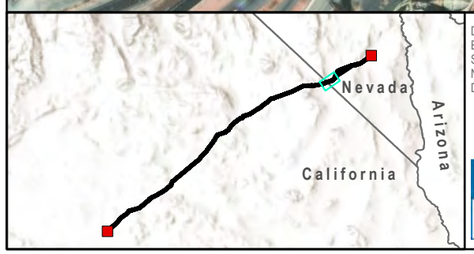
LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-27
Special-Status Wildlife

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-28
Special-Status Wildlife

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Common Chuckwalla (G5S3) *Sauromalus ater*
- Swainson's Hawk (non-nest) (ST, BLMS) *Buteo swainsoni*
- Desert tortoise pallet
- Class 3 desert tortoise burrow: deteriorated condition
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-29
Special-Status Wildlife

500 0 500 Feet

L1, 29-4
L2, 28-6
L1, 29-3
L2, 28-5
L1, 29-2
L2, 28-4
L1, 29-1
L2, 28-3
L1, 28-6
L2, 28-2
L1, 28-5
L2, 28-1
L1, 28-4
L2, 27-5
L1, 28-3
L2, 27-4
L1, 28-2
L2, 27-3

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

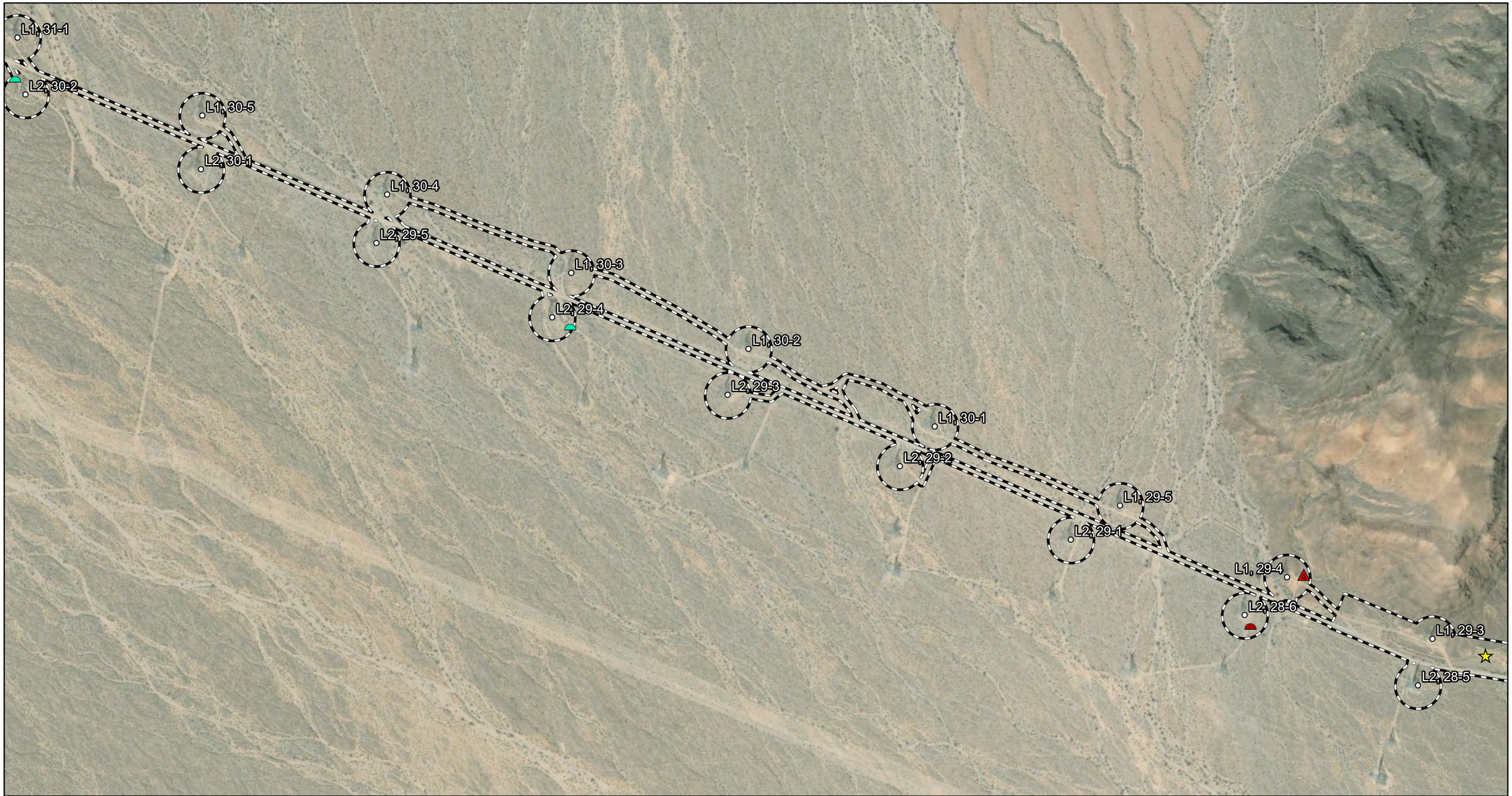
LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Red-tailed hawk nest - *Buteo jamaicensis*
- Live desert tortoise individual
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-30
Special-Status Wildlife

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

- Red-tailed hawk nest - *Buteo jamaicensis*
- Live desert tortoise individual
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**31**
Special-Status Wildlife

500 0 500 Feet

L1, 32-3
L2, 31-4
L1, 32-2
L2, 31-3
L1, 32-1
L2, 31-2
L1, 31-5
L2, 31-1
L1, 31-4
L2, 30-5
L1, 31-3
L2, 30-4
L1, 31-2
L2, 30-3
L1, 31-1
L2, 30-2
L1, 30-5
L2, 30-1

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species

Figure 4.2-3-32
Special-Status Wildlife

500 0 500 Feet

L1, 33-4
L2, 32-6
L1, 33-3
L2, 32-5
L1, 33-2
L2, 32-4
L1, 33-1
L2, 32-3
L1, 32-6
L2, 32-2
L1, 32-5
L2, 32-1
L1, 32-4
L2, 31-5
L1, 32-3
L2, 31-4
L1, 32-2
L2, 31-3

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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MCC-VIC Tower Location
Substation
Survey Area
Class 3 desert tortoise burrow: deteriorated condition

Figure 4.2-3-**33**
Special-Status Wildlife

500 0 500 Feet

L1, 34-6
L1, 34-5
L2, 34-2
L2, 34-1
L1, 34-4
L1, 34-3
L2, 33-5
L2, 33-4
L1, 34-2
L2, 33-3
L1, 34-1
L2, 33-2
L1, 33-5
L2, 33-1
L1, 33-4
L2, 32-6
L1, 33-3
L2, 32-5

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

LA DWP

MCC-VIC Tower Location
Substation
Survey Area

Red-tailed hawk nest - *Buteo jamaicensis*
Class 2 desert tortoise burrow: good condition
Class 3 desert tortoise burrow: deteriorated condition
Class 4 desert tortoise burrow: good condition, possibly other species

Figure 4.2-3-**34**
Special-Status Wildlife

N

500 0 500 Feet

L2, 35-3
L2, 35-2
L1, 35-5
L2, 35-1
L1, 35-4
L2, 34-6
L1, 35-3
L2, 34-5
L1, 35-2
L1, 35-1
L2, 34-4
L1, 34-6
L2, 34-3
L1, 34-5
L2, 34-2
L2, 34-1

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Red-tailed hawk nest - *Buteo jamaicensis*
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-35
Special-Status Wildlife

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**36**
Special-Status Wildlife

500 0 500 Feet

L2, 37-5
L1, 38-2
L2, 37-4
L1, 38-1
L2, 37-3
L1, 37-6
L2, 37-2
L1, 37-5
L2, 37-1
L1, 37-4
L2, 36-5
L1, 37-3
L2, 36-4
L1, 37-2
L2, 36-3
L1, 37-1
L2, 36-2
L1, 36-6

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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LA DWP

MCC-VIC Tower Location
Substation
Survey Area

Class 2 desert tortoise burrow: good condition
Class 3 desert tortoise burrow: deteriorated condition
Class 4 desert tortoise burrow: good condition, possibly other species
Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-37
Special-Status Wildlife

N

500 0 500 Feet

L2, 38-6
L1, 39-4
L2, 38-5
L1, 39-3
L2, 38-4
L1, 39-2
L2, 38-3
L1, 39-1
L2, 38-2
L1, 38-5
L2, 38-1
L1, 38-4
L2, 37-6
L1, 38-3
L2, 37-5
L1, 38-2
L2, 37-4
L1, 38-1
L2, 37-3

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-38
Special-Status Wildlife

500 0 500 Feet

L1, 40-4
L2, 40-1
L1, 40-3
L2, 39-5
L1, 40-2
L2, 39-4
L1, 40-1
L2, 39-3
L1, 39-7
L2, 39-2
L1, 39-6
L2, 39-1
L1, 39-5
L2, 38-6
L1, 39-4
L2, 38-5
L1, 39-3
L2, 38-4

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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LA DWP

MCC-VIC Tower Location
Substation
Survey Area

Class 2 desert tortoise burrow: good condition
Class 3 desert tortoise burrow: deteriorated condition
Class 4 desert tortoise burrow: good condition, possibly other species

Figure 4.2-3-**39**
Special-Status Wildlife

500 0 500 Feet

L1, 41-5
L2, 41-2
L2, 41-1
L1, 41-4
L2, 40-6
L2, 40-5
L1, 41-3
L2, 40-4
L1, 41-2
L2, 40-3
L1, 41-1
L2, 40-2
L1, 40-5
L2, 40-1
L1, 40-4

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species

Figure 4.2-3-**40**
Special-Status Wildlife

N

500 0 500 Feet

L1, 43-2
L2, 42-3
L1, 43-1
L2, 42-2
L1, 42-5
L2, 42-1
L1, 42-4
L2, 41-5
L1, 42-3
L2, 41-4
L1, 42-2
L2, 41-3
L1, 42-1
L2, 41-2
L1, 41-5
L2, 41-1

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-41
Special-Status Wildlife

N

500 0 500 Feet

L1, 44-4
L2, 43-5
L1, 44-3
L2, 43-4
L1, 44-2
L2, 43-3
L1, 44-1
L2, 43-2
L1, 43-5
L2, 43-1
L1, 43-4
L2, 42-5
L1, 43-3
L2, 42-4
L1, 43-2
L2, 42-3

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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LA DWP

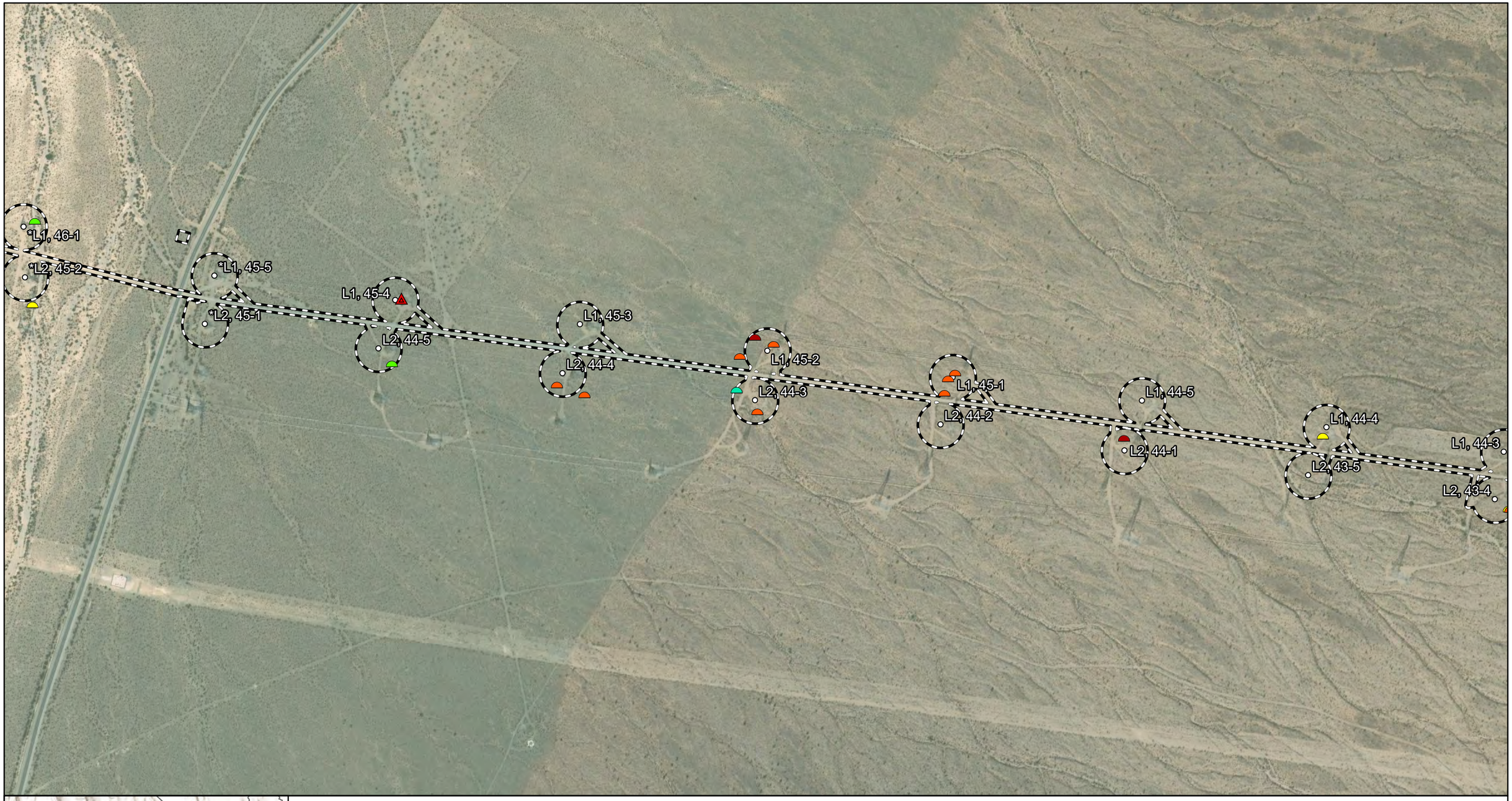
- MCC-VIC Tower Location
- Substation
- Survey Area

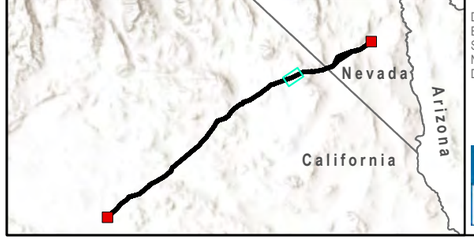
- Loggerhead shirke (non-nest) (SSC) *Lanius ludovicianus*
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**42**
Special-Status Wildlife

N

500 0 500 Feet





Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Red-tailed hawk nest - *Buteo jamaicensis*
- Class 1 desert tortoise burrow: currently active
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**43**
Special-Status Wildlife

N

500 0 500 Feet

L1, 47-2
L2, 46-3
L1, 47-1
L2, 46-2
L1, 46-5
L2, 46-1
L1, 46-4
L2, 45-5
L1, 46-3
L2, 45-4
L1, 46-2
L2, 45-3
*L1, 46-1
*L2, 45-2
*L1, 45-5
*L2, 45-1

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

- Class 1 desert tortoise burrow: currently active
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-44
Special-Status Wildlife

N

500 0 500 Feet

L1, 48-3
L2, 47-5
L1, 48-2
L2, 47-4
L1, 48-1
L2, 47-3
L1, 47-6
L2, 47-2
L1, 47-5
L2, 47-1
L1, 47-4
L2, 46-5
L1, 47-3
L2, 46-4
L1, 47-2
L2, 46-3
L1, 47-1
L2, 46-2

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

- Yellow-headed blackbird (SSC) *Xanthocephalus xanthocephalus*
- Class 1 desert tortoise burrow: currently active
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**45**
Special-Status Wildlife

N

500 0 500 Feet

L1, 49-4
L2, 48-5
L1, 49-3
L2, 48-4
L1, 49-2
L2, 48-3
L1, 49-1
L2, 48-2
L1, 48-5
L2, 48-1
L1, 48-4
L2, 47-6
L1, 48-3
L2, 47-5
L1, 48-2
L2, 47-4

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

- Red-tailed hawk nest - *Buteo jamaicensis*
- Class 1 desert tortoise burrow: currently active
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-46
Special-Status Wildlife

N

500 0 500 Feet

L1, 51-1
L2, 50-3
L1, 50-6
L2, 50-2
L1, 50-5
L2, 50-1
L1, 50-4
L2, 49-5
L1, 50-3
L2, 49-4
L1, 50-2
L2, 49-3
L1, 50-1
L2, 49-2
L1, 49-5
L2, 49-1
L1, 49-4
L2, 48-5

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Desert tortoise Carcass
- Class 1 desert tortoise burrow: currently active
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-47
Special-Status Wildlife

N

500 0 500 Feet

L1, 52-3
L2, 51-4
L1, 52-2
L2, 51-3
L1, 52-1
L2, 51-2
L1, 51-5
L2, 51-1
L1, 51-4
L2, 50-6
L1, 51-3
L2, 50-5
L1, 51-2
L2, 50-4
L1, 51-1
L2, 50-3
L1, 50-6

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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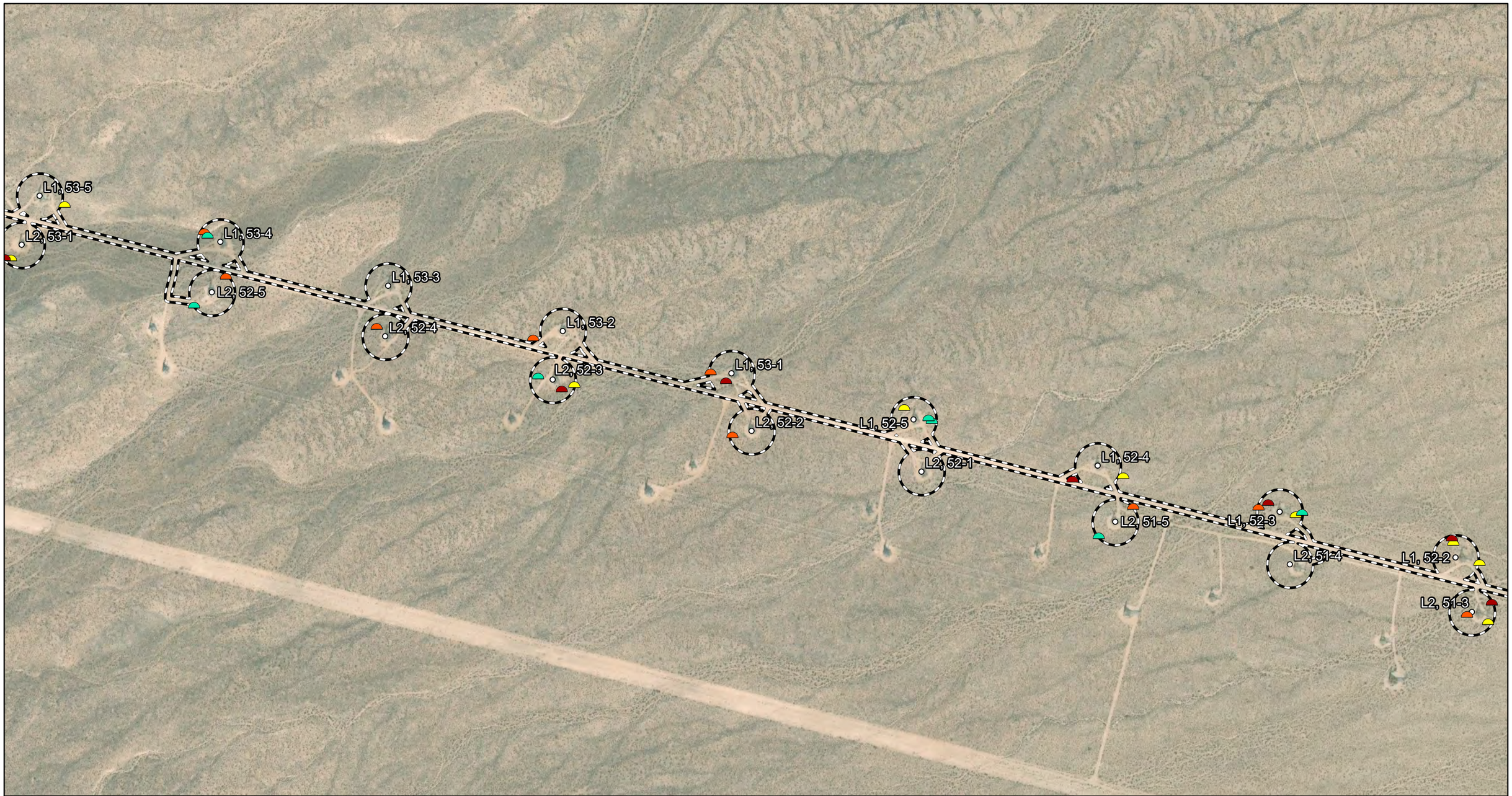
LA DWP

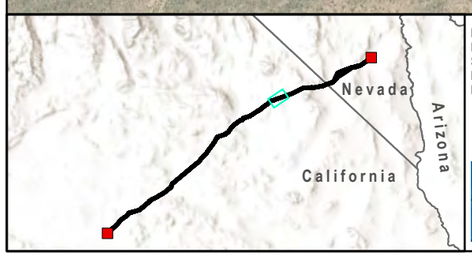
- MCC-VIC Tower Location
- Substation
- Survey Area
- Desert kit fox (Fur bearing mammal) *Vulpix macrotis*
- Desert tortoise Carcass
- Class 1 desert tortoise burrow: currently active
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**48**
Special-Status Wildlife

N

500 0 500 Feet





Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-49
Special-Status Wildlife

N

500 0 500 Feet

L1, 55-1
L2, 54-2
L1, 54-4
L2, 54-1
L1, 54-3
L2, 53-5
L1, 54-2
L2, 53-4
L1, 54-1
L2, 53-3
L1, 53-6
L2, 53-2
L1, 53-5
L2, 53-1
L1, 53-4
L2, 52-5

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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LA DWP

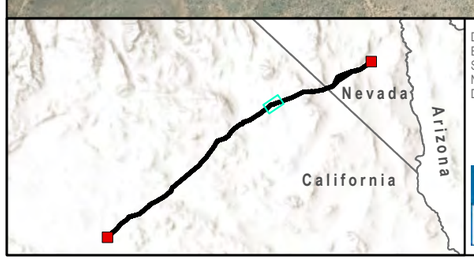
- MCC-VIC Tower Location
- Substation
- Survey Area
- Desert tortoise drinking depression
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-50
Special-Status Wildlife

N

500 0 500 Feet

L1, 56-2
L2, 55-4
L1, 56-1
L2, 55-3
L1, 55-6
L2, 55-2
L1, 55-5
L2, 55-1
L1, 55-4
L2, 54-5
L1, 55-3
L2, 54-4
L1, 55-2
L2, 54-3
L1, 55-1
L2, 54-2
L1, 54-4
L2, 54-1



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

- Class 1 desert tortoise burrow: currently active
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**51**
Special-Status Wildlife

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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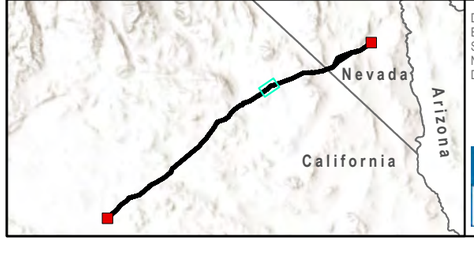
LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Desert tortoise pallet
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-52
Special-Status Wildlife

500 0 500 Feet

L1, 57-3
L1, 57-4
L2, 56-4
L1, 57-5
L2, 56-5
L1, 58-1
L2, 57-1
L2, 57-2
L1, 58-2
L1, 58-3
L2, 57-3
L1, 58-4
L2, 57-4
L1, 58-5
L2, 57-5
L2, 58-1



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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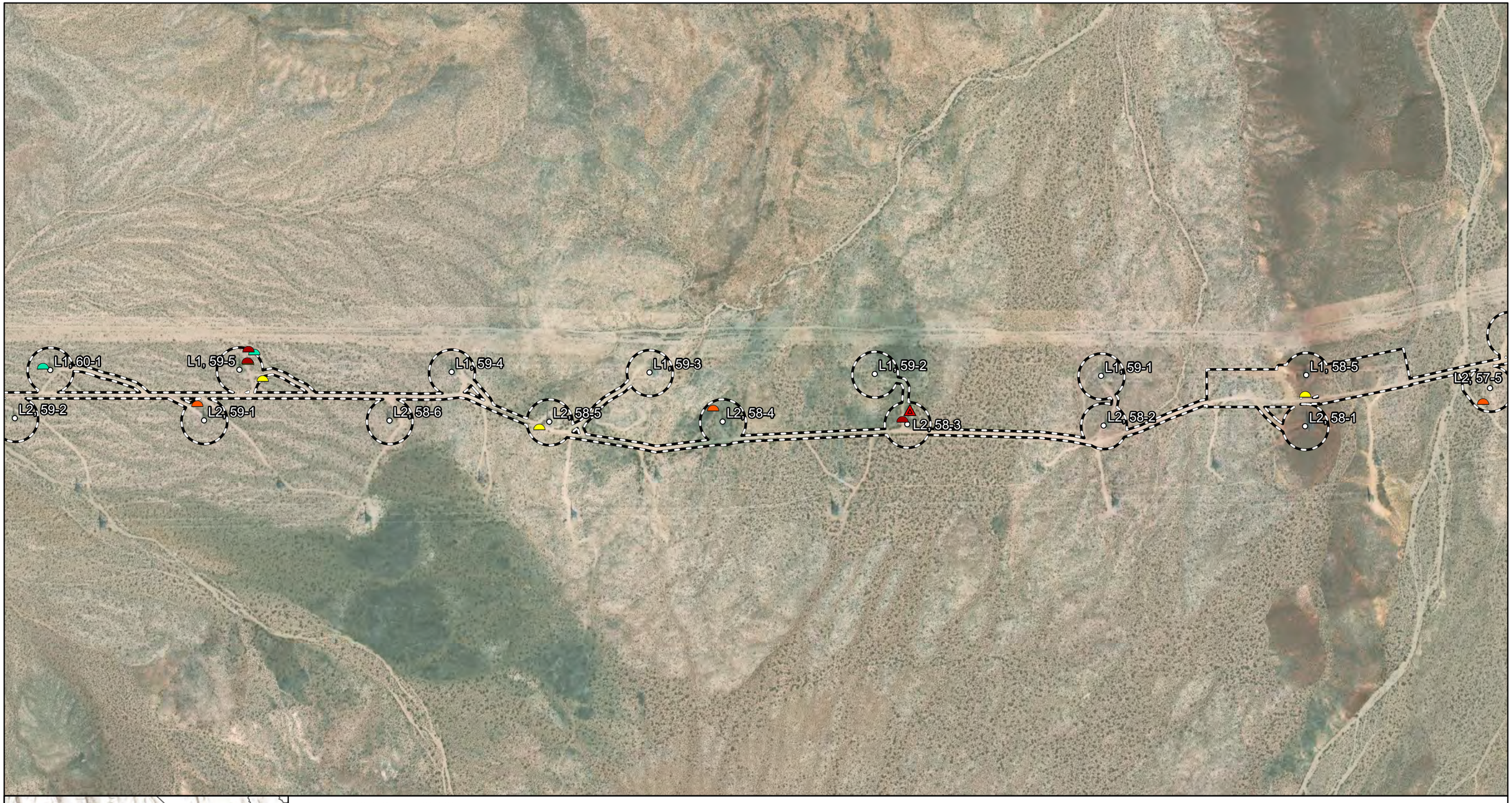
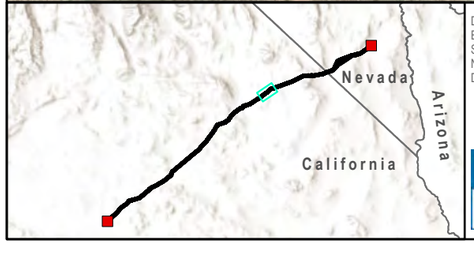
- MCC-VIC Tower Location
- Substation
- Survey Area
- Desert tortoise pallet
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**53**
Special-Status Wildlife

500 0 500 Feet





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LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Red-tailed hawk nest - *Buteo jamaicensis*
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**54**
Special-Status Wildlife

500 0 500 Feet

L1, 61-2
L1, 61-1
L1, 60-5
L1, 60-4
L1, 60-3
L1, 60-2
L1, 60-1
L1, 59-5
L2, 60-3
L2, 60-2
L2, 60-1
L2, 59-5
L2, 59-4
L2, 59-3
L2, 59-2
L2, 59-1

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Desert tortoise Carcass
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**55**
Special-Status Wildlife

N

500 0 500 Feet

L1, 62-3
L1, 62-2
L1, 62-1
L1, 61-6
L1, 61-5
L1, 61-4
L1, 61-3
L1, 61-2
L1, 61-1
L2, 61-3
L2, 61-2
L2, 61-1
L2, 60-5
L2, 60-4
L2, 60-3
L2, 60-2
L2, 61-4

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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LA DWP

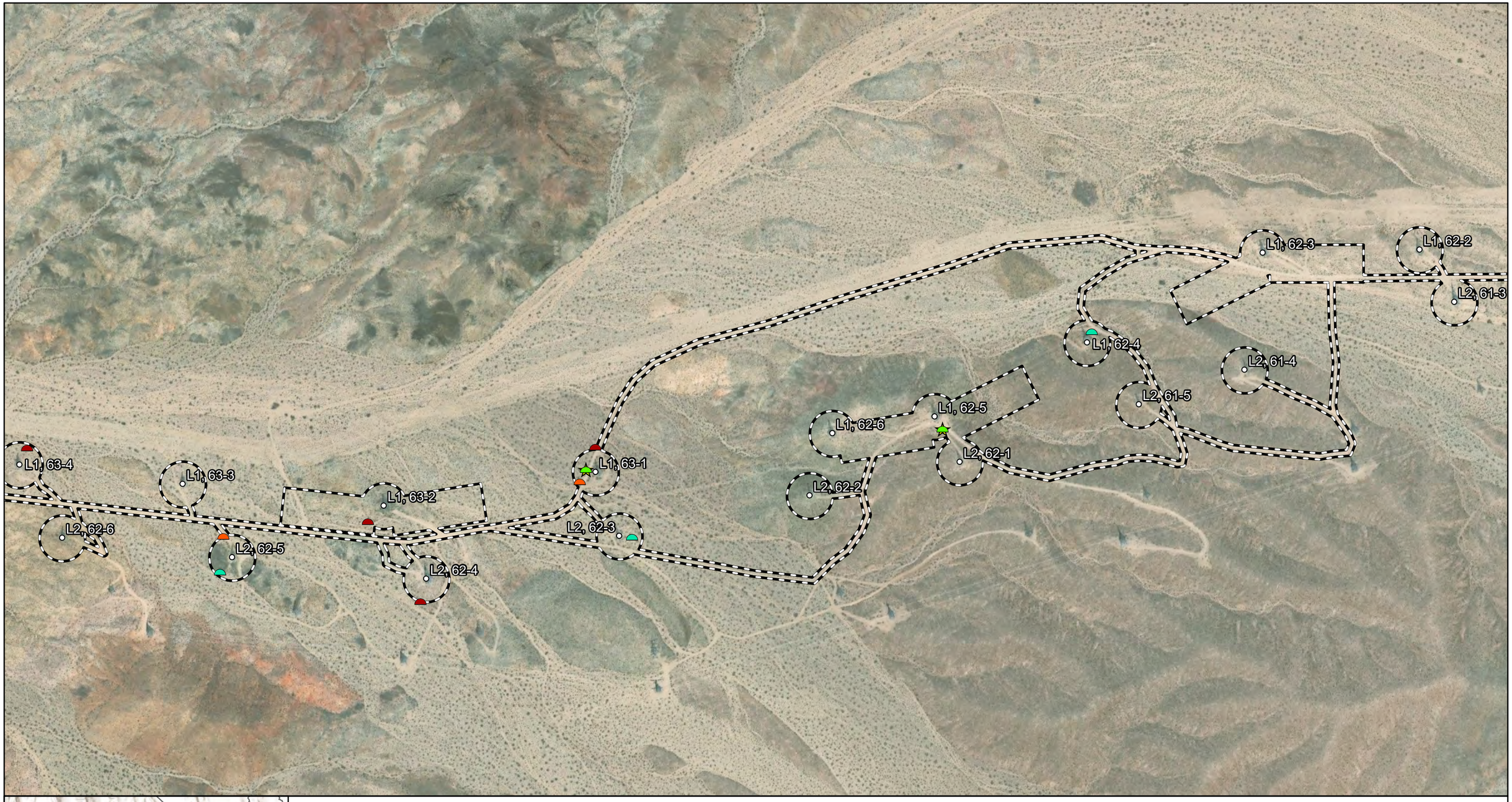
MCC-VIC Tower Location
Substation
Survey Area

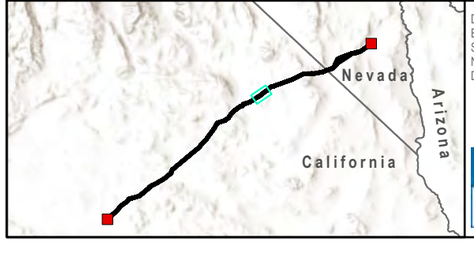
Class 2 desert tortoise burrow: good condition
Class 4 desert tortoise burrow: good condition, possibly other species
Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**56**
Special-Status Wildlife

N

500 0 500 Feet





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LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Live desert tortoise individual
- Class 1 desert tortoise burrow: currently active
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-57
Special-Status Wildlife

N

500 0 500 Feet

L1, 64-5
L1, 64-4
L1, 64-3
L1, 64-2
L1, 64-1
L1, 63-5
L1, 63-4
L1, 63-3
L2, 64-2
L2, 64-1
L2, 63-5
L2, 63-4
L2, 63-3
L2, 63-2
L2, 63-1
L2, 62-6
L2, 62-5

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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LA DWP

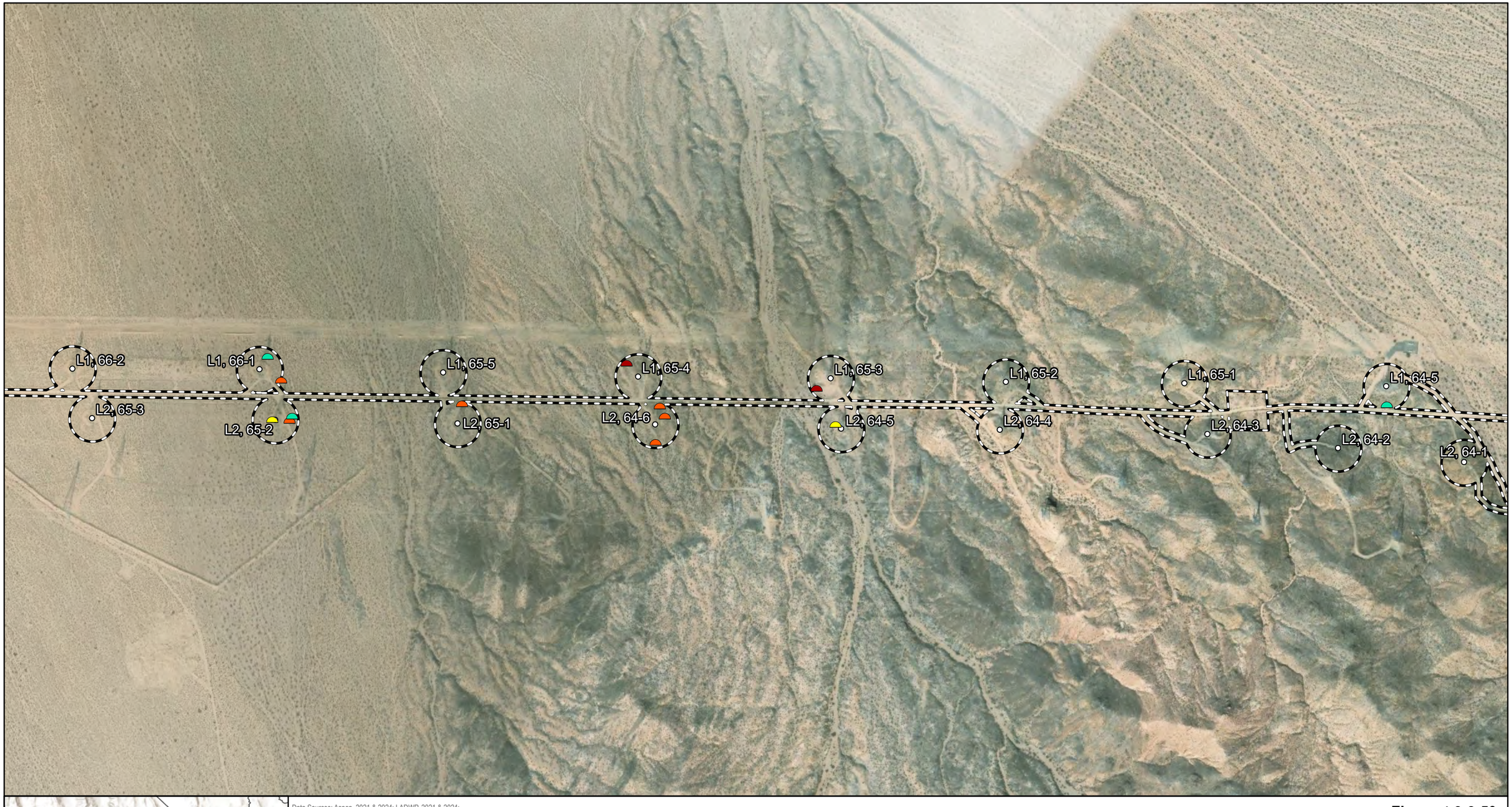
- MCC-VIC Tower Location
- Substation
- Survey Area

- Desert tortoise scat
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**58**
Special-Status Wildlife

N

500 0 500 Feet



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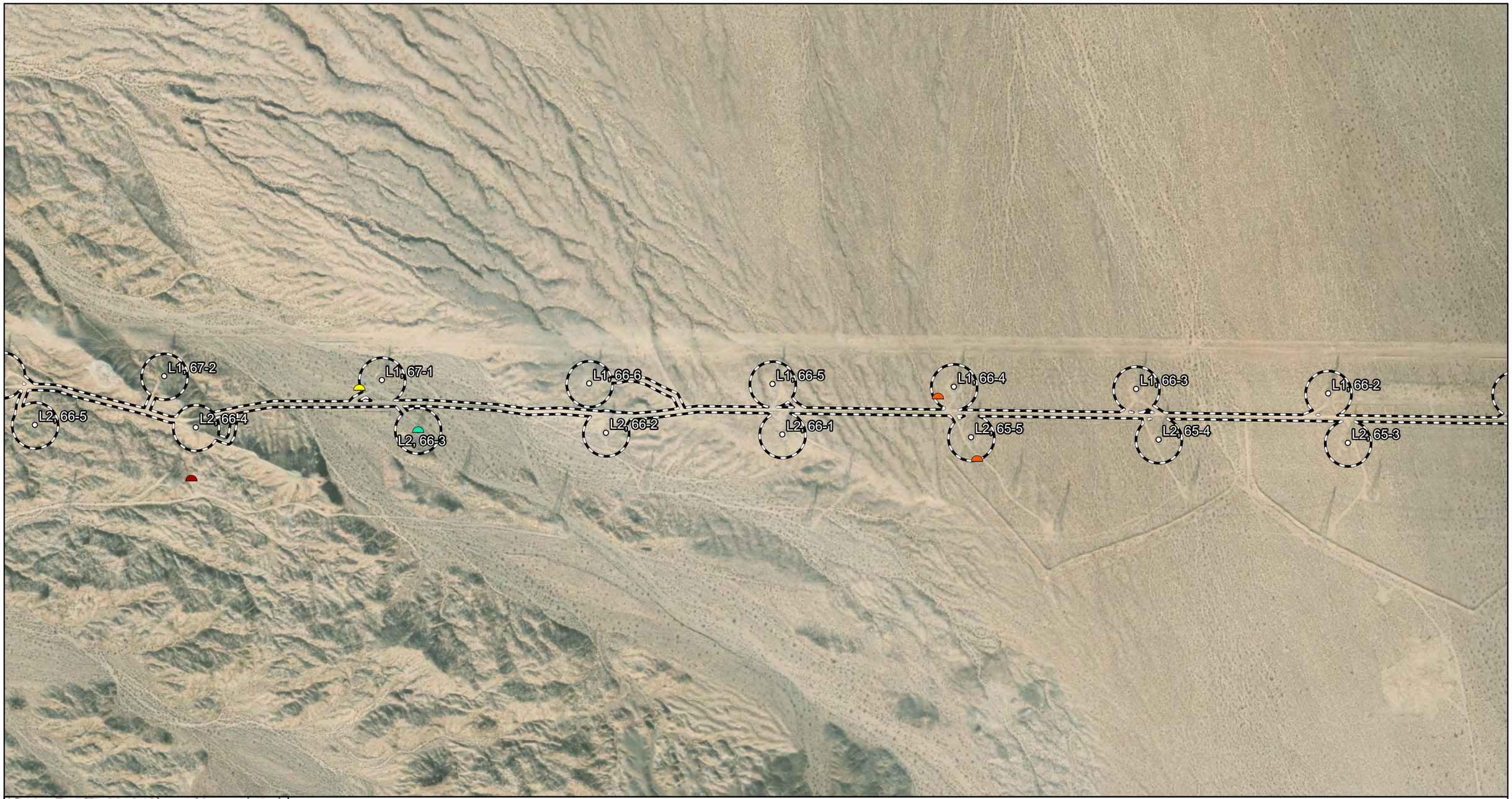
- MCC-VIC Tower Location
- Substation
- Survey Area

- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**59**
Special-Status Wildlife

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-60
Special-Status Wildlife

N

500 0 500 Feet

L1, 68-4
L1, 68-3
L1, 68-2
L1, 68-1
L1, 67-5
L1, 67-4
L1, 67-3
L1, 67-2
L2, 67-5
L2, 67-4
L2, 67-3
L2, 67-2
L2, 67-1
L2, 66-6
L2, 66-5
L2, 66-4

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**61**
Special-Status Wildlife

N

500 0 500 Feet

L1, 70-1
L1, 69-6
L2, 69-2
L1, 69-5
L1, 69-4
L2, 69-1
L2, 68-5
L1, 69-3
L2, 68-4
L1, 69-2
L2, 68-3
L1, 69-1
L2, 68-2
L1, 68-5
L2, 68-1
L1, 68-4
L2, 67-5

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

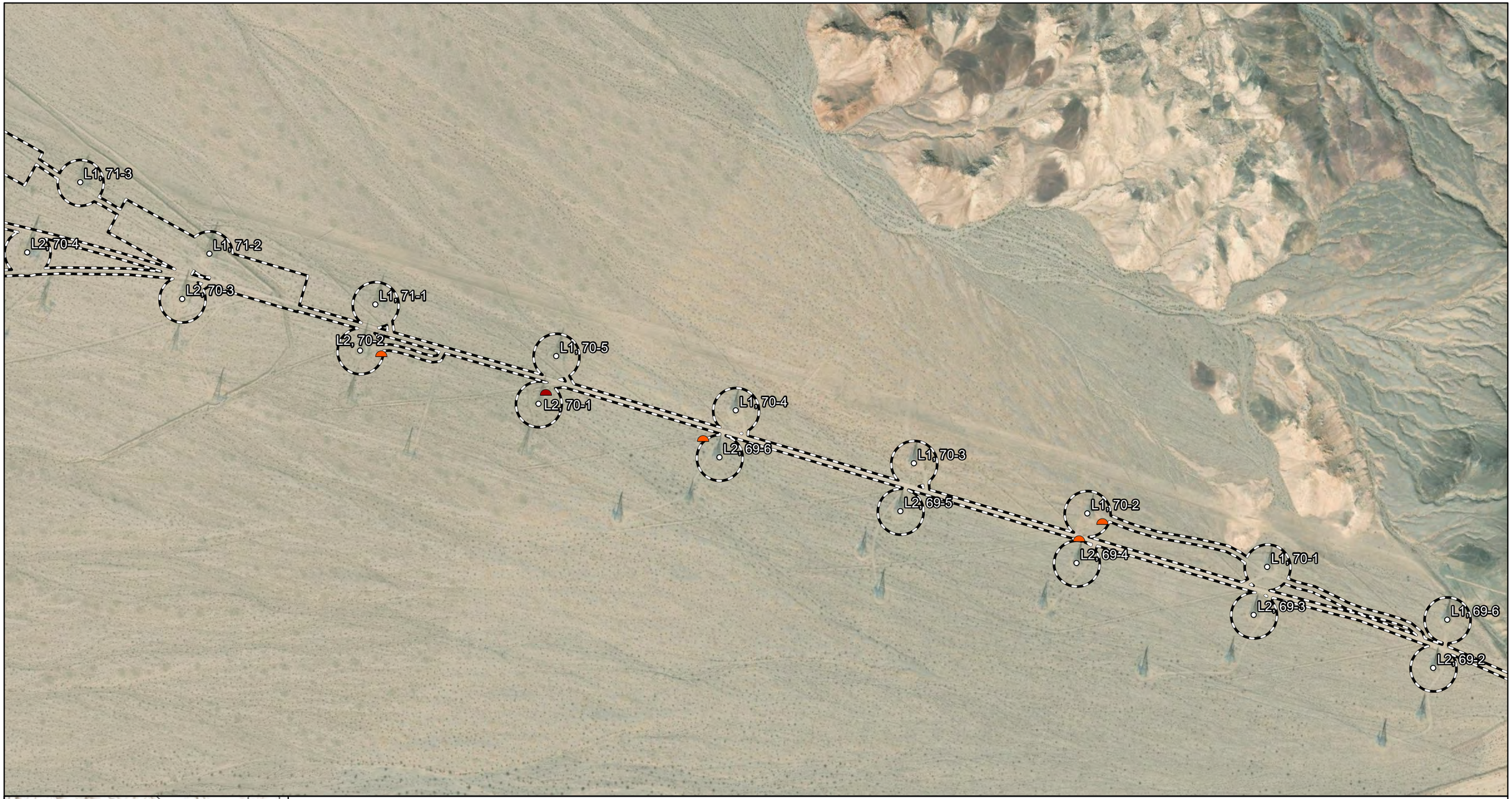
LA DWP

MCC-VIC Tower Location
Substation
Survey Area
Class 3 desert tortoise burrow: deteriorated condition

Figure 4.2-3-**62**
Special-Status Wildlife

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

MCC-VIC Tower Location
Substation
Survey Area

Class 3 desert tortoise burrow: deteriorated condition
Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**63**
Special-Status Wildlife

500 0 500 Feet

L1, 72-4
L2, 71-5
L1, 72-3
L2, 71-4
*L1, 72-2
*L2, 71-3
*L1, 72-1
*L2, 71-2
L1, 71-6
L2, 71-1
L1, 71-5
L1, 71-4
L2, 70-6
L1, 71-3
L2, 70-5
L2, 70-4
L1, 71-2
L2, 70-3

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

LA DWP

MCC-VIC Tower Location
Substation
Survey Area

Class 2 desert tortoise burrow: good condition
Class 3 desert tortoise burrow: deteriorated condition
Class 4 desert tortoise burrow: good condition, possibly other species

Figure 4.2-3-**64**
Special-Status Wildlife

500 0 500 Feet

L1, 73-1
L1, 73-2
L2, 72-2
L1, 72-5
L1, 72-4
L1, 73-3
L2, 72-3
L2, 72-1
L1, 73-4
L2, 72-4
L2, 71-5
L1, 73-5
L2, 72-5
L1, 73-6
L2, 73-1
L2, 73-2

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Class 3 desert tortoise burrow: deteriorated condition
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-65
Special-Status Wildlife

N

500 0 500 Feet

L1, 75-2
L1, 75-1
L2, 74-3
L1, 74-5
L1, 74-4
L2, 74-2
L2, 74-1
L1, 74-3
L2, 73-6
L2, 73-5
L1, 74-2
L2, 73-4
L1, 74-1
L2, 73-3
L1, 73-6
L2, 73-1
L2, 73-2

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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MCC-VIC Tower Location
Substation
Survey Area

Class 3 desert tortoise burrow: deteriorated condition
Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**66**
Special-Status Wildlife

500 0 500 Feet

L1, 76-3
L1, 76-2
L1, 76-1
L1, 75-5
L1, 75-4
L1, 75-3
L1, 75-2
L1, 75-1
L2, 75-5
L2, 75-4
L2, 75-3
L2, 75-2
L2, 75-1
L2, 74-6
L2, 74-5
L2, 74-4
L2, 74-3

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

MCC-VIC Tower Location
Substation
Survey Area
Class 4 desert tortoise burrow: good condition, possibly other species

Figure 4.2-3-**67**
Special-Status Wildlife

N

500 0 500 Feet

L1, 77-5
L1, 77-4
L1, 77-3
L1, 77-2
L1, 77-1
L1, 76-5
L1, 76-4
L1, 76-3
L2, 77-1
L2, 76-5
L2, 76-4
L2, 76-3
L2, 76-2
L2, 76-1
L2, 75-6
L2, 75-5

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

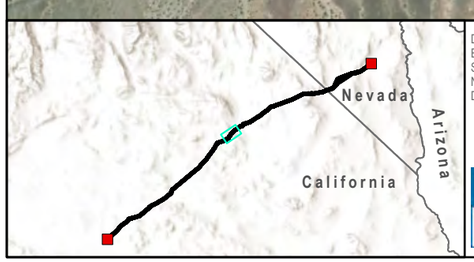
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**68**
Special-Status Wildlife

N

500 0 500 Feet

L1, 80-2
L2, 79-3
L1, 80-3
L2, 79-4
L1, 80-4
L2, 79-5
L1, 80-5
L2, 80-1
L1, 81-1
L2, 80-2
L1, 81-2
L2, 80-3
L1, 81-3
L2, 80-4
L1, 81-4
L2, 80-5
L1, 81-5
L2, 80-6



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

MCC-VIC Tower Location
Substation
Survey Area
Class 4 desert tortoise burrow: good condition, possibly other species

Figure 4.2-3-69
Special-Status Wildlife

500 0 500 Feet

L1, 81-4
L2, 80-5
L1, 81-5
L2, 80-6
L1, 81-6
L2, 81-1
L1, 82-1
L2, 81-2
L1, 82-2
L2, 81-3
L1, 82-3
L2, 81-4
L1, 82-4
L2, 81-5
L1, 82-5
L2, 82-1
L1, 83-1
L2, 82-2

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

MCC-VIC Tower Location
Substation
Survey Area
Class 2 desert tortoise burrow: good condition

Figure 4.2-3-**70**
Special-Status Wildlife

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

MCC-VIC Tower Location
Substation
Survey Area

Class 4 desert tortoise burrow: good condition, possibly other species
Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**71**
Special-Status Wildlife

N

500 0 500 Feet

L1, 86-5
L2, 86-1
L1, 86-4
L2, 85-5
L1, 86-3
L2, 85-4
L1, 86-2
L2, 85-3
L1, 86-1
L2, 85-2
L1, 85-5
L2, 85-1
L1, 85-4
L2, 84-5
L1, 85-3
L2, 84-4
L2, 84-3

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Desert tortoise pallet
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**72**
Special-Status Wildlife

N

500 0 500 Feet

L1, 88-1
L2, 87-2
L1, 87-6
L2, 87-1
L1, 87-5
L2, 86-6
L1, 87-4
L2, 86-5
L1, 87-3
L2, 86-4
L1, 87-2
L2, 86-3
L1, 87-1
L2, 86-2
L1, 86-5
L2, 86-1
L1, 86-4
L2, 85-5

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-73
Special-Status Wildlife

N

500 0 500 Feet

L1, 89-3
L1, 89-2
L2, 88-3
L1, 89-1
L2, 88-2
L1, 88-5
L2, 88-1
L1, 88-4
L2, 87-5
L1, 88-3
L2, 87-4
L1, 88-2
L2, 87-3
L1, 88-1
L2, 87-2
L1, 87-6
L2, 87-1

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-74
Special-Status Wildlife

N

500 0 500 Feet

L1, 89-3
L2, 88-4
L1, 89-2
L2, 88-3
L1, 89-4
L2, 88-5
L1, 89-5
L2, 89-1
L1, 90-1
L2, 89-2
L1, 90-2
L2, 89-3
L1, 90-3
L2, 89-4
L1, 90-4
L2, 89-5
L1, 90-5
L2, 90-1

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**75**
Special-Status Wildlife

N

500 0 500 Feet

L1, 91-6
L2, 91-1
L1, 92-1
L2, 91-2
L2, 91-3
L1, 92-2
L2, 91-4
L1, 92-3
L2, 91-5
L1, 92-4
L2, 91-6
L1, 92-5
L2, 92-1
L1, 93-1
L2, 92-2
L1, 93-2
L2, 92-3
L2, 92-4

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Desert tortoise drinking depression
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**76**
Special-Status Wildlife

N

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Desert bighorn sheep (FP, BLM S) *Ovis canadensis nelsoni*
- Desert tortoise drinking depression
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**77**
Special-Status Wildlife

500 0 500 Feet

L1, 94-3
L2, 93-5
L1, 94-4
L2, 93-6
L1, 94-5
L2, 94-1
L1, 95-1
L2, 94-2
L1, 95-2
L2, 94-3
L1, 95-3
L2, 94-4
L1, 95-4
L2, 94-5
L1, 95-5
L2, 94-6
L1, 95-6
L2, 95-1

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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LA DWP

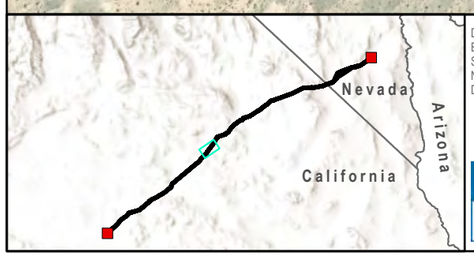
- MCC-VIC Tower Location
- Substation
- Survey Area
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-78
Special-Status Wildlife

N

500 0 500 Feet

L1, 95-5
L1, 95-6
L2, 94-6
L2, 95-1
L1, 96-1
L2, 95-2
L1, 96-2
L2, 95-3
L1, 96-3
L2, 95-4
L1, 96-4
L2, 95-5
L1, 96-5
L2, 96-1
L1, 97-1
L2, 96-2



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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MCC-VIC Tower Location
Substation
Survey Area
Desert tortoise Carcass
Class 3 desert tortoise burrow: deteriorated condition

Figure 4.2-3-**79**
Special-Status Wildlife

500 0 500 Feet

L1, 97-1
L2, 96-2
L1, 97-2
L2, 96-3
L1, 97-3
L1, 97-4
L2, 96-4
L1, 97-5
L2, 96-5
L1, 98-1
L2, 97-1
L1, 98-2
L2, 97-2
L1, 98-3
L2, 97-3
L1, 98-4
L2, 97-4
L1, 98-5
L2, 97-5

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

- Desert tortoise Carcass
- Class 2 desert tortoise burrow: good condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**80**
Special-Status Wildlife

N

500 0 500 Feet

L1, 98-4
L2, 97-4
L1, 98-5
L2, 97-5
L1, 98-6
L2, 98-1
L1, 99-1
L2, 98-2
L1, 99-2
L1, 99-3
L2, 98-3
L1, 99-4
L1, 99-5
L2, 98-4
L2, 98-5
L1, 100-1
L2, 99-1

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-81
Special-Status Wildlife

N

500 0 500 Feet

L1, 99-5
L1, 100-1
L2, 99-1
L1, 100-2
L1, 100-3
L2, 99-2
L1, 100-4
L2, 99-3
L1, 100-5
L2, 99-4
L1, 101-1
L2, 99-5
L2, 100-1
L1, 101-2
L2, 100-2
L2, 100-3

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Desert kit fox (Fur bearing mammal) *Vulpix macrotis*
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3**-82**
Special-Status Wildlife

N

500 0 500 Feet

L1, 102-2
L2, 101-4
L1, 102-3
L2, 101-5
L1, 102-4
L2, 101-6
L1, 102-5
L1, 103-1
L2, 102-1
L1, 103-2
L2, 102-2
L1, 103-3
L2, 102-3
L1, 103-4
L2, 102-4
L1, 103-5
L2, 102-5

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

- Desert kit fox (Fur bearing mammal) *Vulpix macrotis*
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**83**
Special-Status Wildlife

N

500 0 500 Feet

L1, 103-4
L1, 103-5
L2, 102-5
L1, 103-6
L2, 103-1
L1, 104-1
L2, 103-2
L1, 104-2
L2, 103-3
L1, 104-3
L2, 103-4
L1, 104-4
L1, 104-5
L2, 103-5
L1, 104-6
L2, 103-6
L1, 105-1
L2, 104-1
L2, 104-2

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Red-tailed hawk nest - *Buteo jamaicensis*
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**84**
Special-Status Wildlife

N

500 0 500 Feet

L1, 106-2
L1, 106-1
L2, 105-4
L2, 105-3
L2, 105-2
L1, 105-5
L2, 105-1
L1, 105-4
L2, 104-5
L1, 105-3
L2, 104-4
L1, 105-2
L2, 104-3
L1, 105-1
L2, 104-2
L1, 104-6
L2, 104-1

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**85**
Special-Status Wildlife

N

500 0 500 Feet

L1, 107-4
L1, 107-3
L1, 107-2
L1, 107-1
L1, 106-5
L1, 106-4
L1, 106-3
L1, 106-2
L2, 106-5
L2, 106-4
L2, 106-3
L2, 106-2
L2, 106-1
L2, 105-6
L2, 105-5
L2, 105-4
L2, 105-3

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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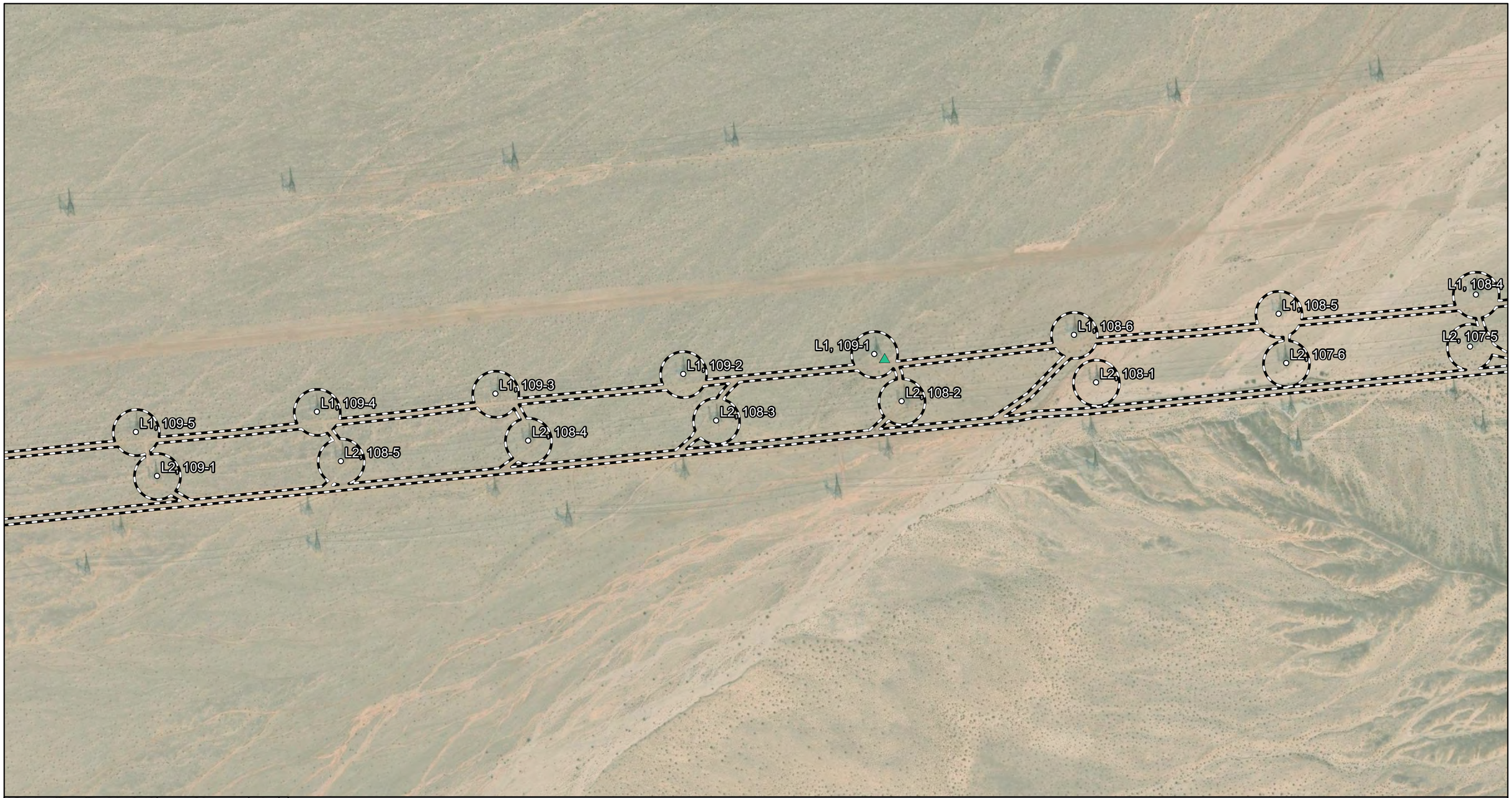
LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Class 2 desert tortoise burrow: good condition
- Class 3 desert tortoise burrow: deteriorated condition
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**86**
Special-Status Wildlife

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Golden eagle (non-nest) (FP, BLMS) *Aquila chrysaetos*

Figure 4.2-3-**87**
Special-Status Wildlife

N

500 0 500 Feet

L1, 113-4
L1, 113-3
L1, 113-2
L1, 113-1
L1, 112-5
L1, 112-4
L1, 112-3
L1, 112-2
L2, 112-4
L2, 112-3
L2, 112-2
L2, 112-1
L2, 111-6
L2, 111-5
L2, 111-4
L2, 111-3

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
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MCC-VIC Tower Location
Substation
Survey Area

Class 4 desert tortoise burrow: good condition, possibly other species

Figure 4.2-3**-88**
Special-Status Wildlife

500 0 500 Feet

L1, 115-6
L1, 116-1
L1, 116-2
L1, 116-3
L1, 116-4
L1, 116-5
L1, 117-1
L1, 117-2
L2, 115-2
L2, 115-3
L2, 115-4
L2, 115-5
L2, 115-6
L2, 116-1
L2, 116-2
L2, 116-3

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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Date Exported: 5/24/2024

LA DWP

MCC-VIC Tower Location
Substation
Survey Area

Desert kit fox (Fur bearing mammal) *Vulpix macrotis*

Figure 4.2-3-**89**
Special-Status Wildlife

N

500 0 500 Feet

L1, 118-4
L1, 118-3
L1, 118-2
L1, 118-1
L1, 117-5
L1, 117-4
L1, 117-3
L1, 117-2
L1, 117-1
L2, 117-4
L2, 117-3
L2, 117-2
L2, 117-1
L2, 116-5
L2, 116-4
L2, 116-3
L2, 116-2

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
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LA DWP

MCC-VIC Tower Location
Substation
Survey Area

Class 4 desert tortoise burrow: good condition, possibly other species

Figure 4.2-3-**90**
Special-Status Wildlife

N

500 0 500 Feet

L1, 120-6
L1, 120-5
L1, 120-4
L1, 120-3
L1, 120-2
L1, 120-1
L1, 119-5
L1, 119-4
L2, 120-2
L2, 120-1
L2, 119-4
L2, 119-3
L2, 119-2
L2, 119-1
L2, 118-5
L2, 118-4

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

- MCC-VIC Tower Location
- Substation
- Survey Area
- Red-tailed hawk nest - *Buteo jamaicensis*
- Desert tortoise Carcass
- Class 3 desert tortoise burrow: deteriorated condition
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**91**
Special-Status Wildlife

N

500 0 500 Feet

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

- MCC-VIC Tower Location
- Substation
- Survey Area
- Desert kit fox (Fur bearing mammal) *Vulpix macrotis*
- Loggerhead shirke (non-nest) (SSC) *Lanius ludovicianus*

Figure 4.2-3-92
Special-Status Wildlife

500 0 500 Feet

L1, 125-5
L2, 125-1
L1, 125-4
L2, 124-5
L1, 125-3
L2, 124-4
L1, 125-2
L2, 124-3
L1, 125-1
L2, 124-2
L1, 124-5
L2, 124-1
L1, 124-4
L2, 123-5
L1, 124-3
L2, 123-4

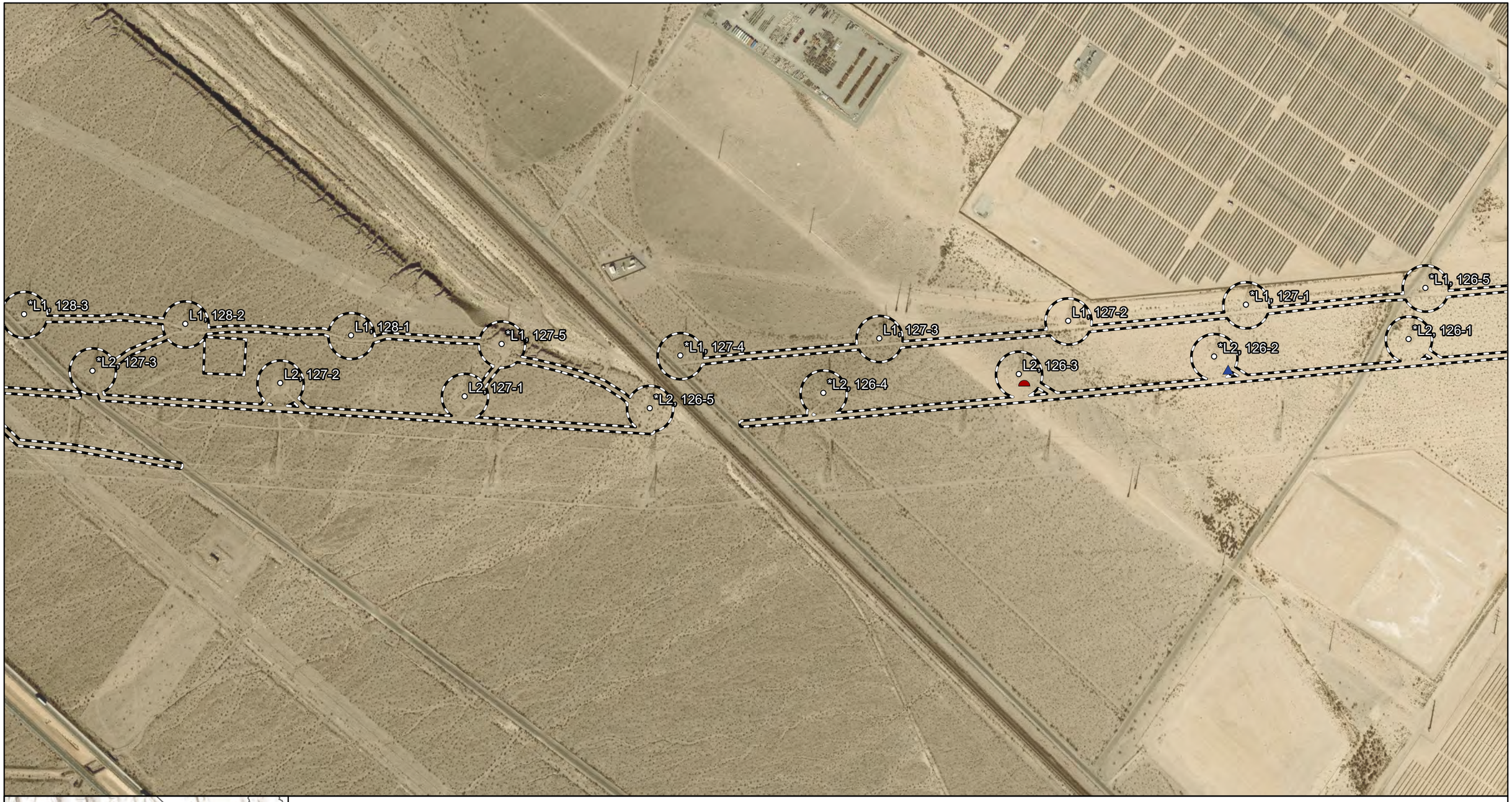
Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

MCC-VIC Tower Location
Substation
Survey Area

Desert kit fox (Fur bearing mammal) *Vulpix macrotis*

Figure 4.2-3-**93**
Special-Status Wildlife

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Desert kit fox (Fur bearing mammal) *Vulpix macrotis*
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**94**
Special-Status Wildlife

N

500 0 500 Feet

L1, 130-4
L1, 130-3
L1, 130-2
L1, 130-1
L1, 129-6
*L1, 129-5
*L1, 129-4
L1, 129-3
L2, 129-6
L2, 129-5
L2, 129-4
L2, 129-3
L2, 129-2
*L2, 129-1
*L2, 128-5
L2, 128-4

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**95**
Special-Status Wildlife

N

500 0 500 Feet

L1, 131-5
L2, 131-1
L1, 131-4
L2, 130-5
L1, 131-3
L2, 130-4
L1, 131-2
L2, 130-3
L1, 131-1
L2, 130-2
L1, 130-5
L2, 130-1
L1, 130-4
L2, 129-6
L1, 130-3
L2, 129-5

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

- Red-tailed hawk nest - *Buteo jamaicensis*
- Desert tortoise Carcass
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**96**
Special-Status Wildlife

N

500 0 500 Feet

L1, 134-4
L1, 134-3
L2, 133-4
L1, 134-2
L1, 134-1
L2, 133-3
L2, 133-2
L1, 133-5
L2, 133-1
L1, 133-4
L2, 132-6
L1, 133-3
L2, 132-5
L1, 133-2
L2, 132-4
L1, 133-1
L2, 132-3

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

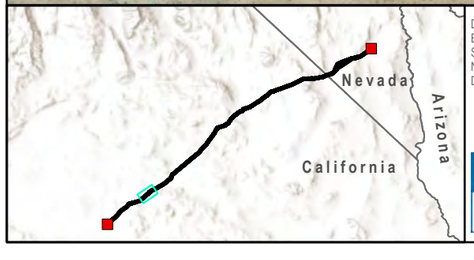
MCC-VIC Tower Location
Substation
Survey Area
Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**97**
Special-Status Wildlife

N

500 0 500 Feet

L1, 136-5
L1, 136-6
L1, 137-1
L2, 136-1
L2, 136-2
L1, 137-2
L2, 136-3
L1, 137-3
L2, 136-4
L1, 137-4
L1, 137-5
L2, 136-5
L1, 138-1
L2, 137-1
L2, 137-2



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

- MCC-VIC Tower Location
- Substation
- Survey Area
- Red-tailed hawk nest - *Buteo jamaicensis*
- Class 4 desert tortoise burrow: good condition, possibly other species

Figure 4.2-3-98
Special-Status Wildlife

500 0 500 Feet

L1, 139-3
L1, 139-2
L2, 138-4
L2, 138-3
L1, 139-1
L2, 138-2
L1, 138-5
L2, 138-1
L1, 138-4
L2, 137-5
L1, 138-3
L2, 137-4
L1, 138-2
L2, 137-3
L1, 138-1
L2, 137-2

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

LA DWP

MCC-VIC Tower Location
Substation
Survey Area

Desert tortoise Carcass
Class 3 desert tortoise burrow: deteriorated condition
Class 4 desert tortoise burrow: good condition, possibly other species
Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**99**
Special-Status Wildlife

500 0 500 Feet

L1, 141-5
L1, 141-4
L2, 140-5
L1, 141-3
L2, 140-4
L2, 140-3
L1, 141-2
*L1, 141-1
L2, 140-2
*L2, 140-1
*L1, 140-5
L1, 140-4
*L2, 139-6
L1, 140-3
L2, 139-5
L2, 139-4

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

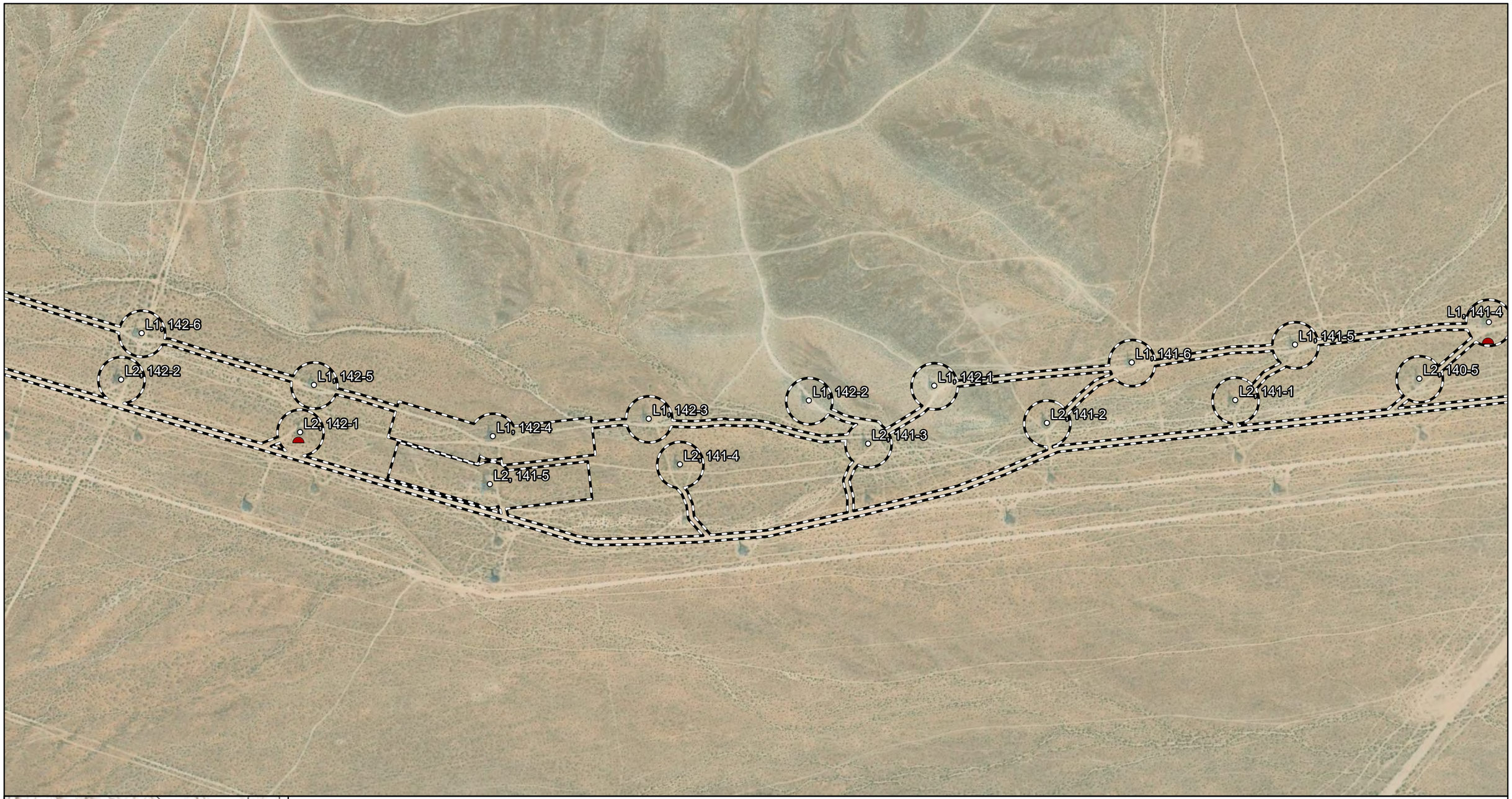
LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Class 3 desert tortoise burrow: deteriorated condition
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3**-100**
Special-Status Wildlife

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3**-101**
Special-Status Wildlife

500 0 500 Feet

L1, 144-2
L2, 143-4
L1, 144-1
L2, 143-3
L1, 143-5
L2, 143-2
L1, 143-4
L2, 143-1
L1, 143-3
L2, 142-5
L1, 143-2
L2, 142-4
L1, 143-1
L2, 142-3
L1, 142-6
L2, 142-2
L1, 142-5
L2, 142-1

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

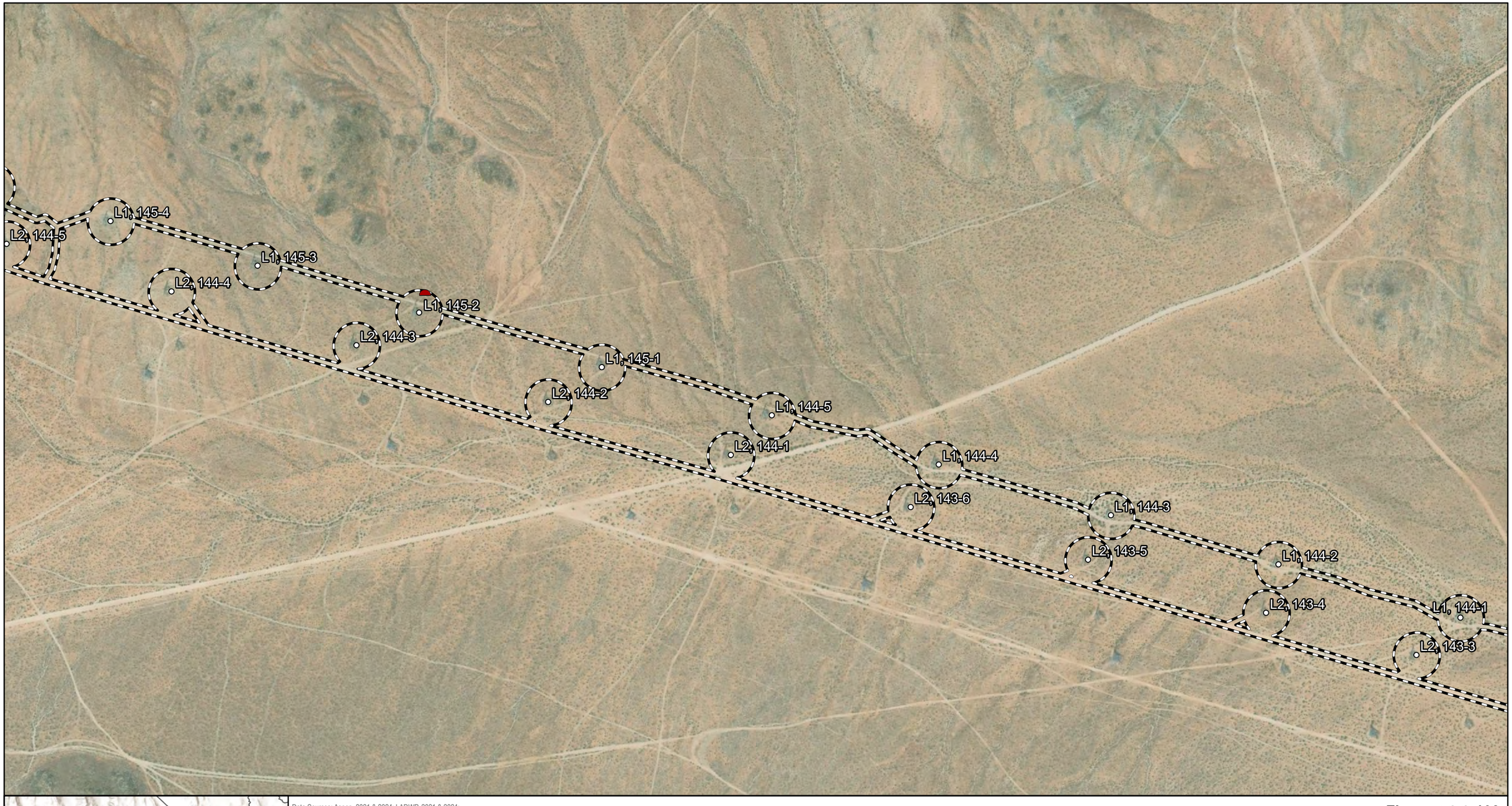
LA DWP

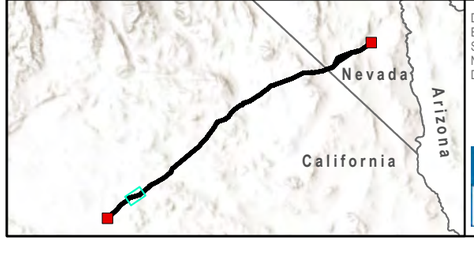
- MCC-VIC Tower Location
- Substation
- Survey Area
- Class 2 desert tortoise burrow: good condition
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-102
Special-Status Wildlife

N

500 0 500 Feet





Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

MCC-VIC Tower Location
Substation
Survey Area

Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-103
Special-Status Wildlife

500 0 500 Feet

L1, 146-5
L1, 146-4
L2, 146-1
L1, 146-3
L2, 145-5
L1, 146-2
L2, 145-4
L1, 146-1
L2, 145-3
L1, 145-7
L2, 145-2
L1, 145-6
L2, 145-1
L1, 145-5
L1, 145-4
L2, 144-5
L1, 145-3
L2, 144-4

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area

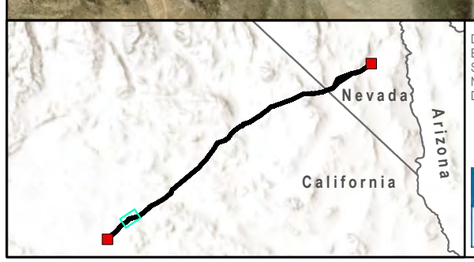
- Red-tailed hawk nest - *Buteo jamaicensis*
- Le Conte's thrasher (non-nest) (SSC) *Toxostoma lecontei*
- Class 4 desert tortoise burrow: good condition, possibly other species

Figure 4.2-3-**104**
Special-Status Wildlife

N

500 0 500 Feet

L1, 148-1
L1, 147-6
**L1, 147-5
L2, 147-3
**L1, 147-4
**L2, 147-2
**L2, 147-1
L1, 147-3
L2, 146-6
L1, 147-2
L2, 146-5
L1, 147-1
L2, 146-4
L1, 146-5
L2, 146-3
L1, 146-4
L2, 146-2
L2, 146-1



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

MCC-VIC Tower Location
Substation
Survey Area

Le Conte's thrasher (non-nest) (SSC)
Toxostoma lecontei
Class 4 desert tortoise burrow: good condition, possibly other species
Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**105**
Special-Status Wildlife

500 0 500 Feet

L1, 148-1
L1, 147-6
L1, 148-2
L2, 147-3
L1, 148-3
L2, 147-4
**L2, 147-2
L1, 148-4
L2, 147-5
L1, 148-5
L2, 147-6
L1, 149-1
L2, 148-1
L1, 149-2
L2, 148-2
L1, 149-3
L2, 148-3
L2, 148-4

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Class 4 desert tortoise burrow: good condition, possibly other species
- Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**106**
Special-Status Wildlife

N

500 0 500 Feet

L1, 150-4
L1, 150-3
L1, 150-2
L1, 150-1
L1, 149-5
L1, 149-4
L1, 149-3
L1, 149-2
L2, 149-6
L2, 149-5
L2, 149-4
L2, 149-3
L2, 149-2
L2, 149-1
L2, 148-5
L2, 148-4
L2, 148-3

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

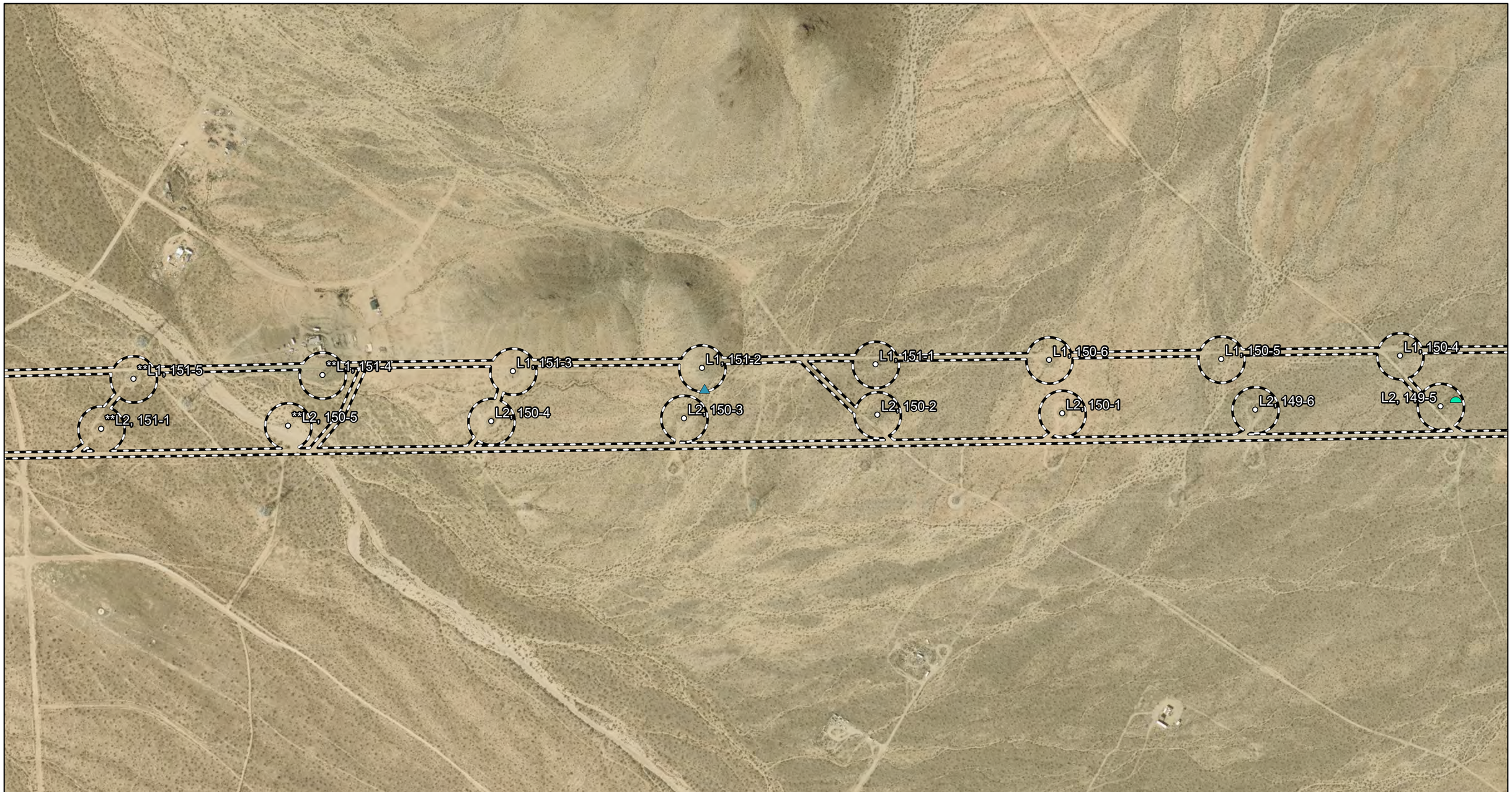
LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Burrowing Owl (non-nest) (SSC, BLMS) *Athene cunicularia*
- Class 4 desert tortoise burrow: good condition, possibly other species

Figure 4.2-3-**107**
Special-Status Wildlife

N

500 0 500 Feet



Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

LA DWP

- MCC-VIC Tower Location
- Substation
- Survey Area
- Le Conte's thrasher (non-nest) (SSC) *Toxostoma lecontei*
- Class 4 desert tortoise burrow: good condition, possibly other species

Figure 4.2-3-**108**
Special-Status Wildlife

N

500 0 500 Feet

L1, 154-3
*L1, 154-4
*L2, 153-3
*L1, 154-5
*L2, 153-4
L1, 154-6
*L2, 153-5
L1, 155-1
L2, 154-1
L1, 155-2
L2, 154-2
L1, 155-3
L2, 154-3
L1, 155-4
L2, 154-4
L2, 154-5

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

LA DWP

MCC-VIC Tower Location
Substation
Survey Area

Class 4 desert tortoise burrow: good condition, possibly other species

Figure 4.2-3-**109**
Special-Status Wildlife

N

500 0 500 Feet

L1, 155-4
L1, 155-5
L2, 154-5
L1, 156-1
L2, 155-1
L1, 156-2
L2, 155-2
L1, 156-3
L1, 156-4
L2, 155-3
L1, 156-5
L2, 155-4
L1, 156-6
L2, 155-5
L1, 157-1
L2, 156-1
L2, 156-2

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

MCC-VIC Tower Location
Substation
Survey Area

Class 5 desert tortoise burrow: deteriorated condition, possibly other species

Figure 4.2-3-**110**
Special-Status Wildlife

500 0 500 Feet

L1, 156-6
L1, 157-1
L1, 157-2
L2, 156-2
L1, 157-3
L2, 156-3
L1, 157-4
L2, 156-4
L1, 157-5
L2, 156-5
L1, 157-6
L2, 156-6
L1, 158-1
L2, 157-1
L1, 158-2
L2, 157-2
L2, 157-3

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

LA DWP

MCC-VIC Tower Location
Substation
Survey Area

Class 4 desert tortoise burrow: good condition, possibly other species

Figure 4.2-3-**111**
Special-Status Wildlife

N

500 0 500 Feet

VICTORVILLE SUBSTATION

L1, 162-4
L1, 162-3
*L1, 162-2
*L1, 162-1
L1, 161-6
L1, 161-5
L1, 161-4
L2, 160-3
L2, 160-4
L2, 160-5
*L2, 161-1
*L2, 161-2
L2, 161-5
L2, 161-4
L2, 161-3

Nevada
Arizona
California

Data Sources: Aspen, 2021 & 2024; LADWP, 2021 & 2024; ESRI and its licensors, 2024.
Spatial Reference:
NAD 1983 UTM Zone 11N
Date Exported: 5/24/2024

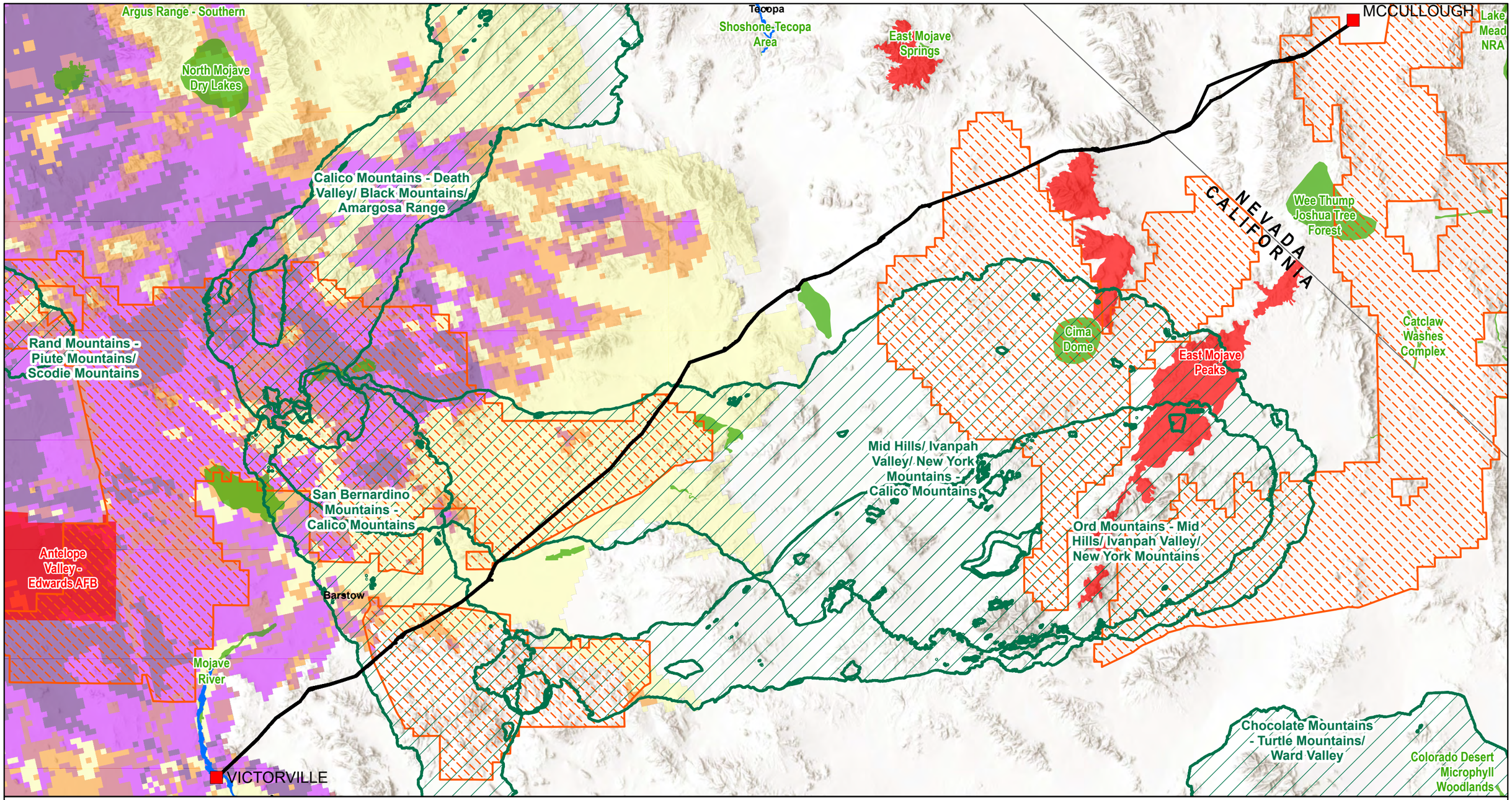
MCC-VIC Tower Location
Substation
Survey Area

Victorville shoulderband (S1)
Helminthoglypta mohaveana

Figure 4.2-3-**112**
Special-Status Wildlife

N

500 0 500 Feet



Substations
Survey Area

Essential Connectivity Areas

Critical Habitat within 10-miles of the Survey Area
- Desert tortoise
- Southwestern willow flycatcher

Important Bird Areas
- Global
- State

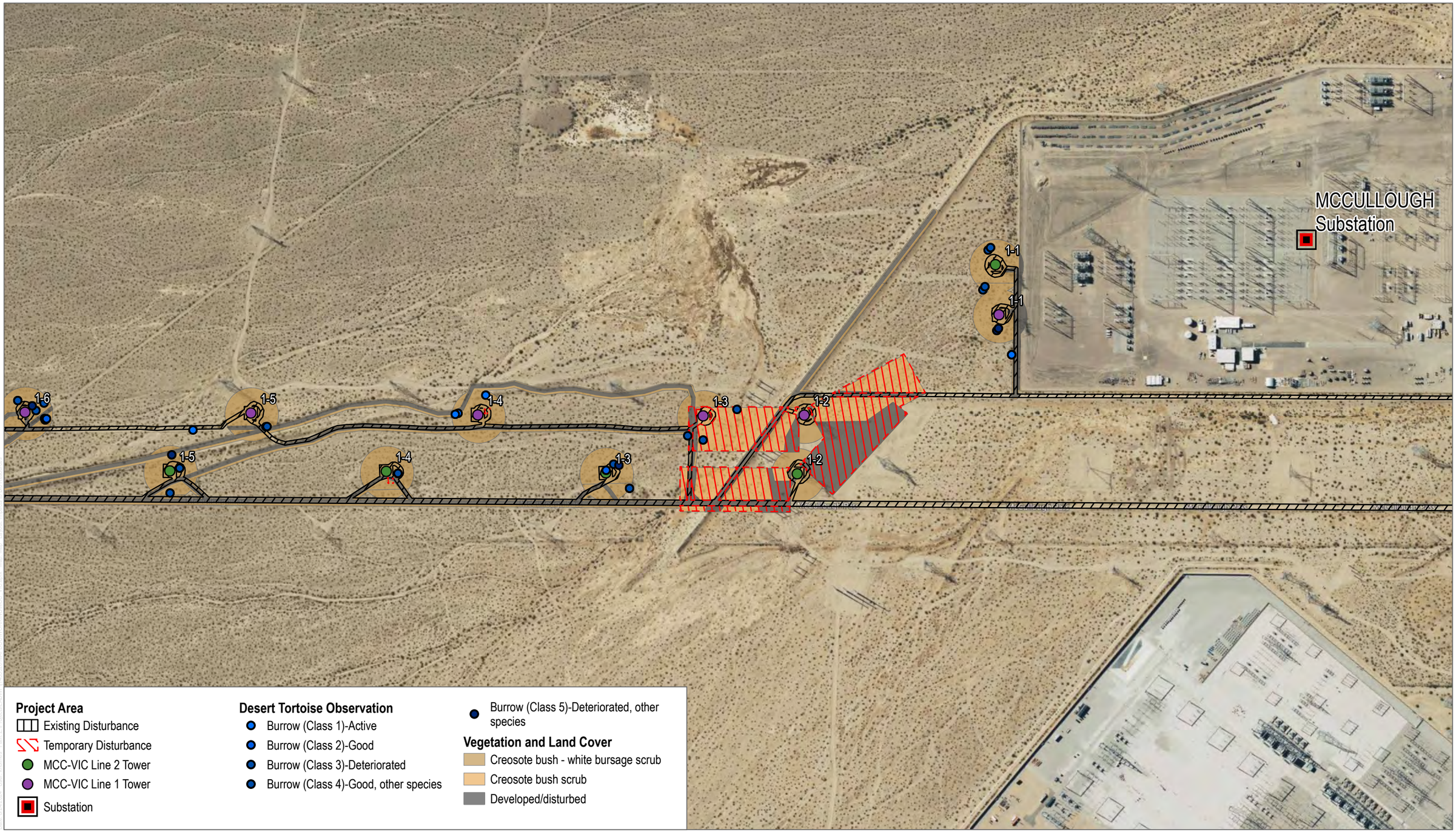
Mohave ground squirrel: USGS (Maxent) Continuous Output
Probability of Occurrence
- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1.0

Figure 4.2-4
Critical Habitat and Other Significant Wildlife Areas

Sources: Aspen, 2021; LADWP, 2021; Audubon, 2021; CDFG, 2010; Esri and it's licensors, 2020
Spatial Reference: NAD 1983 UTM Zone 11

0 20 Miles

N



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-1

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-2

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-3

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

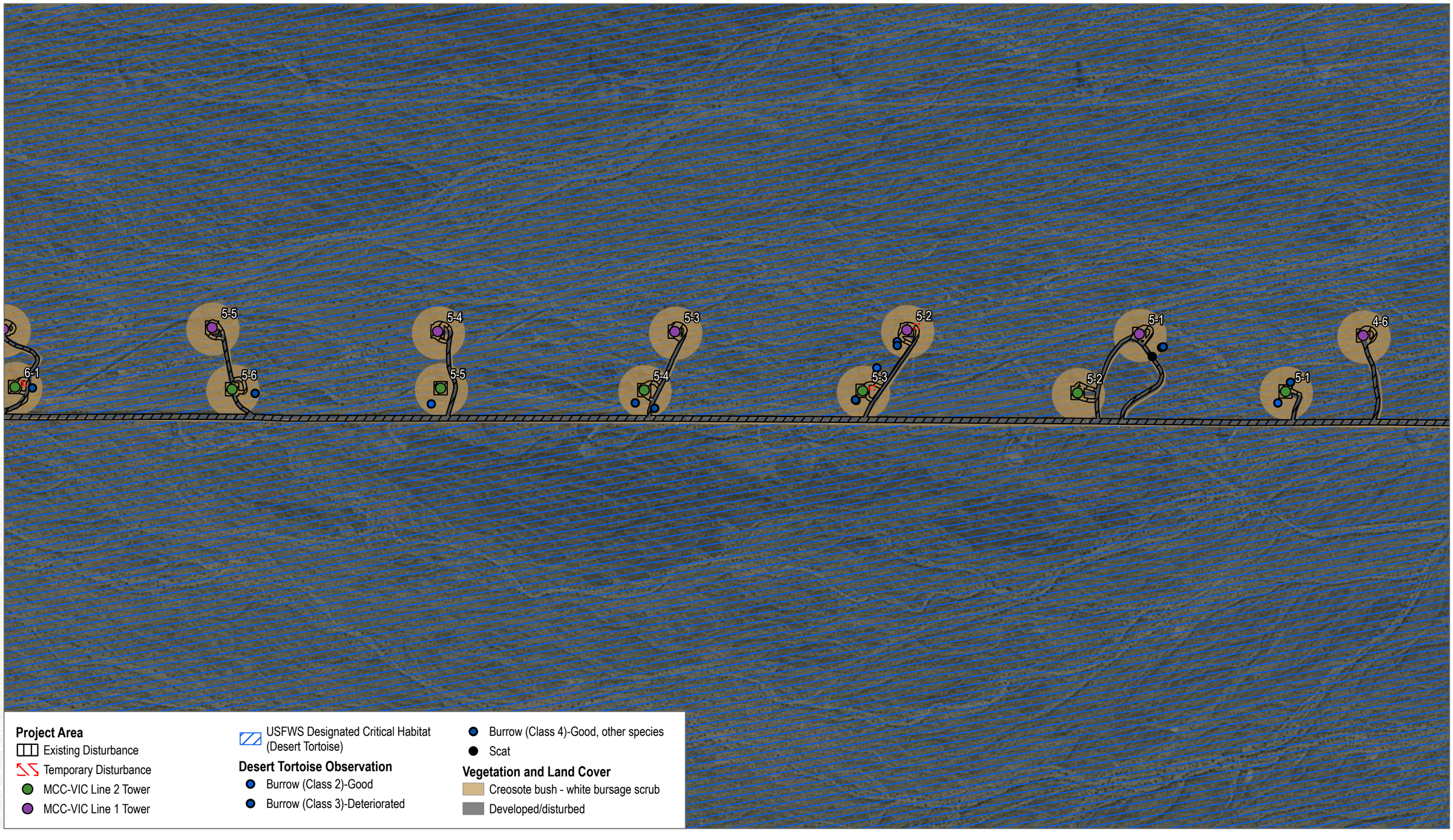
DUDEK

0 200 400 Feet

FIGURE 4.2-5-4

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-5

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

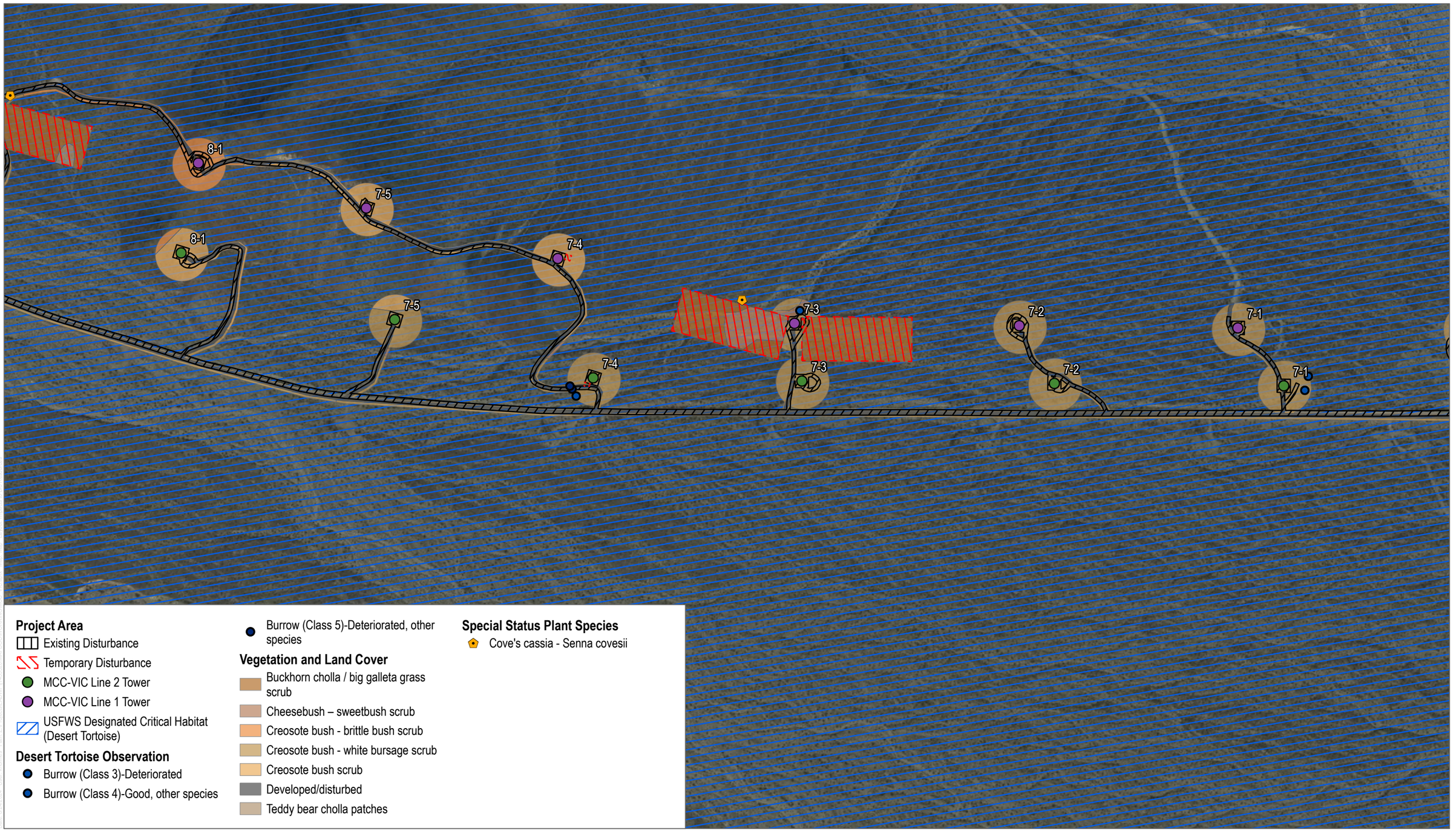
DUDEK

0 200 400 Feet

FIGURE 4.2-5-6

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

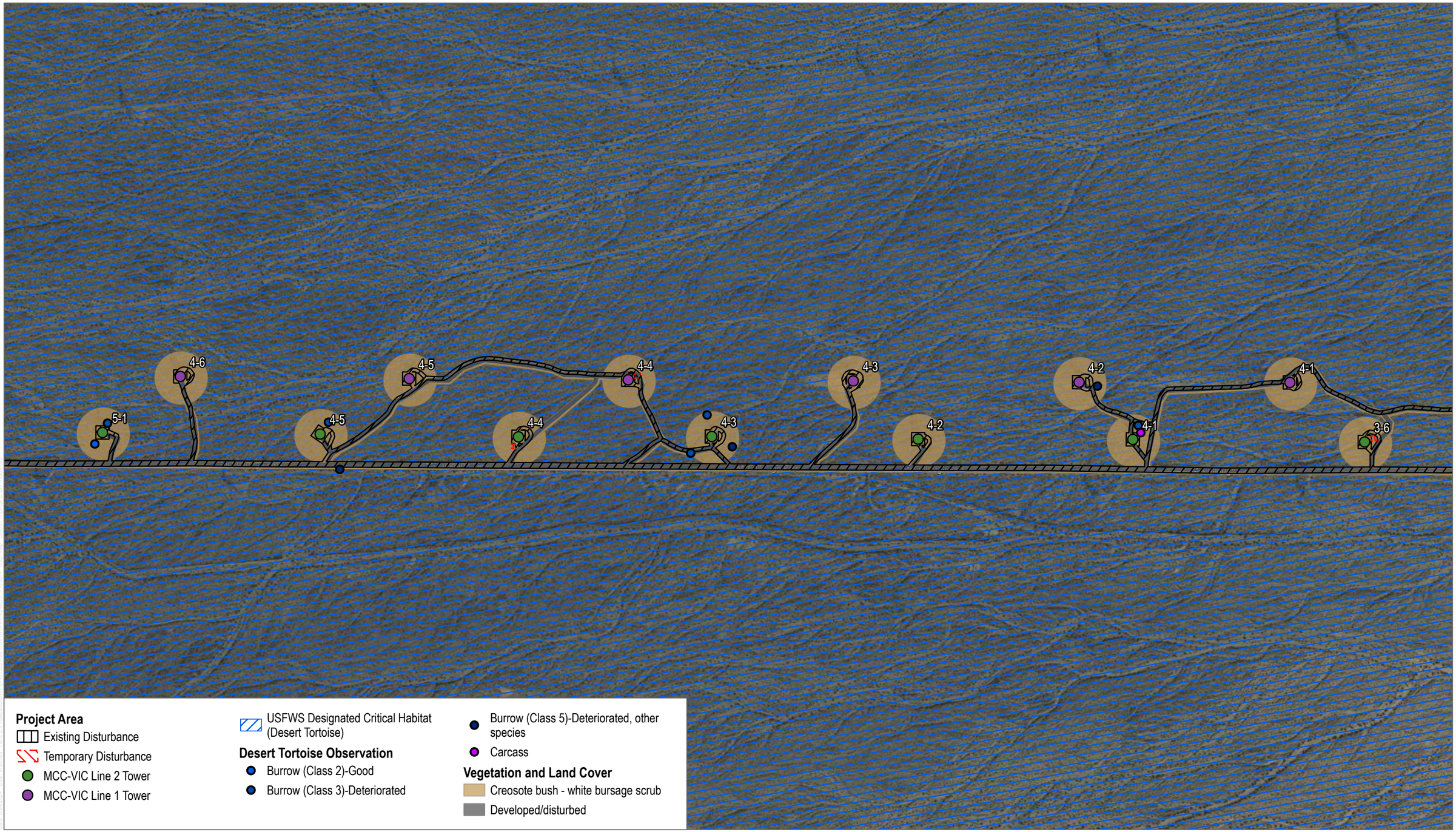
DUDEK

0 200 400 Feet

FIGURE 4.2-5-7

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

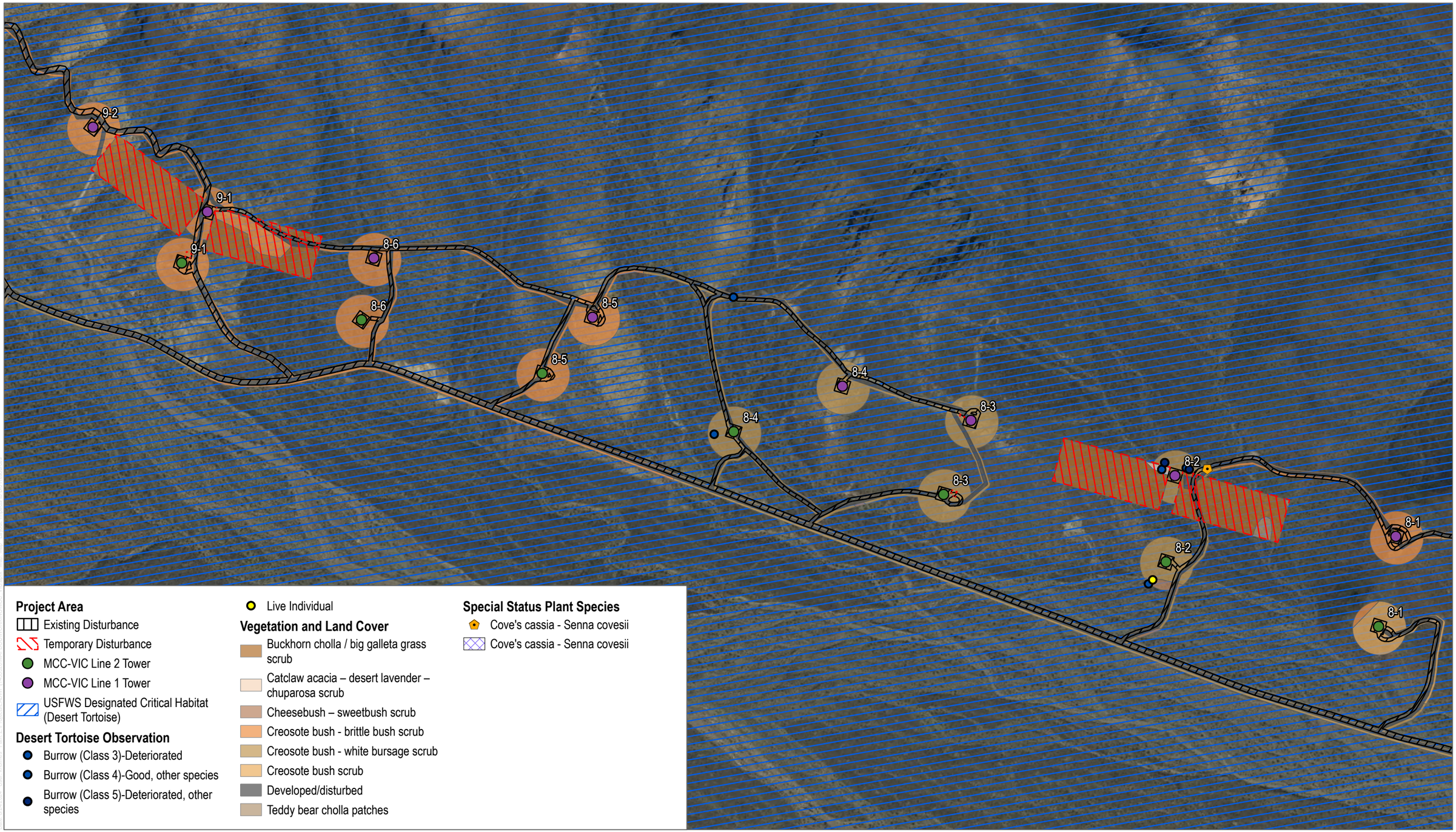
DUDEK

0 200 400 Feet

FIGURE 4.2-5-8

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

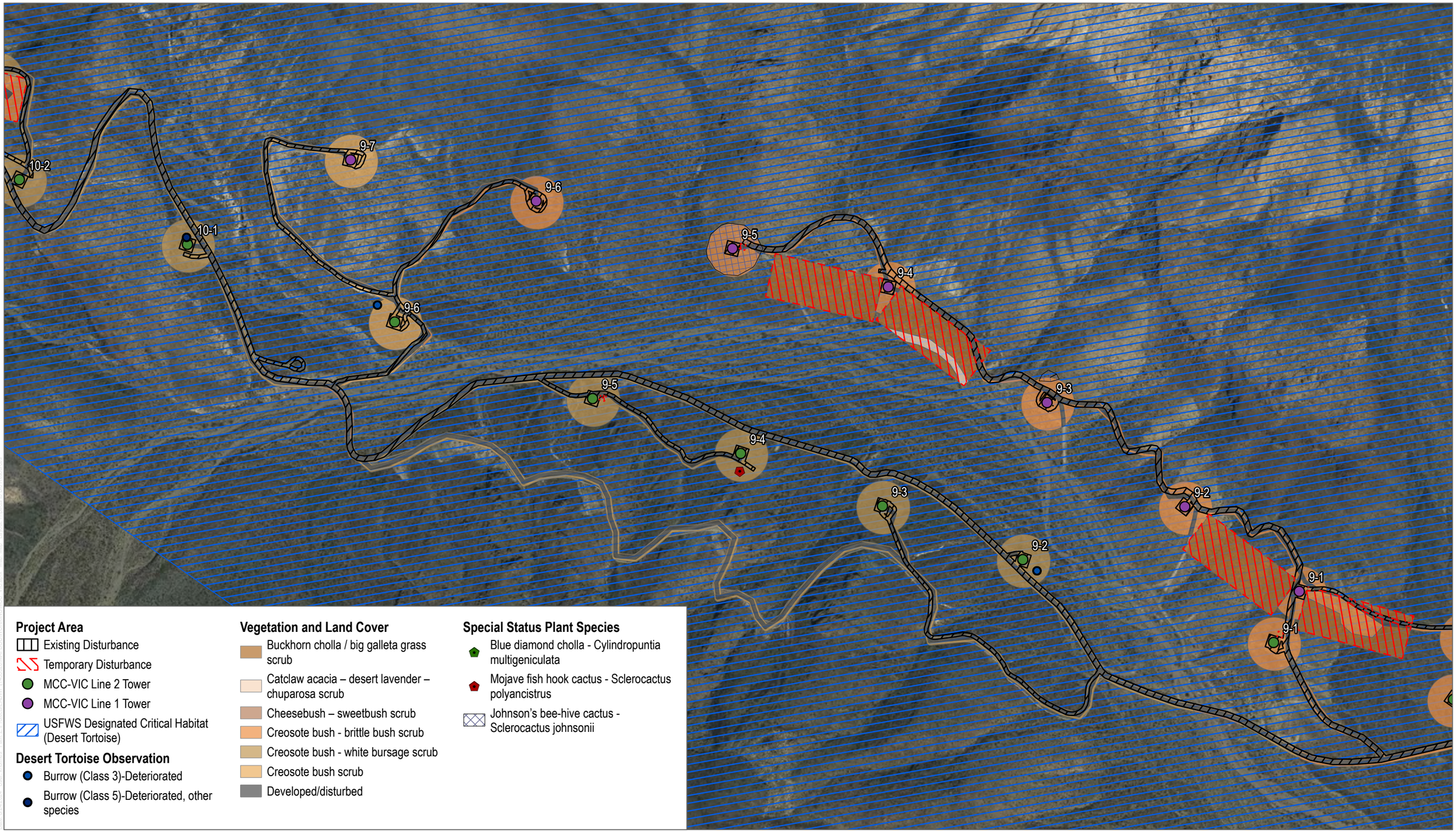
DUDEK

0 200 400 Feet

FIGURE 4.2-5-9

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

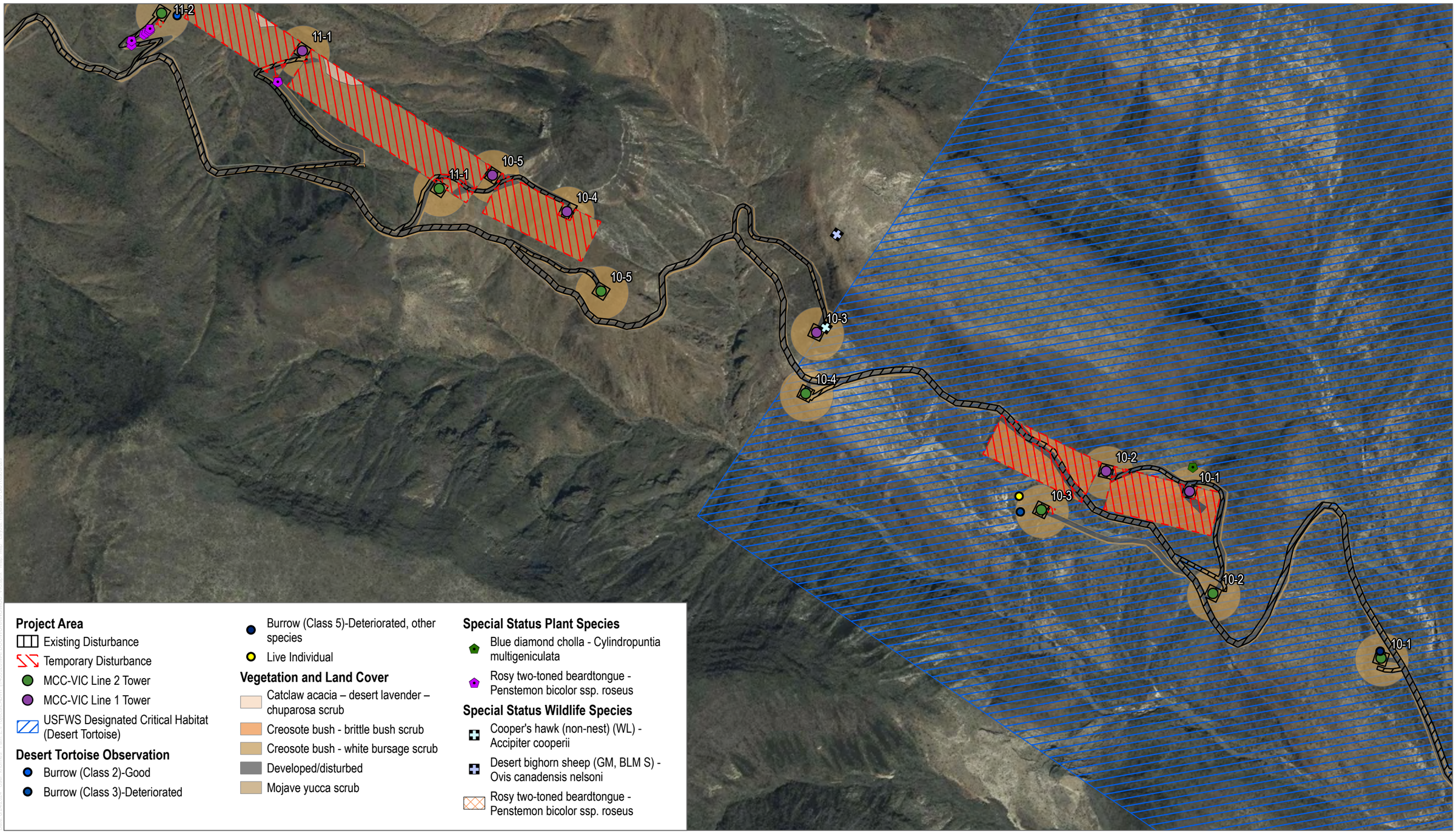
DUDEK

0 200 400 Feet

FIGURE 4.2-5-10

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

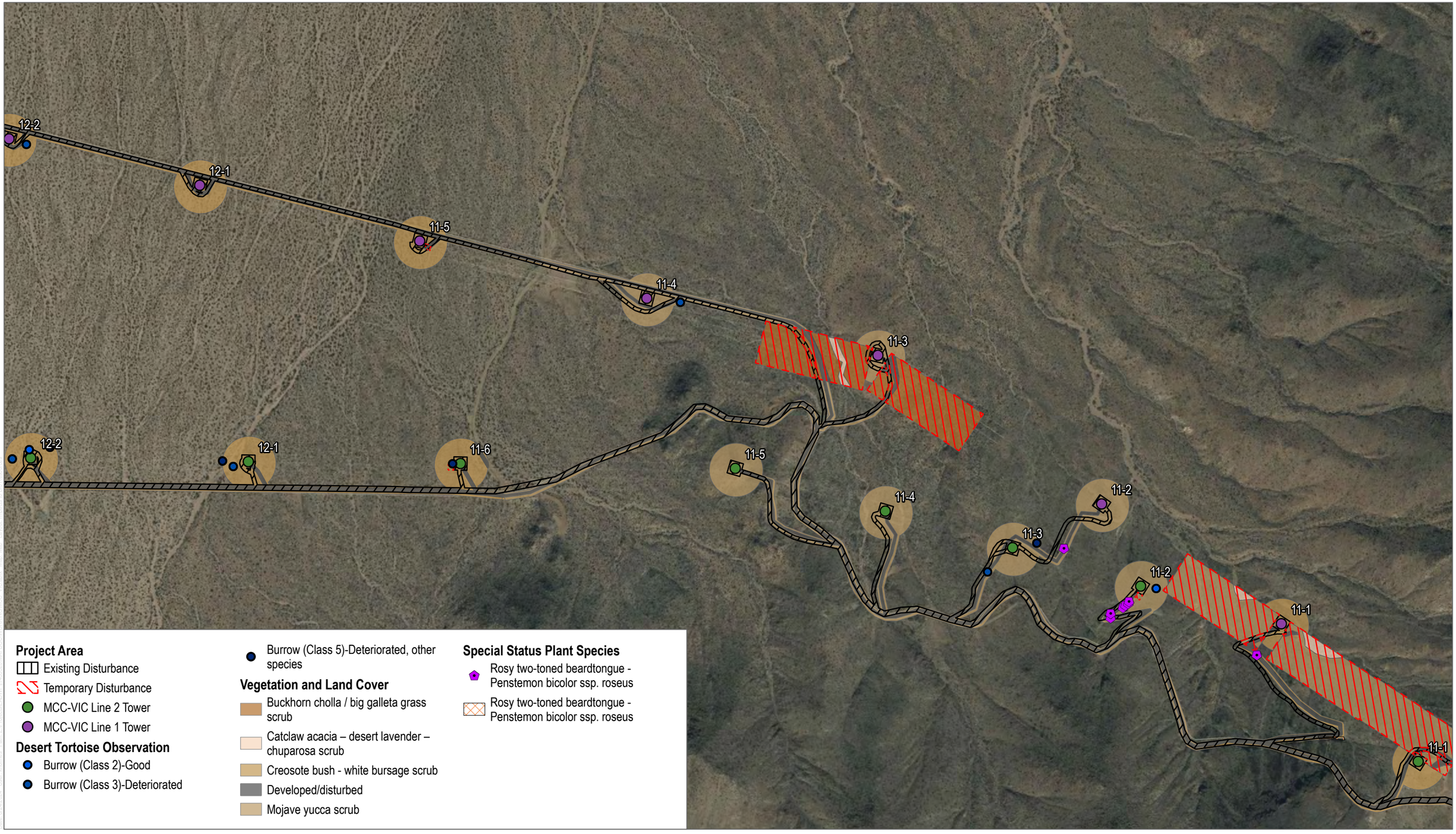
DUDEK

0 200 400 Feet

FIGURE 4.2-5-11

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-12

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-13

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-14

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-15

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-16

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-17

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-18

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-19

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

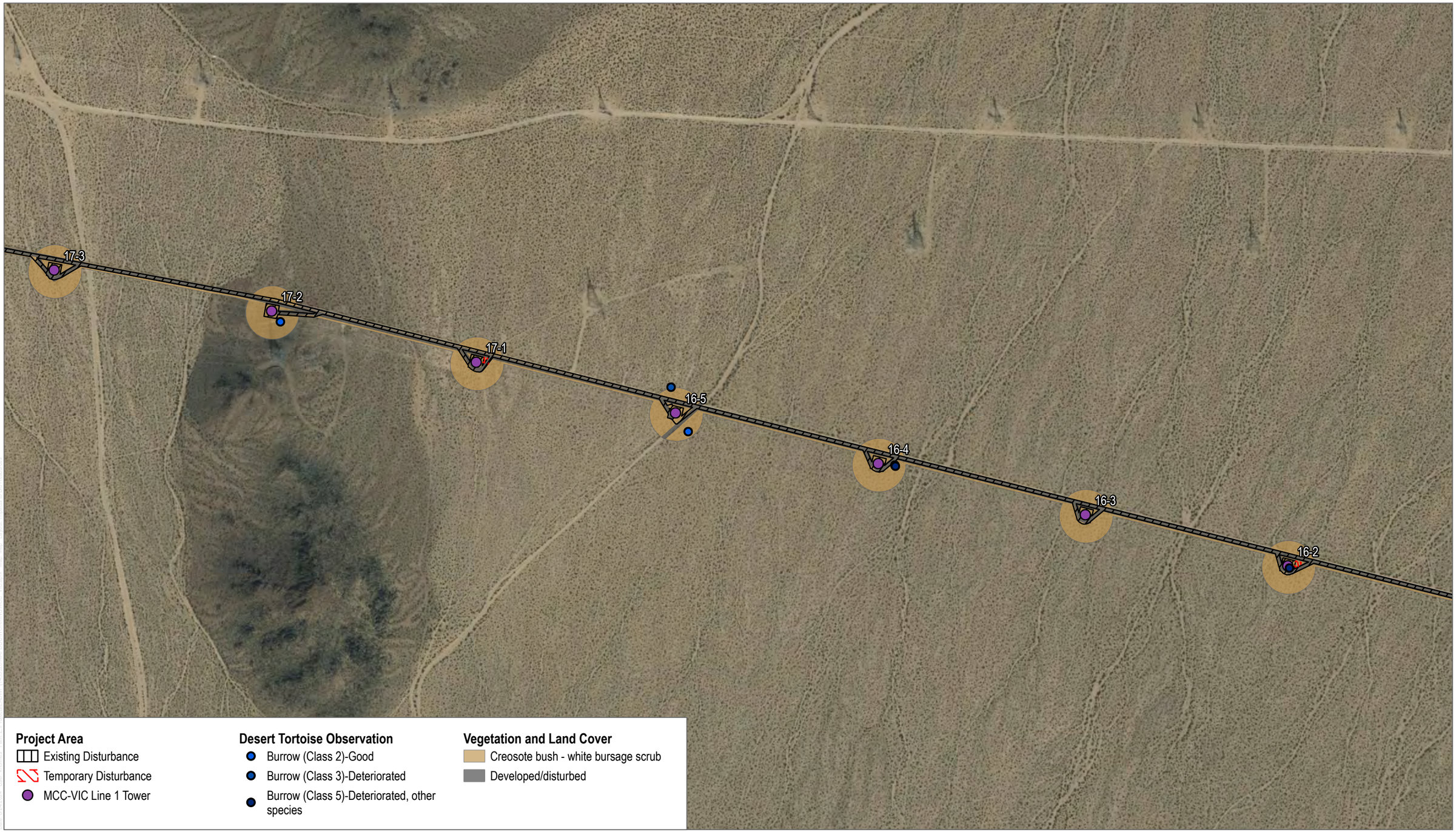
DUDEK

0 200 400 Feet

FIGURE 4.2-5-20

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-21

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-22

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-23

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-24

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

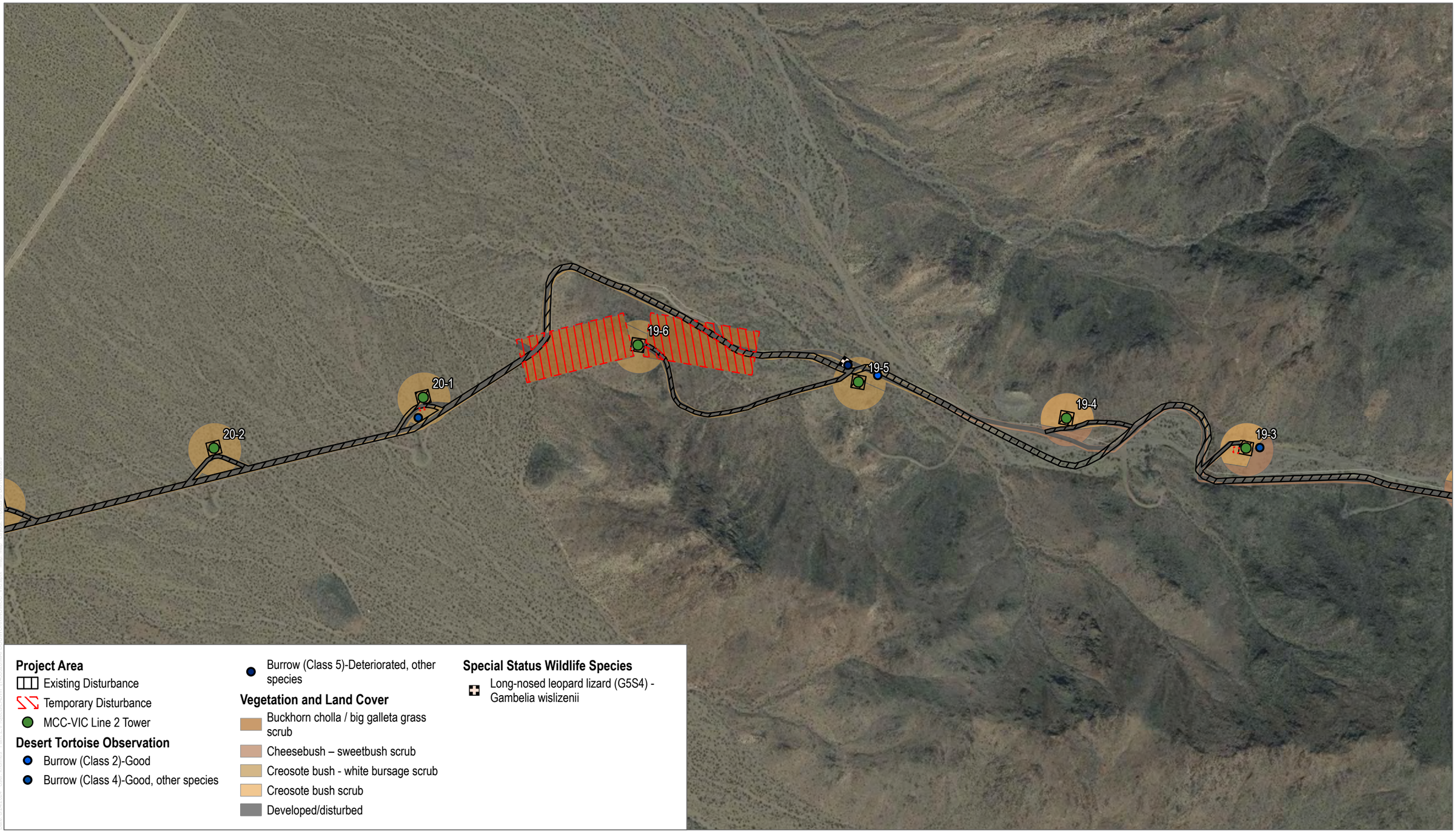
DUDEK

0 200 400 Feet

FIGURE 4.2-5-25

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-26

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-27

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-28

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

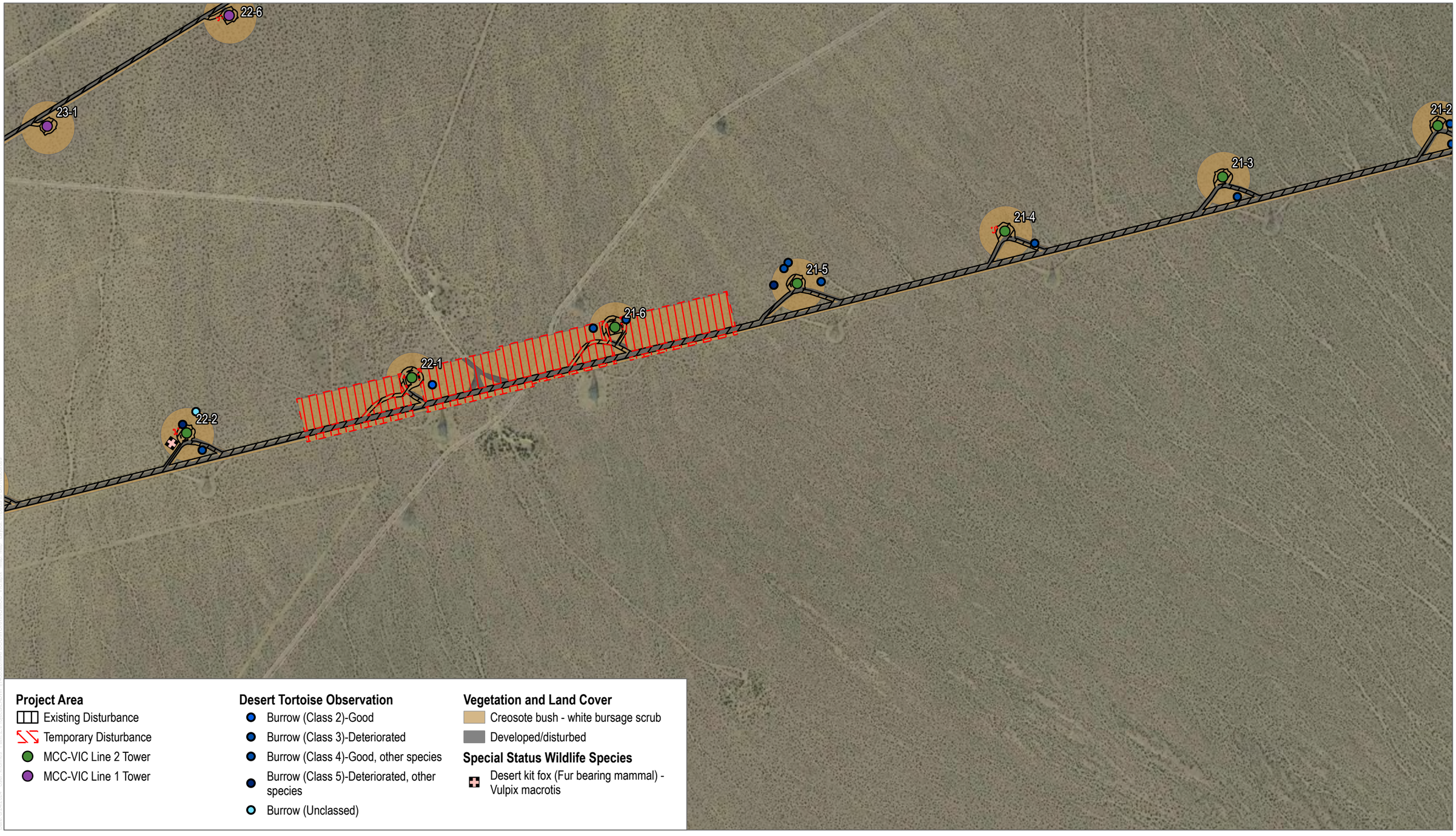
DUDEK

0 200 400 Feet

FIGURE 4.2-5-29

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-30

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-31

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-32

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-33

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

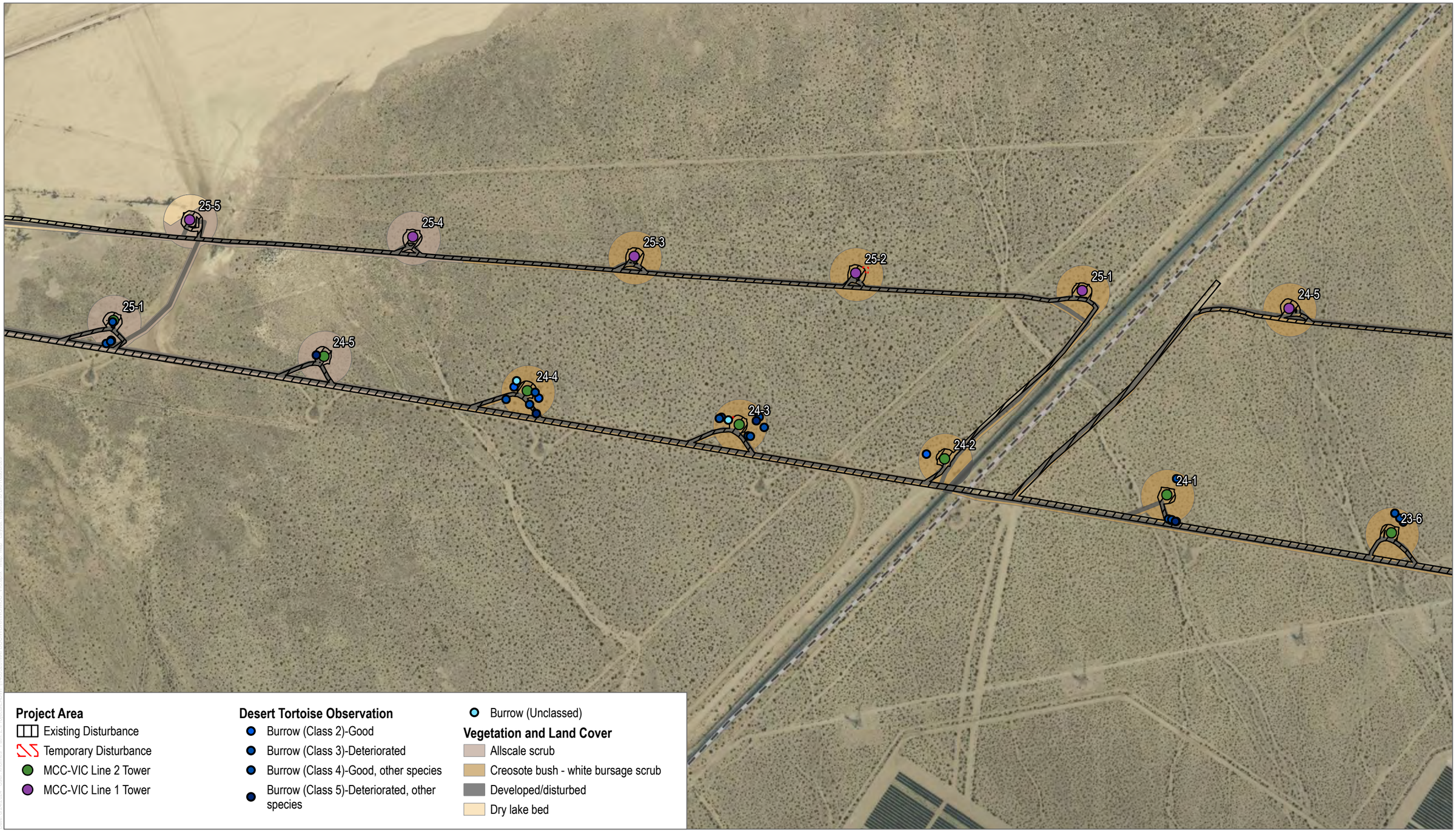
DUDEK

0 200 400 Feet

FIGURE 4.2-5-34

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

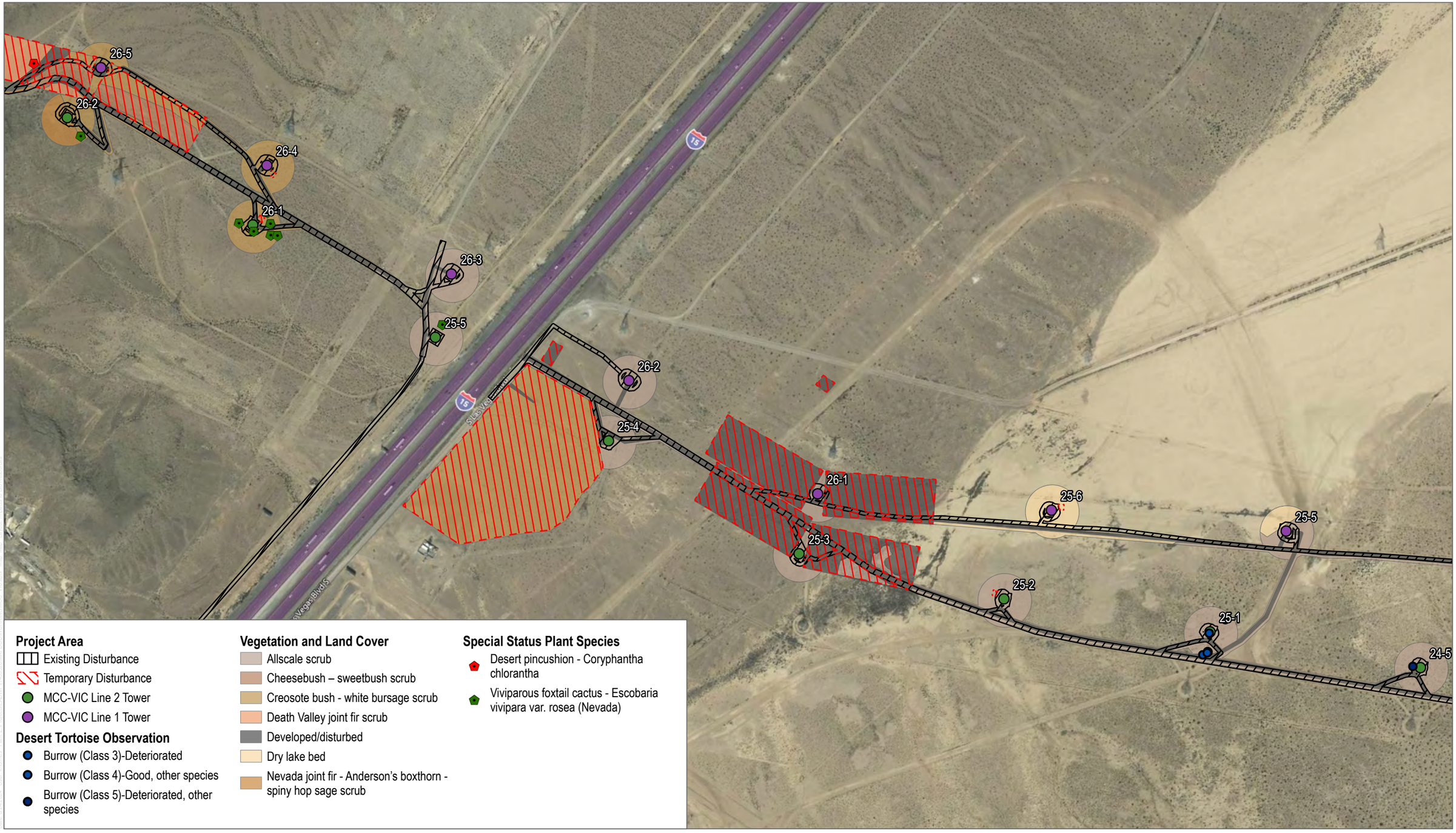
DUDEK

0 200 400 Feet

FIGURE 4.2-5-35

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

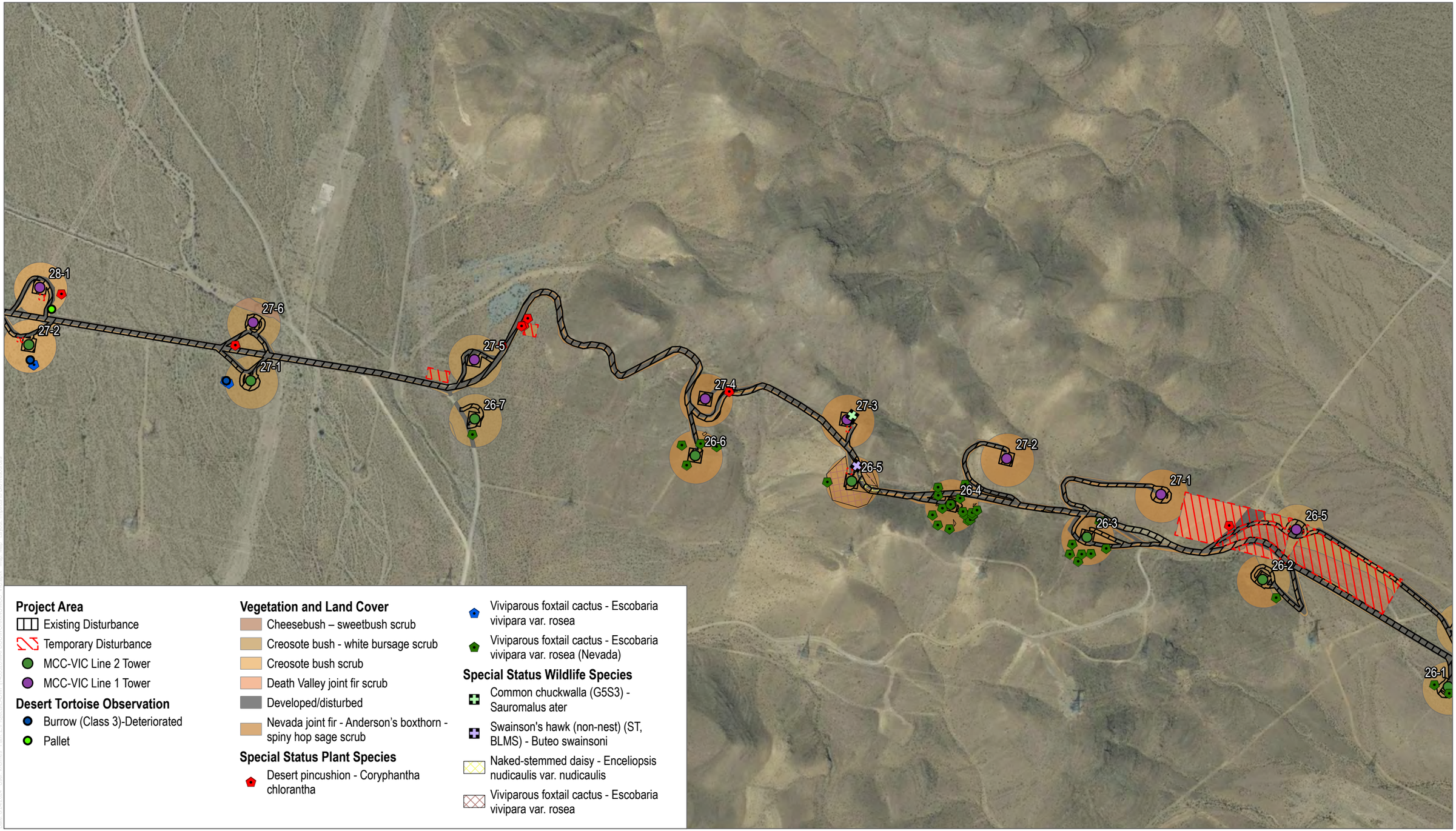
DUDEK

0 200 400 Feet

FIGURE 4.2-5-36

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

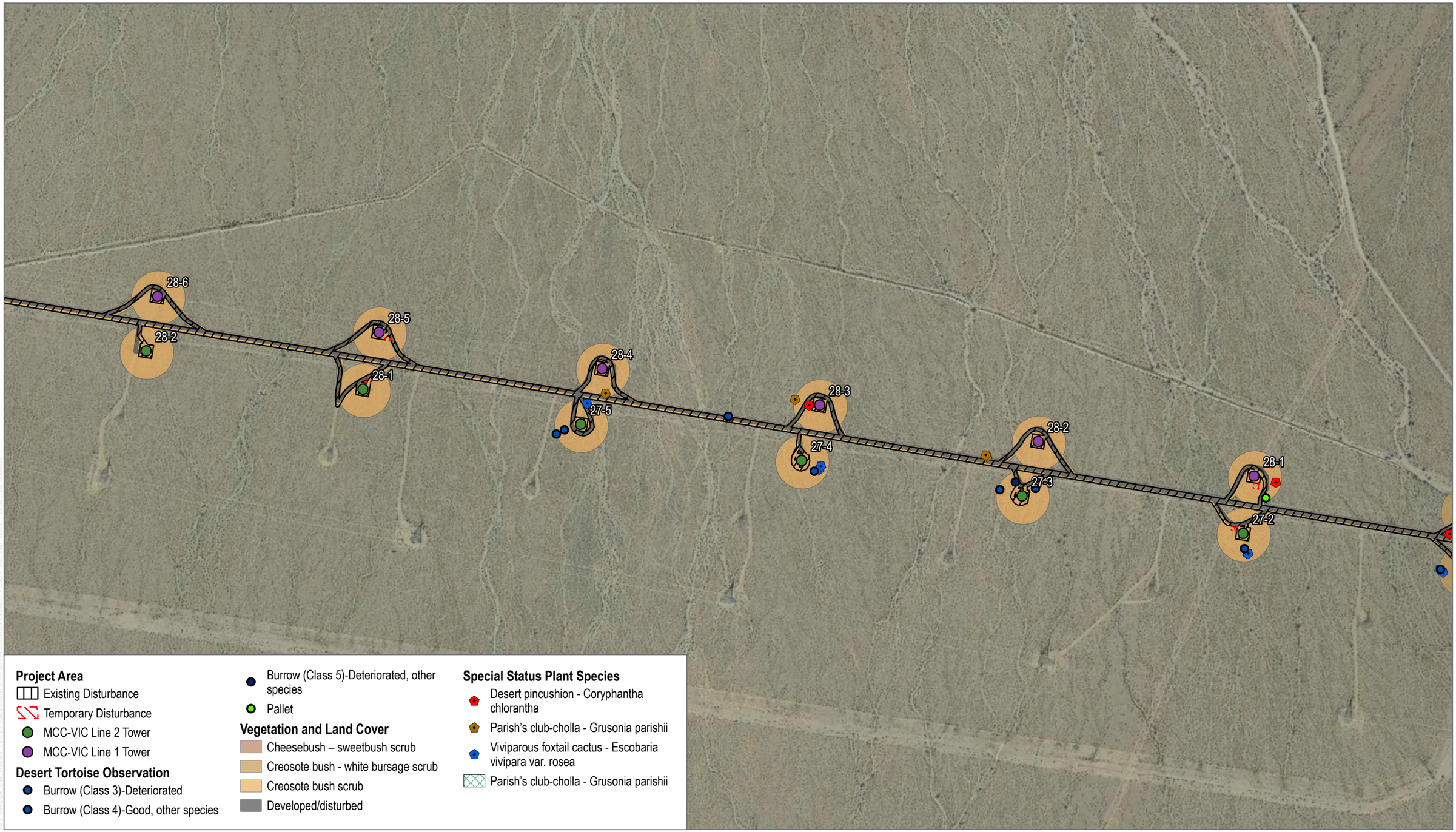
DUDEK

0 200 400 Feet

FIGURE 4.2-5-37

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

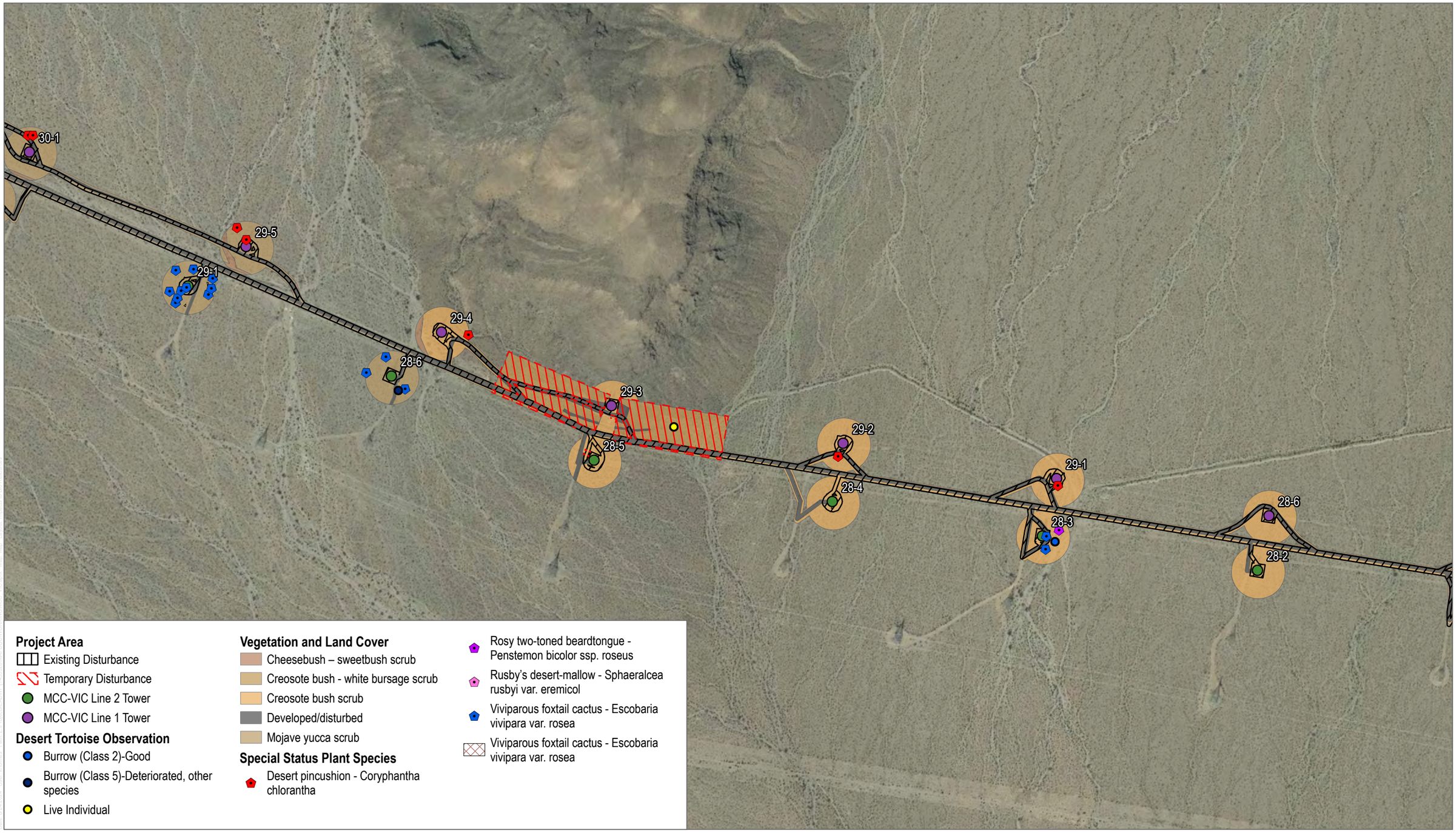
DUDEK

0 200 400 Feet

FIGURE 4.2-5-38

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

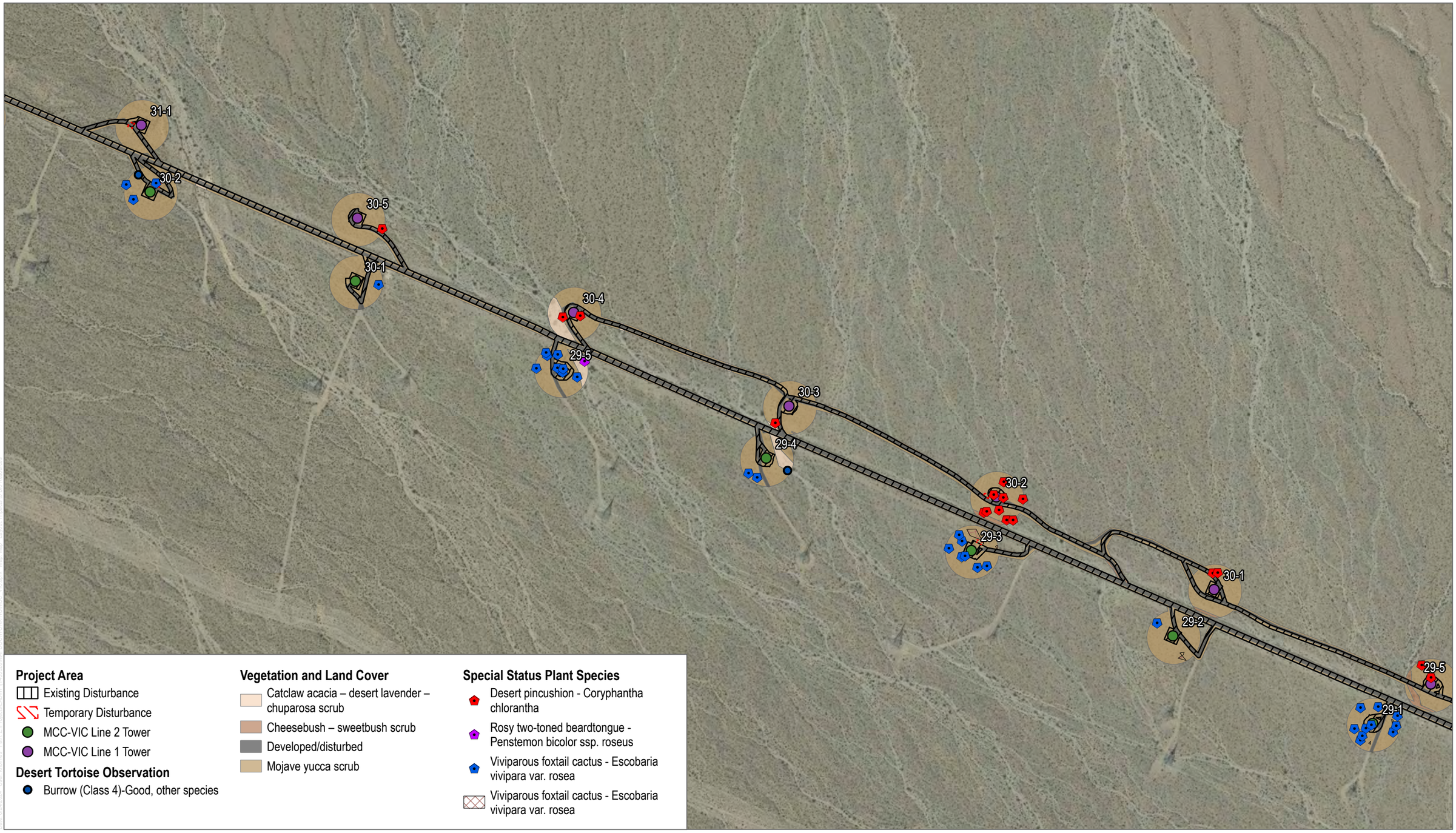
DUDEK

0 200 400 Feet

FIGURE 4.2-5-39

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

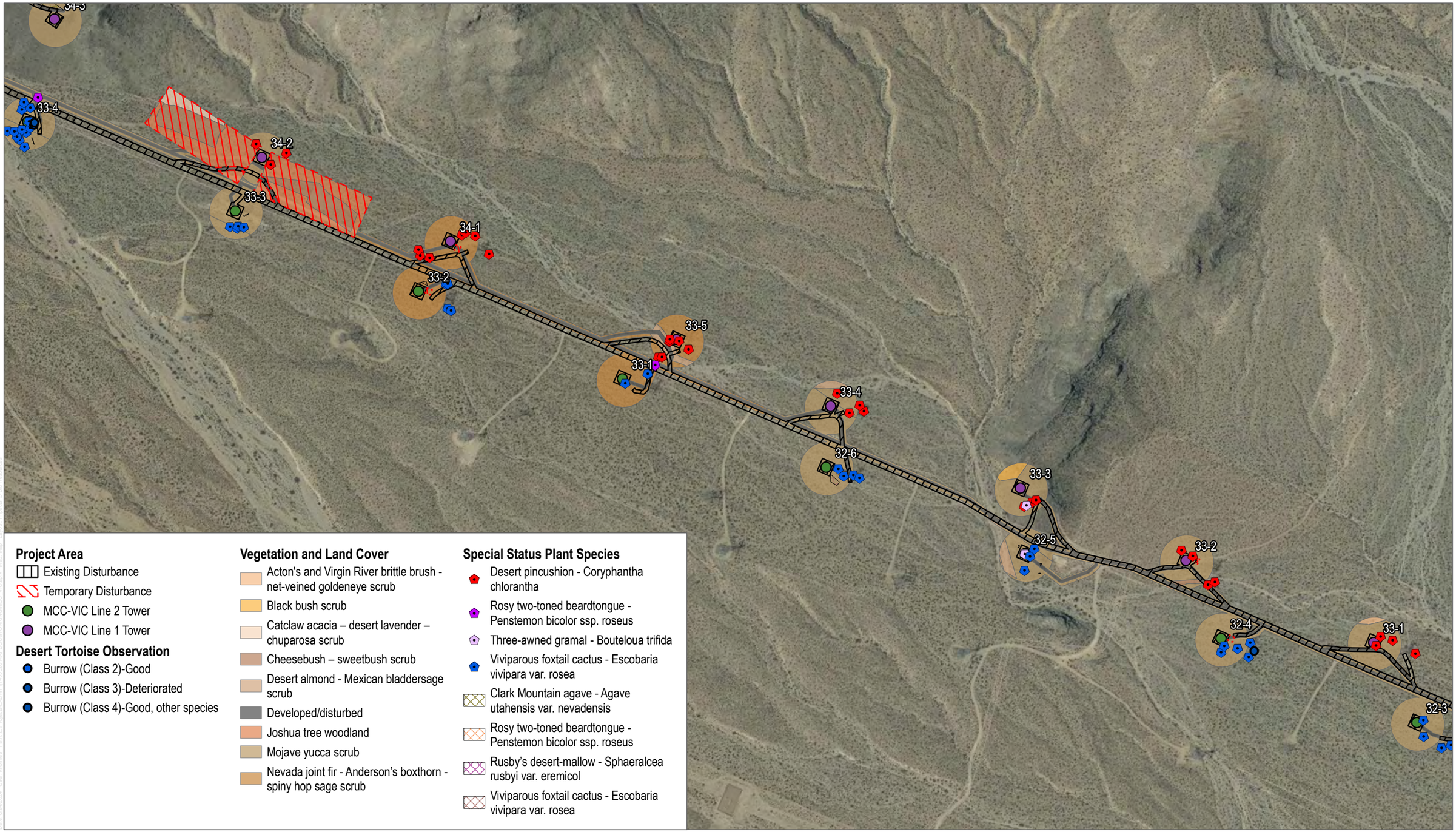
DUDEK

0 200 400 Feet

FIGURE 4.2-5-40

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

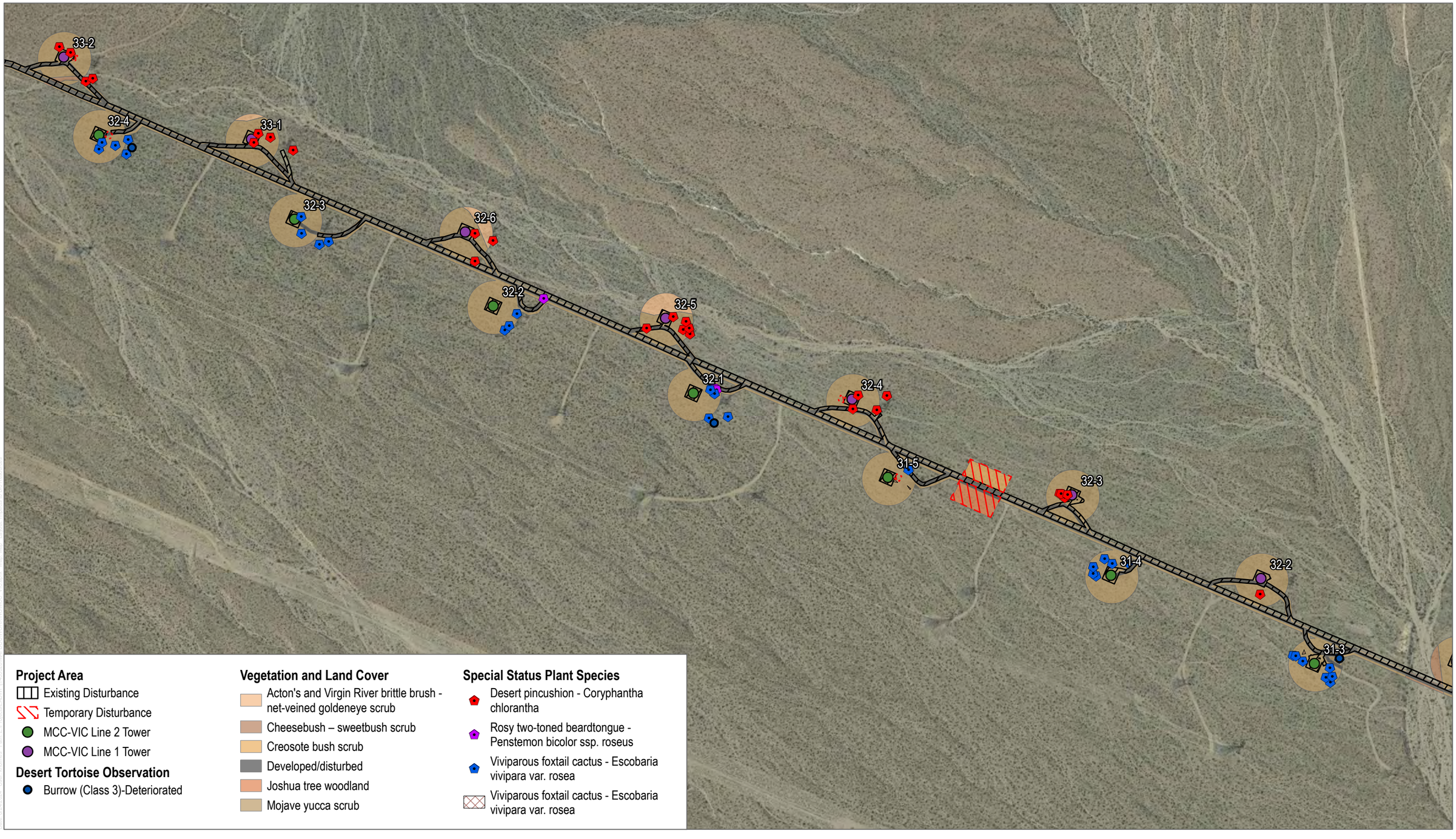
DUDEK

0 200 400 Feet

FIGURE 4.2-5-41

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

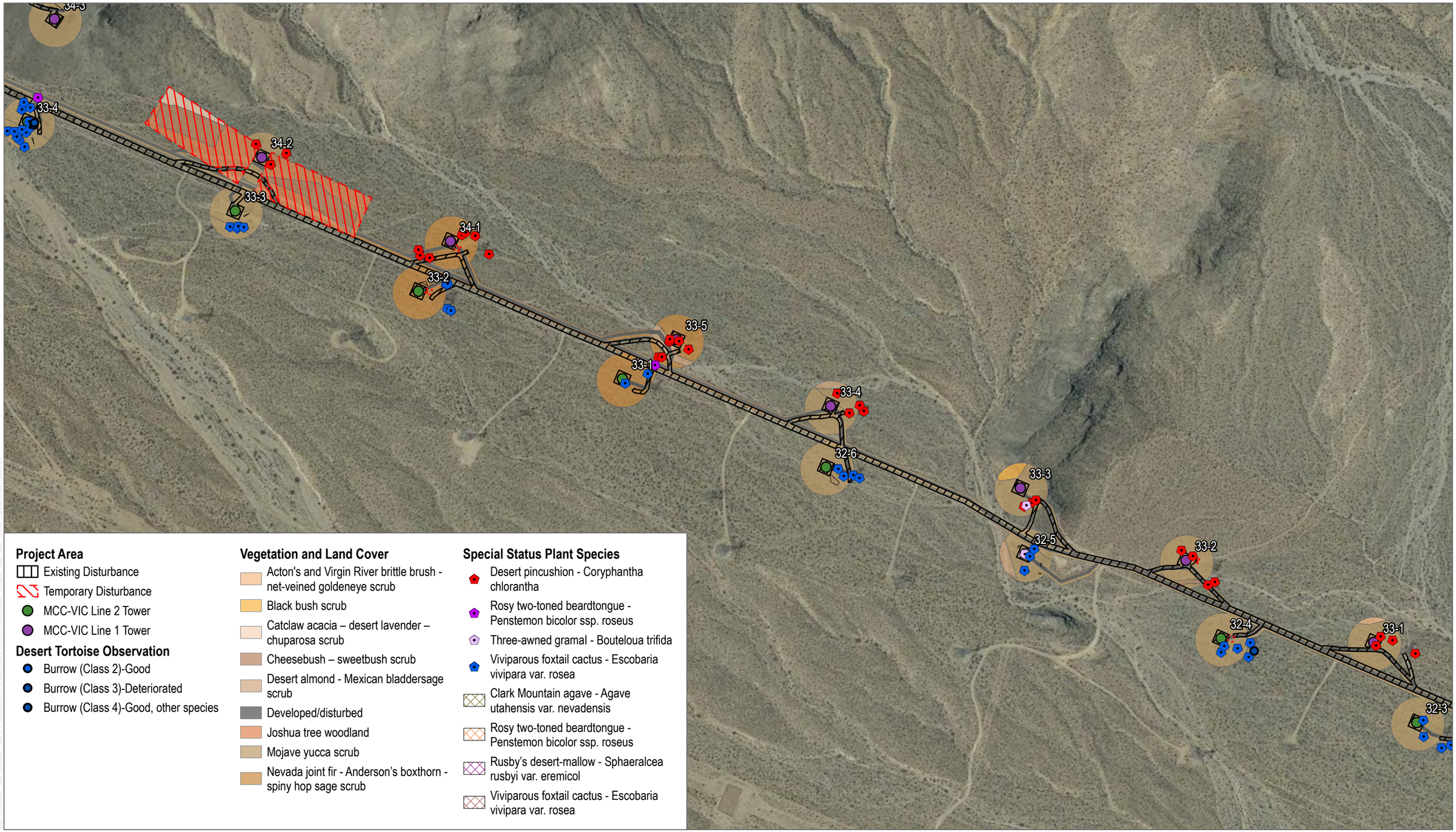
DUDEK

0 200 400 Feet

FIGURE 4.2-5-42

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

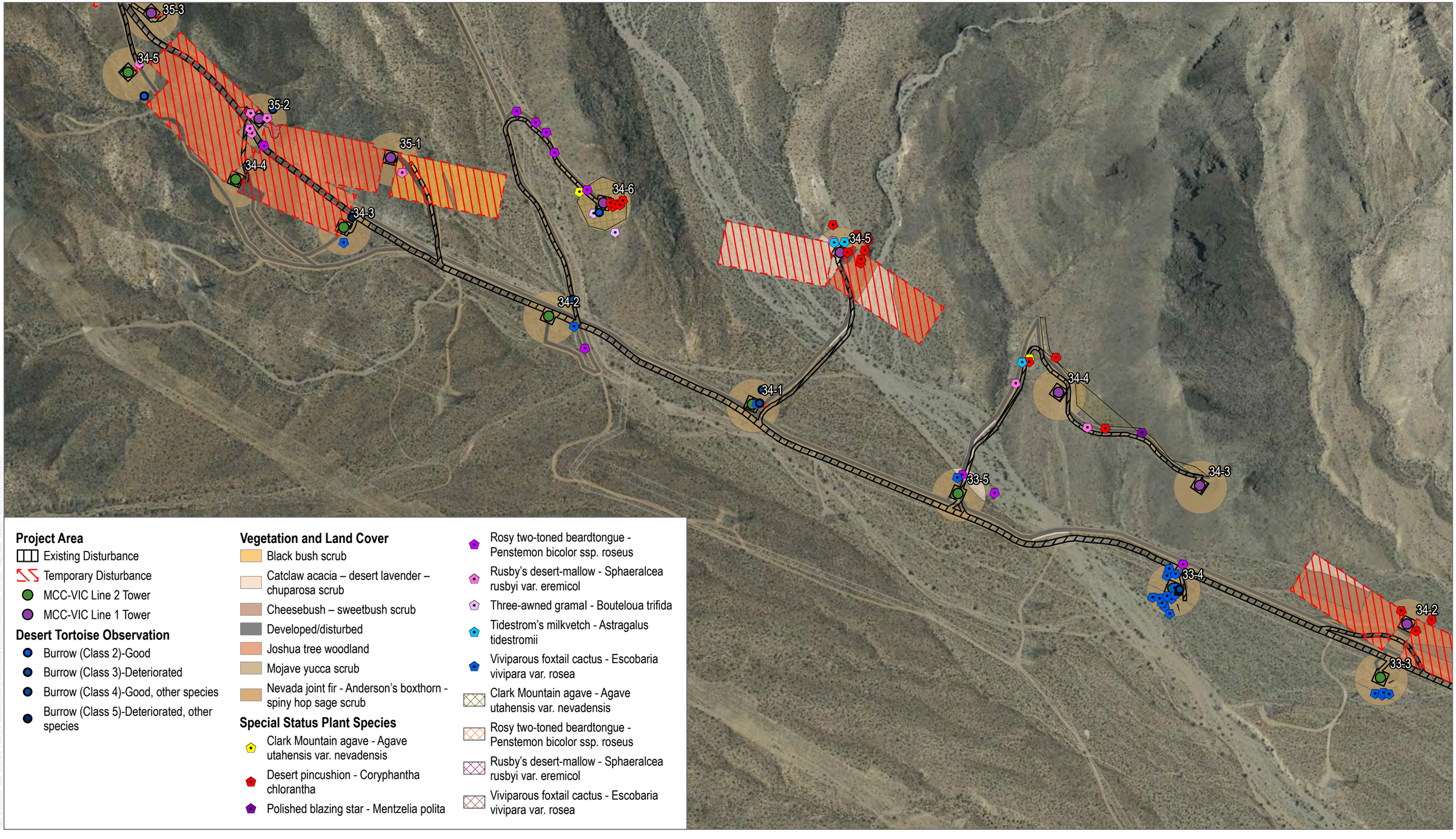
DUDEK

0 200 400 Feet

FIGURE 4.2-5-43

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

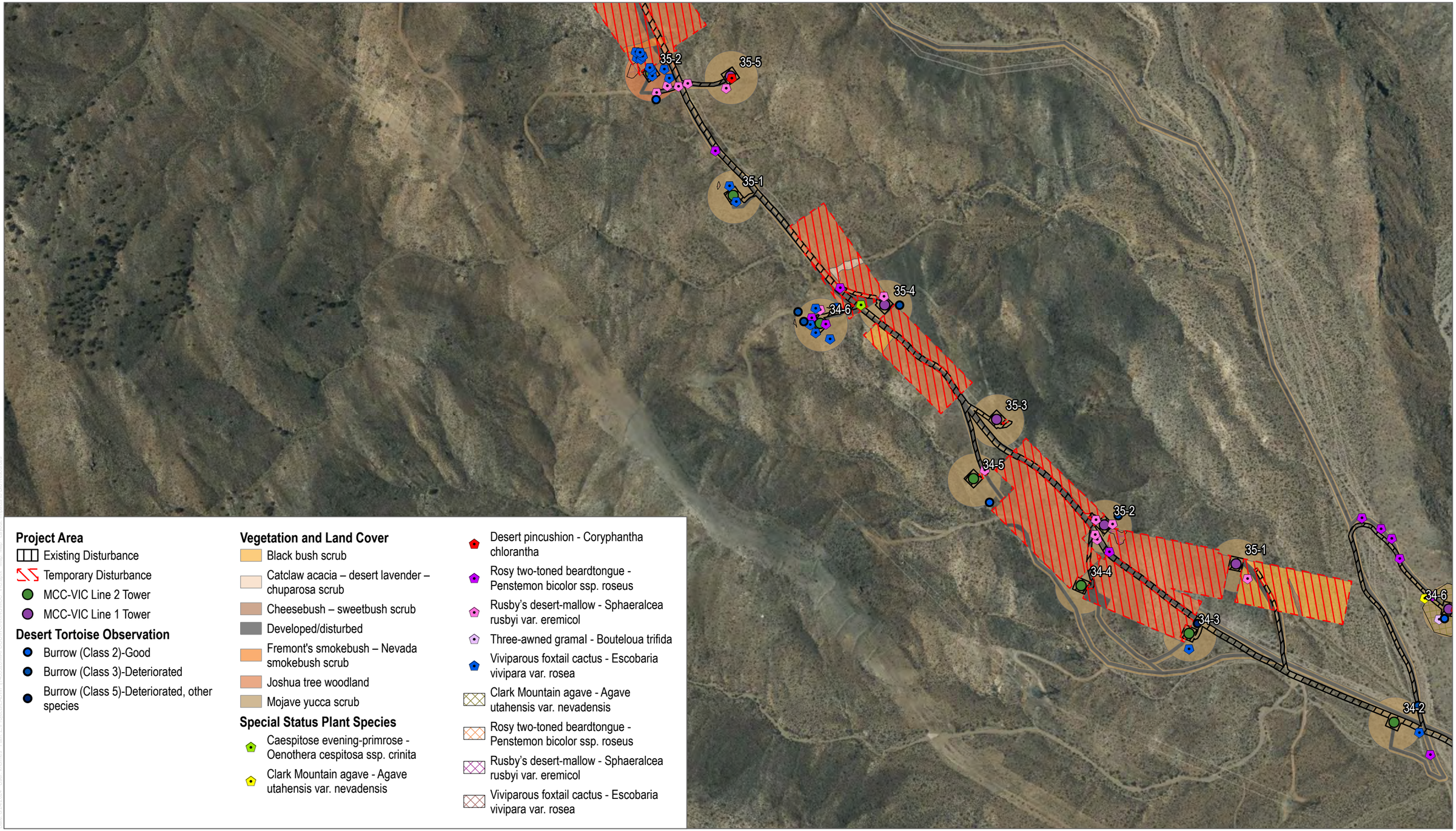
DUDEK

0 200 400 Feet

FIGURE 4.2-5-44

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

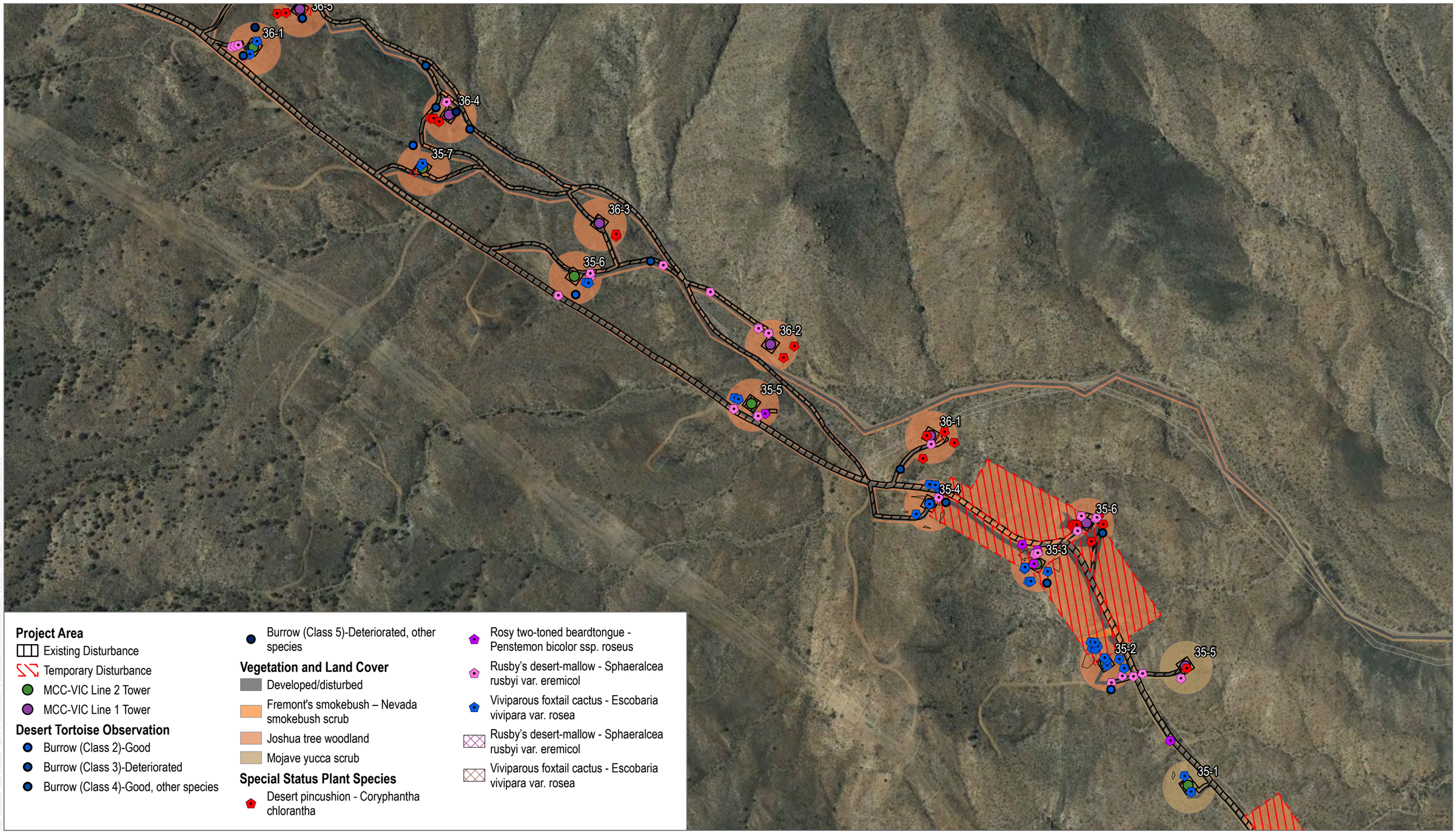
DUDEK

0 200 400 Feet

FIGURE 4.2-5-45

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

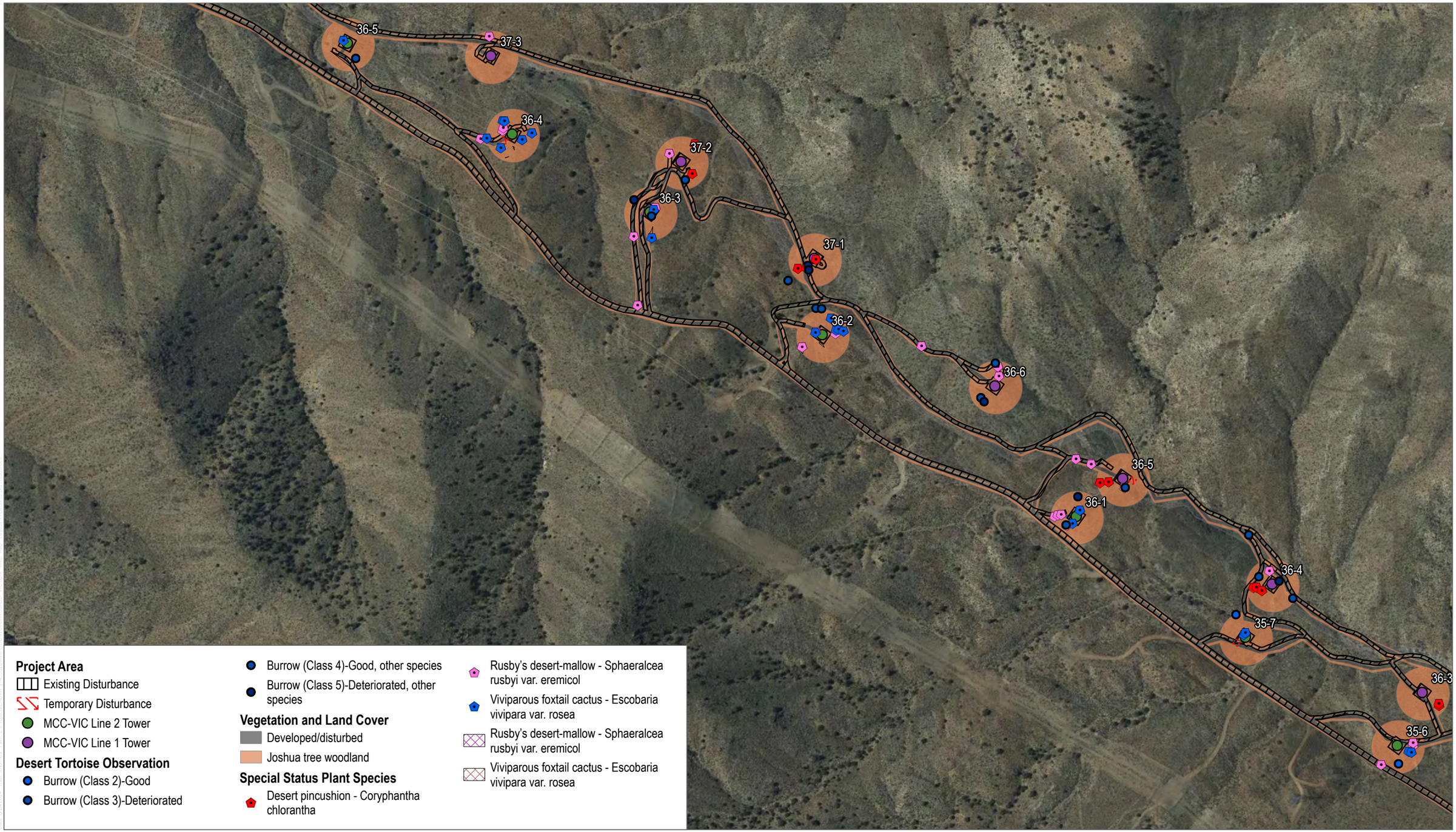
DUDEK

0 200 400 Feet

FIGURE 4.2-5-46

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

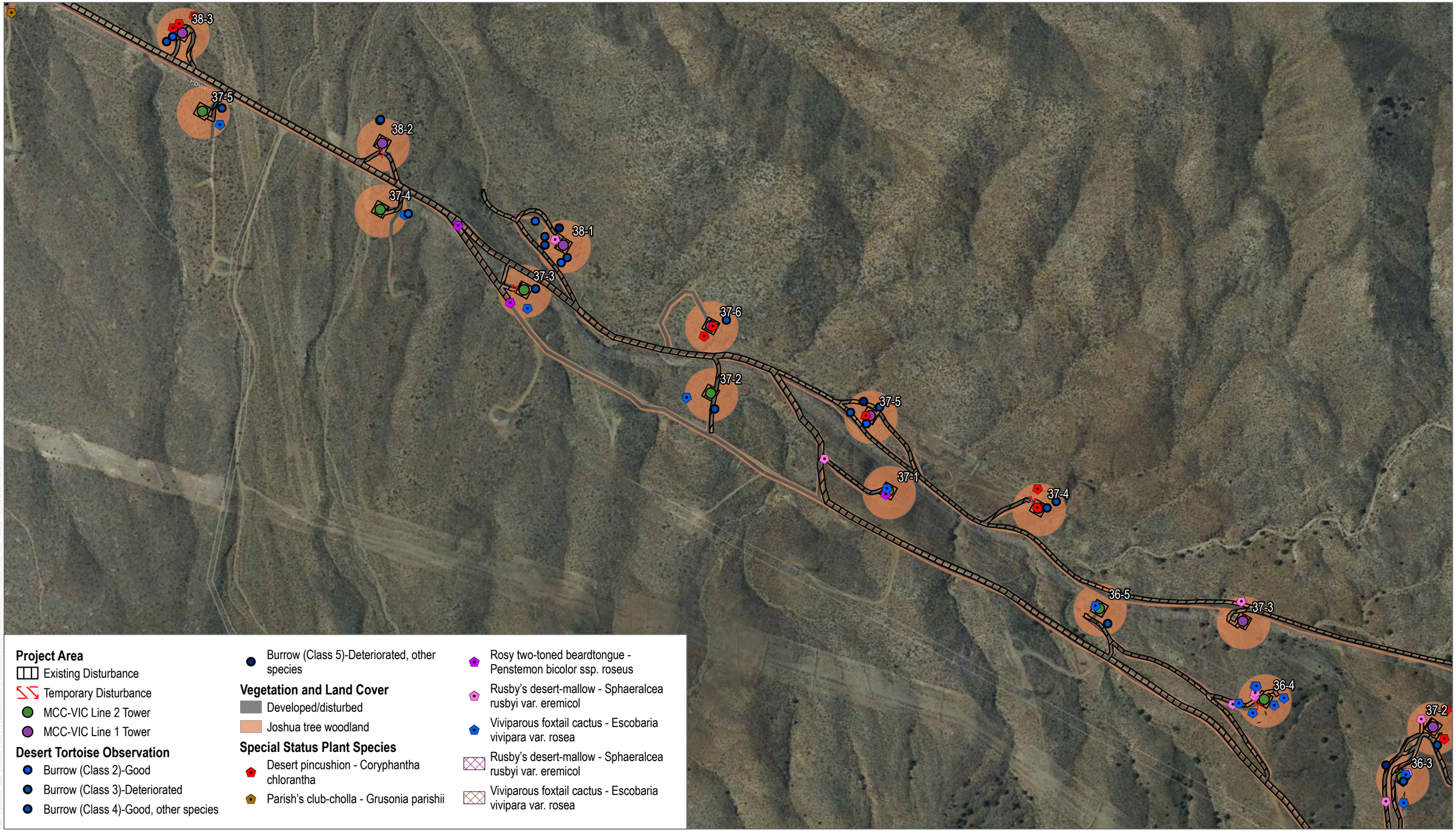
DUDEK

0 200 400 Feet

FIGURE 4.2-5-47

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

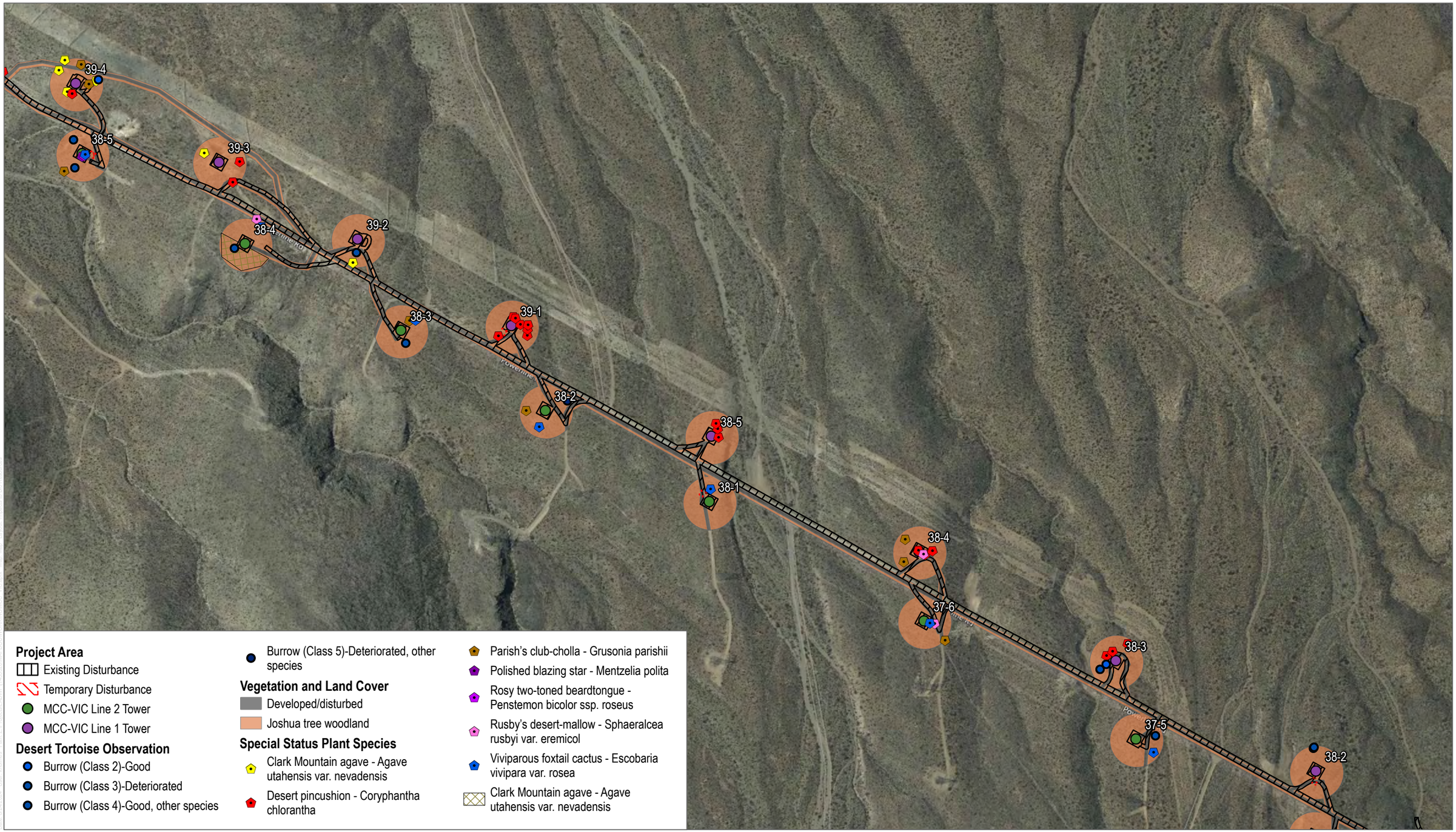
DUDEK

0 200 400 Feet

FIGURE 4.2-5-48

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

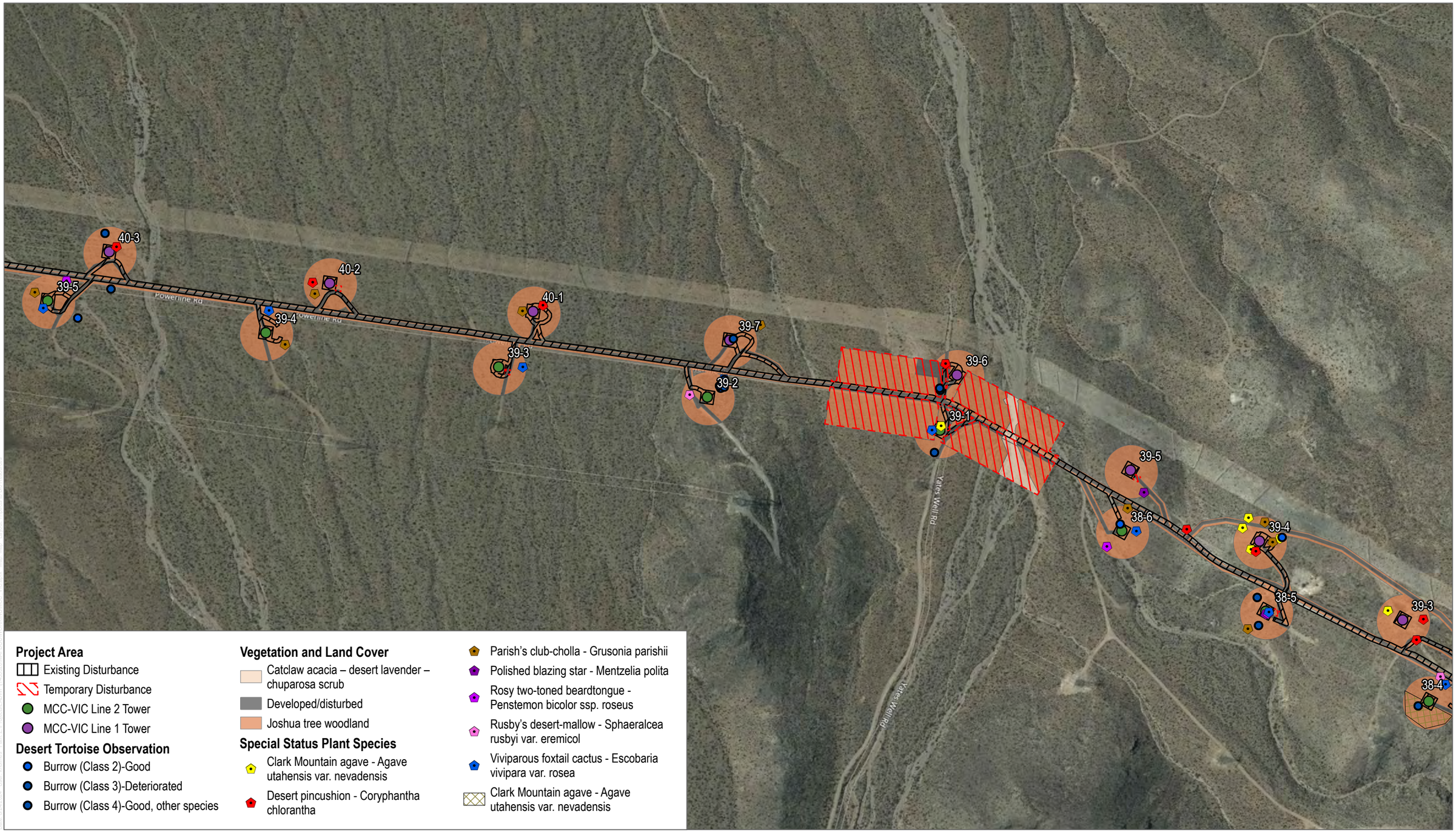
DUDEK

0 200 400 Feet

FIGURE 4.2-5-49

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

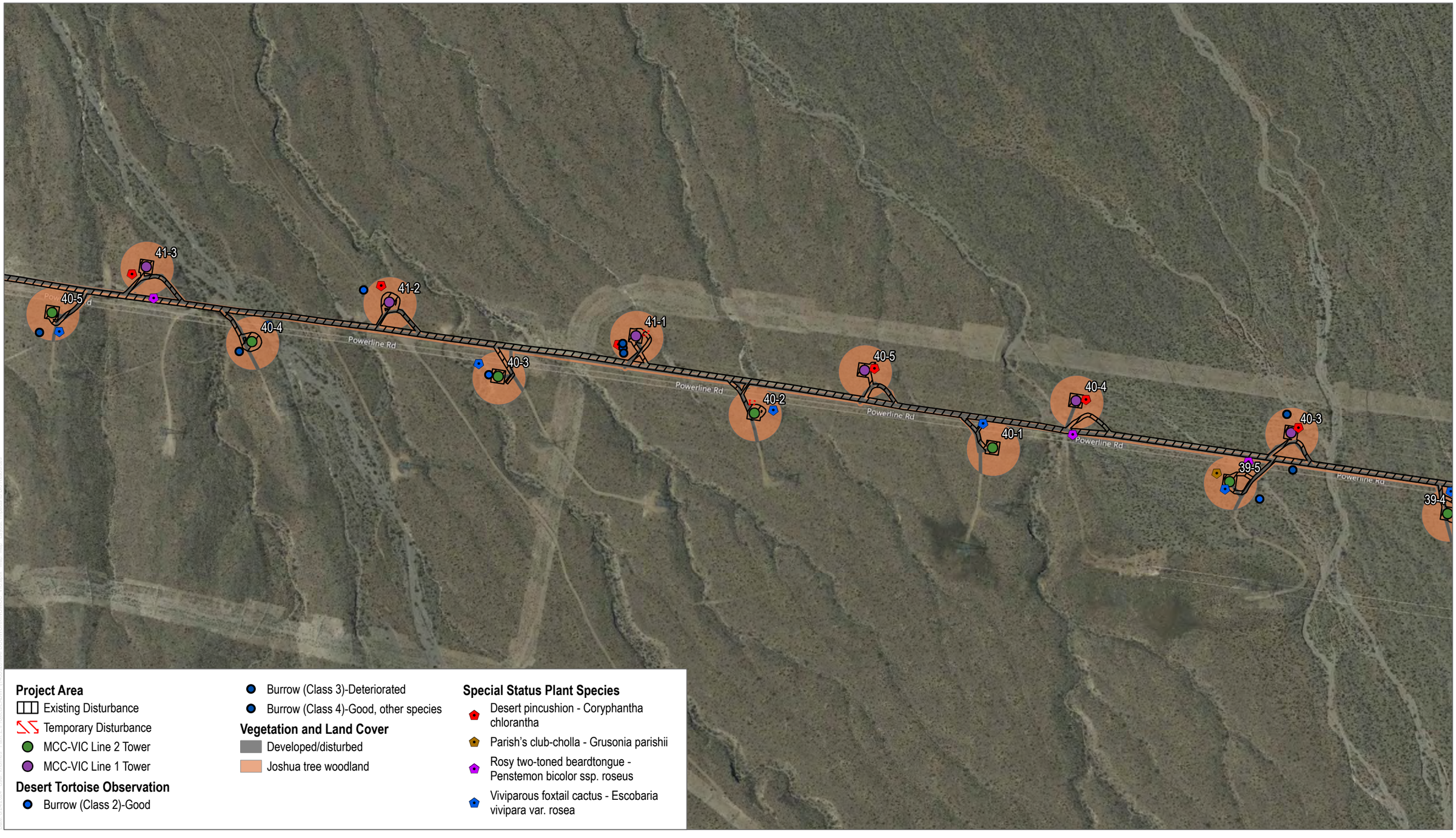
DUDEK

0 200 400 Feet

FIGURE 4.2-5-50

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

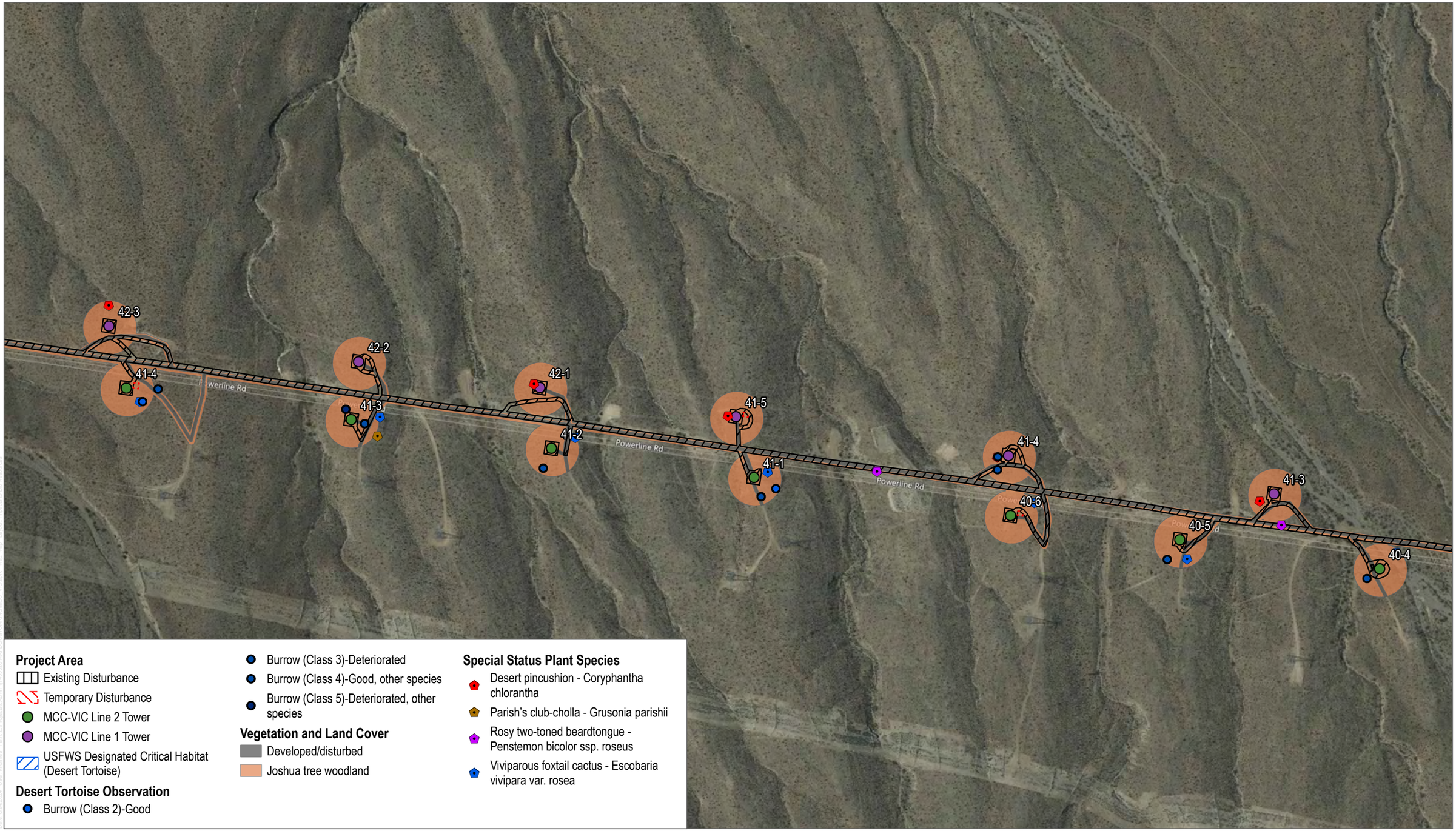
DUDEK

0 200 400 Feet

FIGURE 4.2-5-51

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

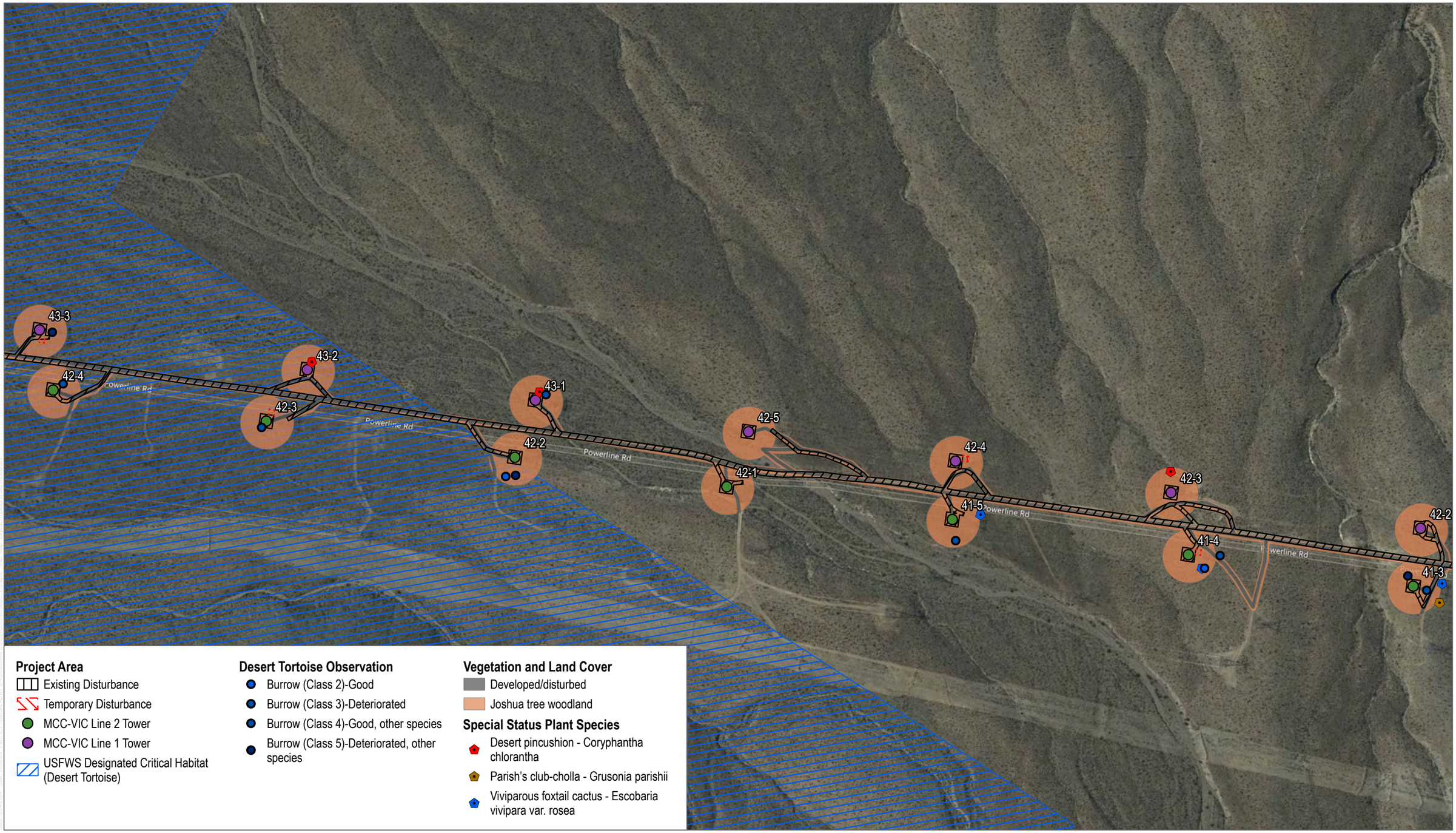
DUDEK

0 200 400 Feet

FIGURE 4.2-5-52

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

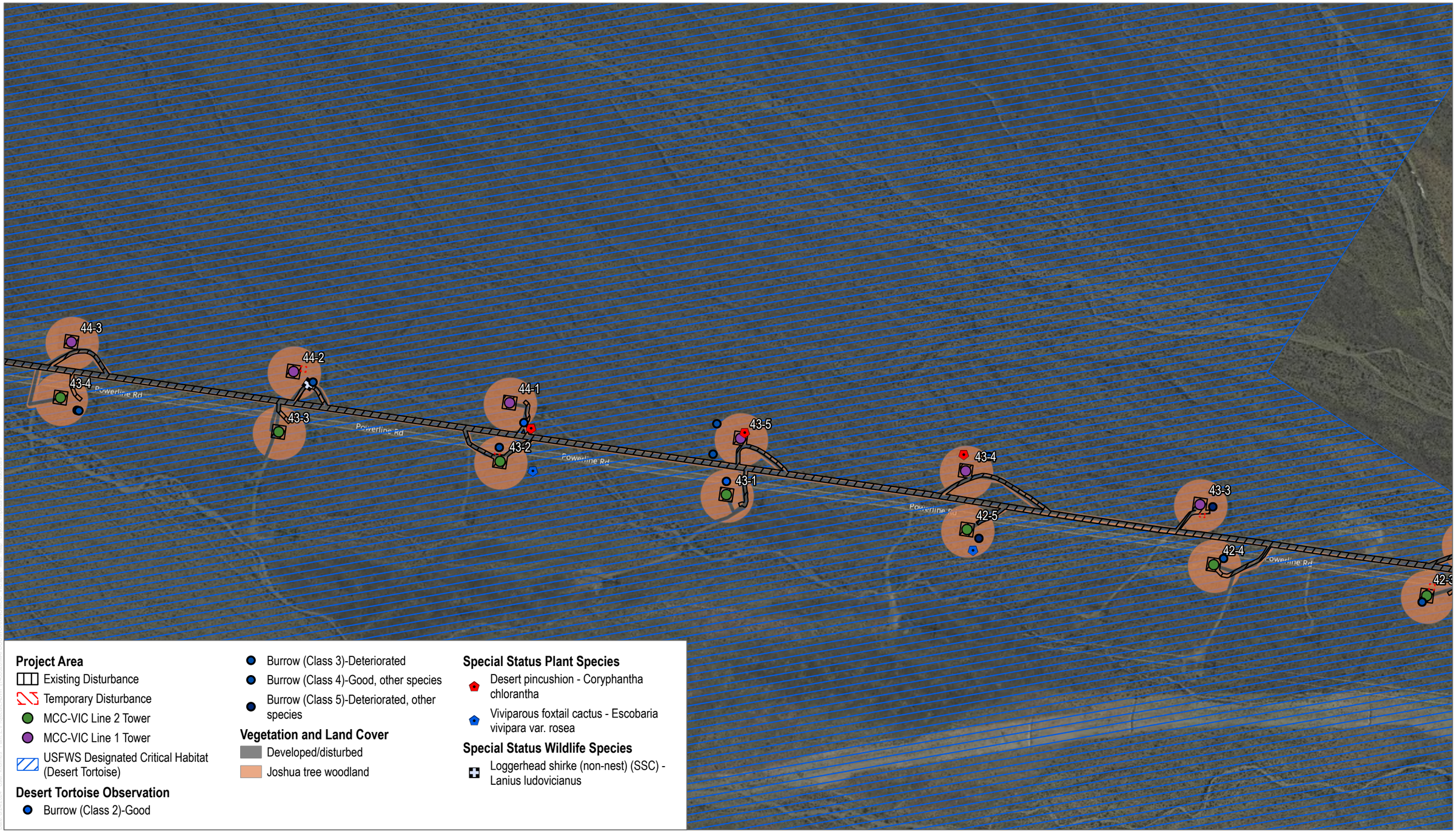
DUDEK

0 200 400 Feet

FIGURE 4.2-5-53

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

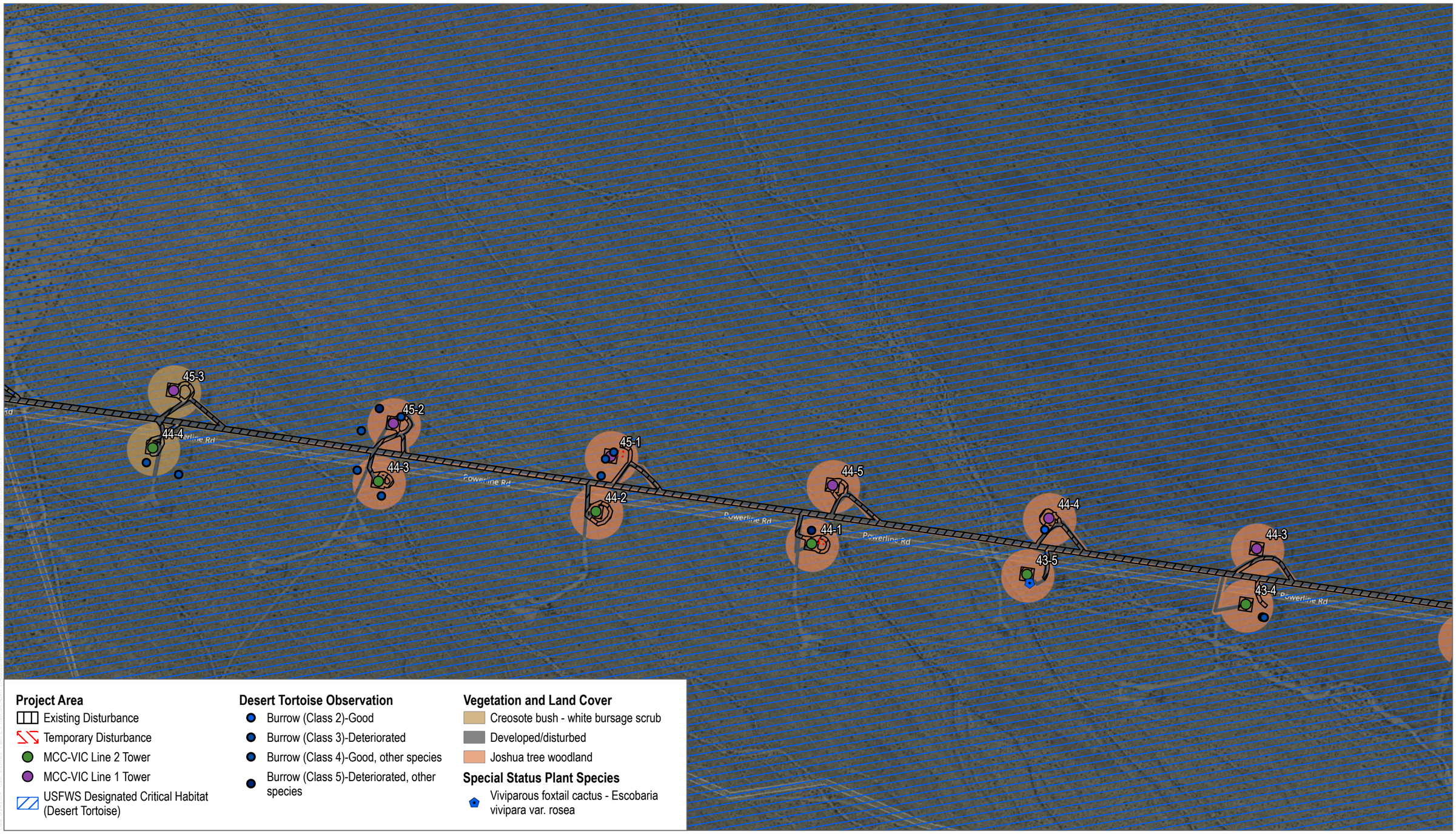
DUDEK

0 200 400 Feet

FIGURE 4.2-5-54

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

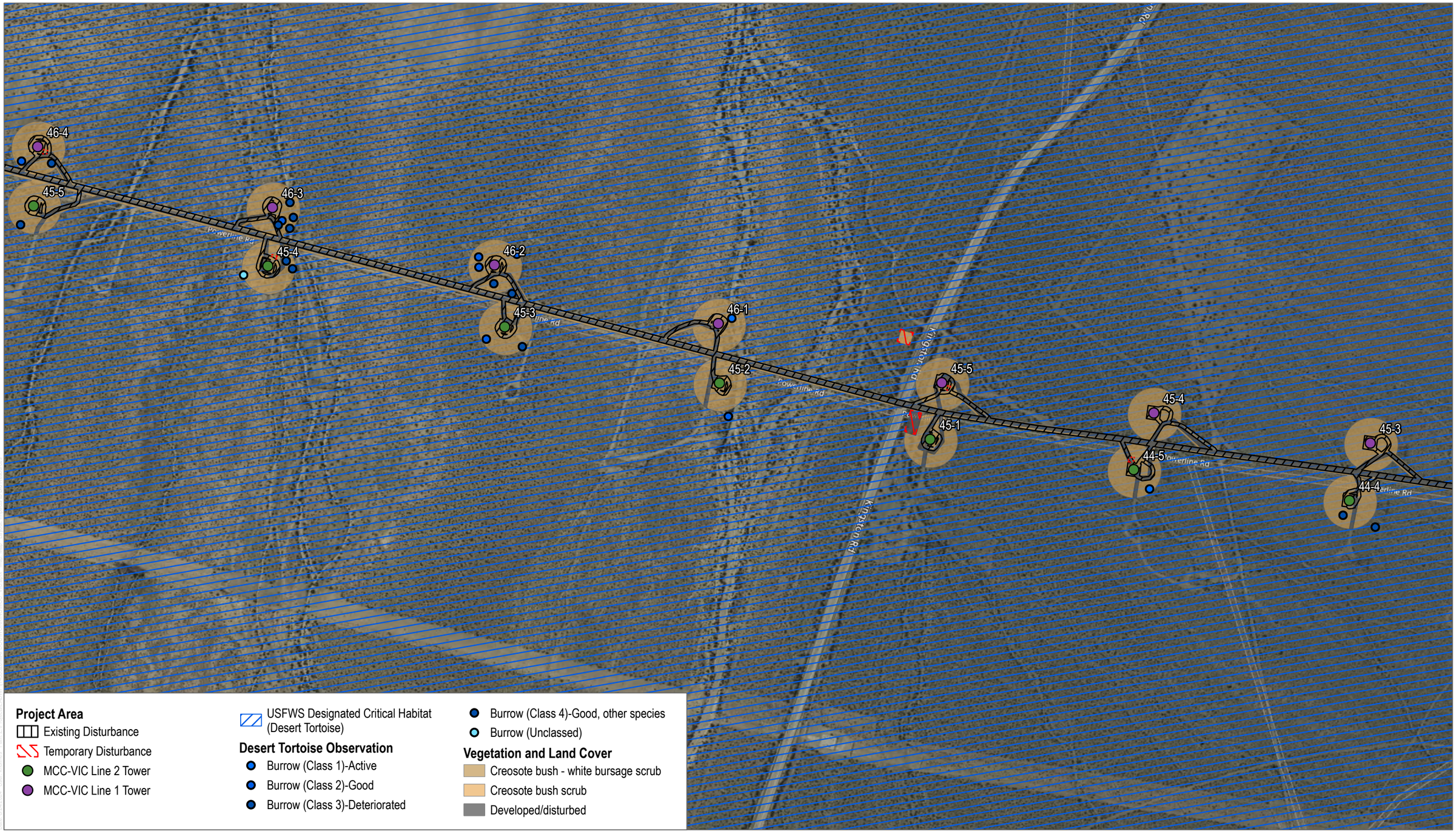
DUDEK

0 200 400 Feet

FIGURE 4.2-5-55

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

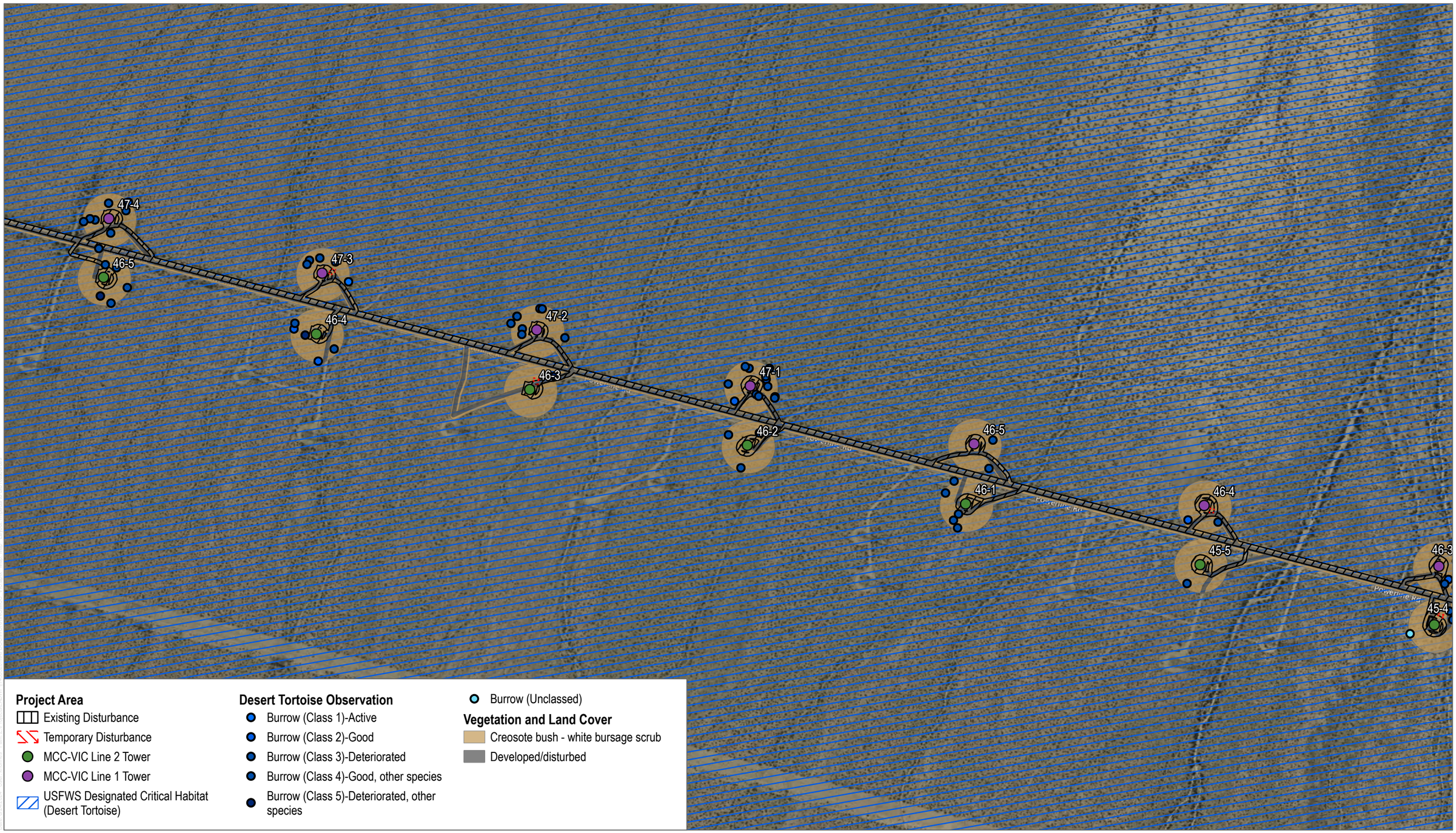
DUDEK

0 200 400 Feet

FIGURE 4.2-5-56

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-57
Impacts to Biological Resources
McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

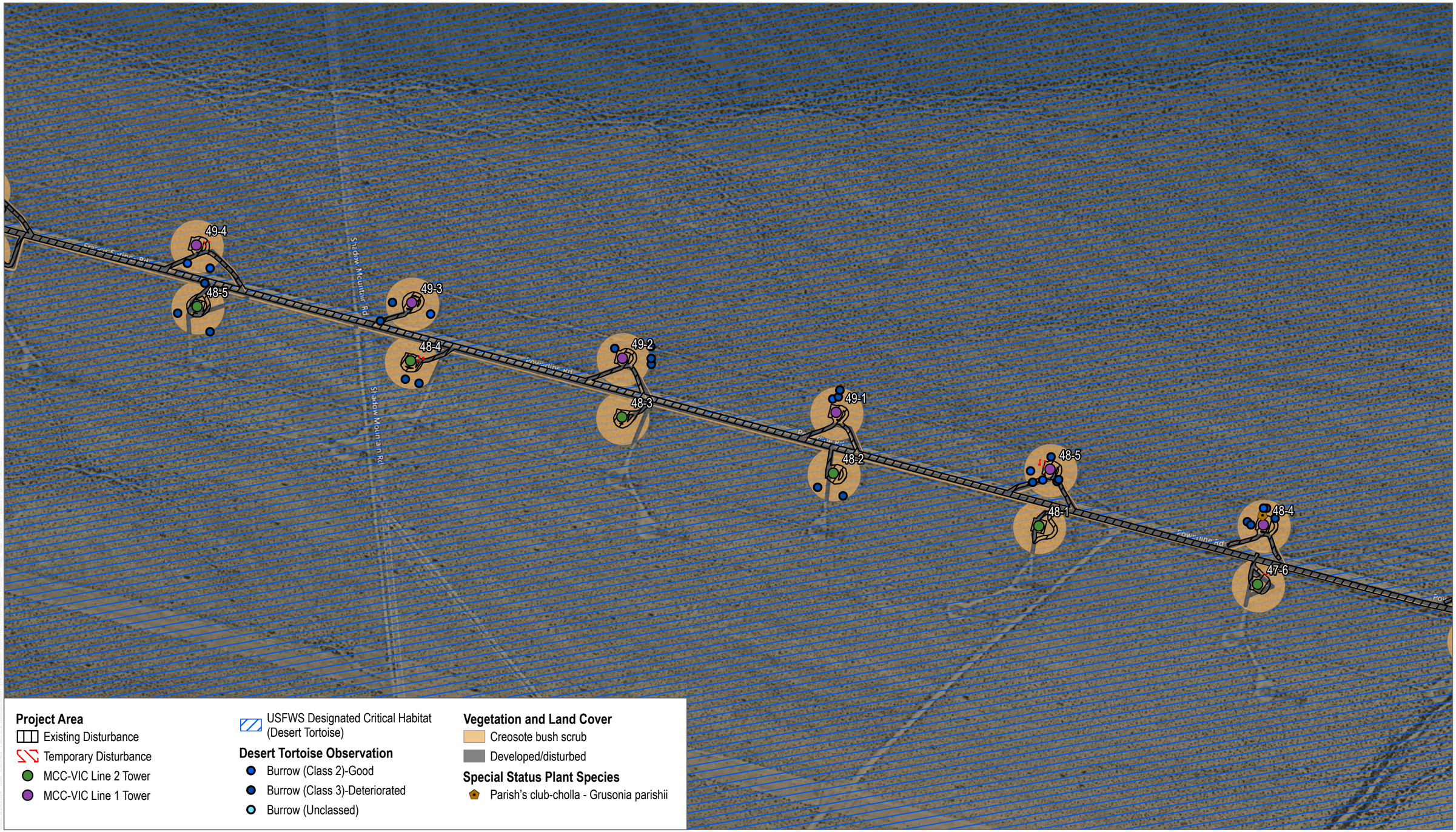
DUDEK

0 200 400 Feet

FIGURE 4.2-5-58

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

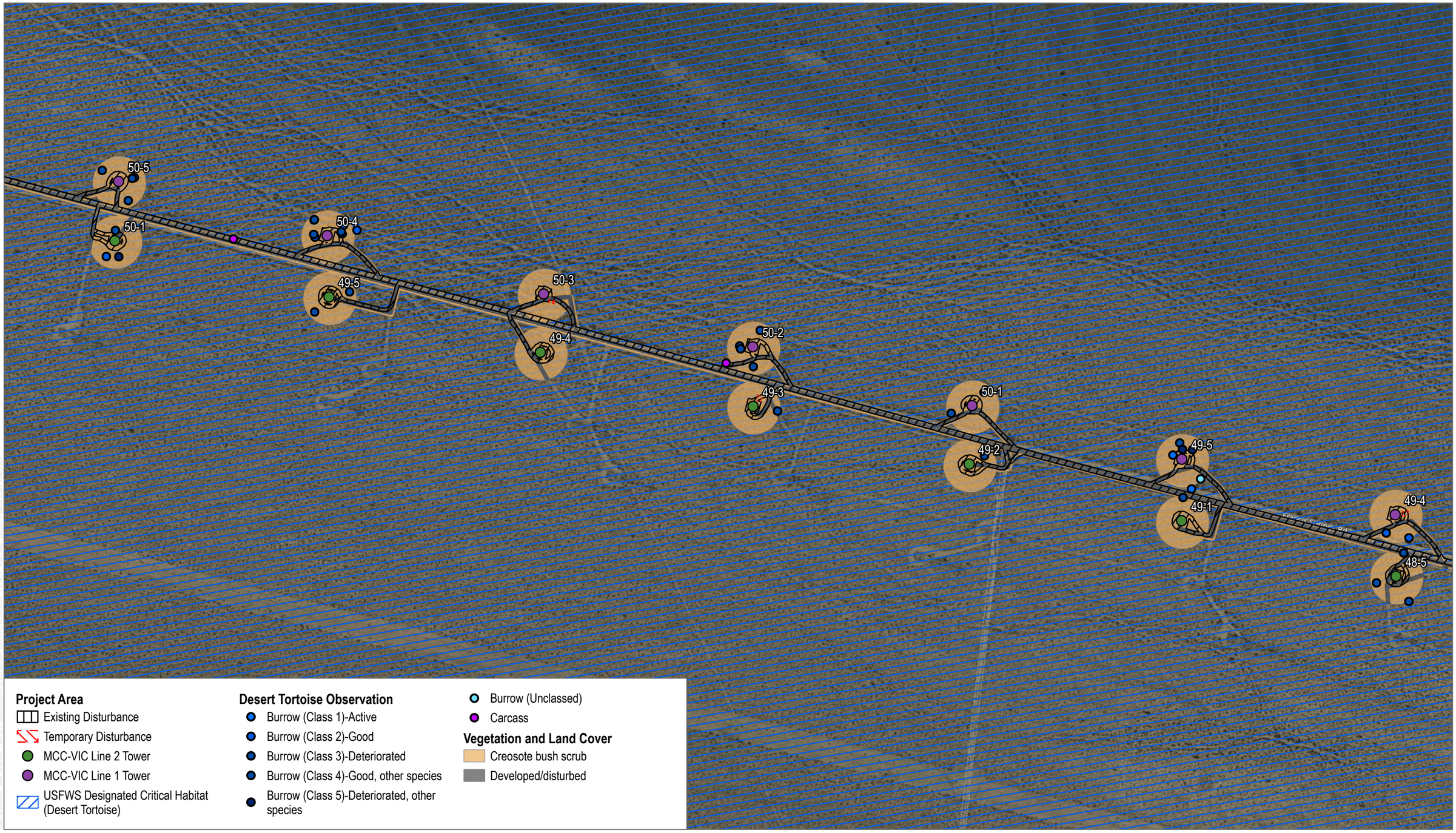
DUDEK

0 200 400 Feet

FIGURE 4.2-5-59

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

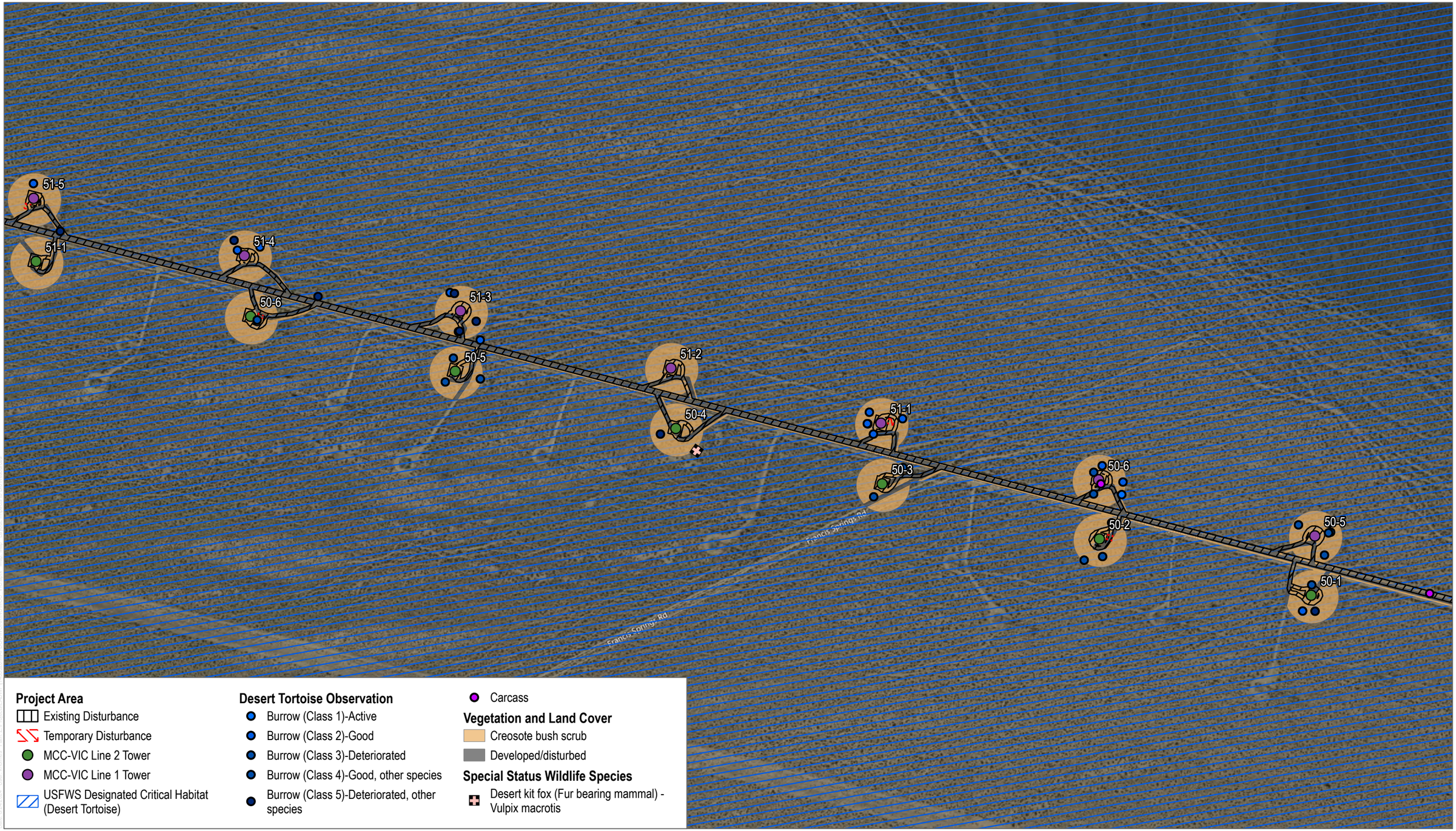
DUDEK

0 200 400 Feet

FIGURE 4.2-5-60

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-61

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-62

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

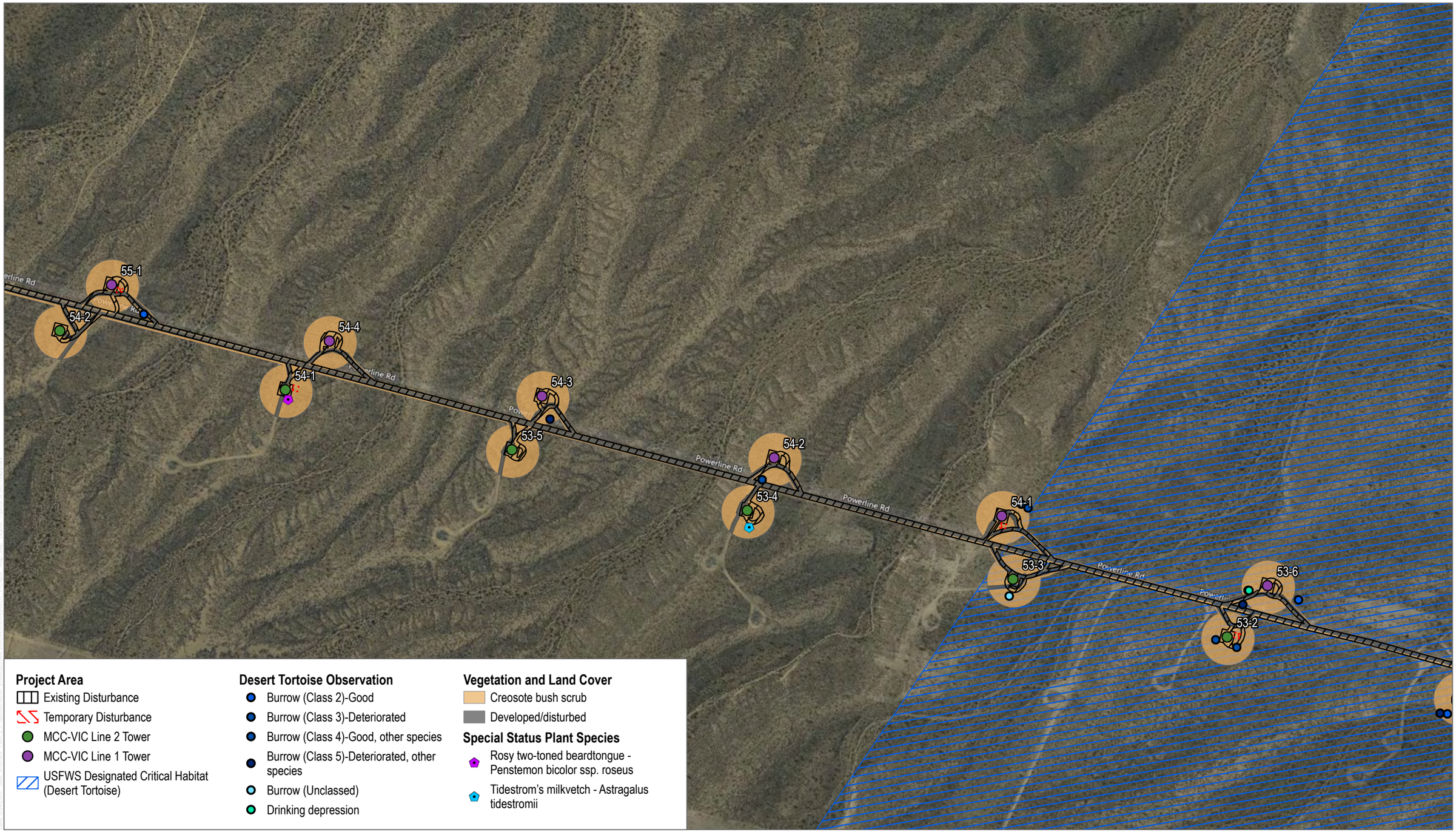
DUDEK

0 200 400 Feet

FIGURE 4.2-5-63

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

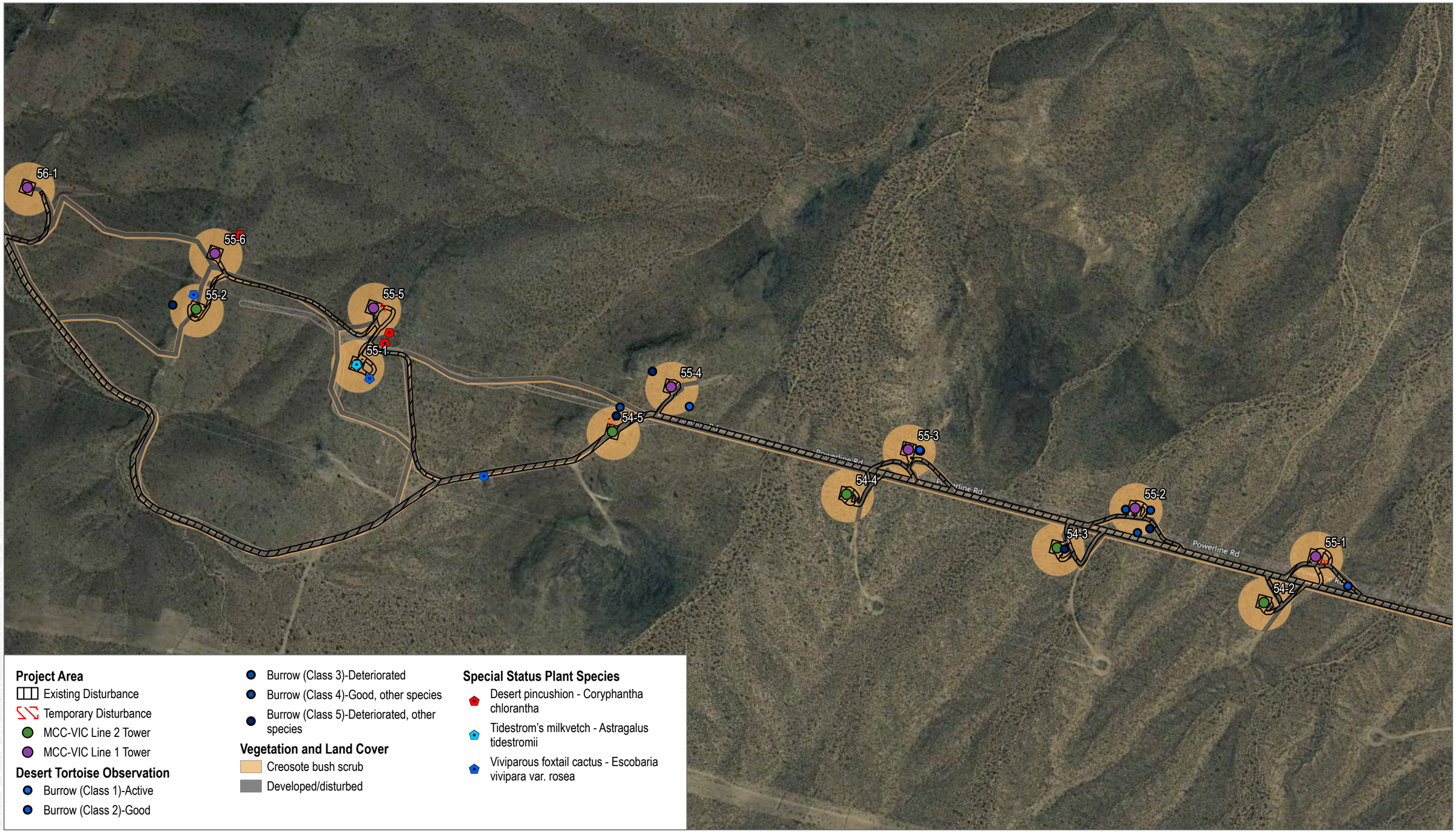
DUDEK

0 200 400 Feet

FIGURE 4.2-5-64

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

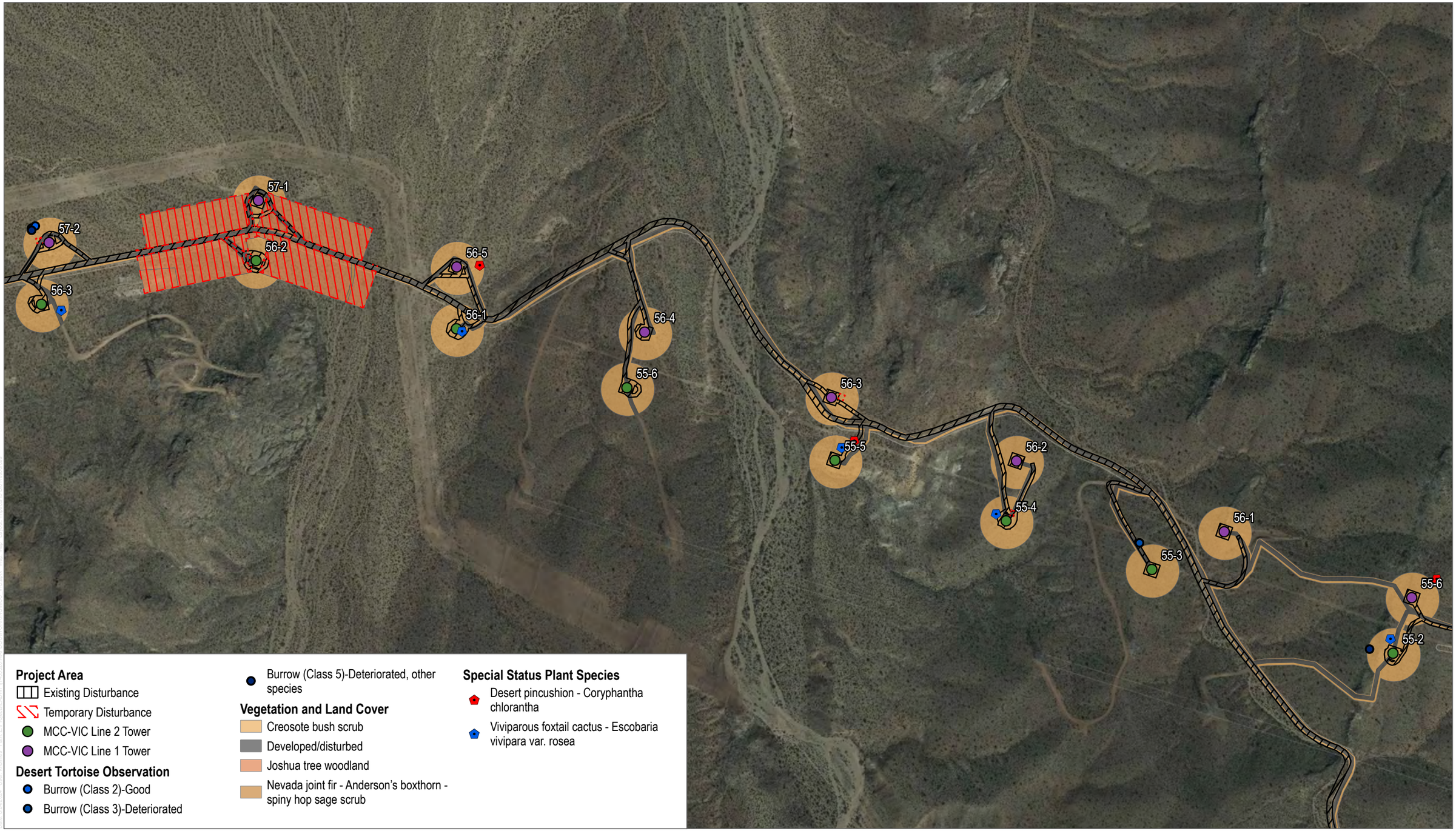
DUDEK

0 200 400 Feet

FIGURE 4.2-5-65

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

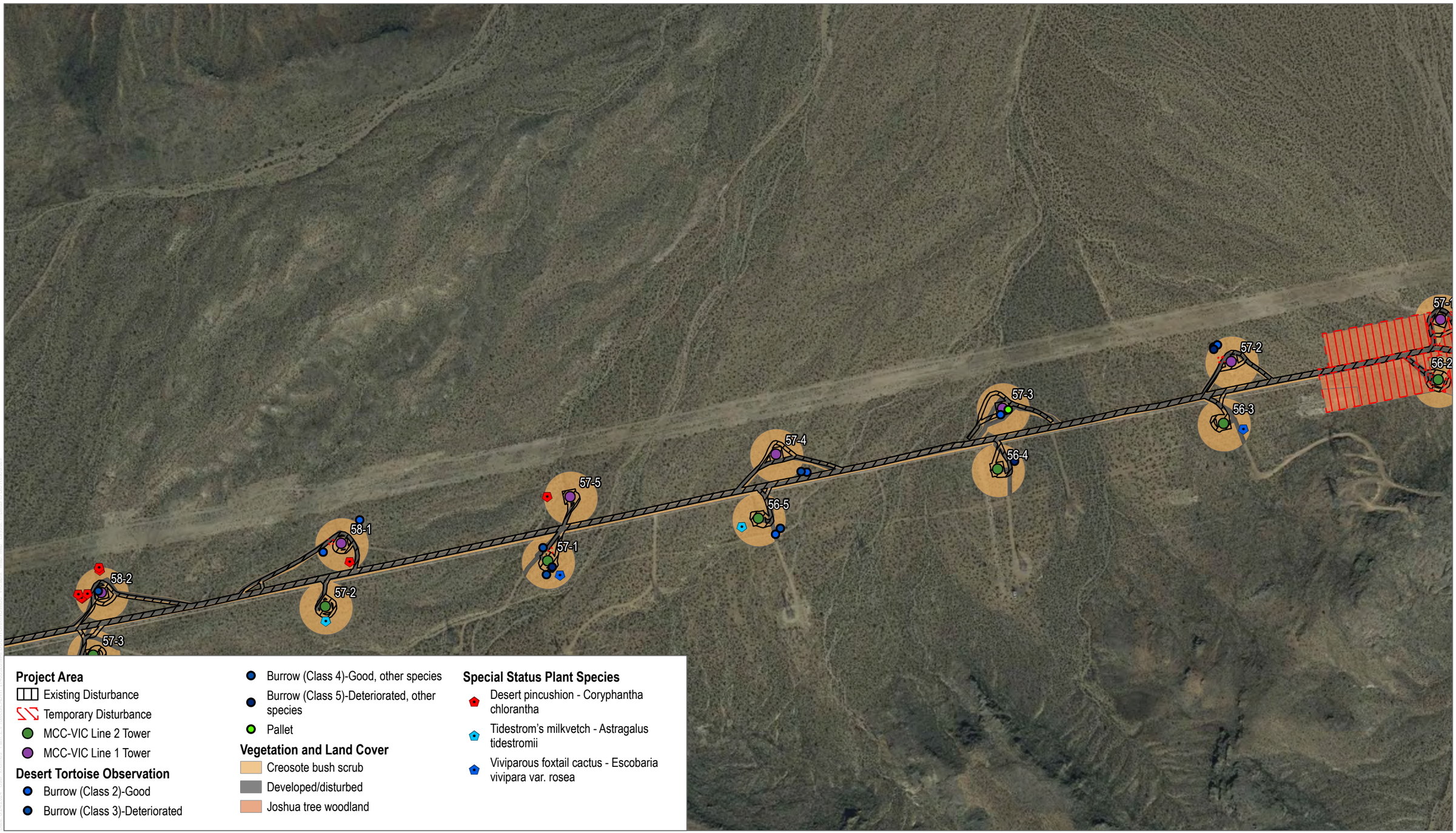
DUDEK

0 200 400 Feet

FIGURE 4.2-5-66

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

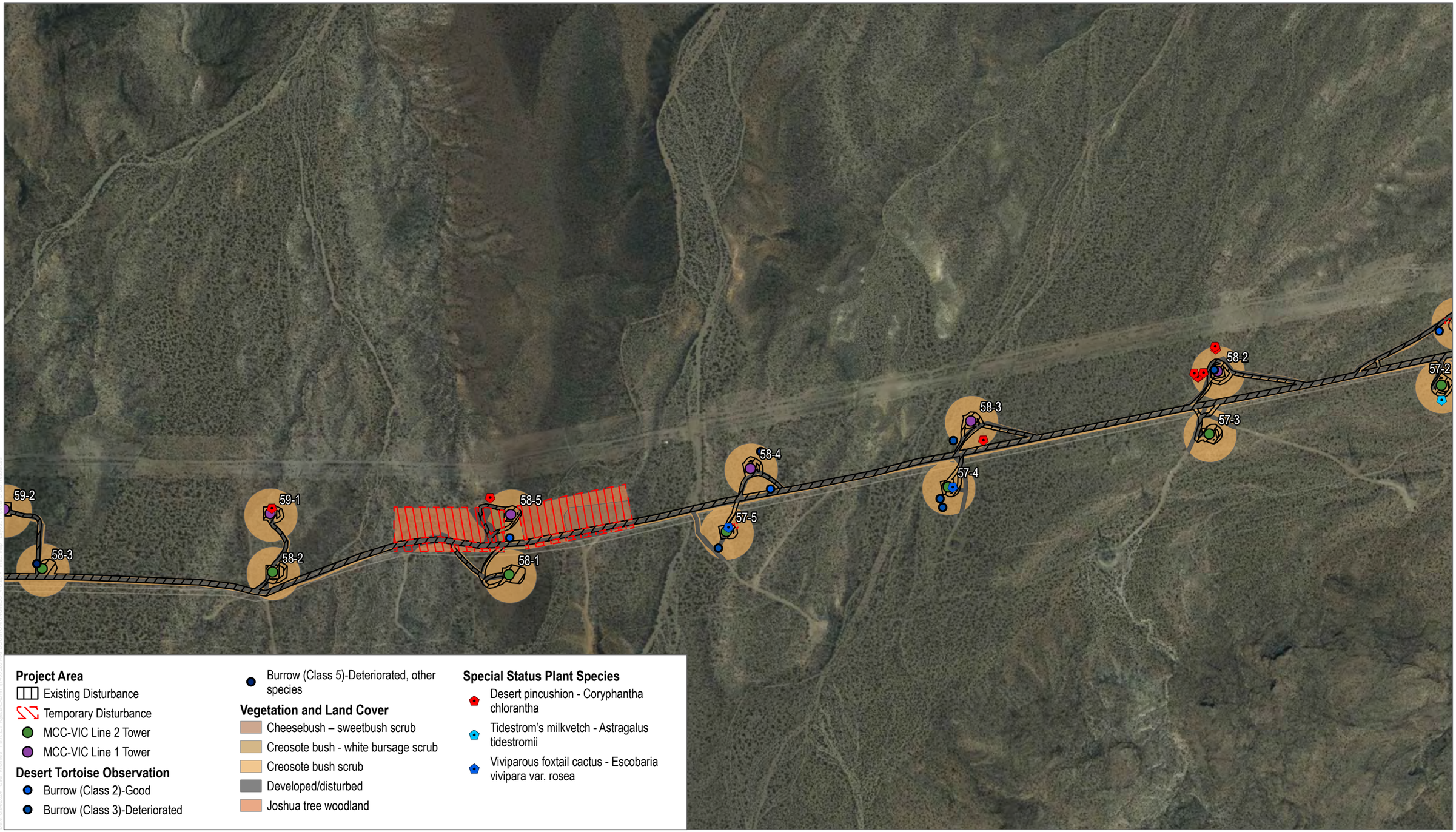
DUDEK

0 200 400 Feet

FIGURE 4.2-5-67

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-68

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

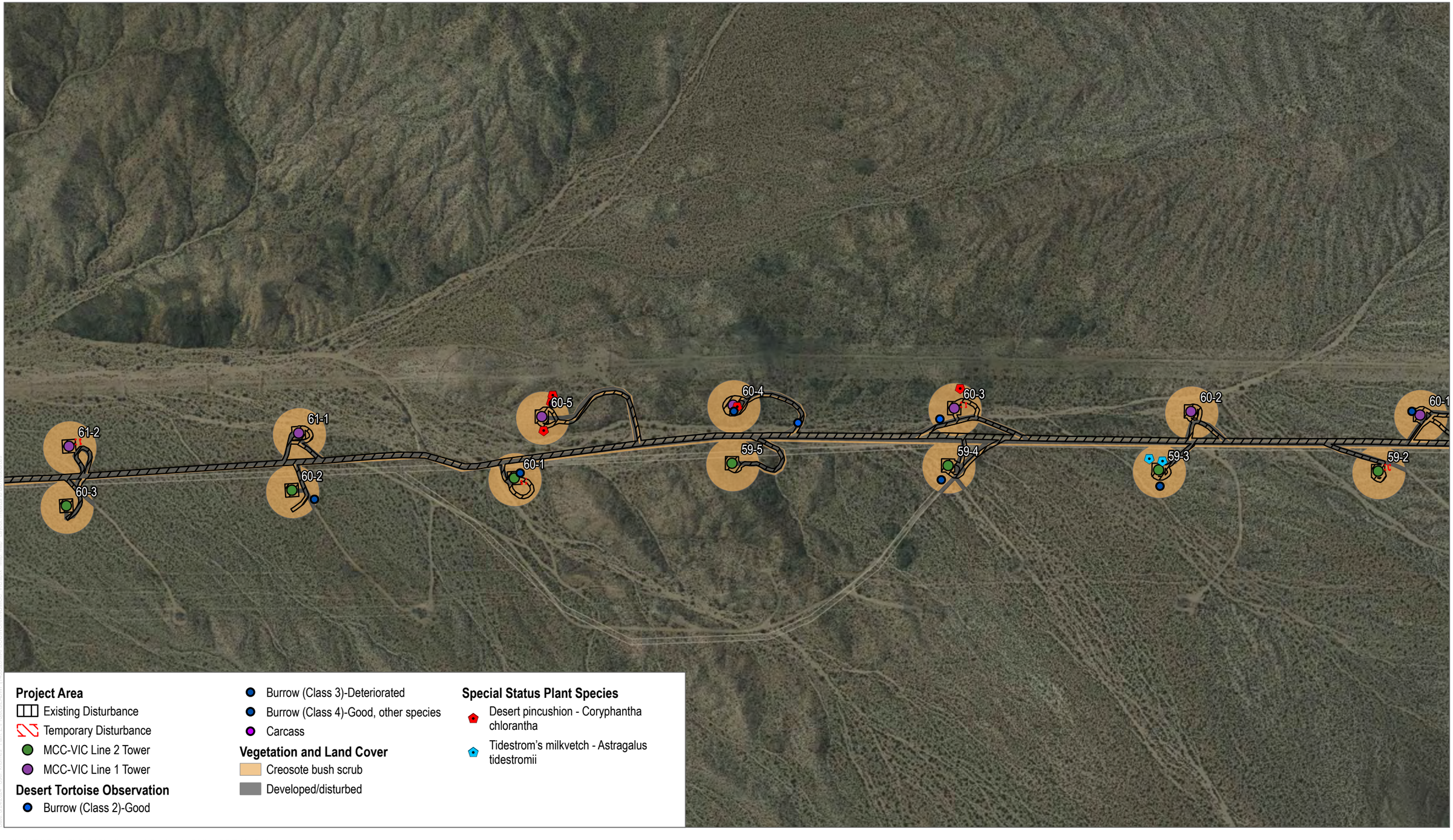
DUDEK

0 200 400 Feet

FIGURE 4.2-5-69

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

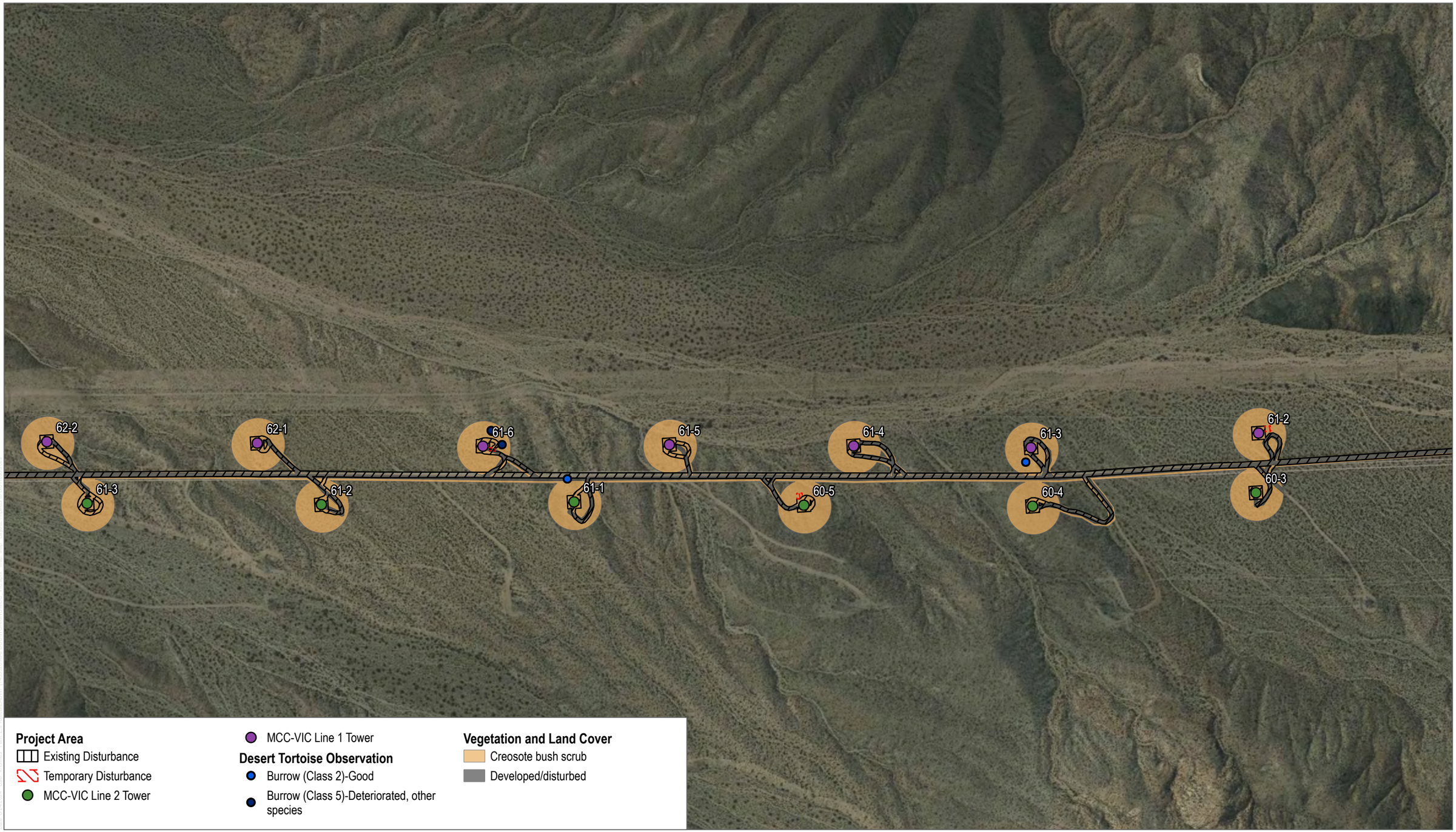
DUDEK

0 200 400 Feet

FIGURE 4.2-5-70

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

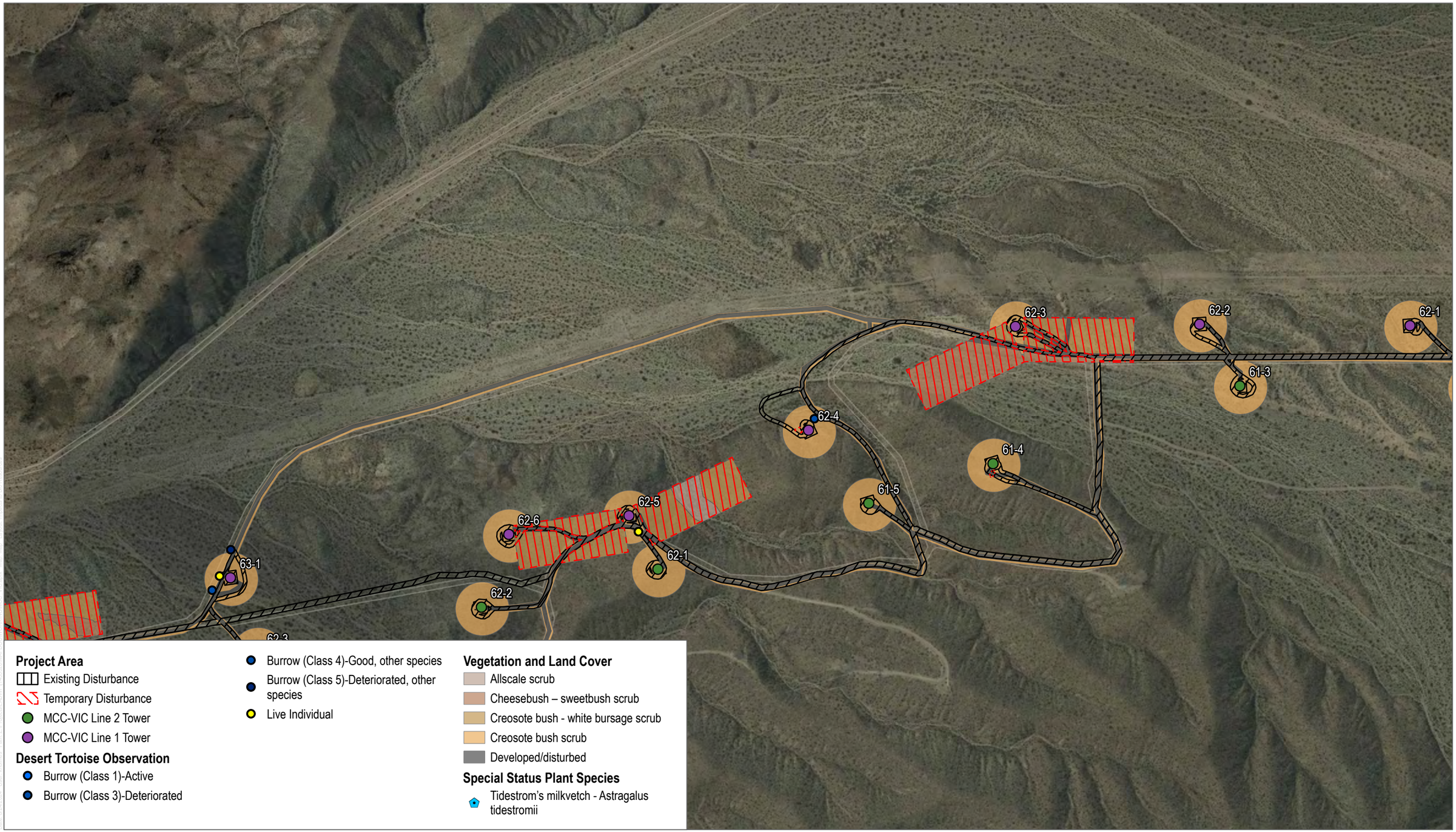
DUDEK

0 200 400 Feet

FIGURE 4.2-5-71

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

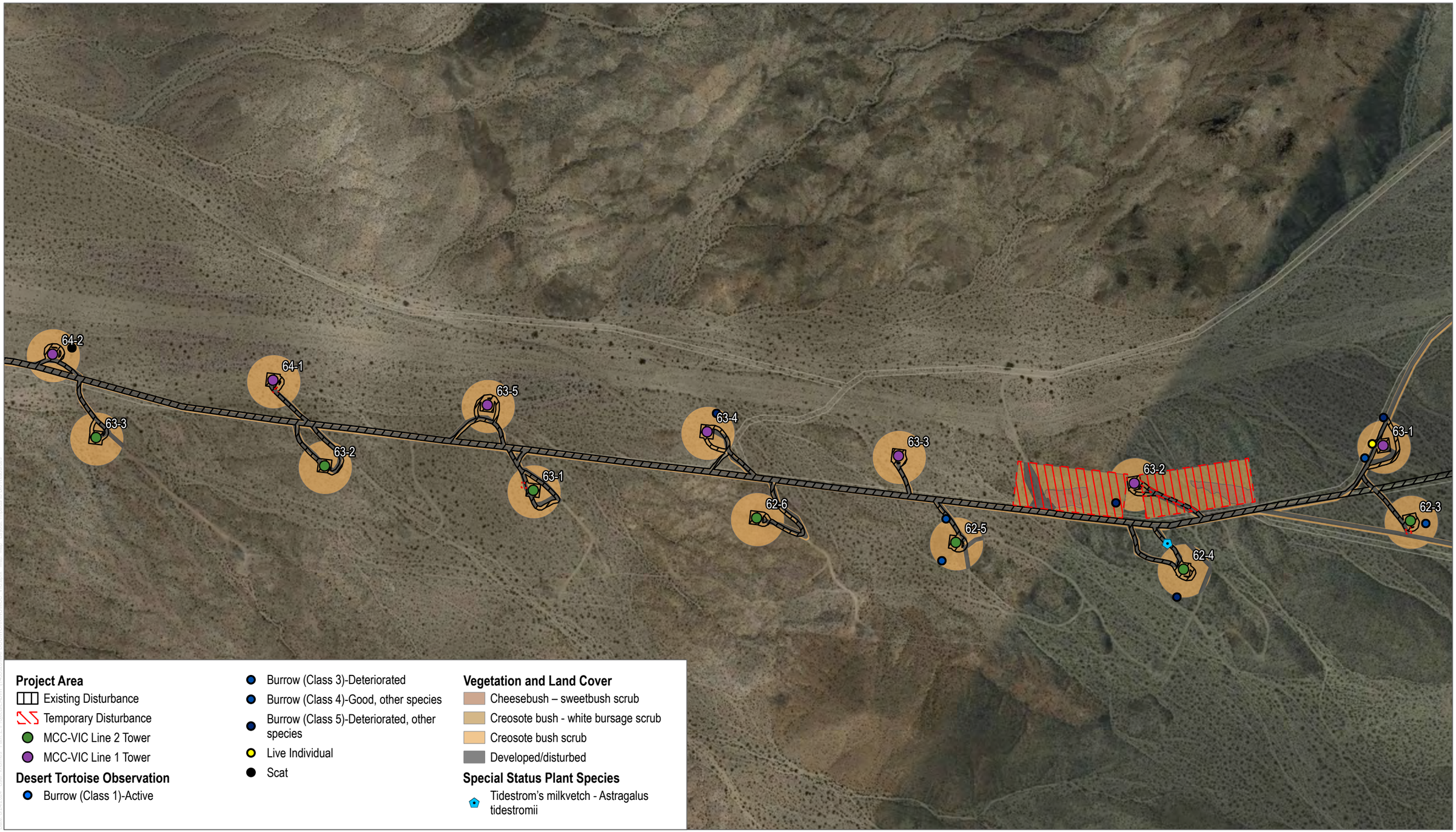
DUDEK

0 200 400 Feet

FIGURE 4.2-5-72

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

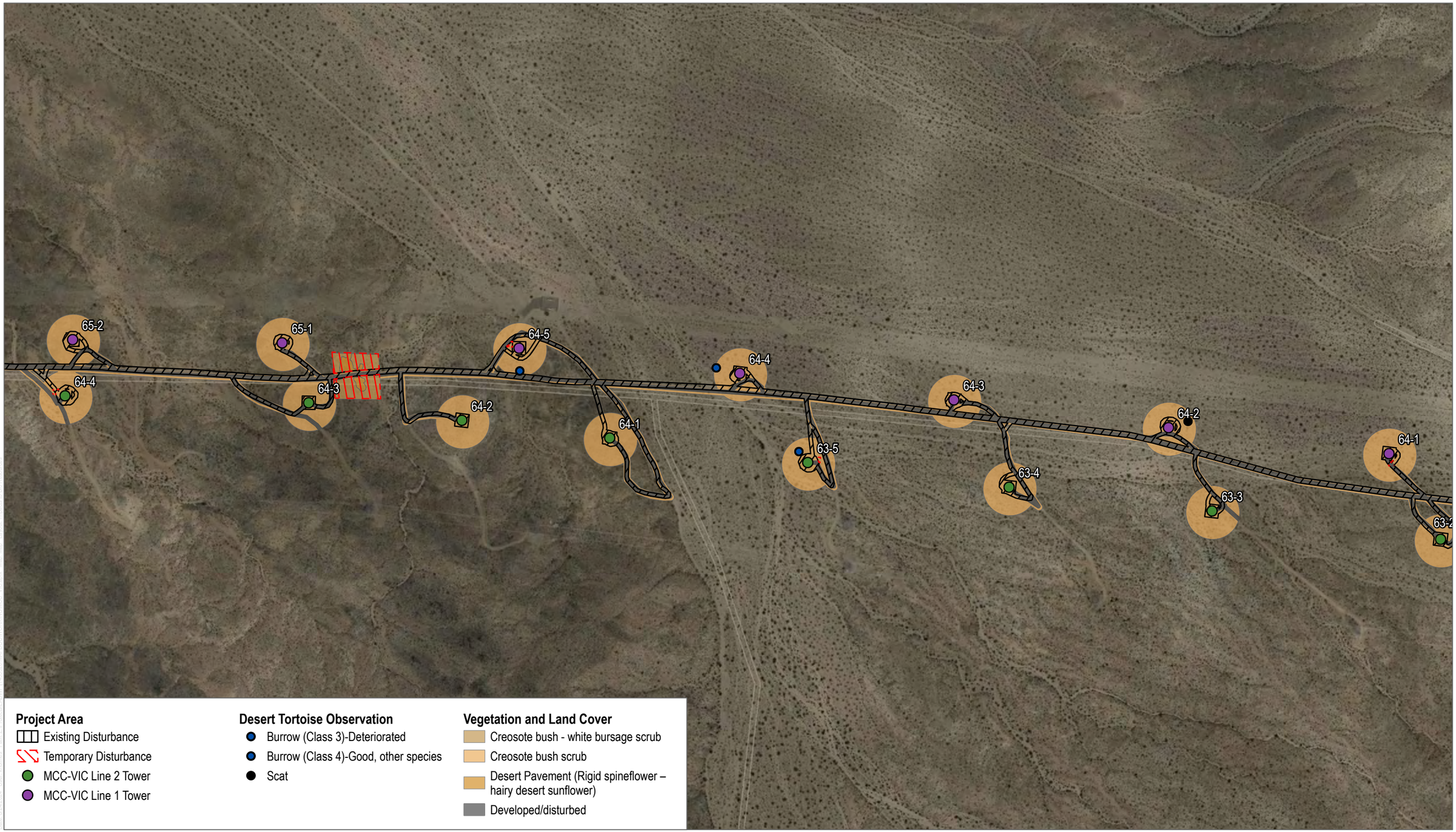
DUDEK

0 200 400 Feet

FIGURE 4.2-5-73

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-74

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

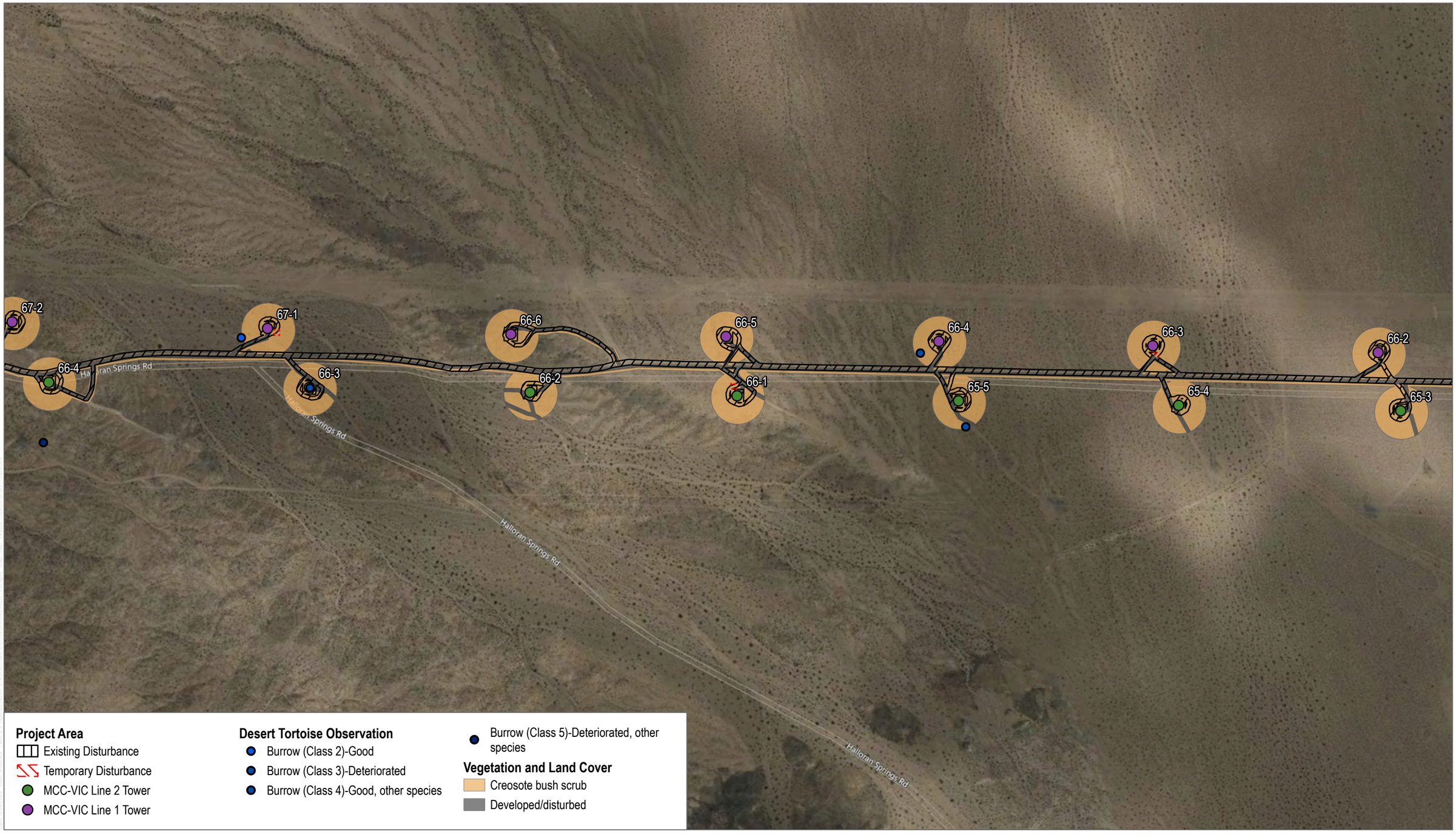
DUDEK

0 200 400 Feet

FIGURE 4.2-5-75

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

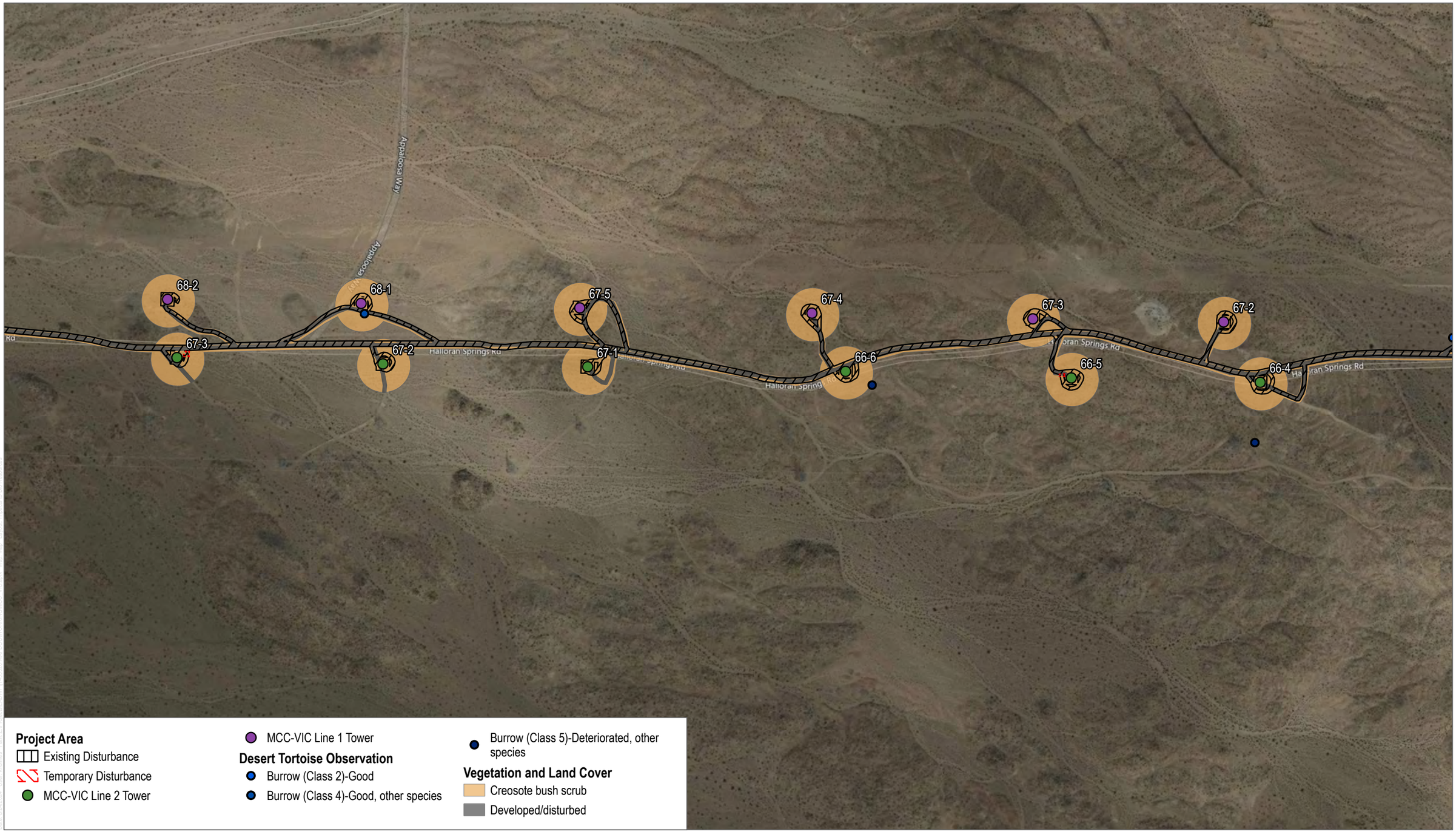
DUDEK

0 200 400 Feet

FIGURE 4.2-5-76

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

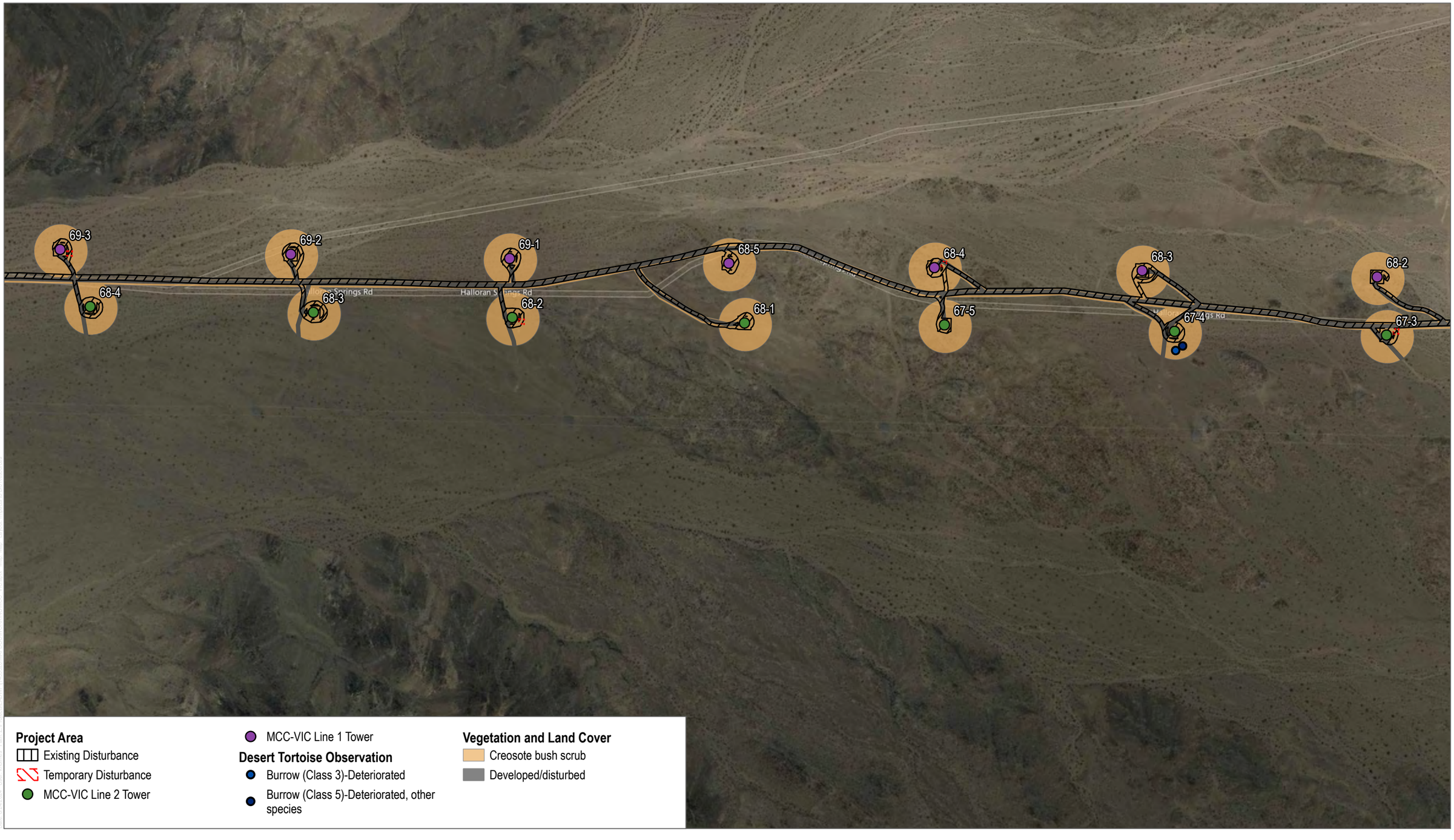
DUDEK

0 200 400 Feet

FIGURE 4.2-5-77

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

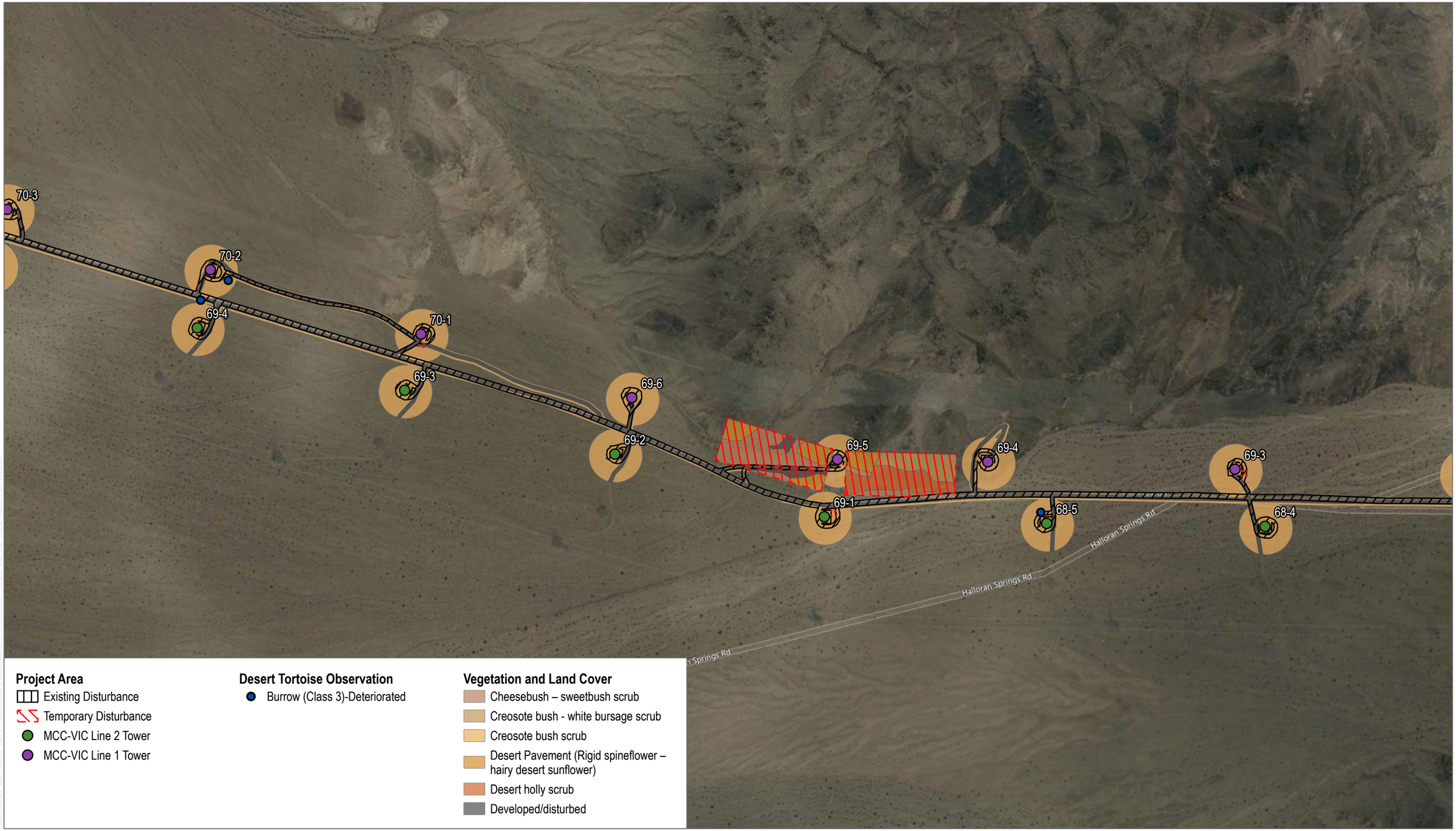
DUDEK

0 200 400 Feet

FIGURE 4.2-5-78

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-79

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-80

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

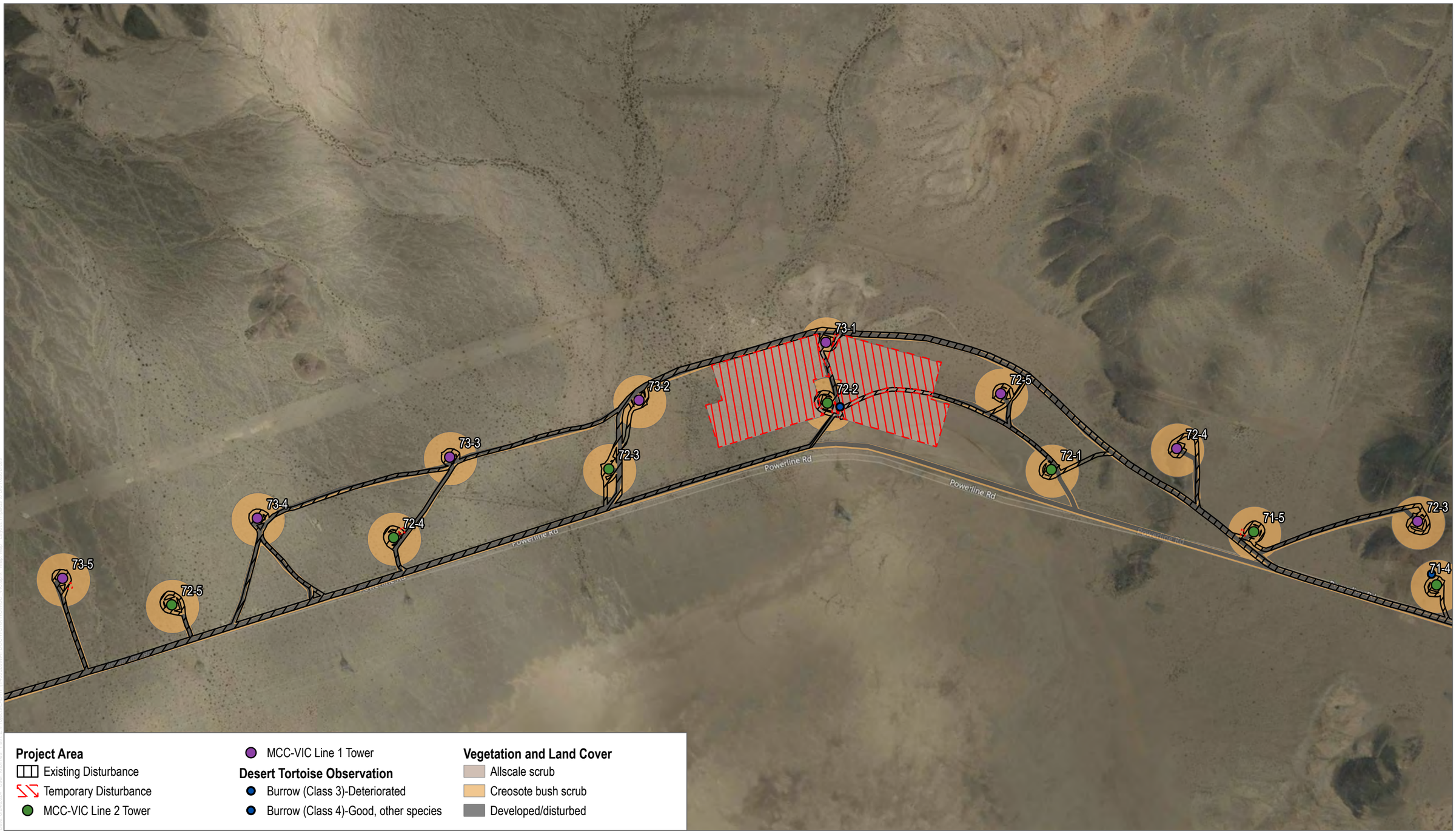
DUDEK

0 200 400 Feet

FIGURE 4.2-5-81

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

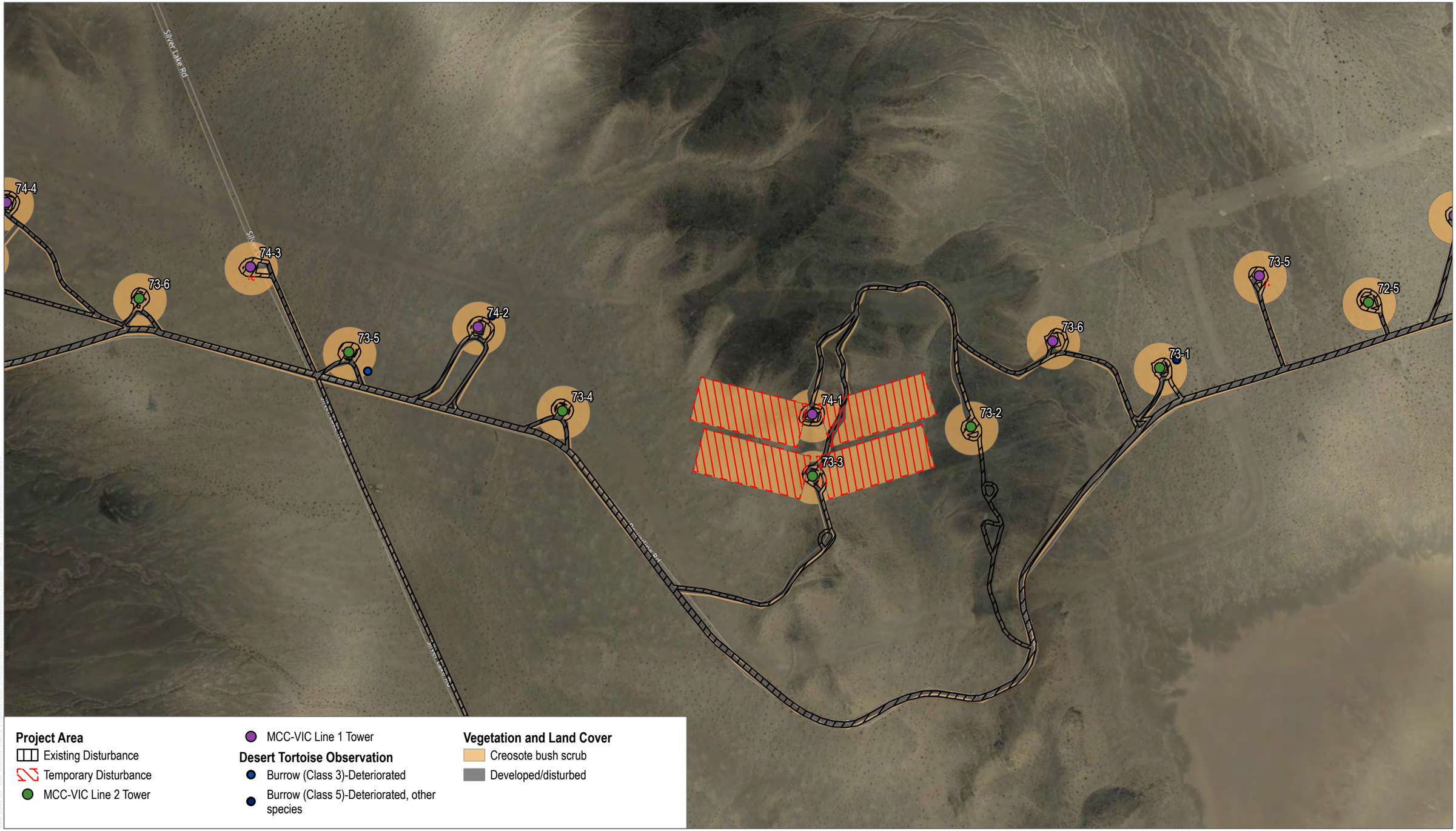


SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-82
Impacts to Biological Resources
McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

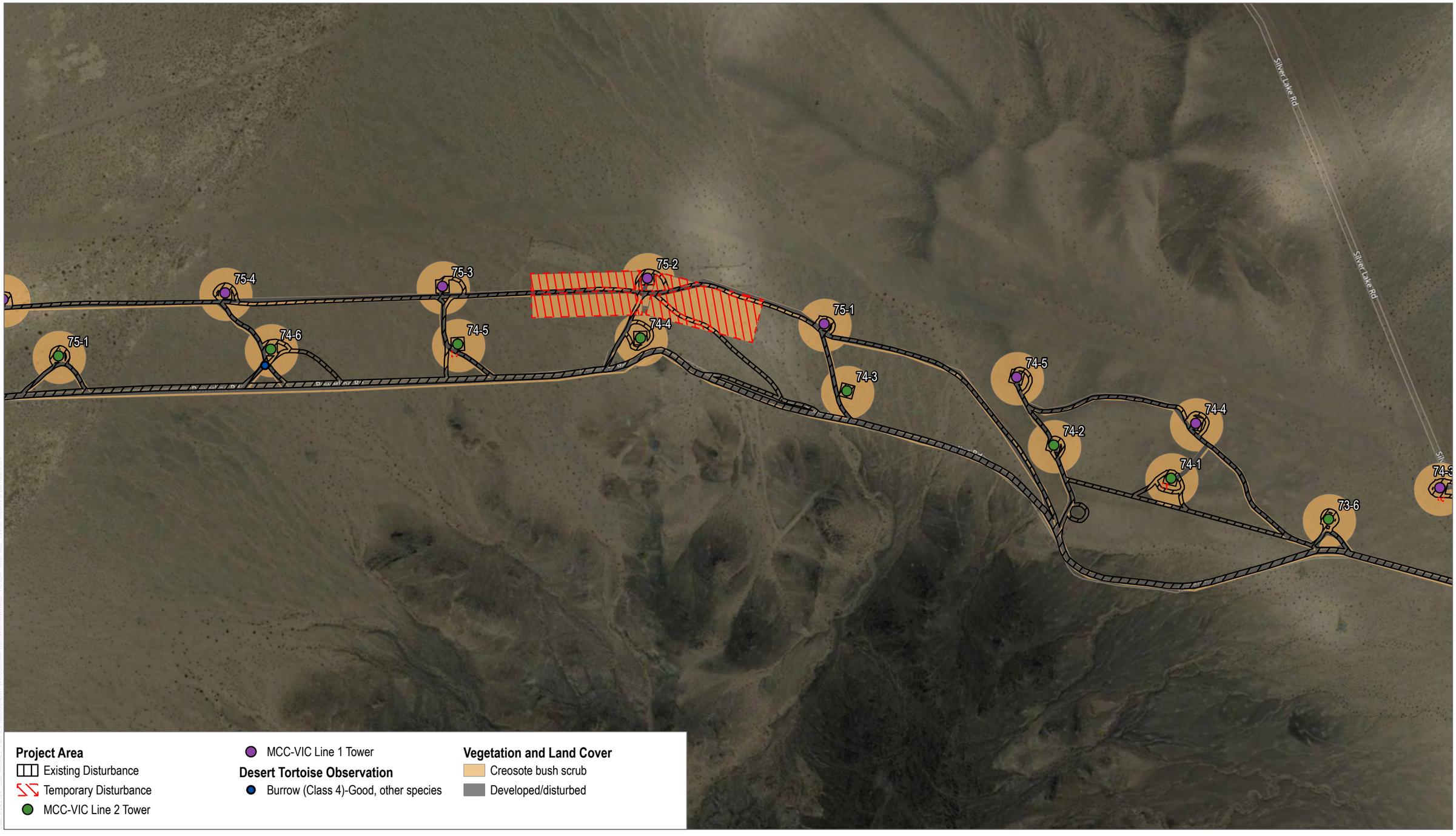
DUDEK

0 200 400 Feet

FIGURE 4.2-5-83

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-84

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-85

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-86

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

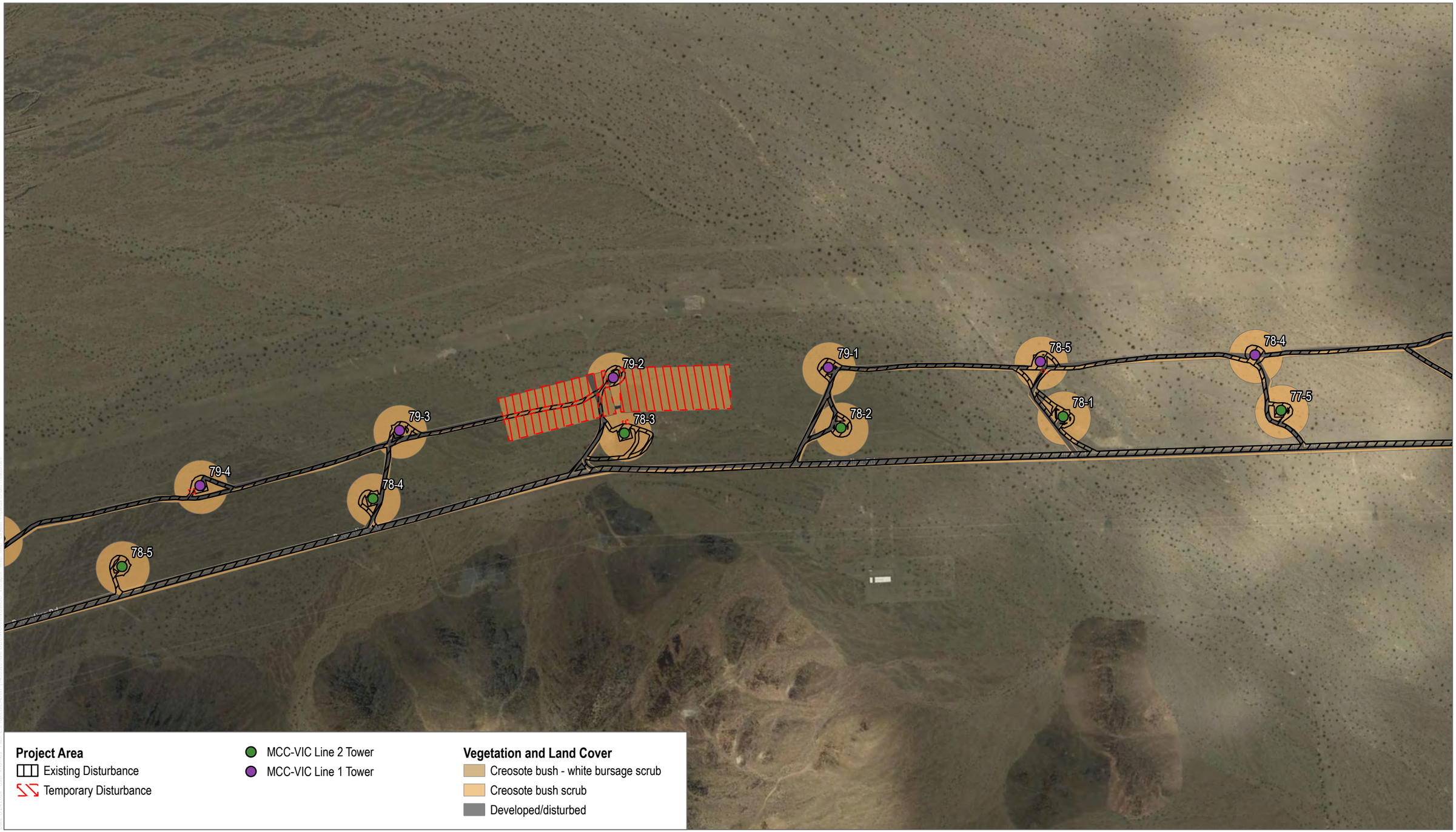
DUDEK

0 200 400 Feet

FIGURE 4.2-5-87

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-88

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-89

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

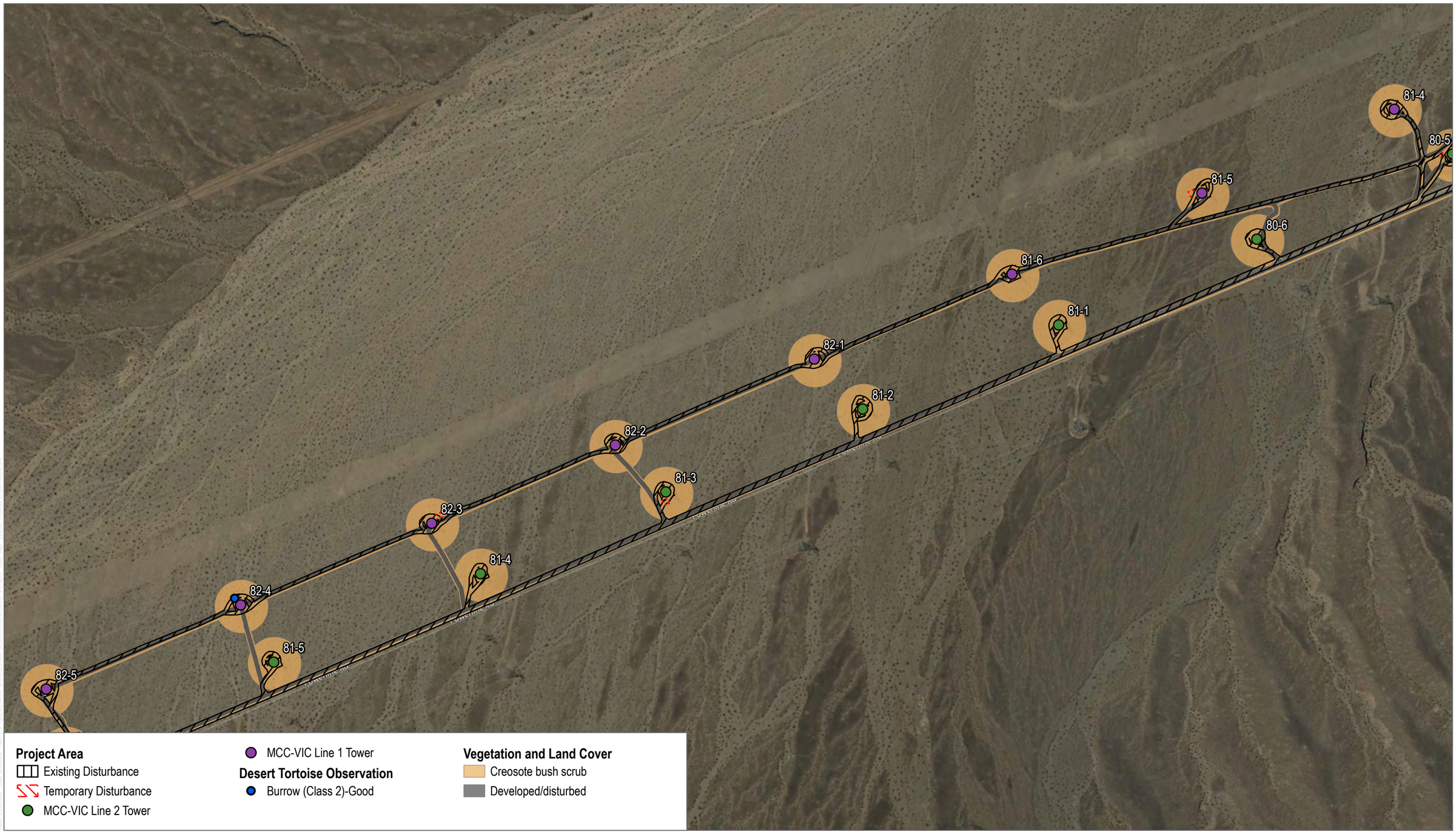
DUDEK

0 200 400 Feet

FIGURE 4.2-5-90

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

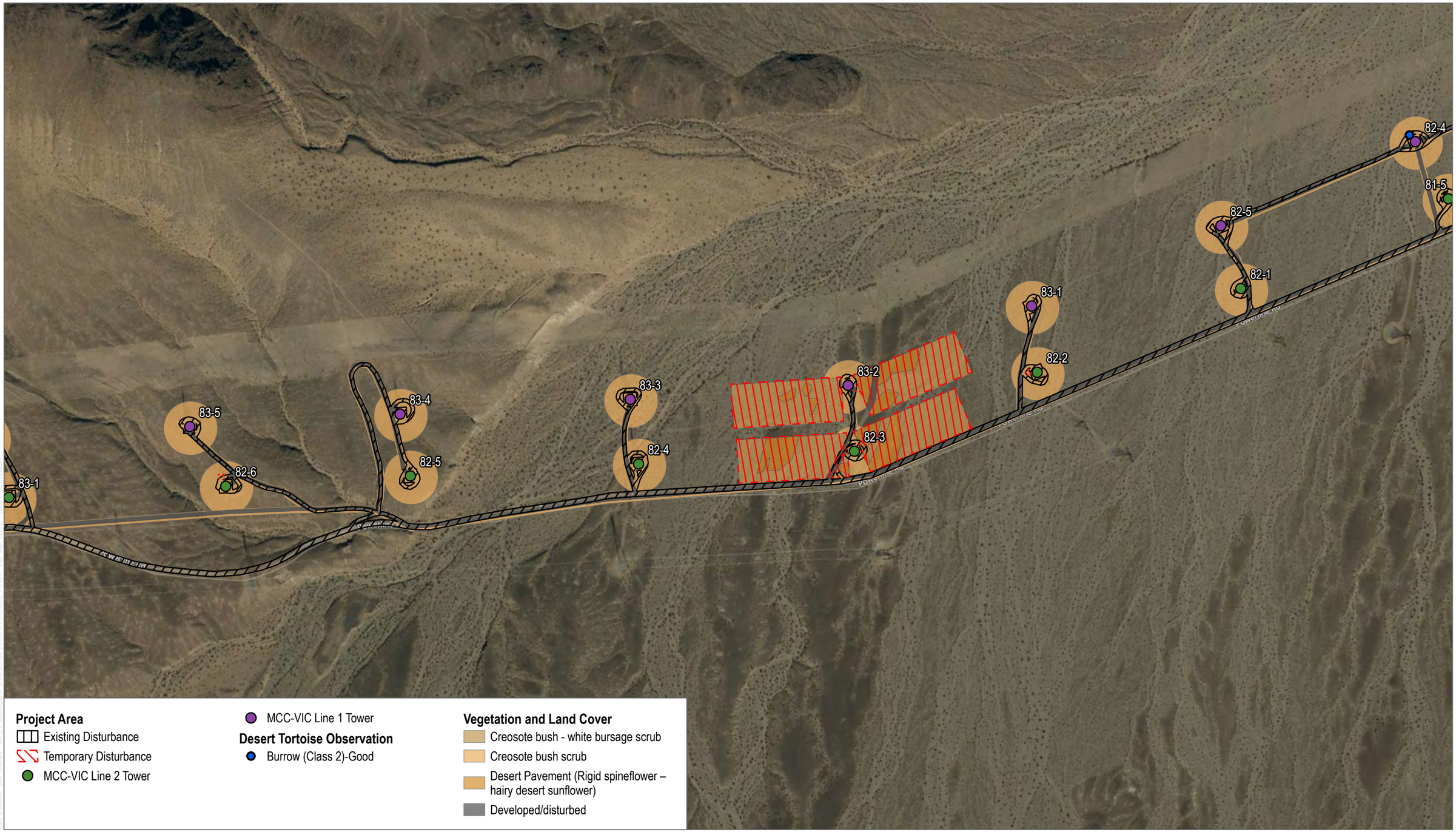
DUDEK

0 200 400 Feet

FIGURE 4.2-5-91

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-92

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

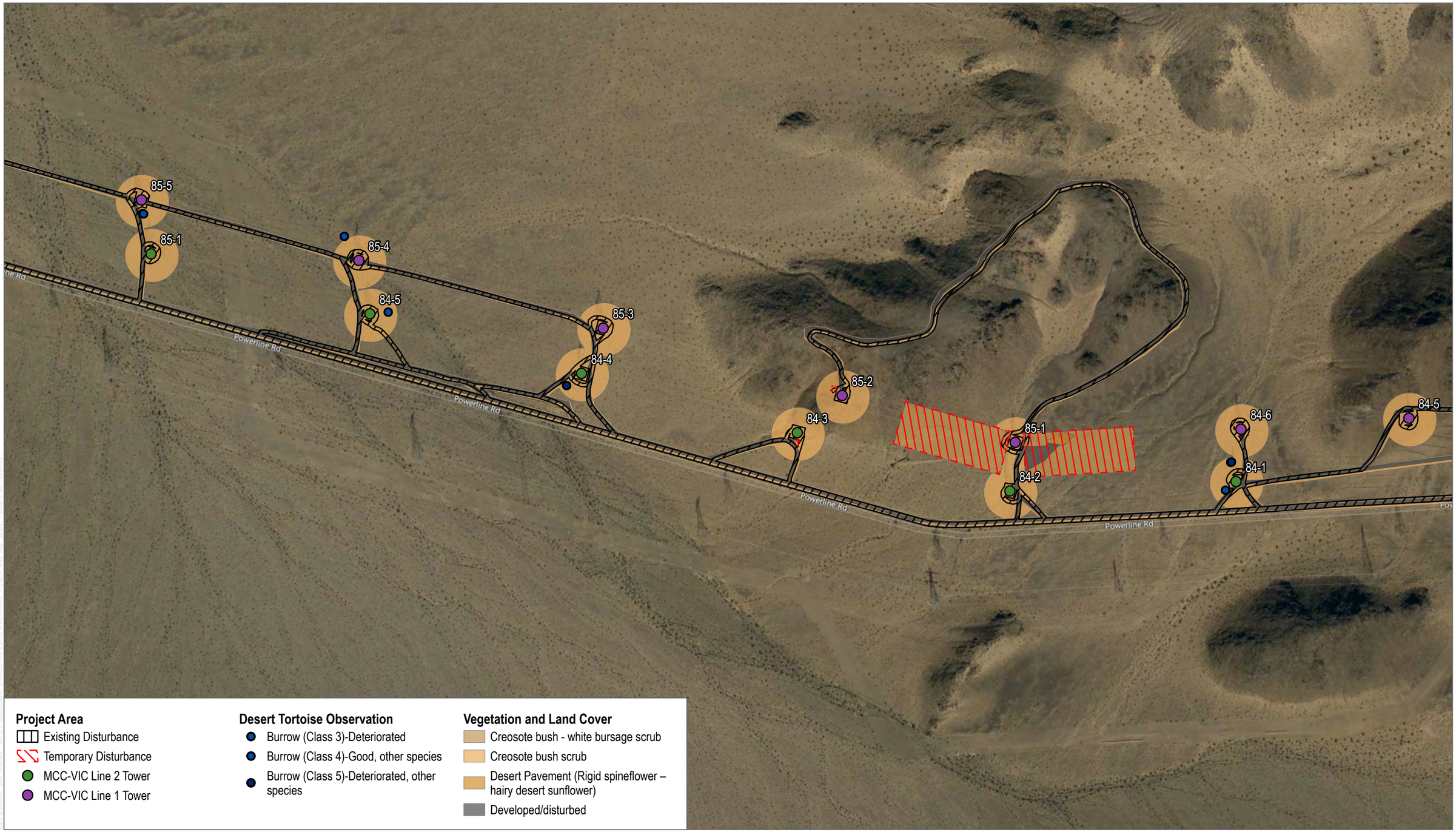
DUDEK

0 200 400 Feet

FIGURE 4.2-5-93

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-94

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-95

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-96

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

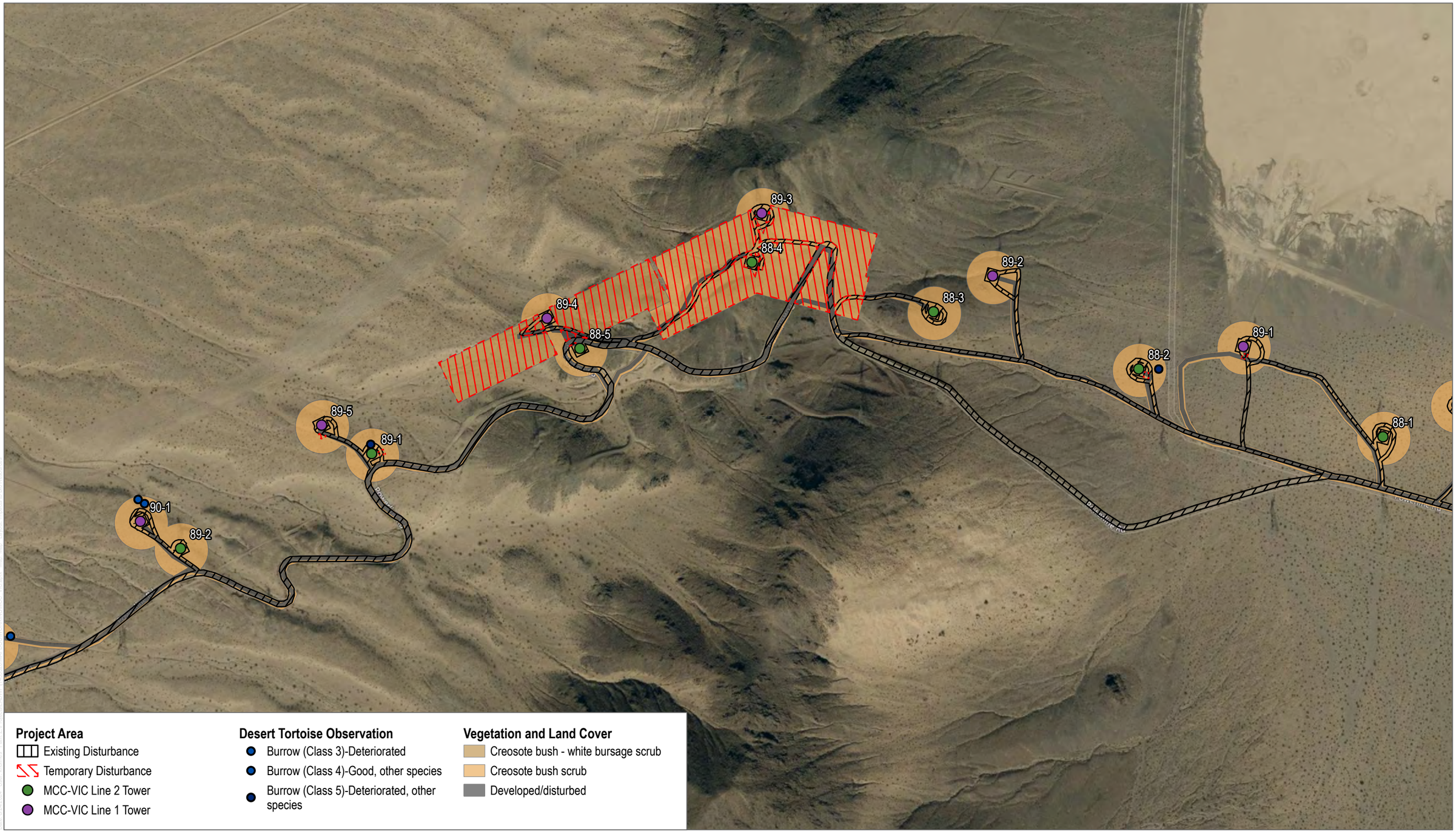
DUDEK

0 200 400 Feet

FIGURE 4.2-5-97

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

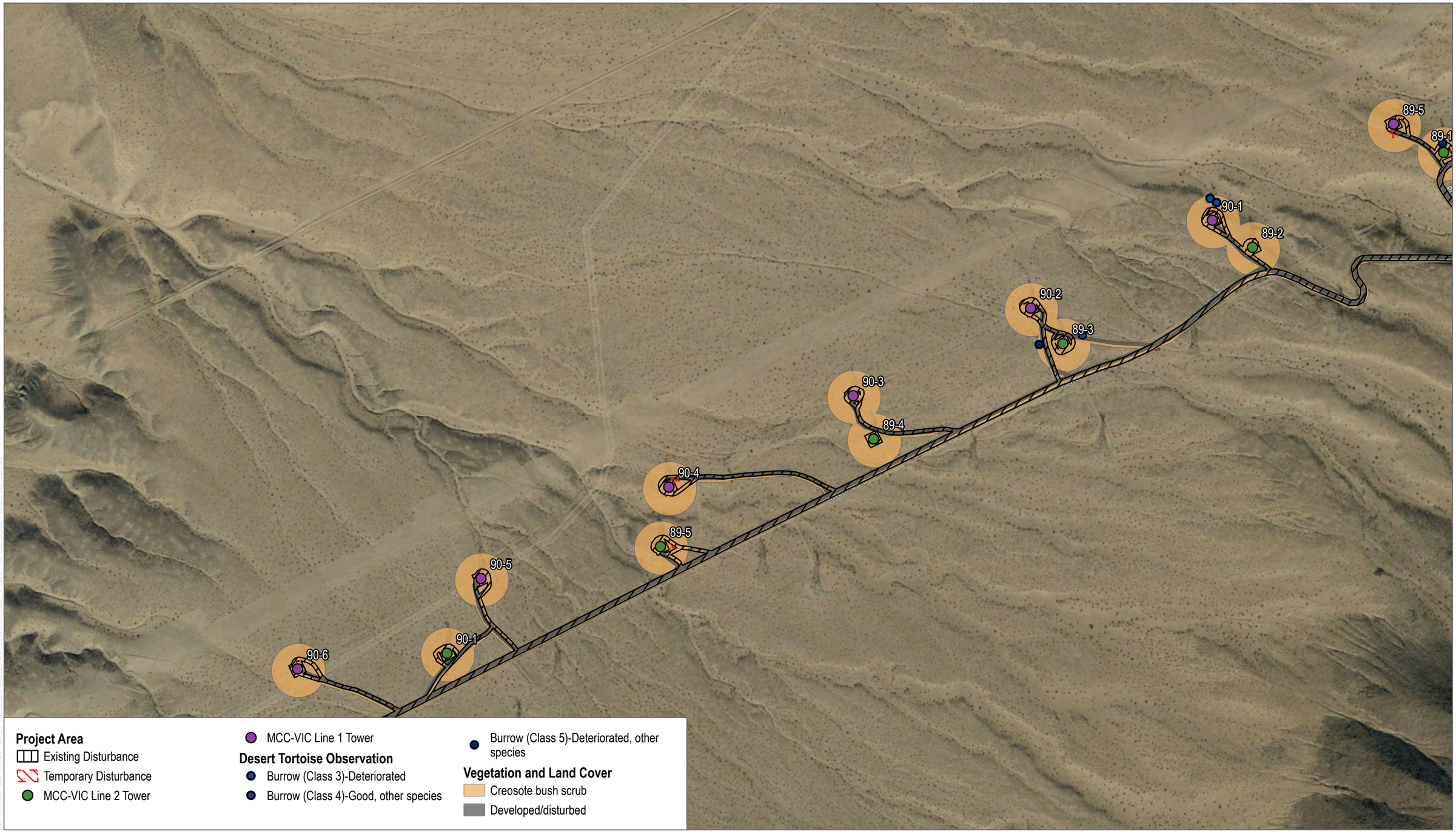
DUDEK

0 200 400 Feet

FIGURE 4.2-5-98

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-99

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

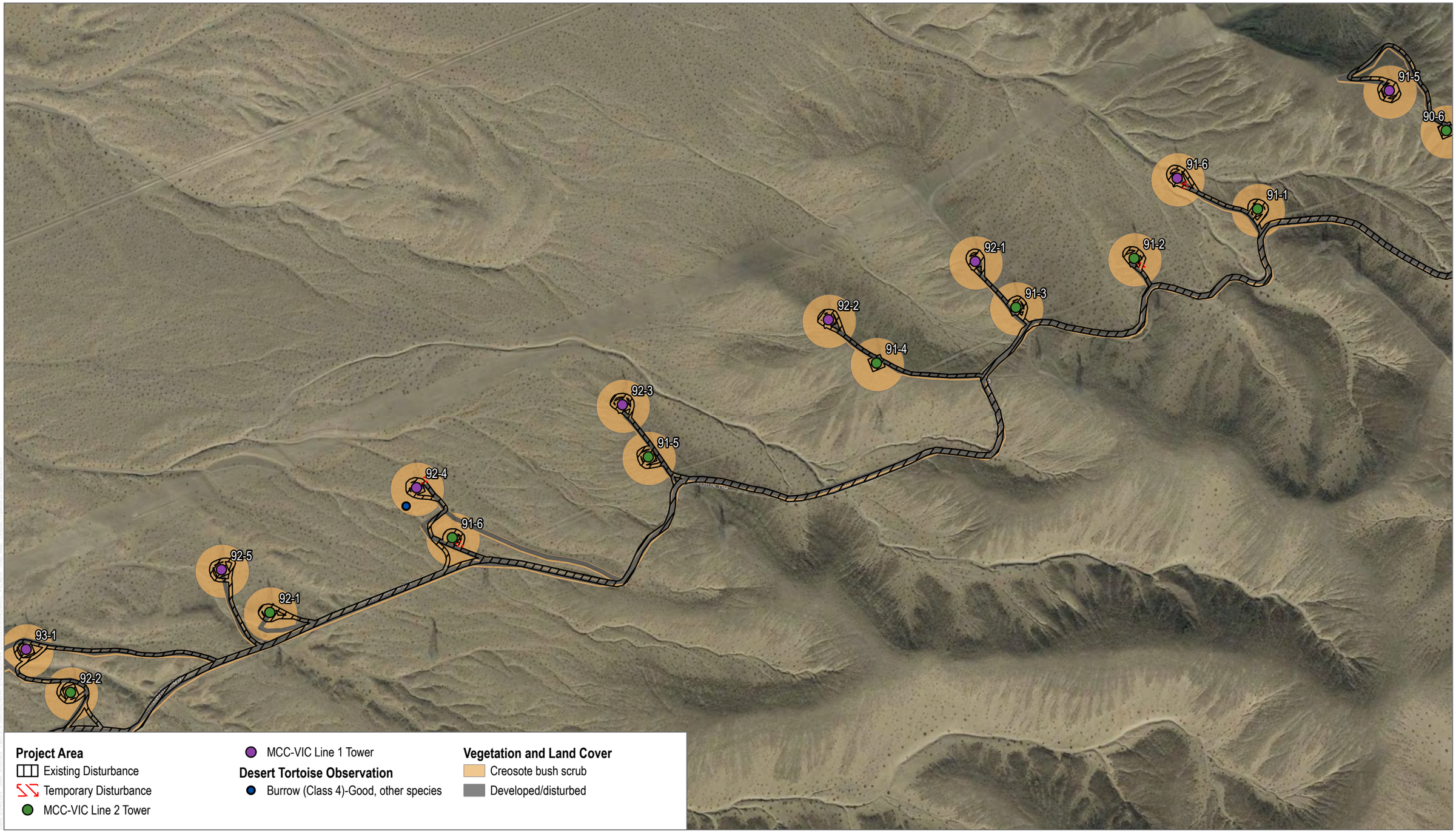
DUDEK

0 200 400 Feet

FIGURE 4.2-5-100

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

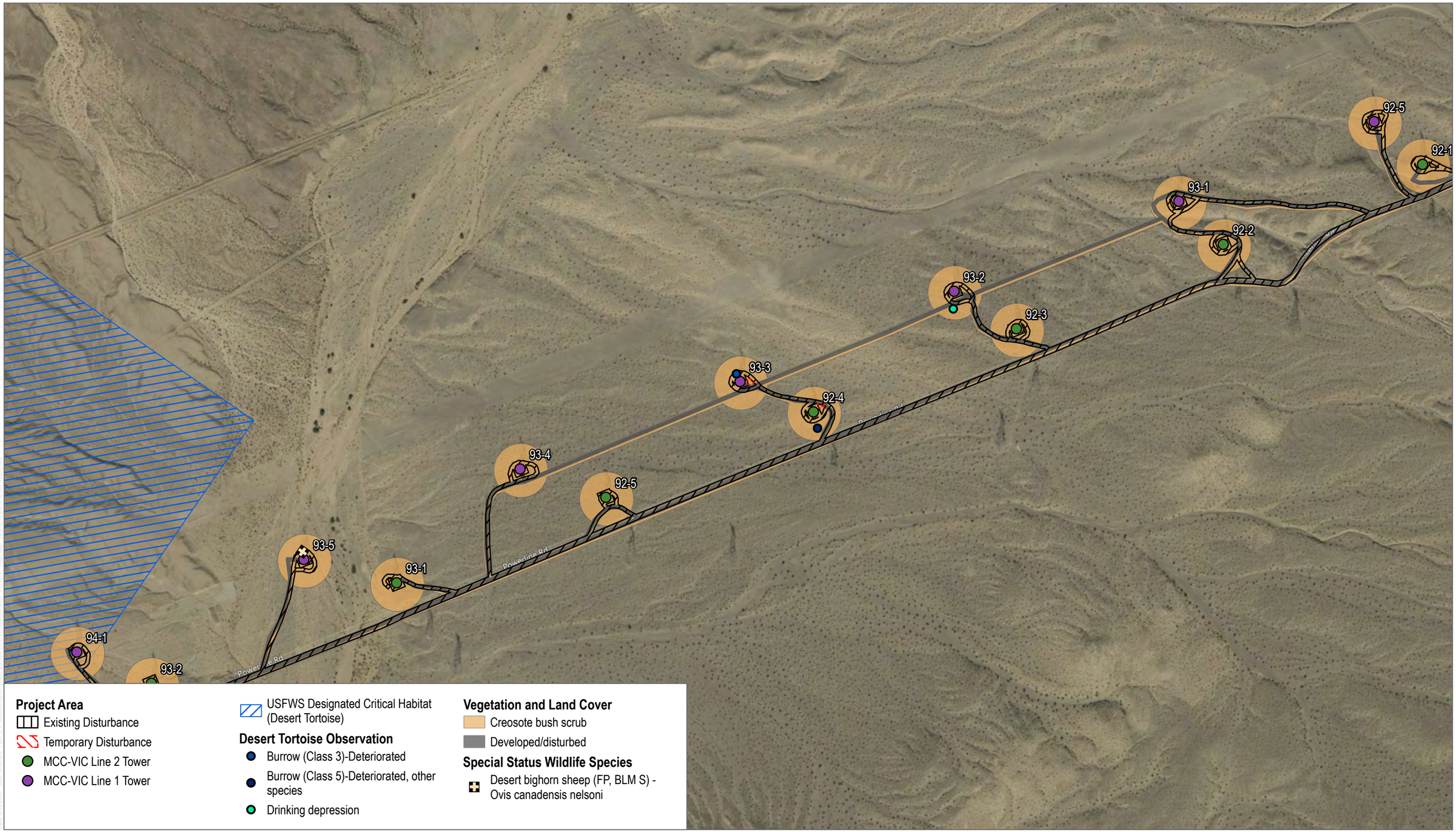
DUDEK

0 200 400 Feet

FIGURE 4.2-5-101

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

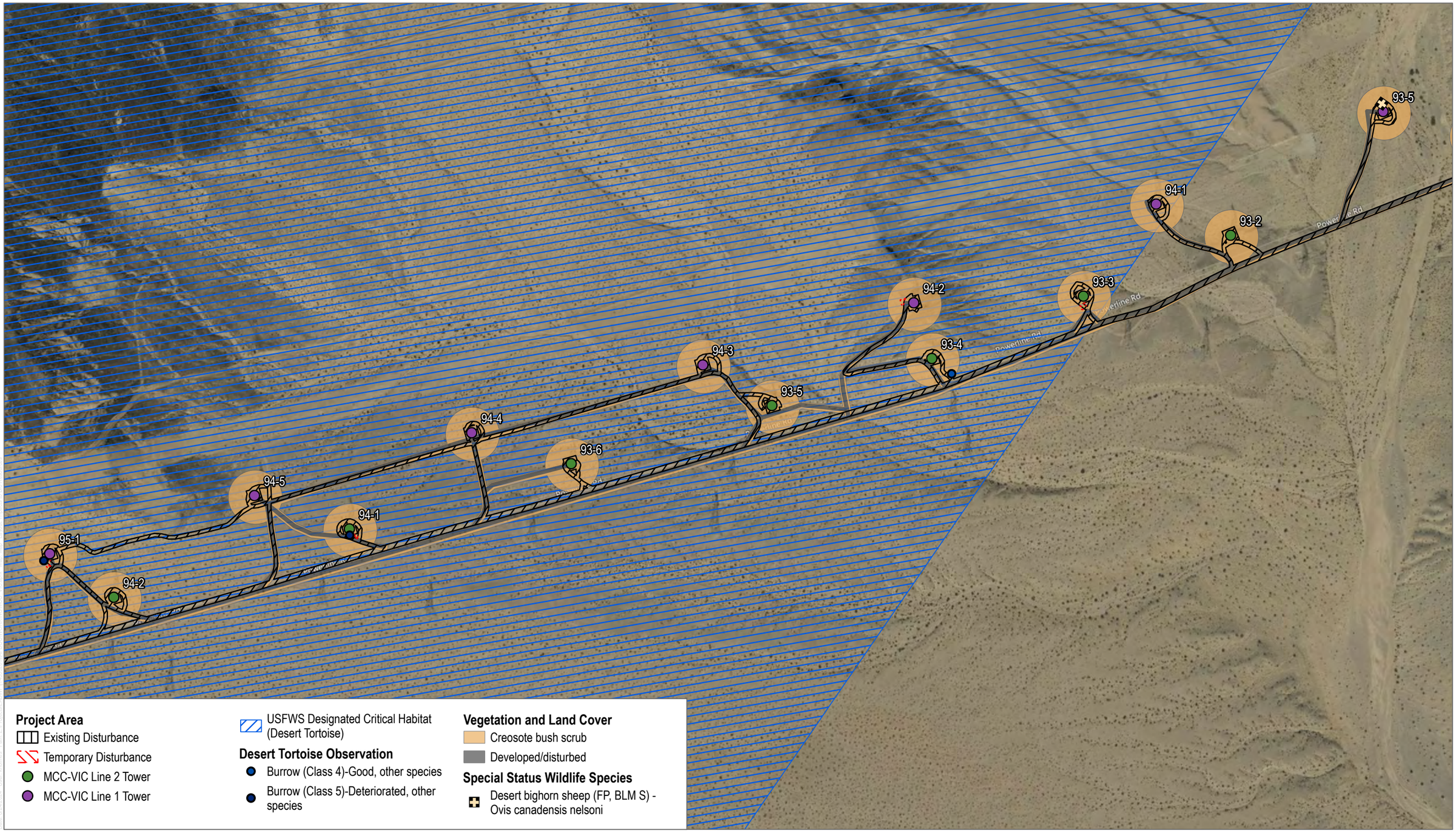
DUDEK

0 200 400 Feet

FIGURE 4.2-5-102

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-103

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-104

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

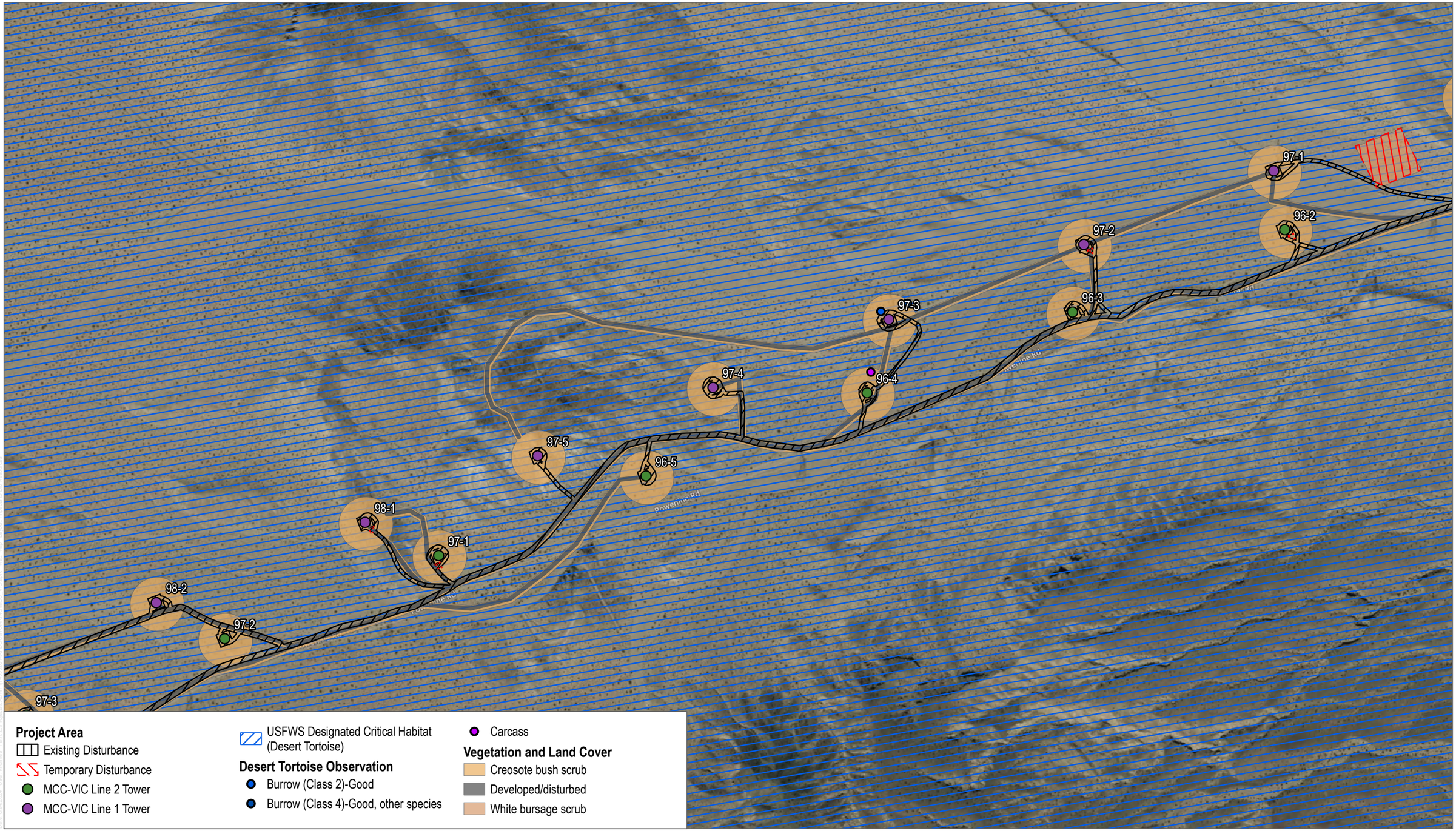
DUDEK

0 200 400 Feet

FIGURE 4.2-5-105

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

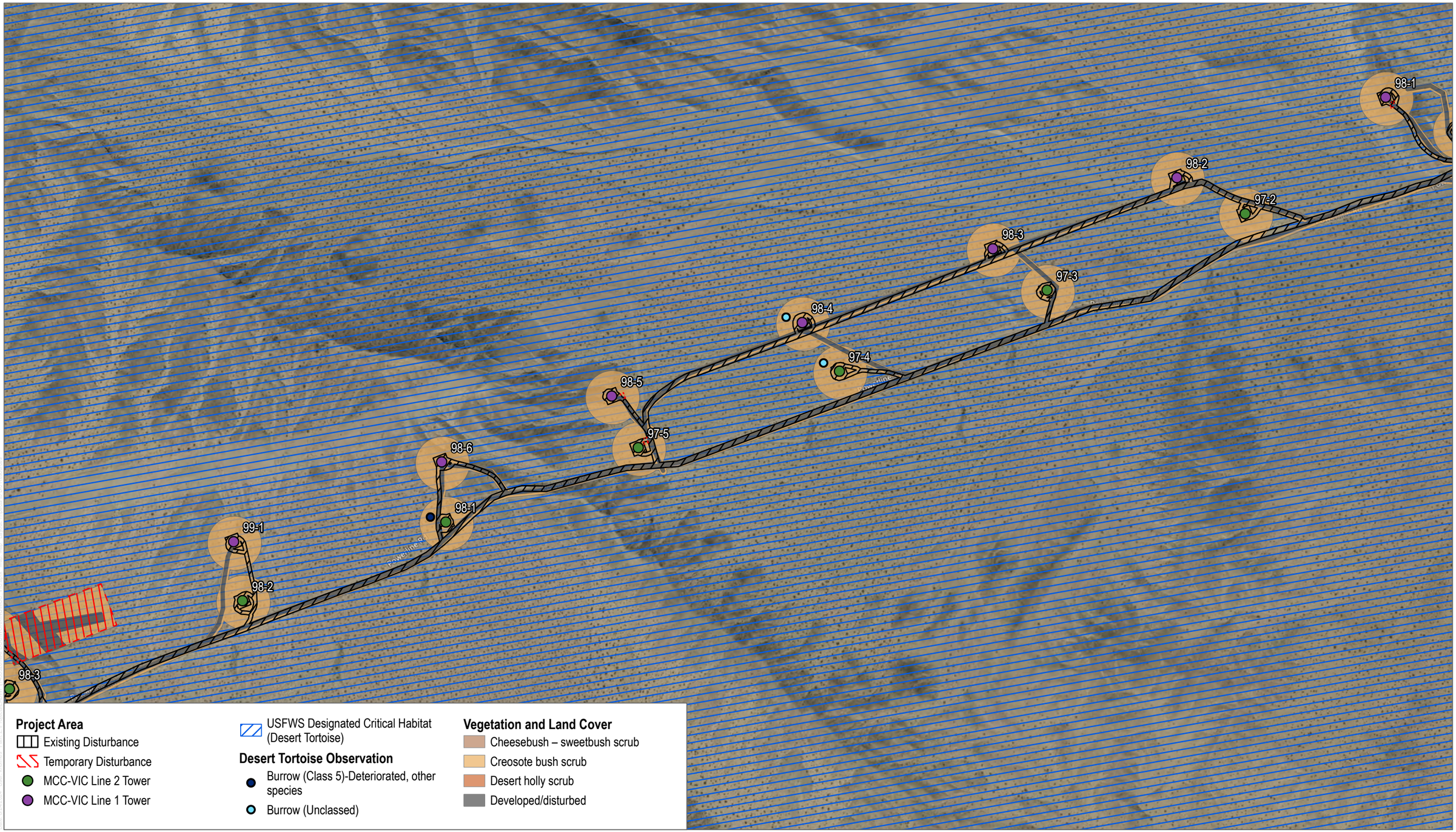
DUDEK

0 200 400 Feet

FIGURE 4.2-5-106

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

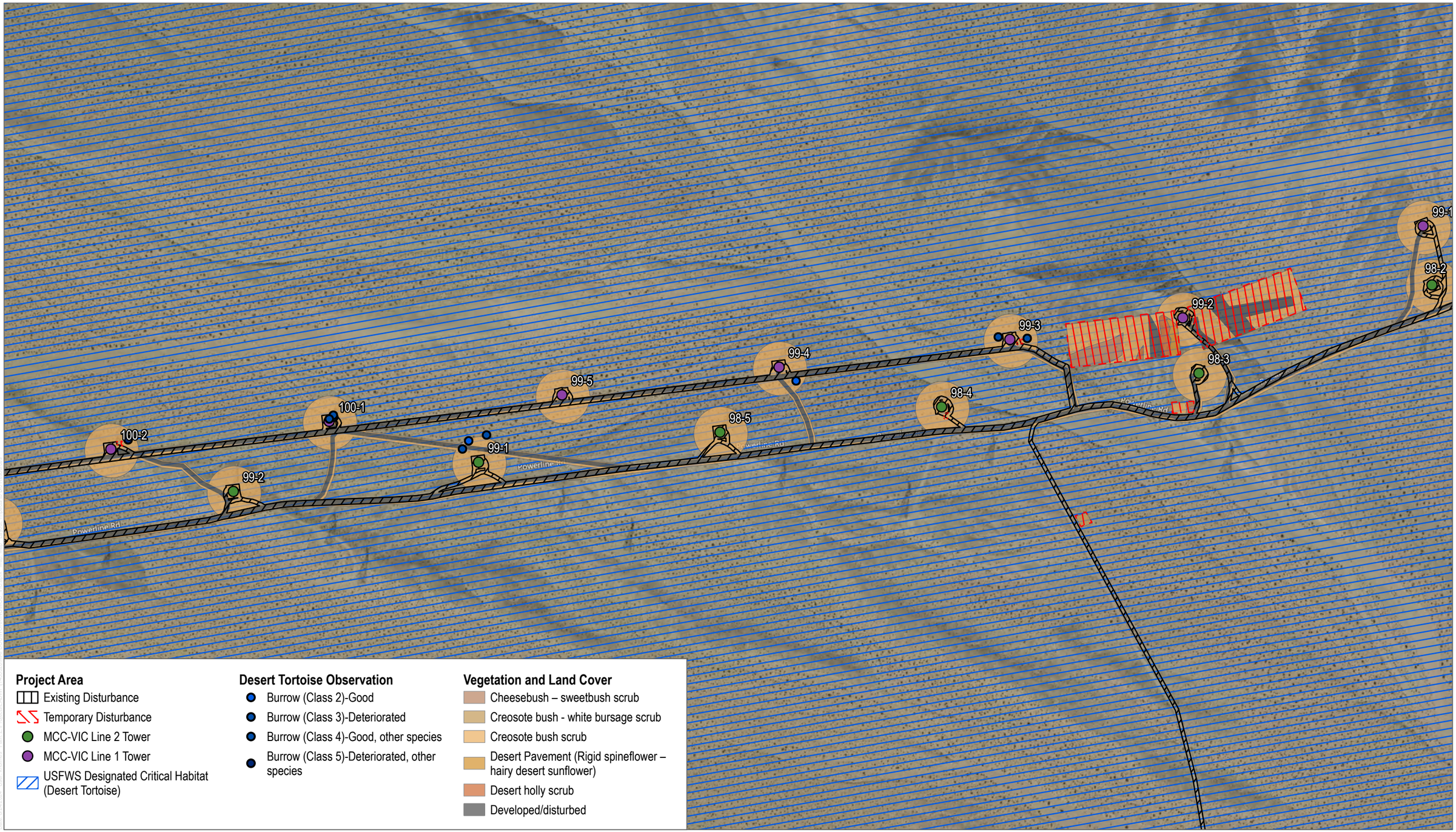
DUDEK

0 200 400 Feet

FIGURE 4.2-5-107

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-108

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

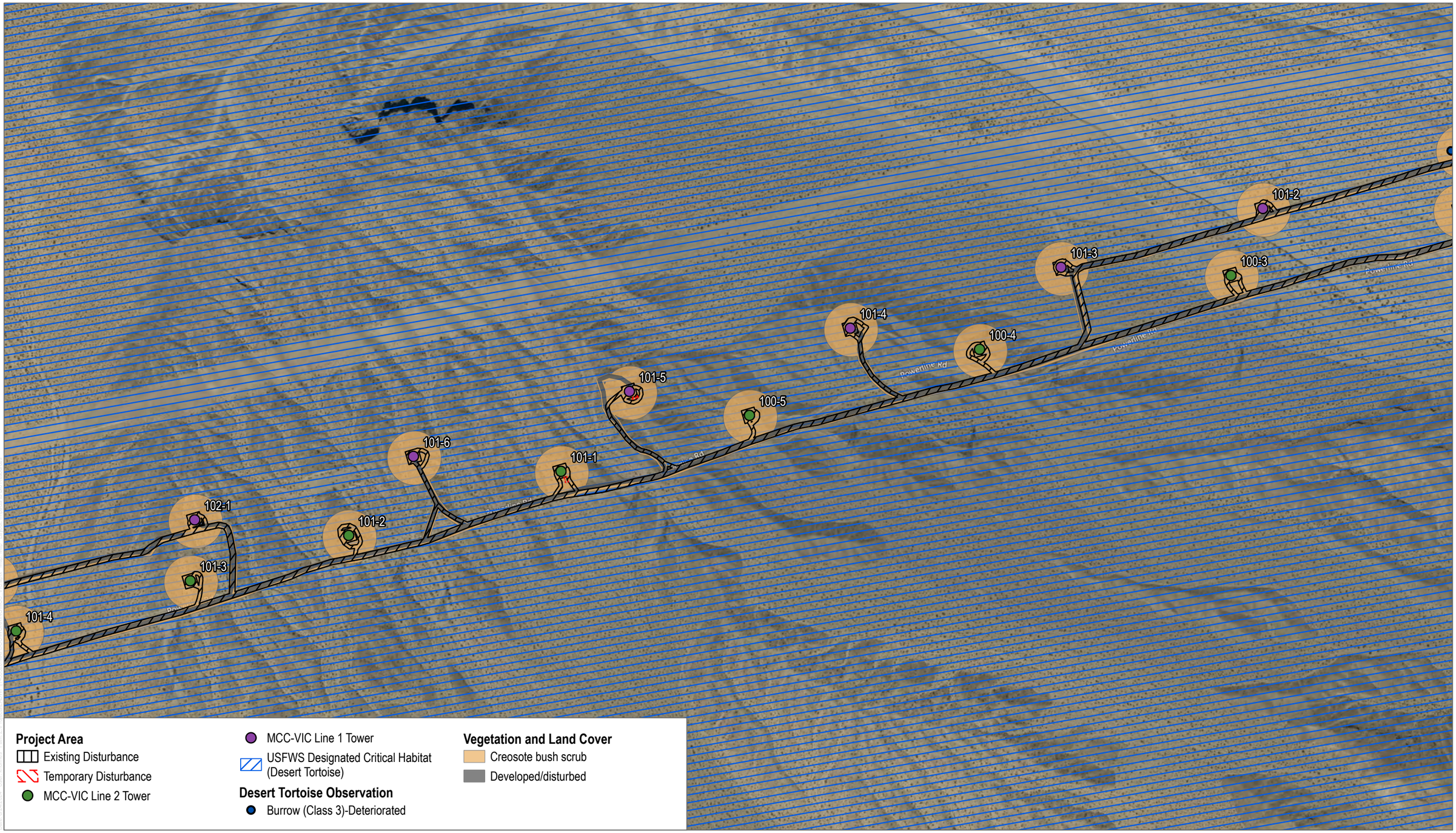
DUDEK

0 200 400 Feet

FIGURE 4.2-5-109

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-110

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-111

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

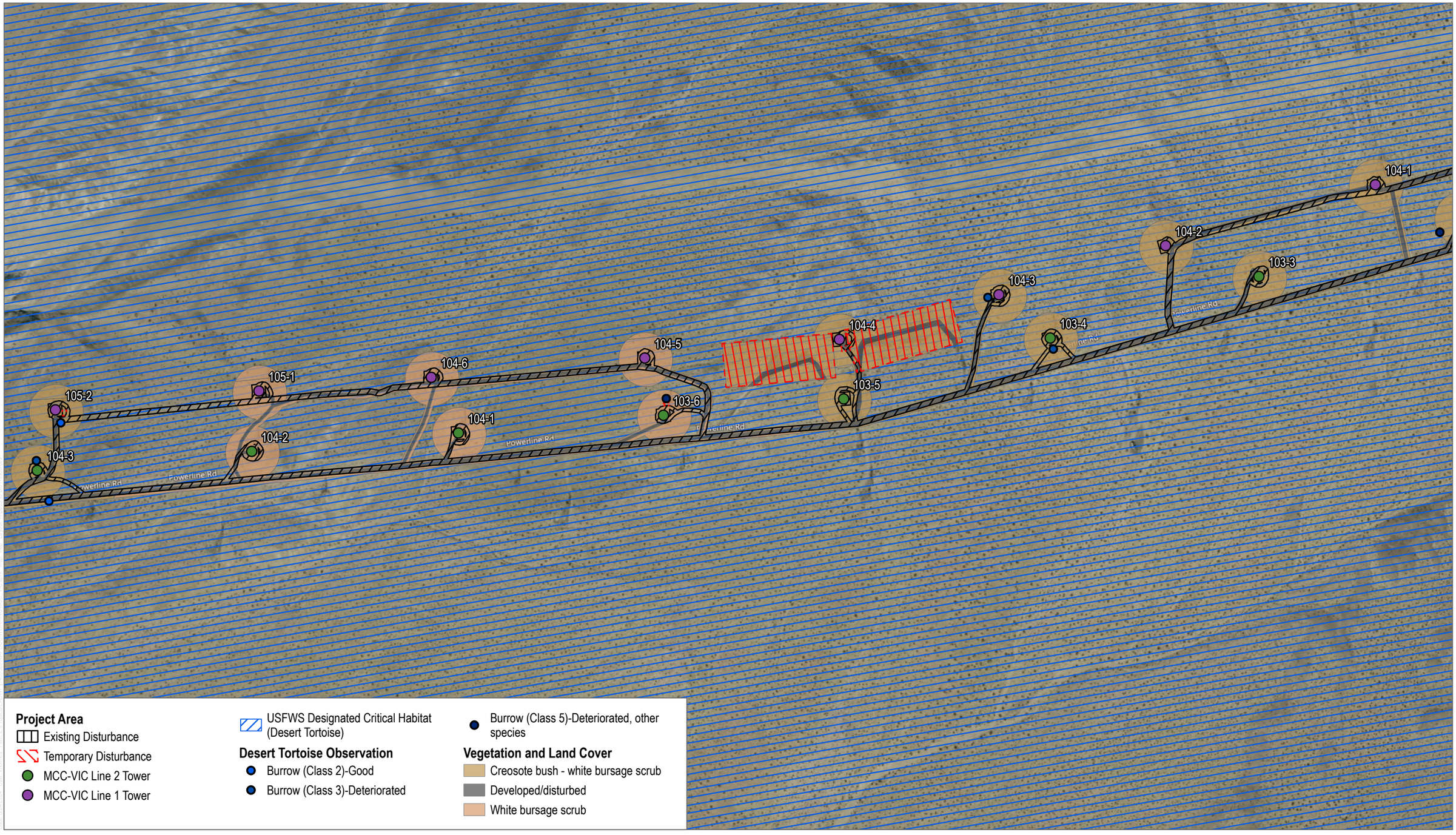
DUDEK

0 200 400 Feet

FIGURE 4.2-5-112

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-113

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-114

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

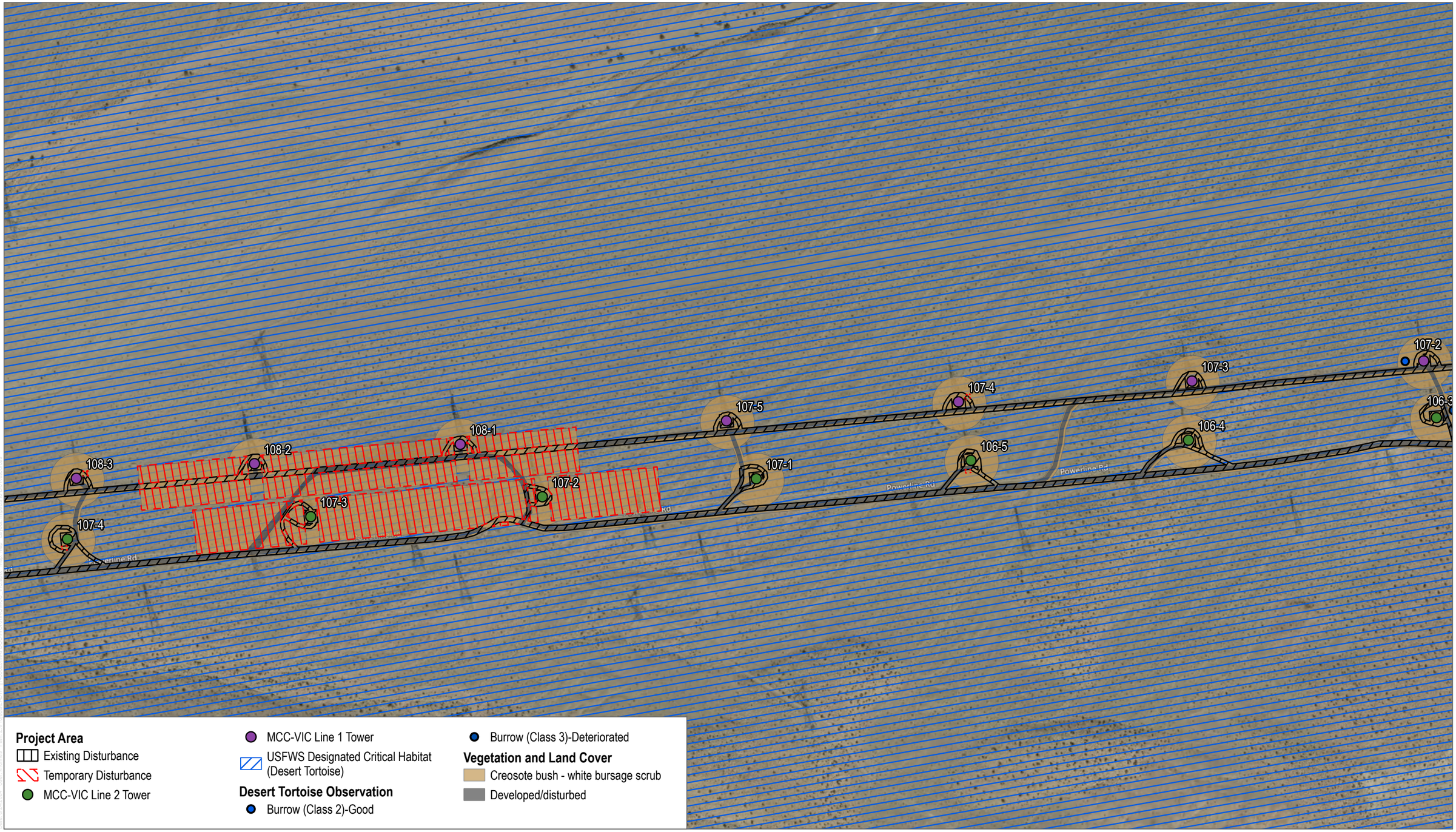
DUDEK

0 200 400 Feet

FIGURE 4.2-5-115

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-116

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-117

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-118

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-119

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

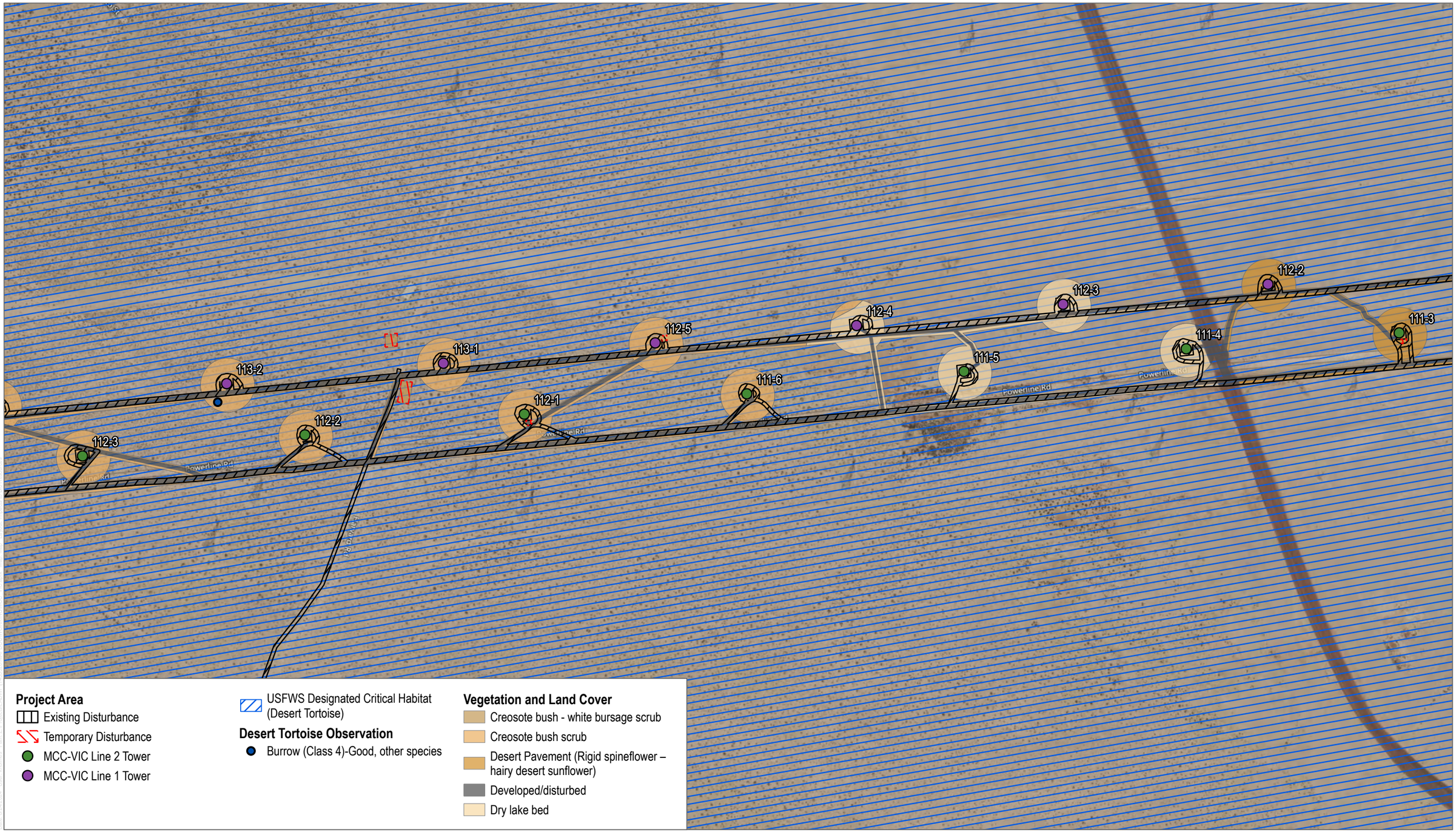
DUDEK

0 200 400 Feet

FIGURE 4.2-5-120

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-121

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

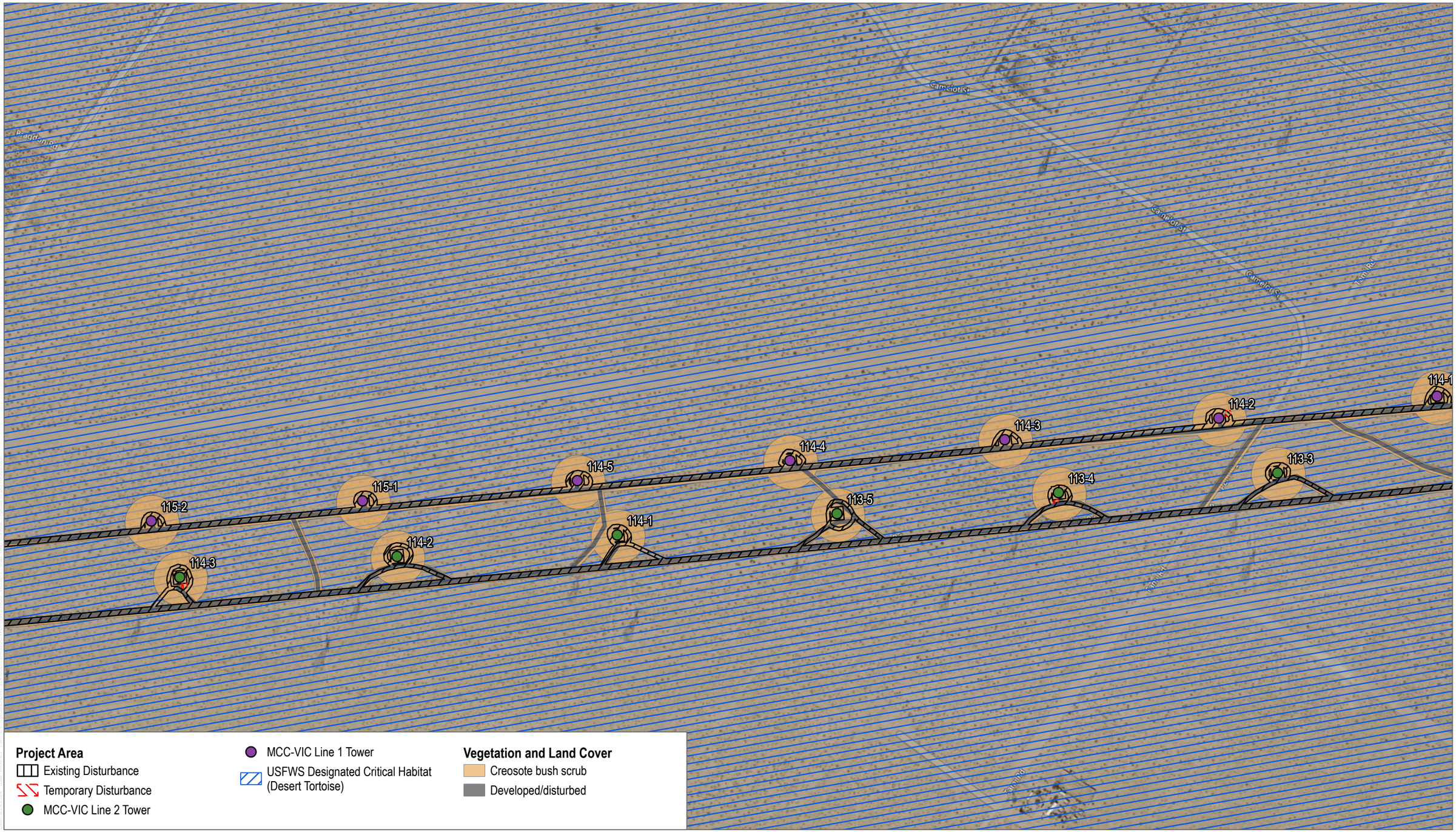
DUDEK

0 200 400 Feet

FIGURE 4.2-5-122

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-123

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-124

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-125

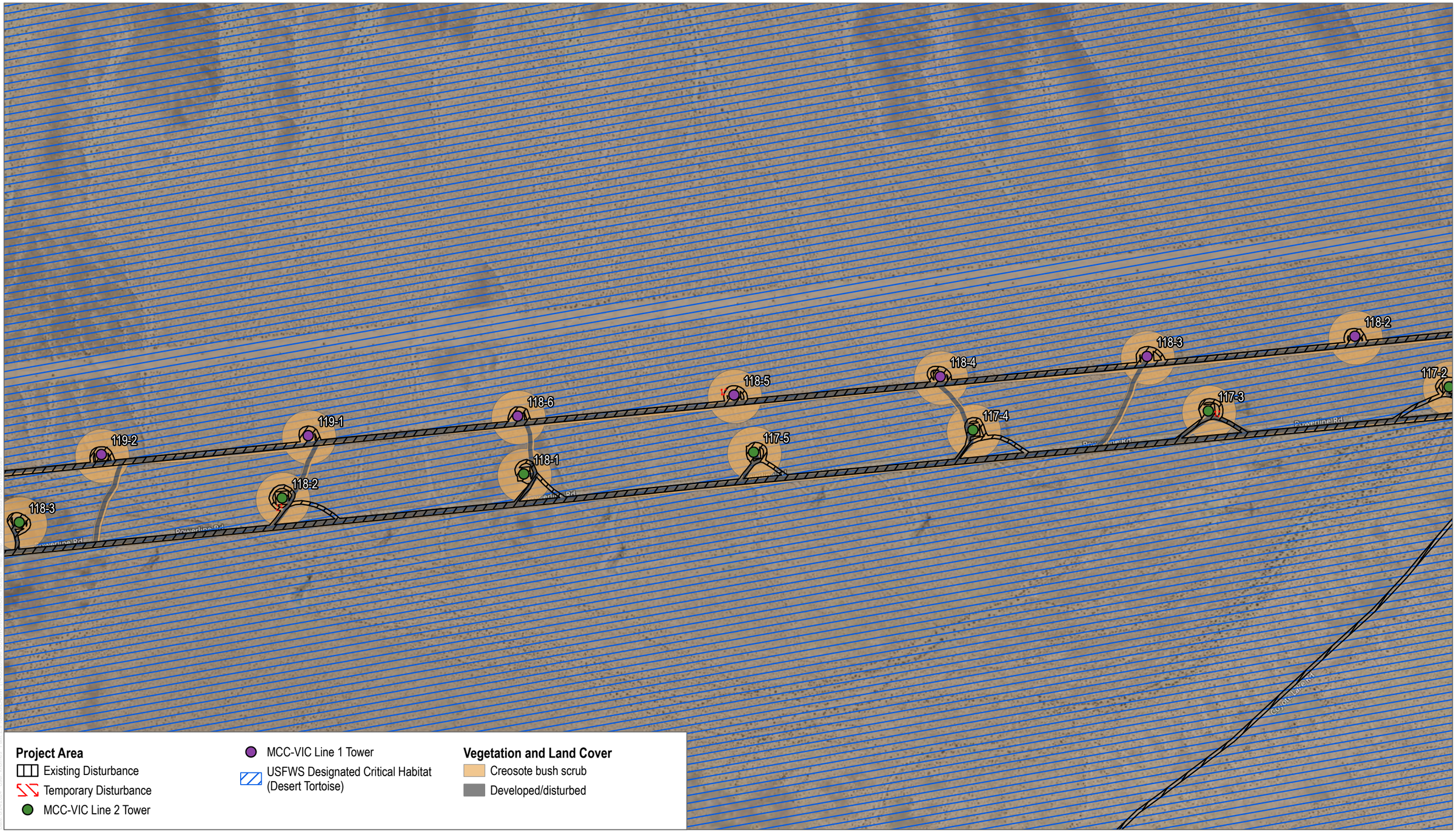
Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

FIGURE 4.2-5-126
Impacts to Biological Resources
McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



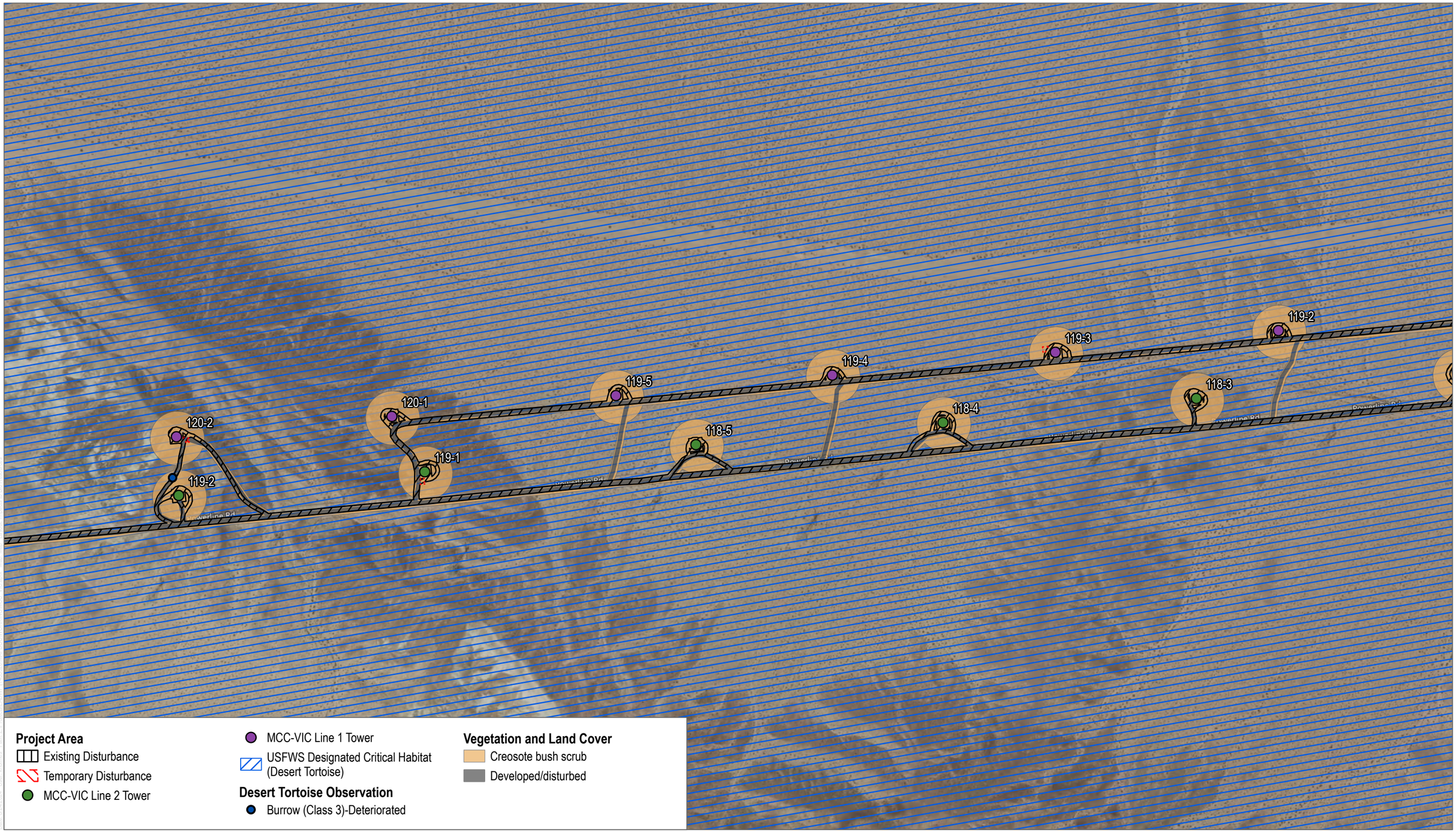
SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

FIGURE 4.2-5-127

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

FIGURE 4.2-5-128
Impacts to Biological Resources
McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

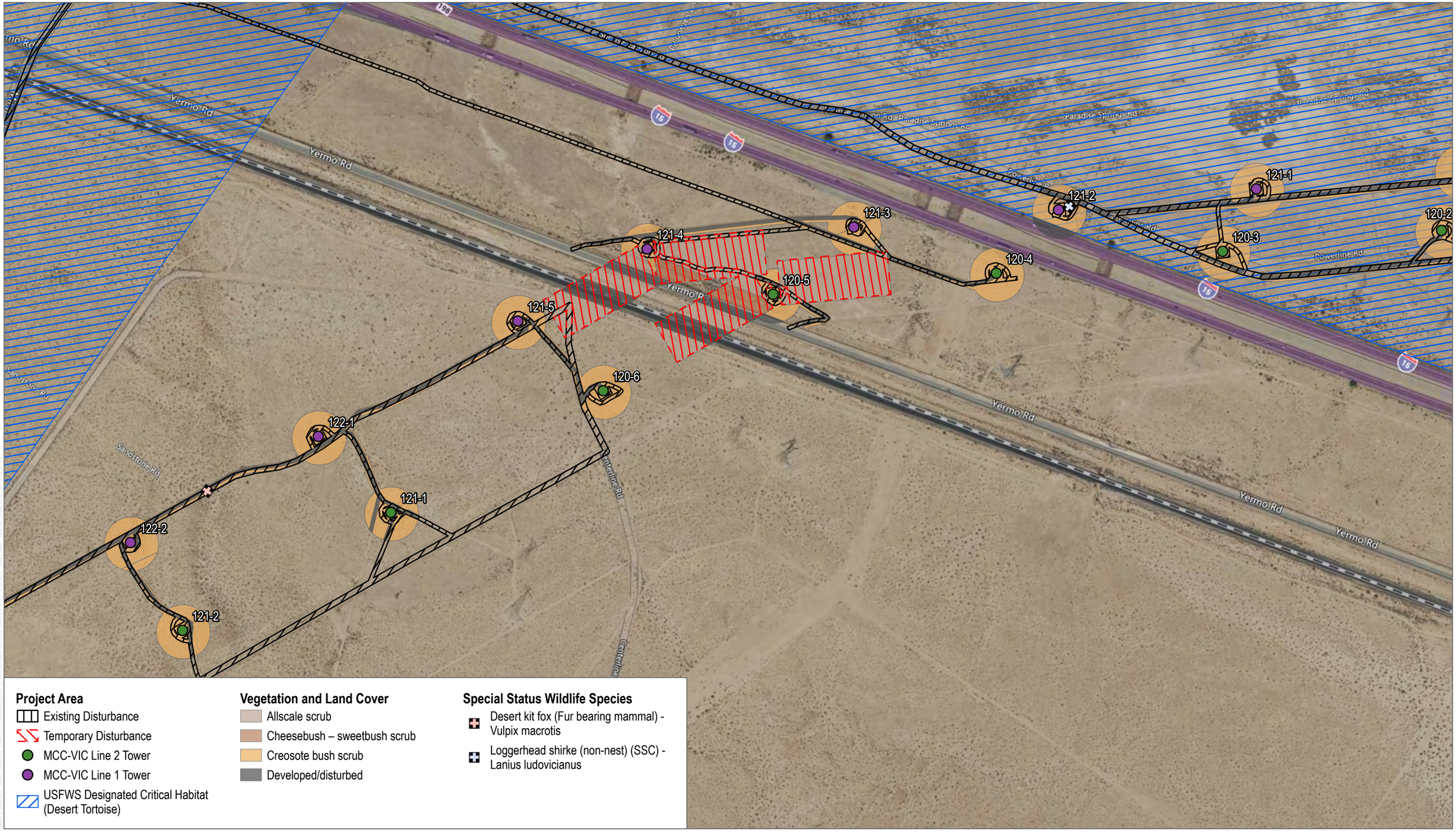
DUDEK

0 200 400 Feet

FIGURE 4.2-5-129

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

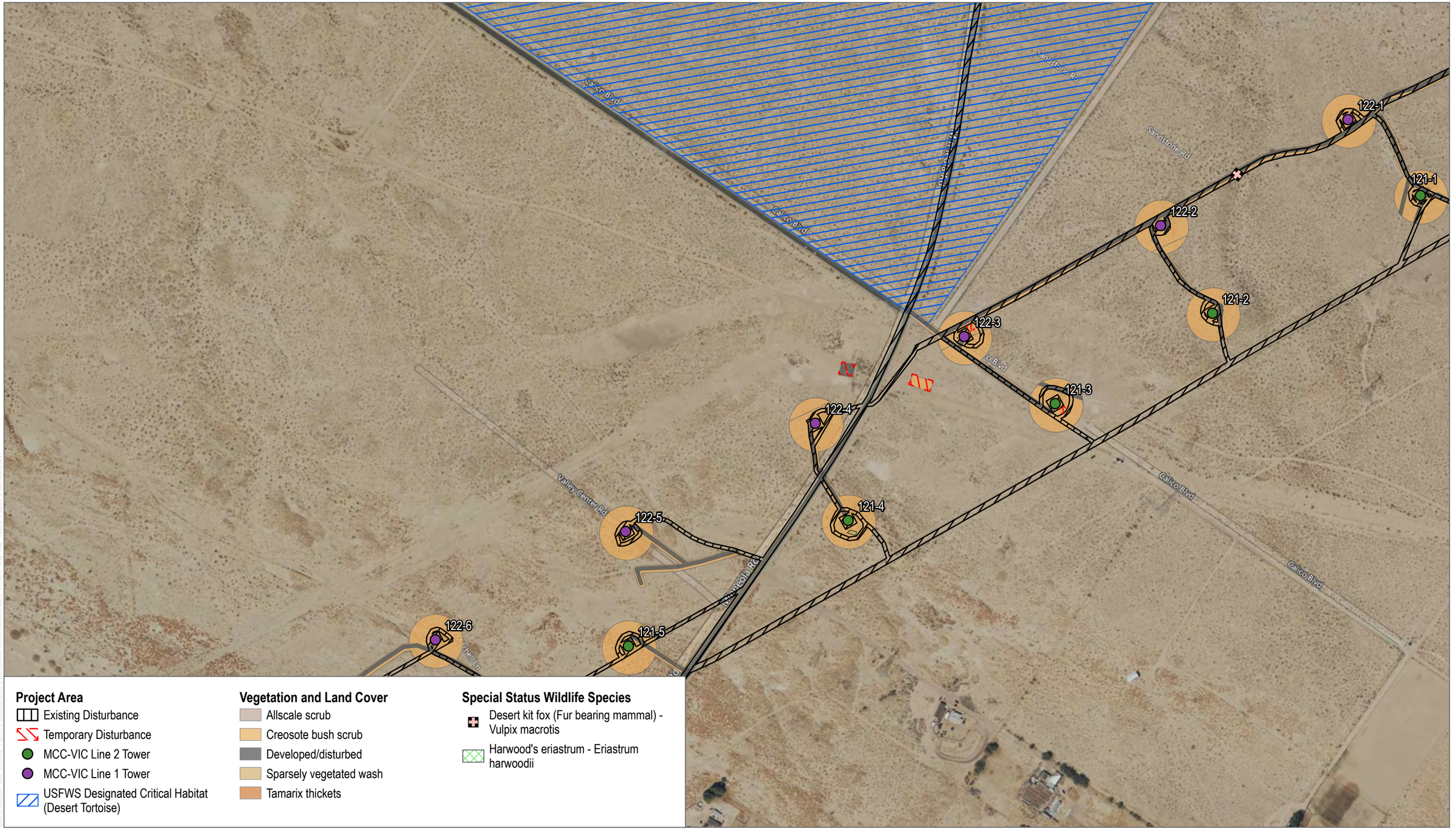
DUDEK

0 200 400 Feet

FIGURE 4.2-5-130

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

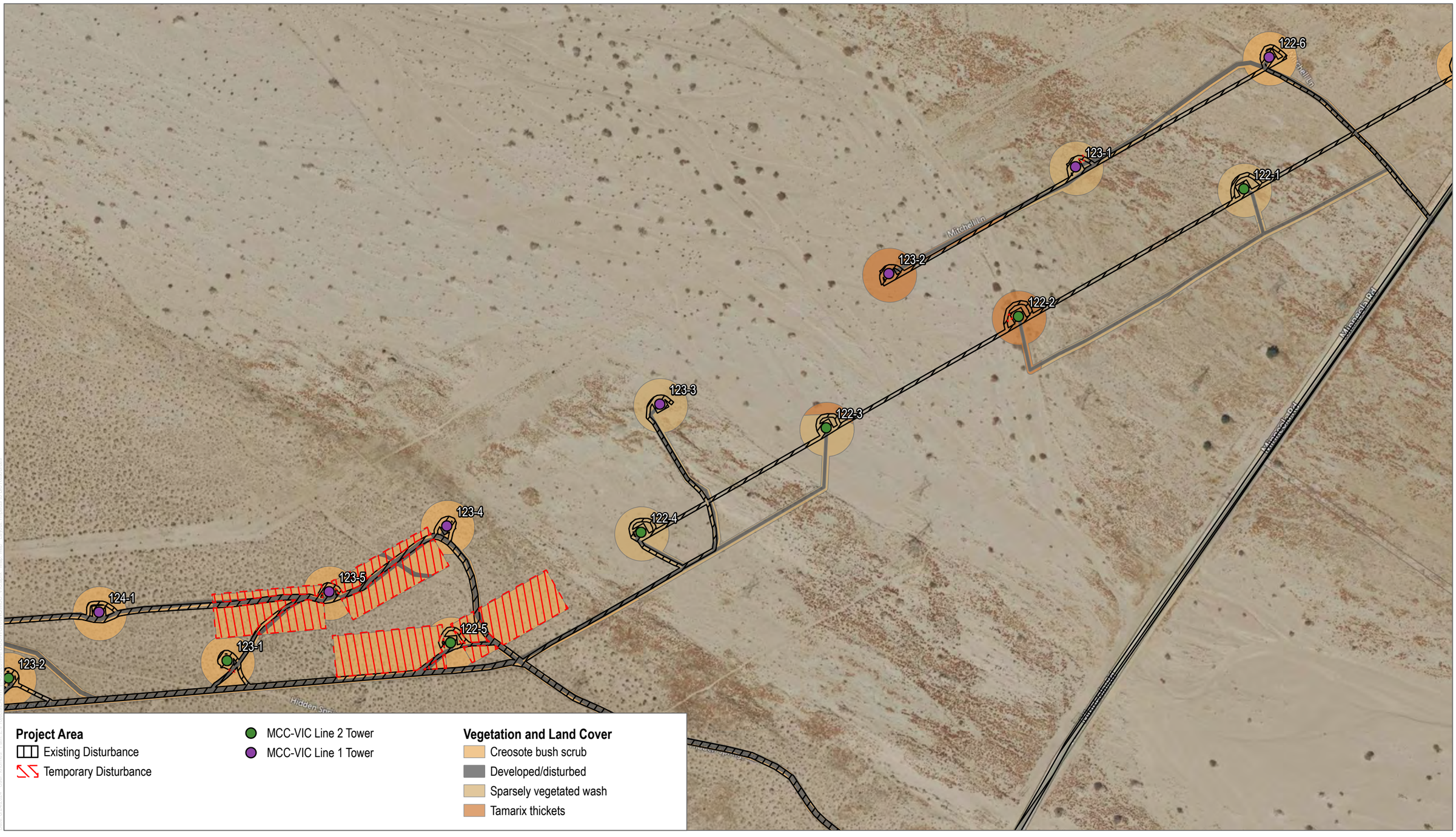
DUDEK

0 200 400 Feet

FIGURE 4.2-5-131

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-132

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-133

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-134

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

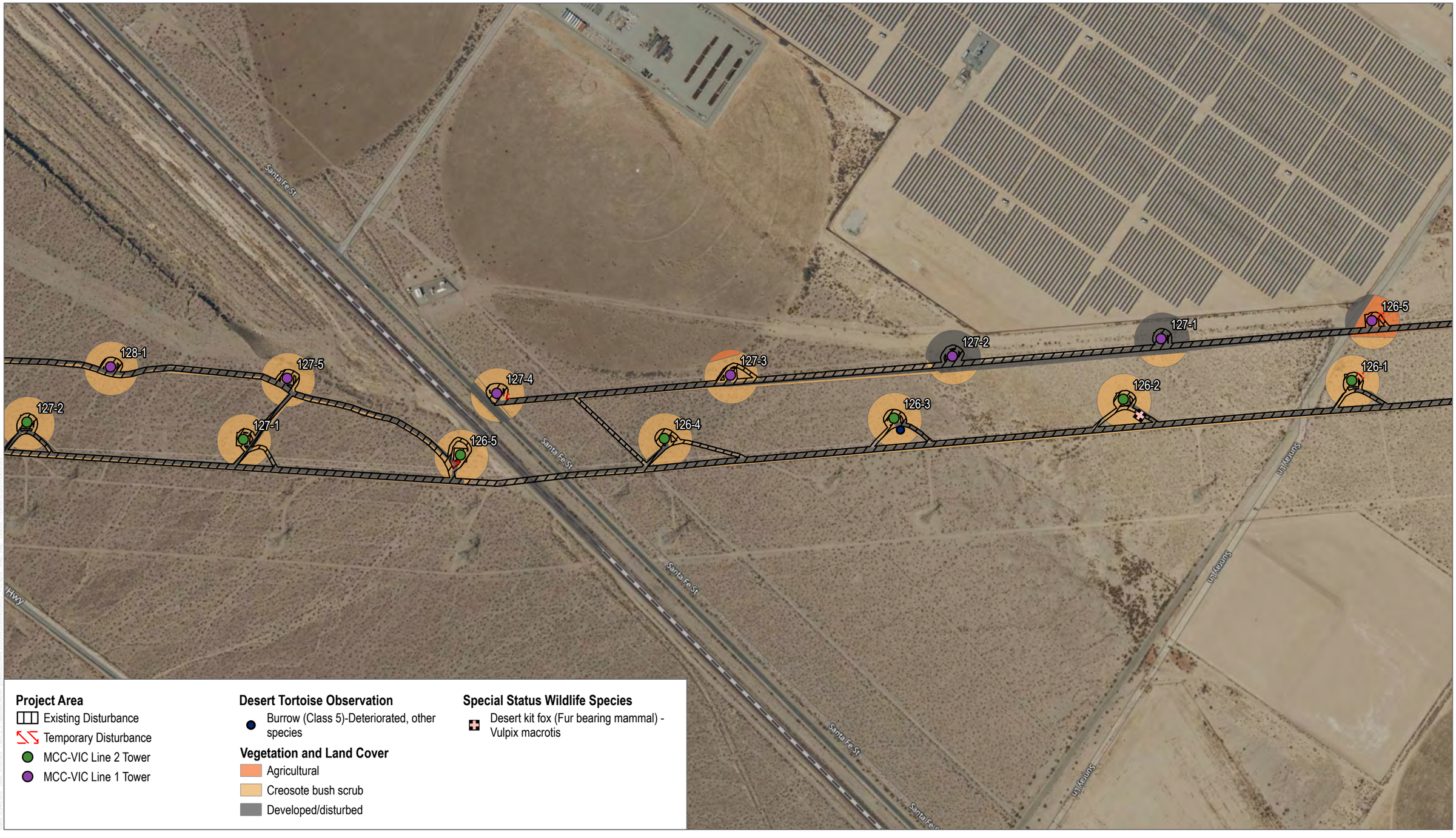
DUDEK

0 200 400 Feet

FIGURE 4.2-5-135

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-136

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-137

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

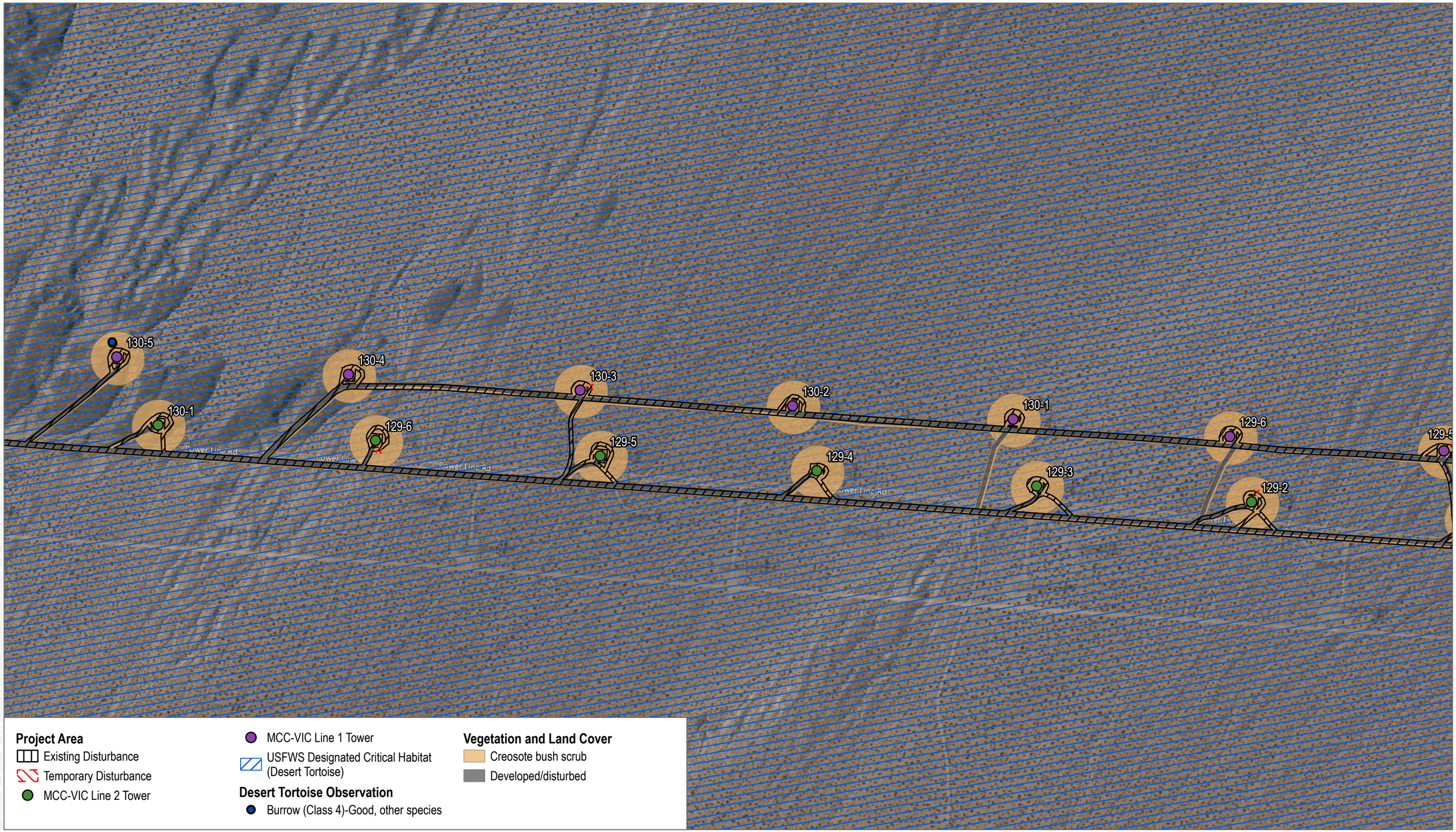
DUDEK

0 200 400 Feet

FIGURE 4.2-5-138

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-139

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-140

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-141

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

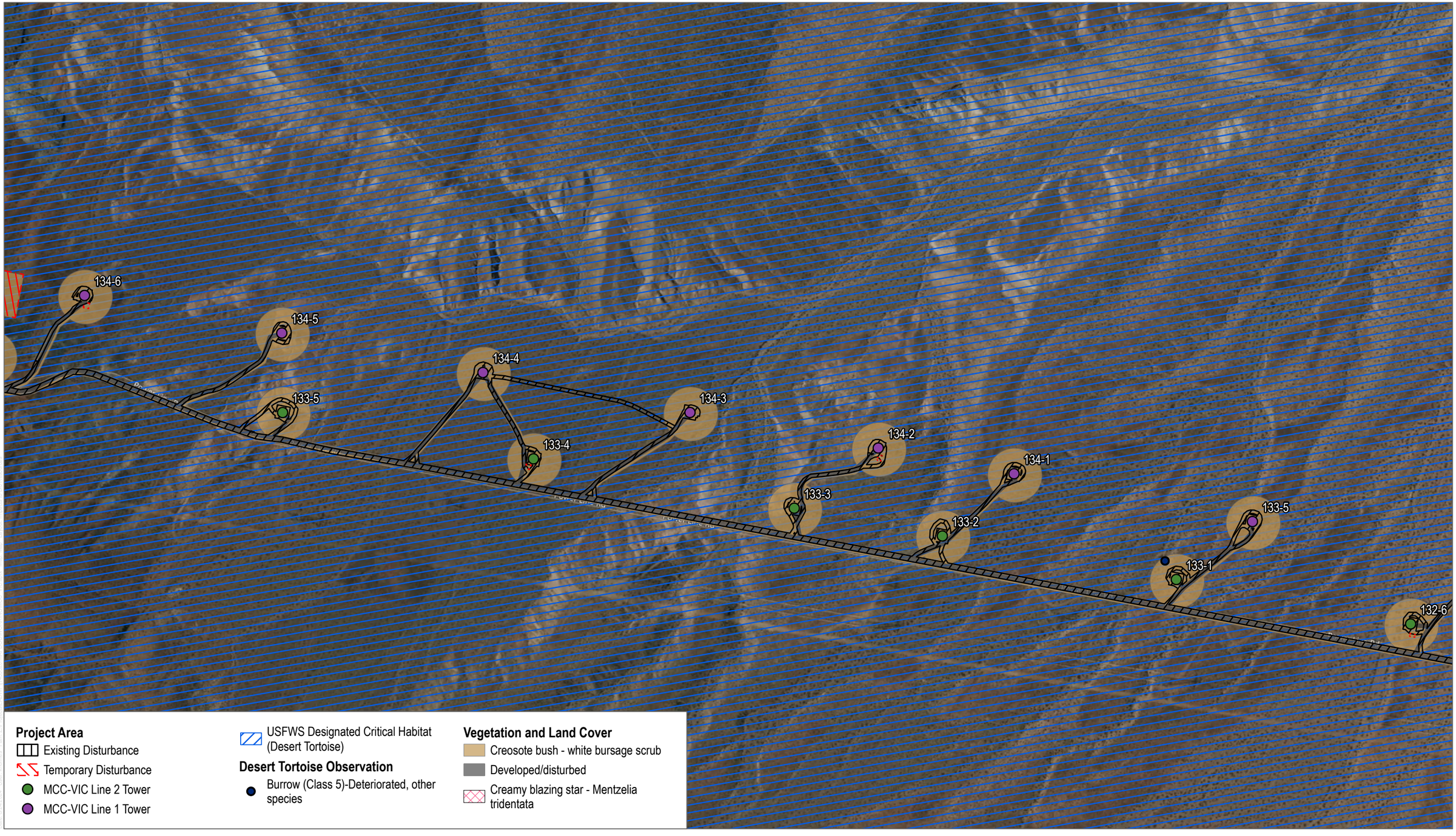
DUDEK

0 200 400 Feet

FIGURE 4.2-5-142

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

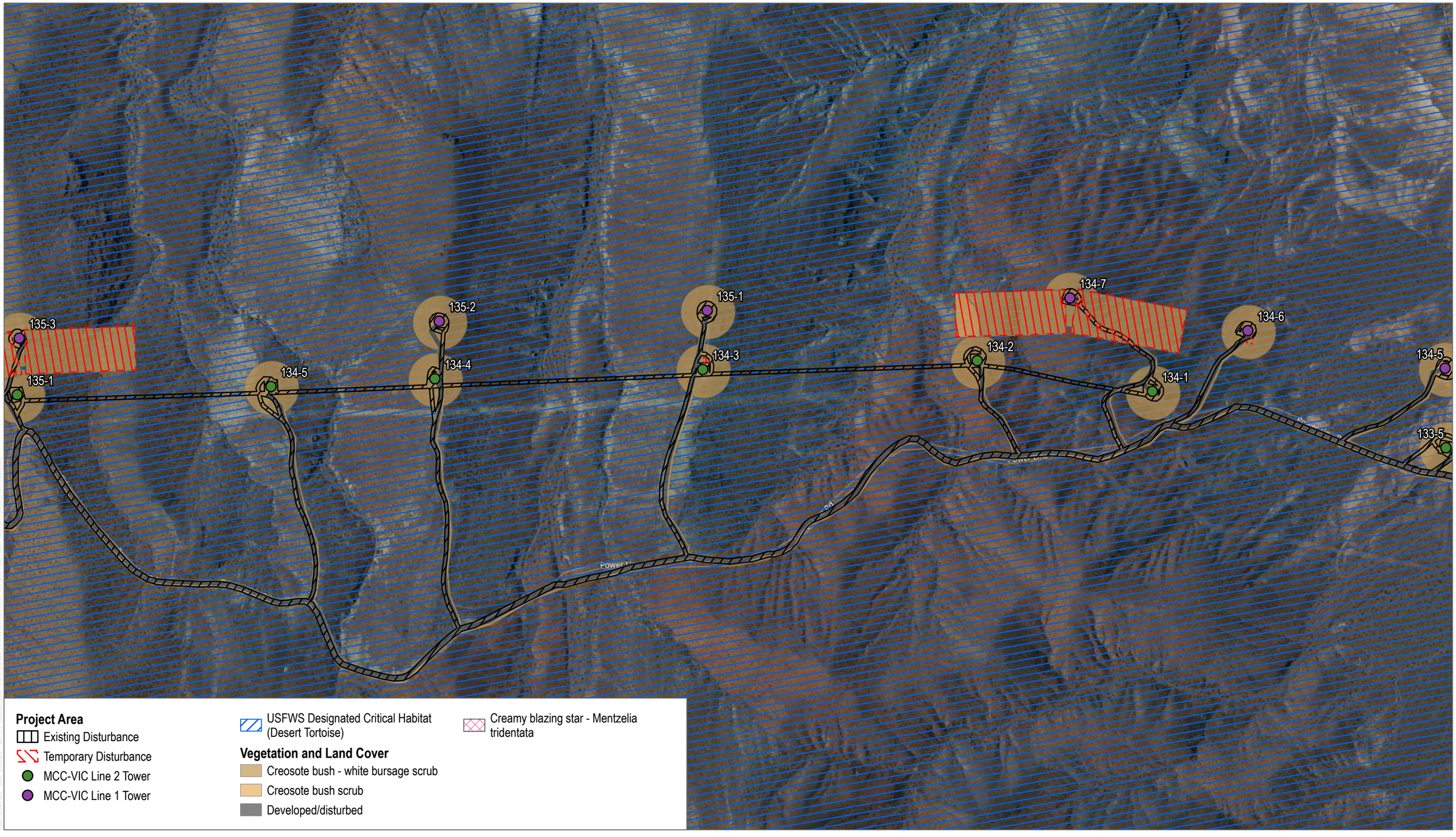
DUDEK

0 200 400 Feet

FIGURE 4.2-5-143

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

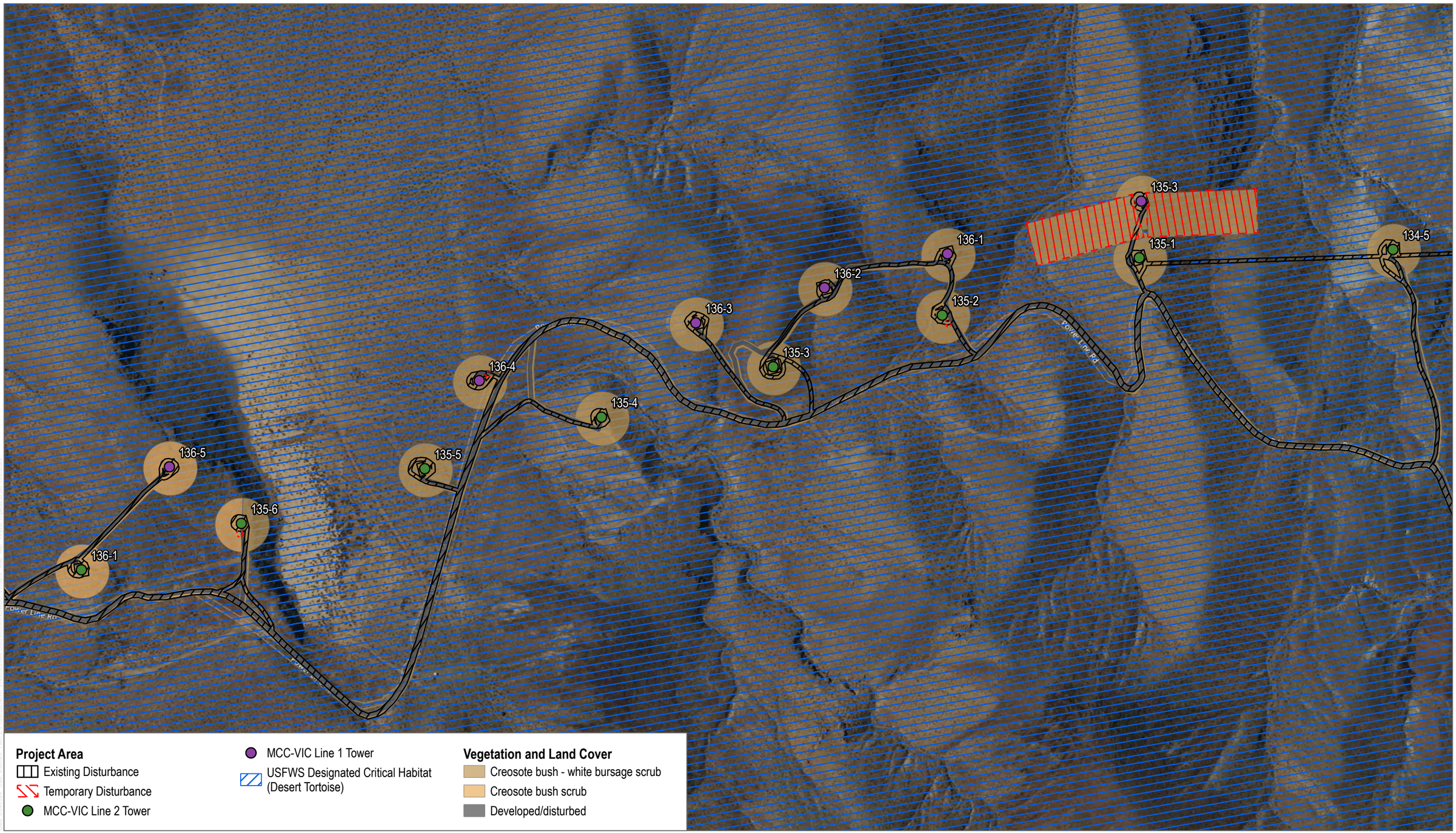
DUDEK

0 200 400 Feet

FIGURE 4.2-5-144

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

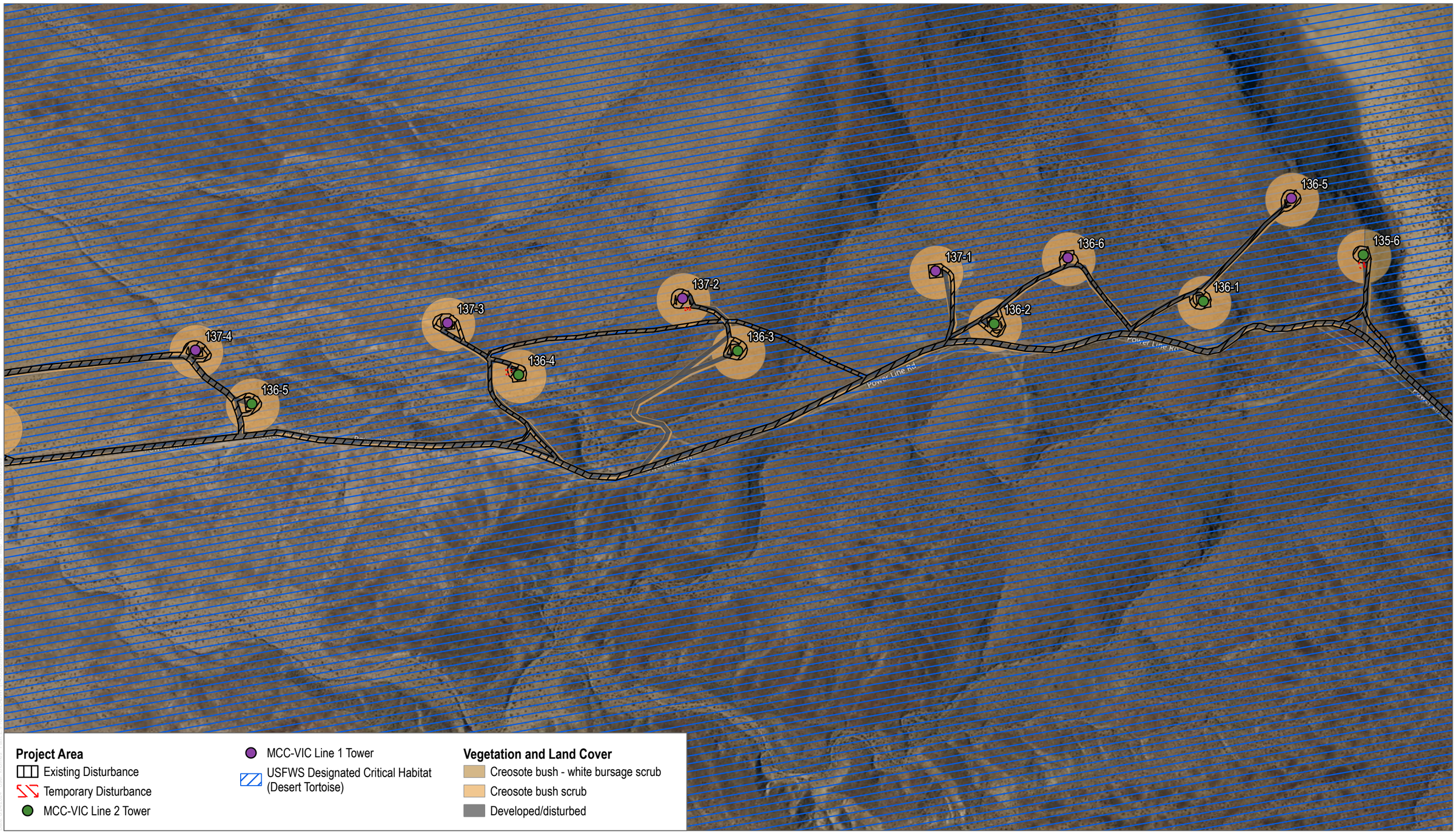
DUDEK

0 200 400 Feet

FIGURE 4.2-5-145

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-146

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-147

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-148

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-149

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

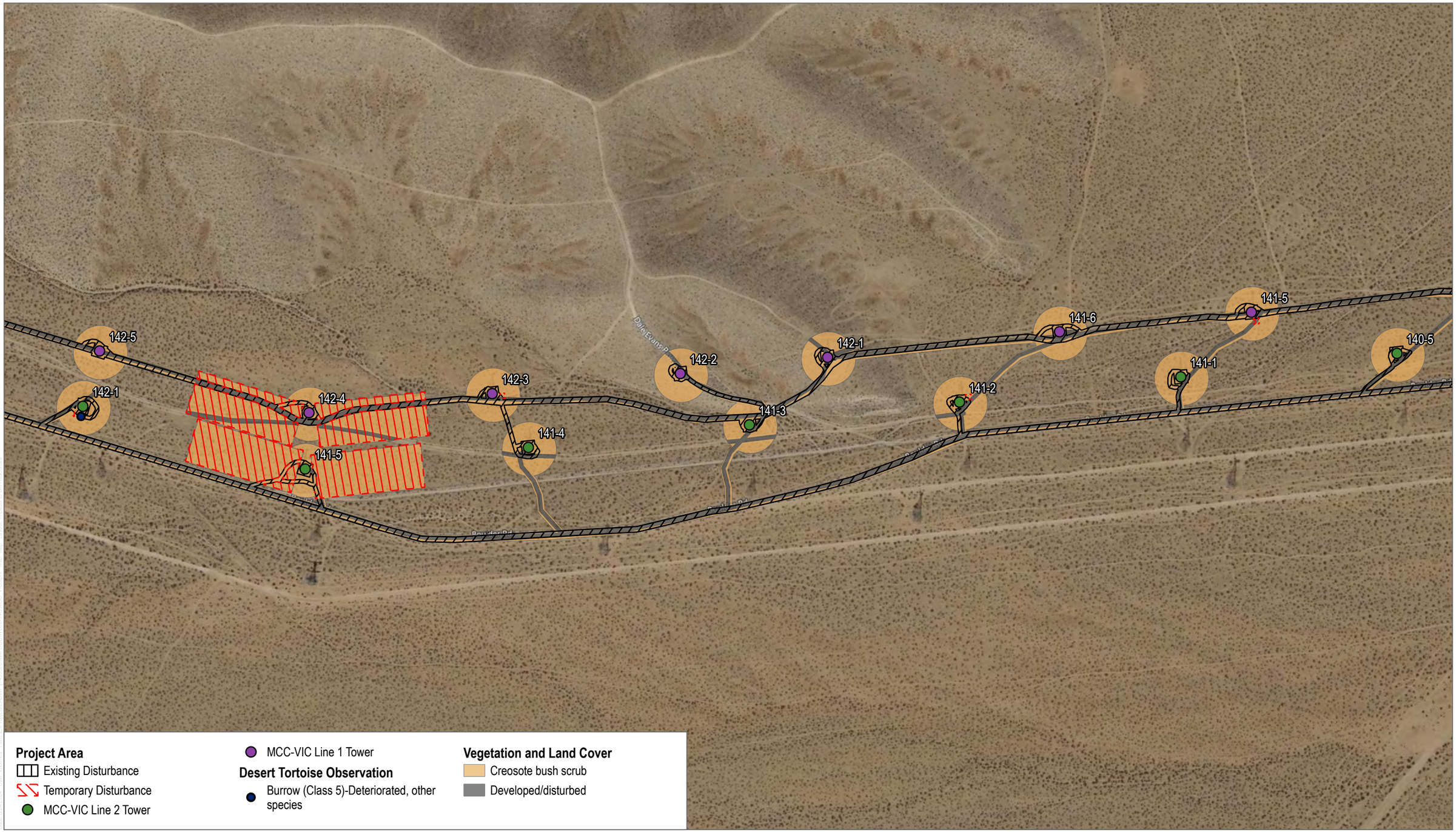
DUDEK

0 200 400 Feet

FIGURE 4.2-5-150

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-151

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-152

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

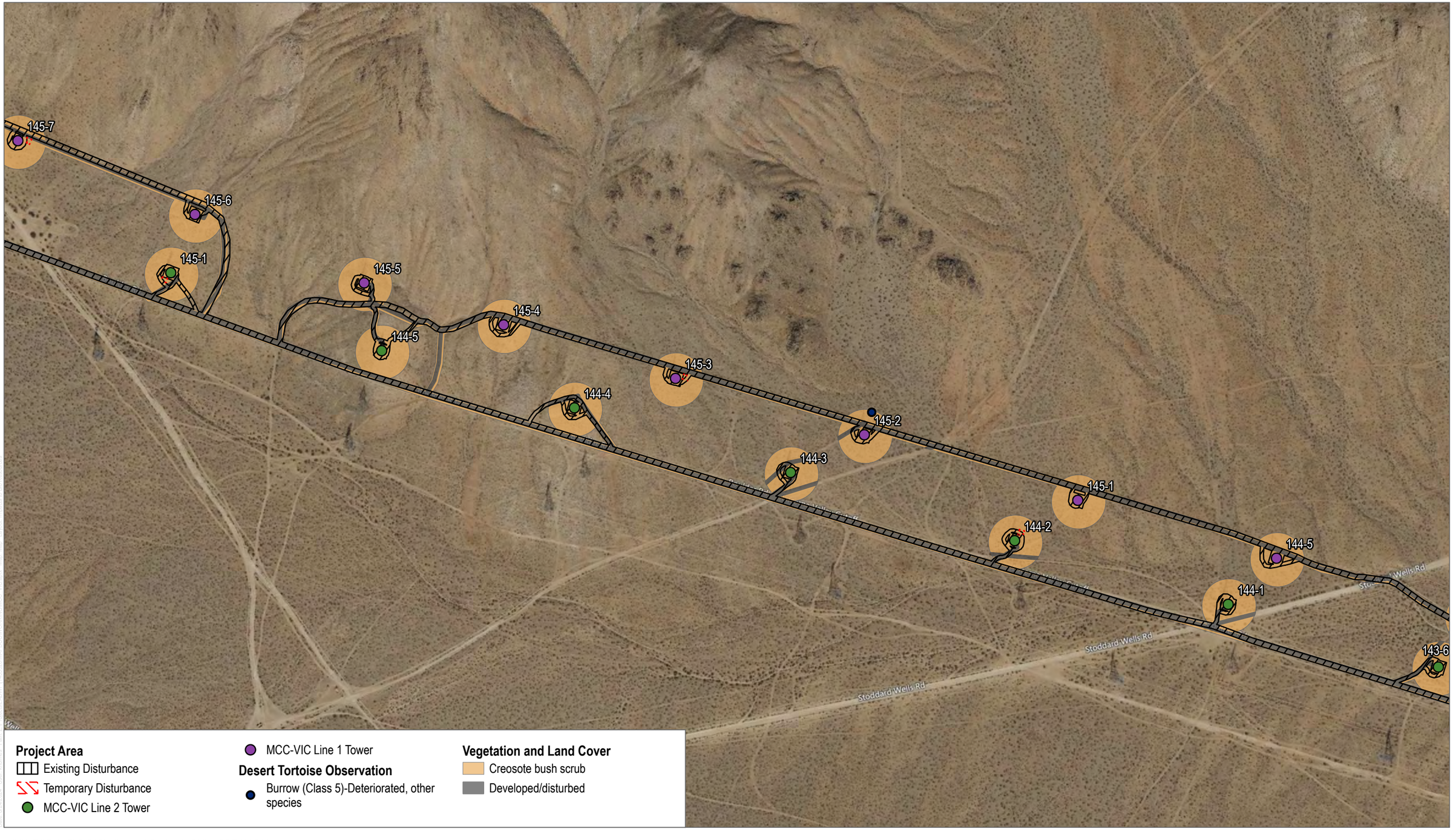
DUDEK

0 200 400 Feet

FIGURE 4.2-5-153

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

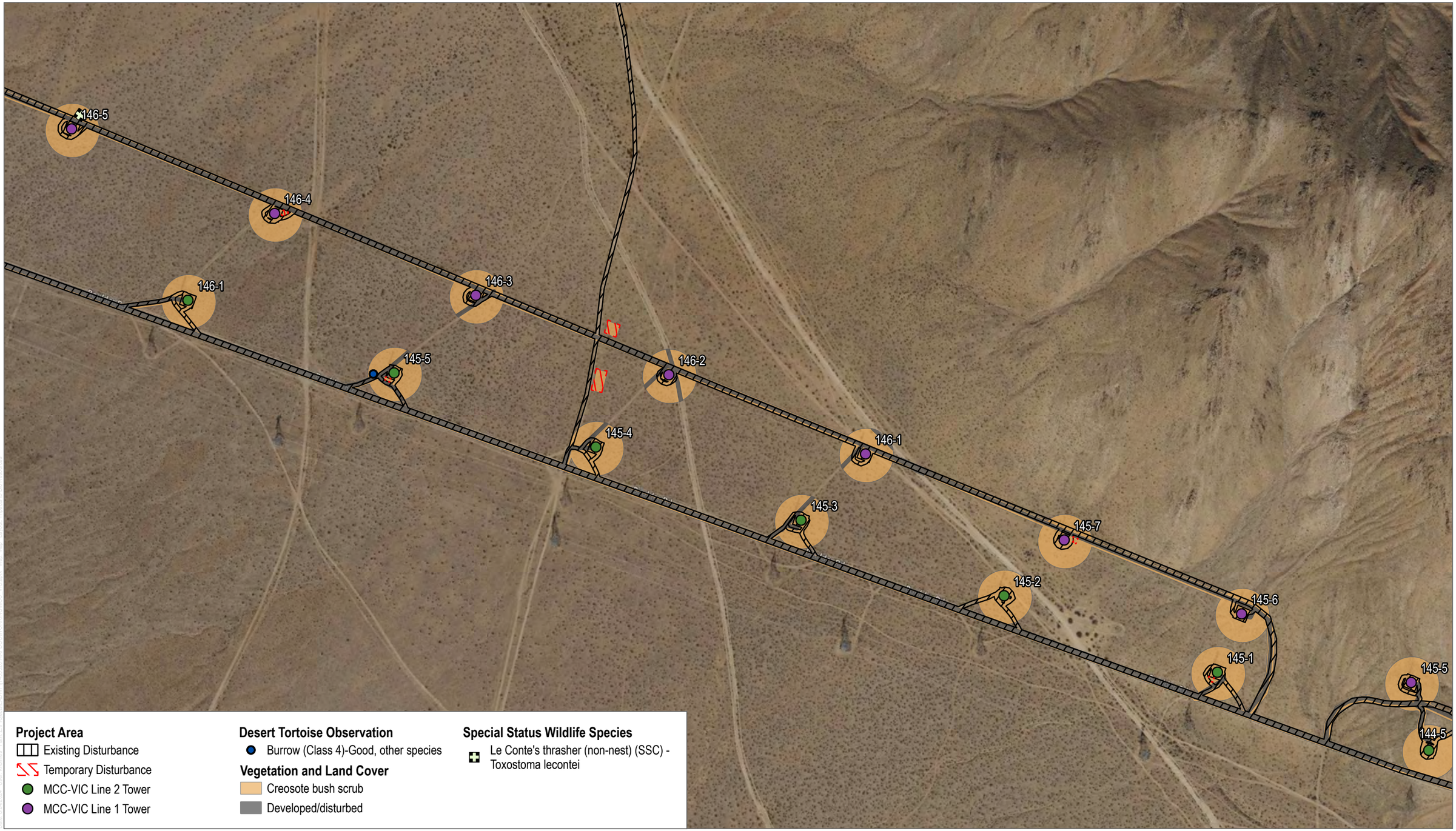
DUDEK

0 200 400 Feet

FIGURE 4.2-5-154

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

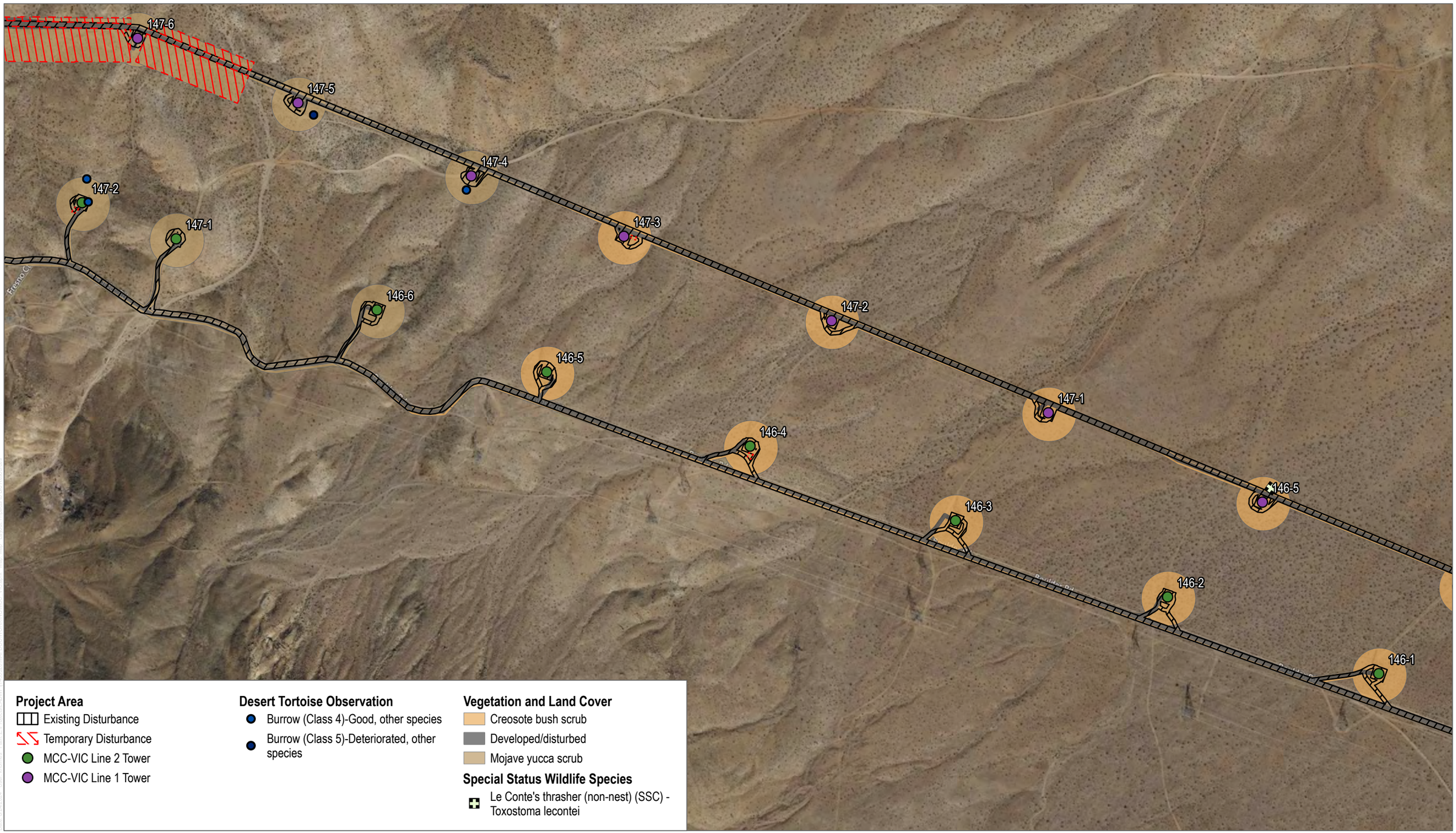
DUDEK

0 200 400 Feet

FIGURE 4.2-5-155

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

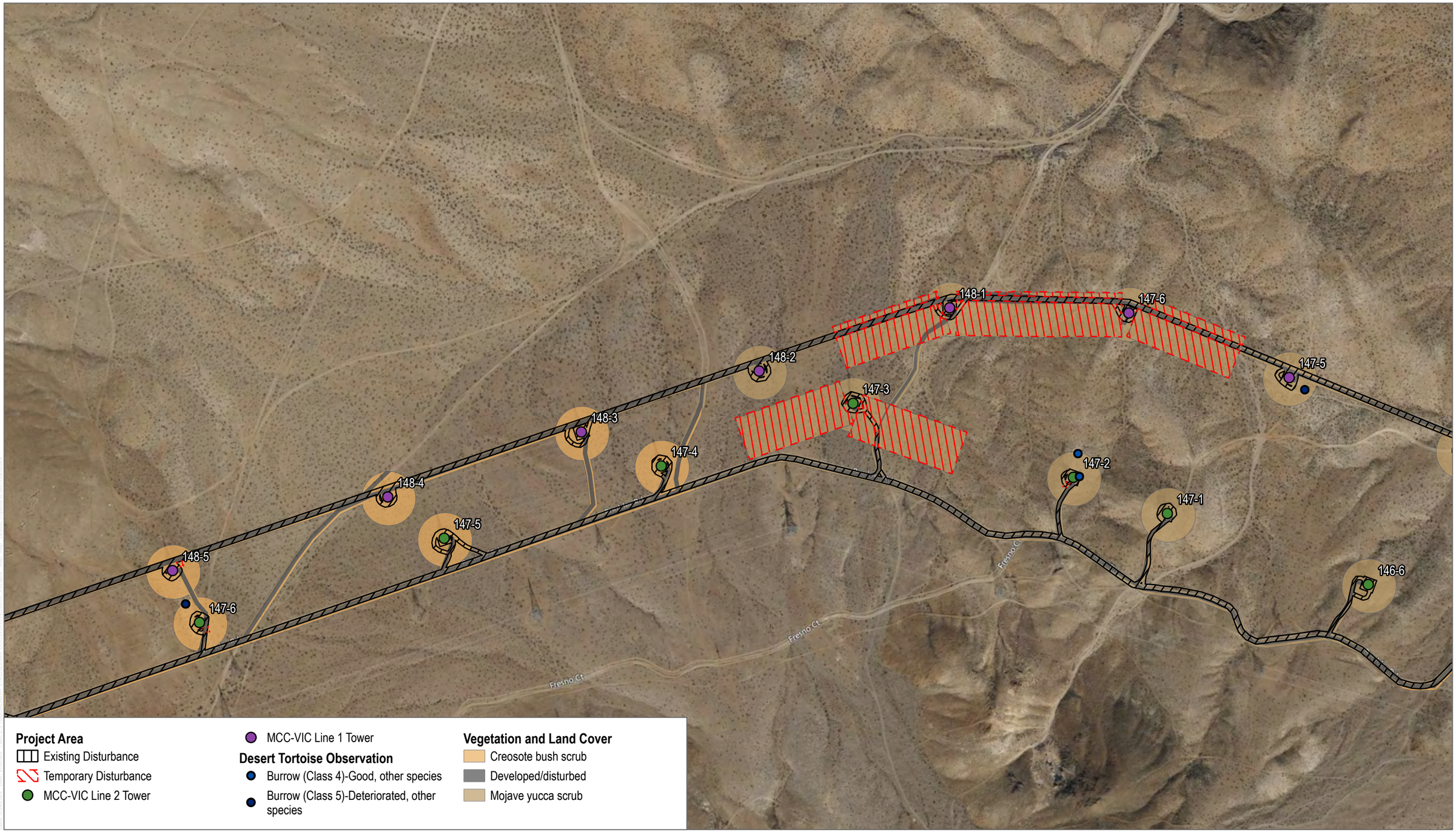
DUDEK

0 200 400 Feet

FIGURE 4.2-5-156

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

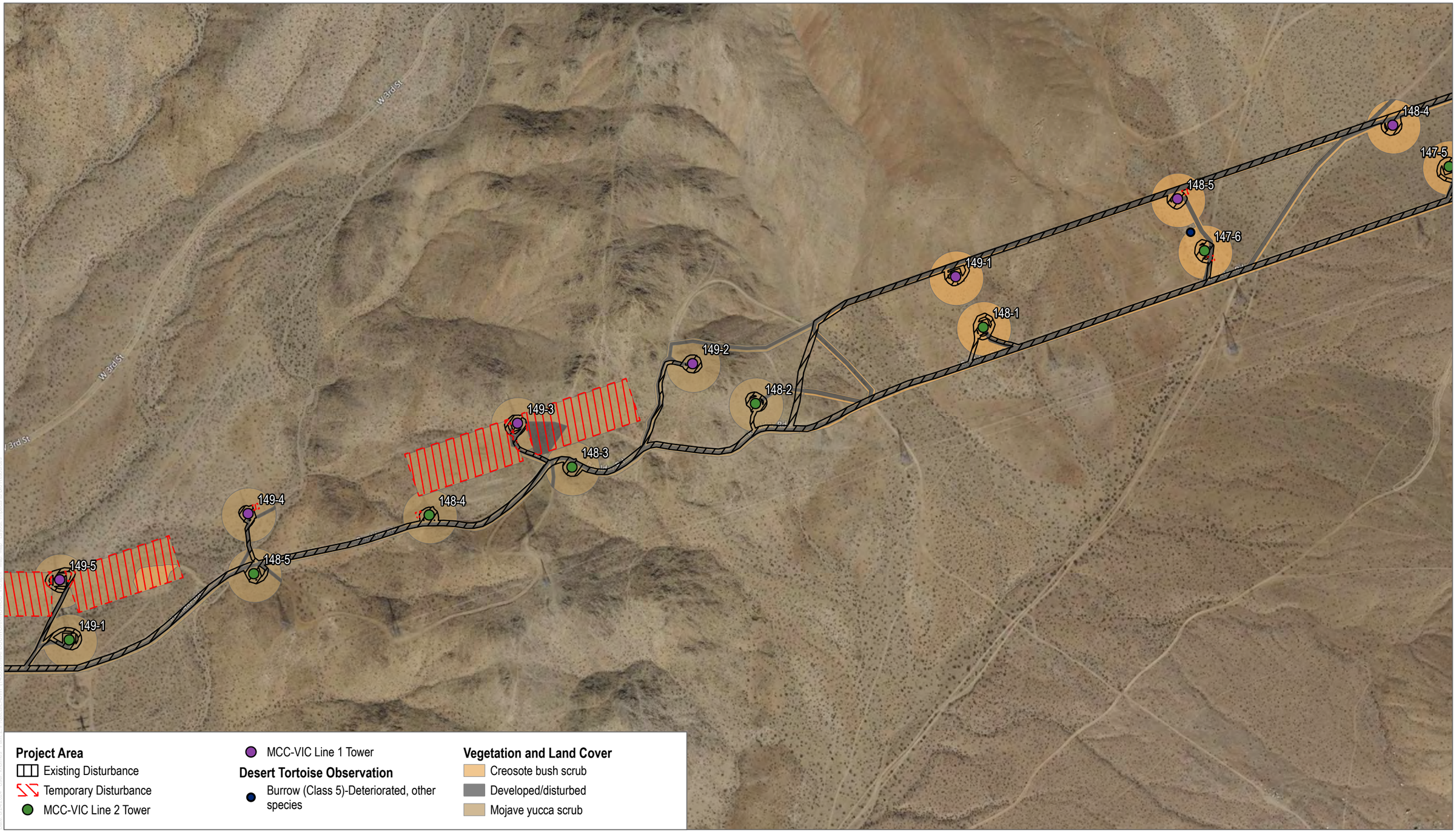
DUDEK

0 200 400 Feet

FIGURE 4.2-5-157

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

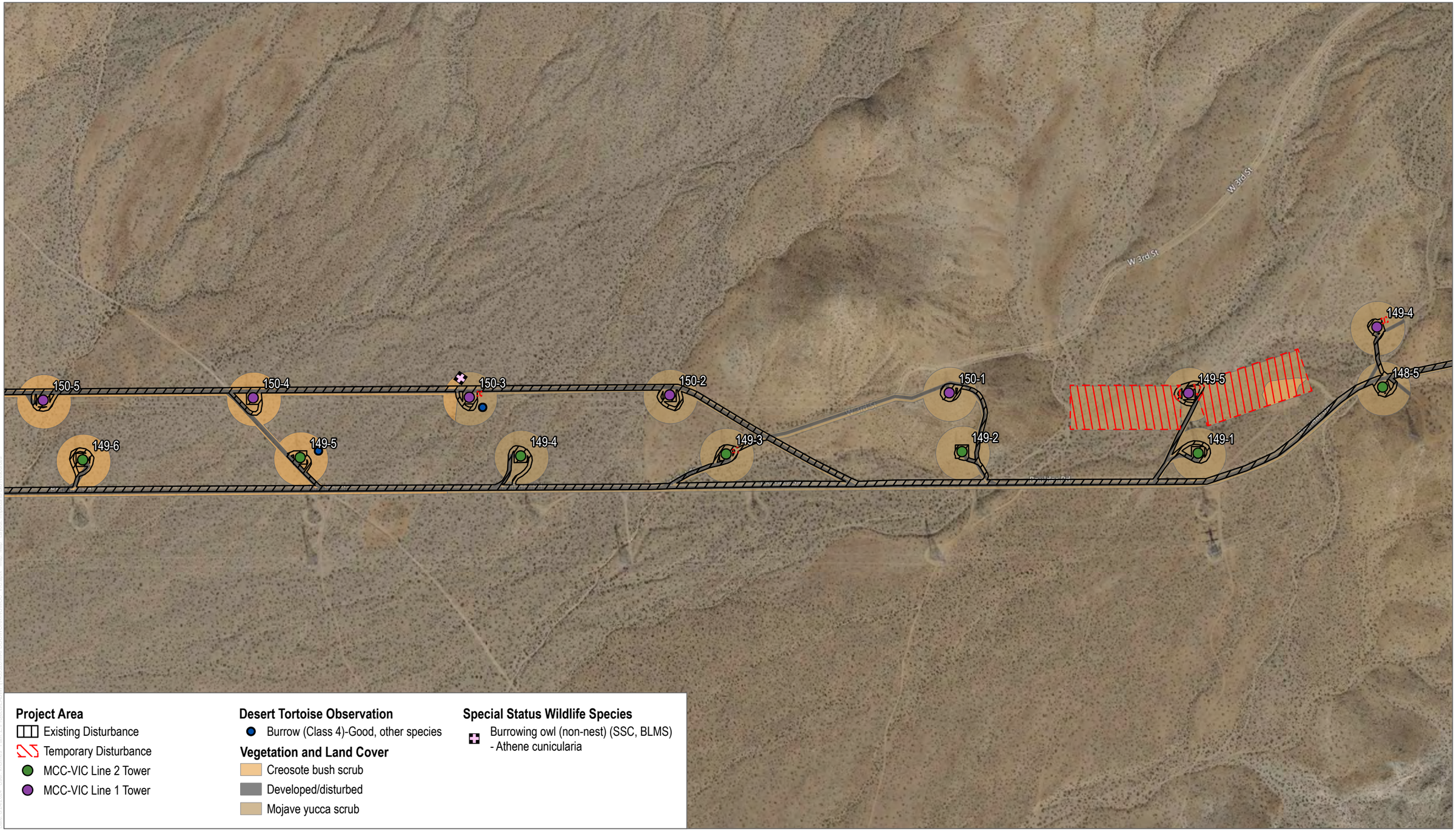
DUDEK

0 200 400 Feet

FIGURE 4.2-5-158

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

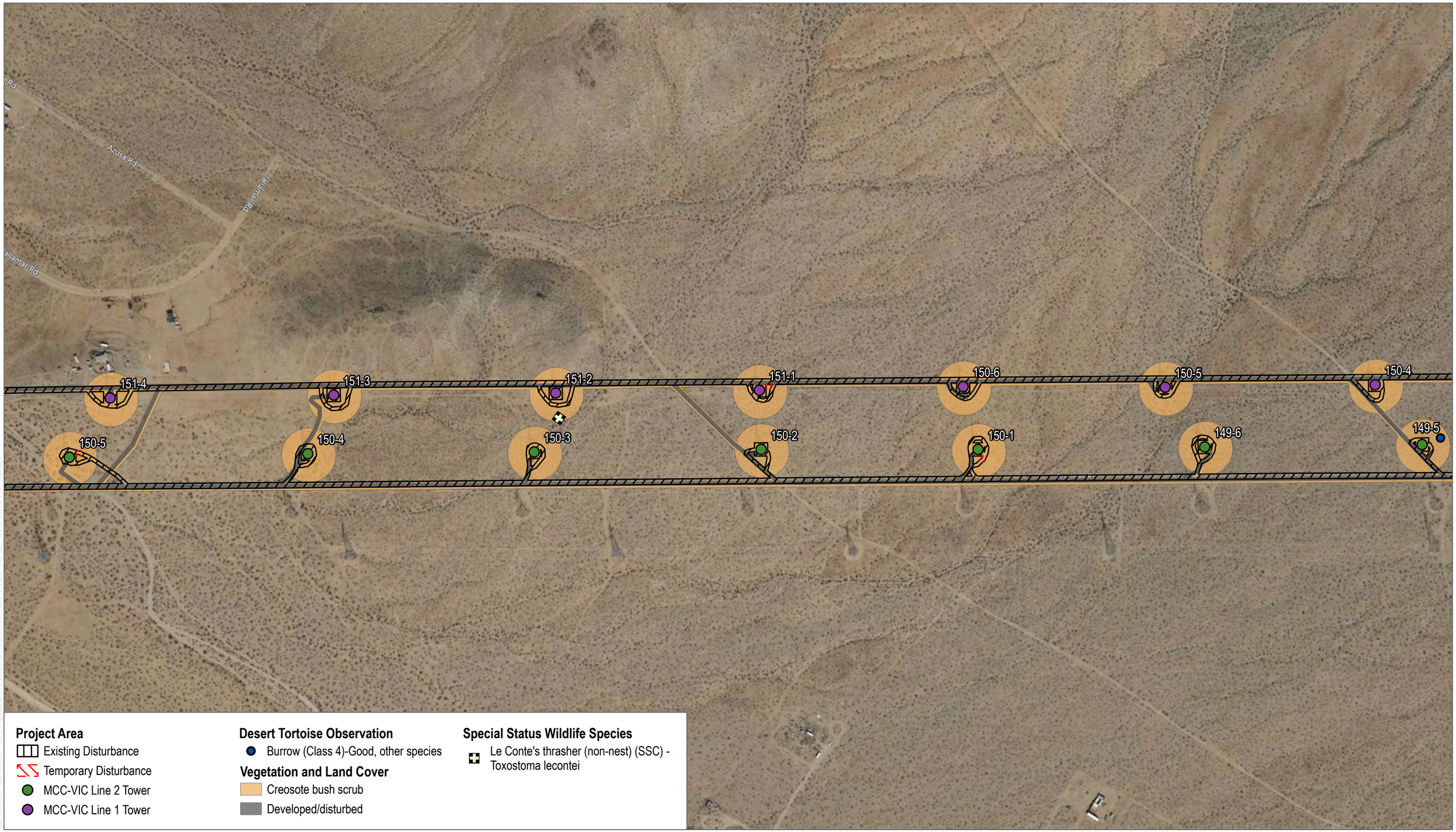
DUDEK

0 200 400 Feet

FIGURE 4.2-5-159

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-160

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

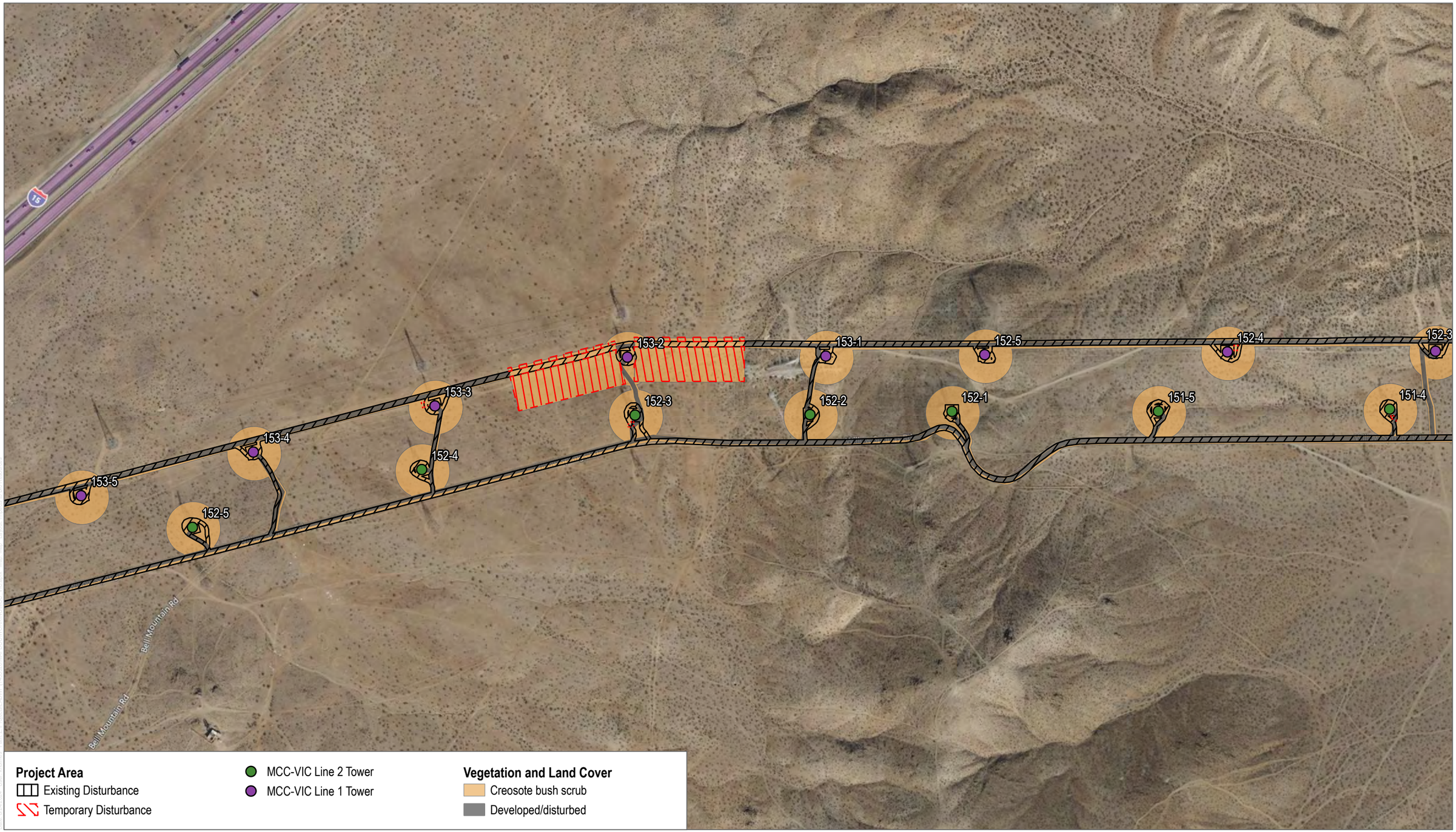
DUDEK

0 200 400 Feet

FIGURE 4.2-5-161

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

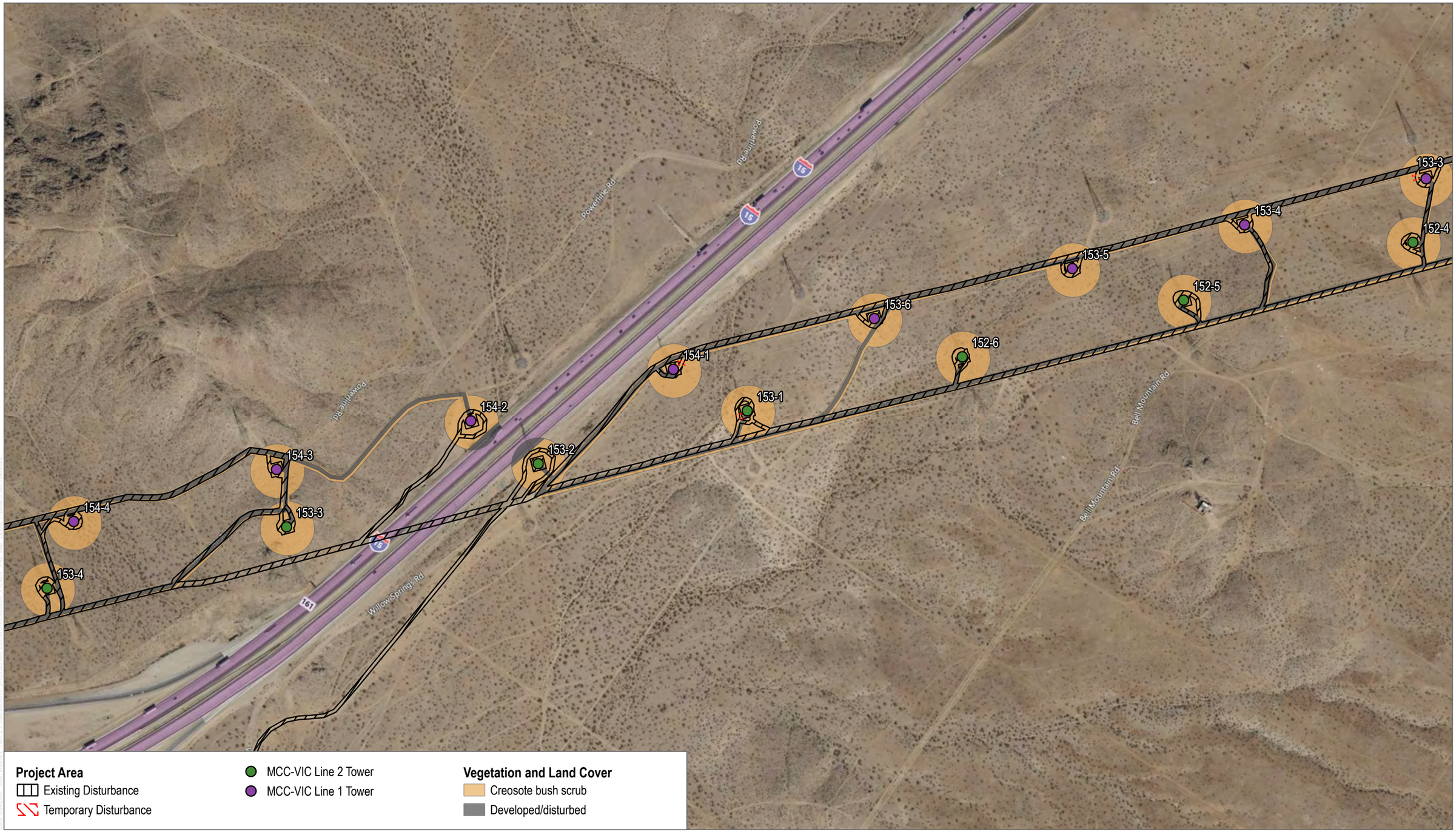
DUDEK

0 200 400 Feet

FIGURE 4.2-5-162

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

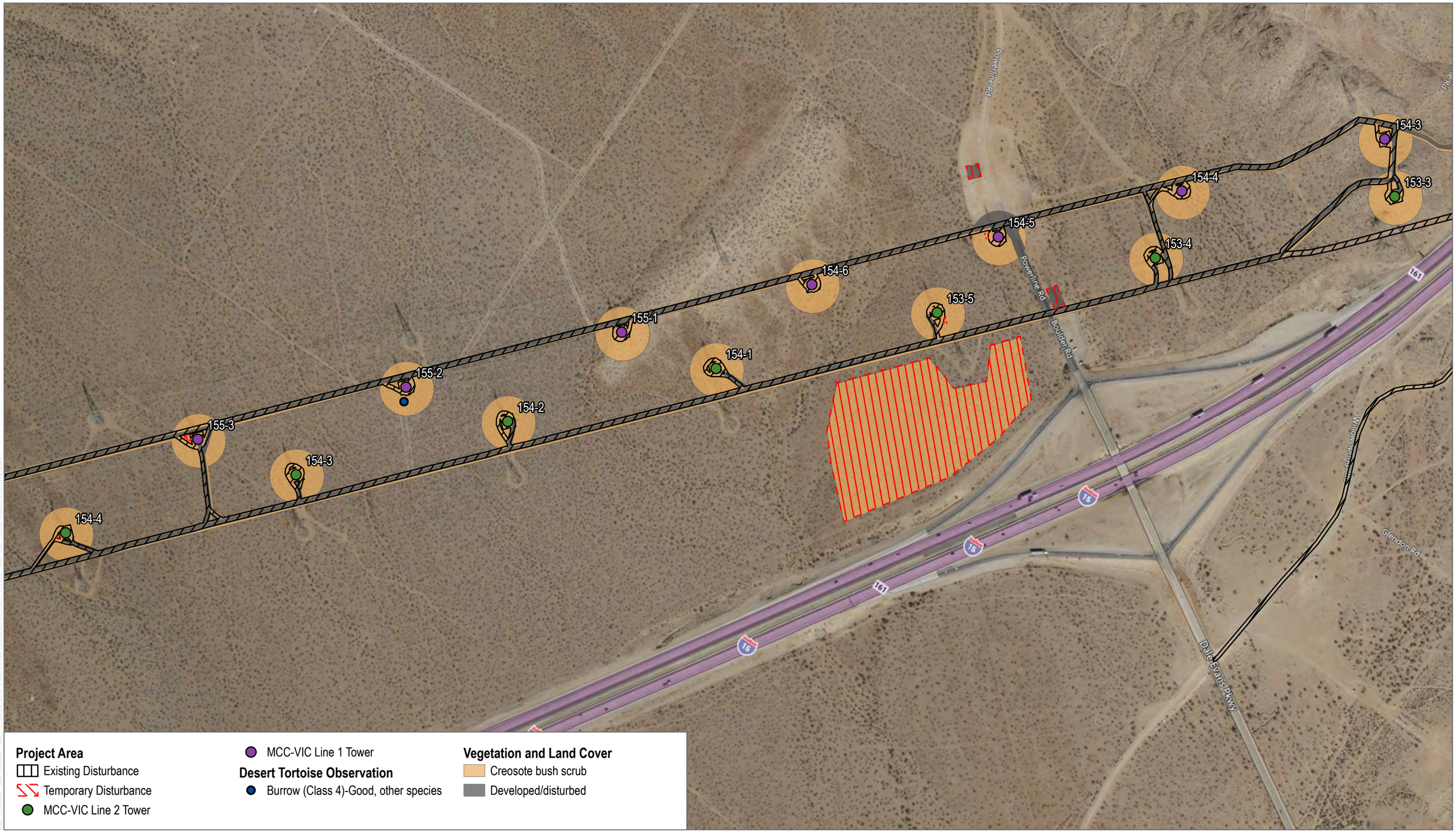
DUDEK

0 200 400 Feet

FIGURE 4.2-5-163

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

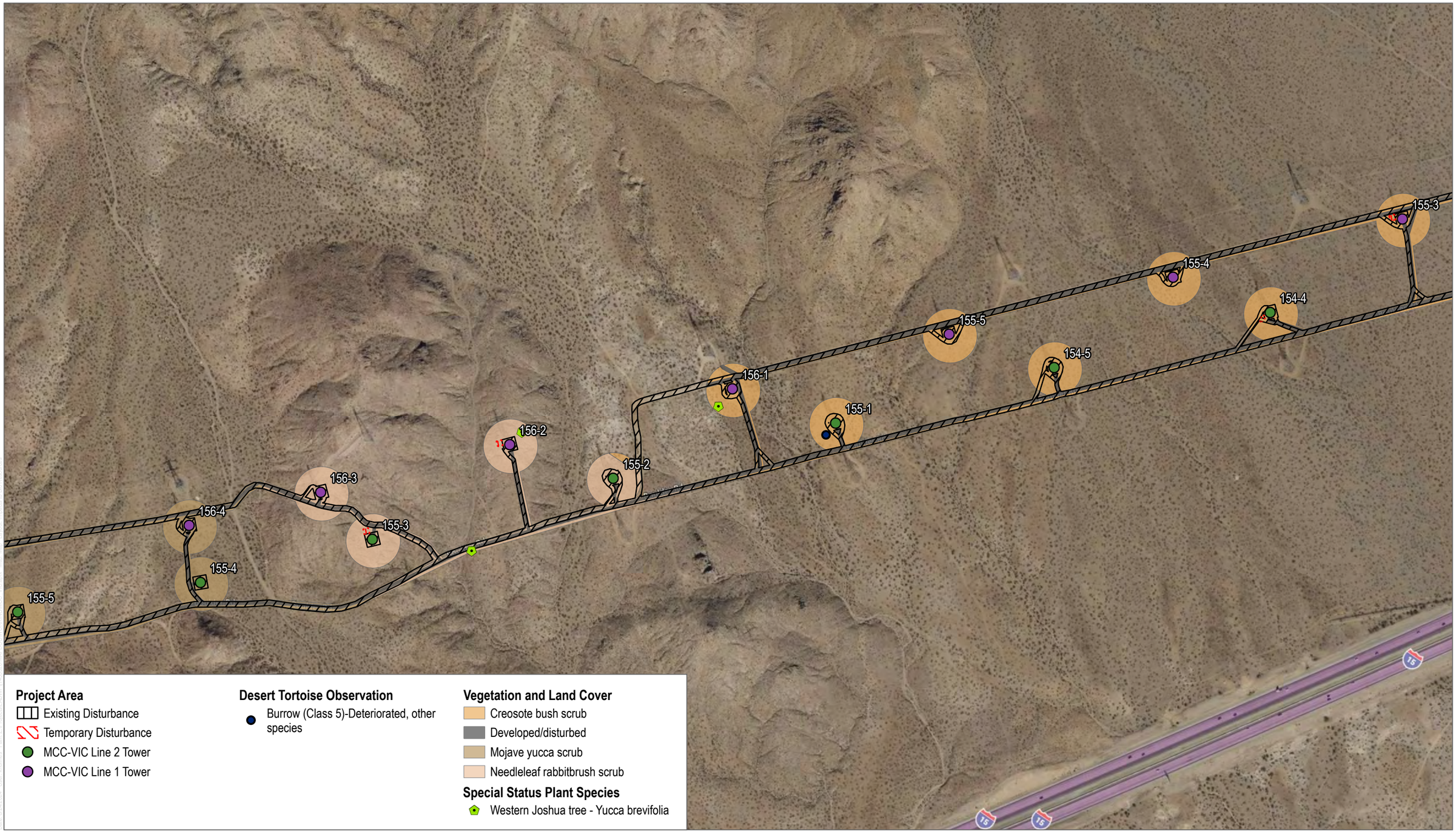
DUDEK

0 200 400 Feet

FIGURE 4.2-5-164

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

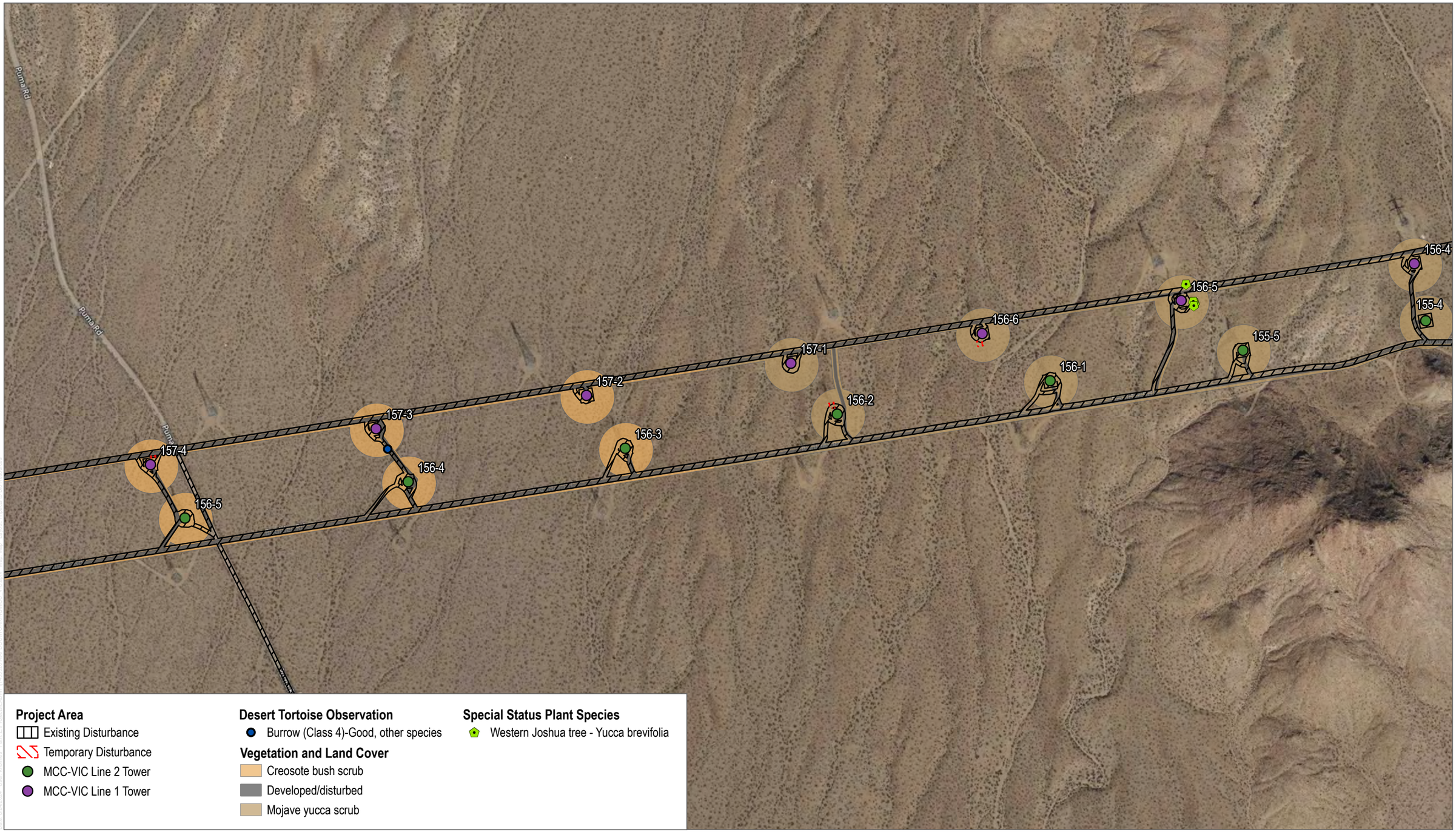
DUDEK

0 200 400 Feet

FIGURE 4.2-5-165

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-166

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

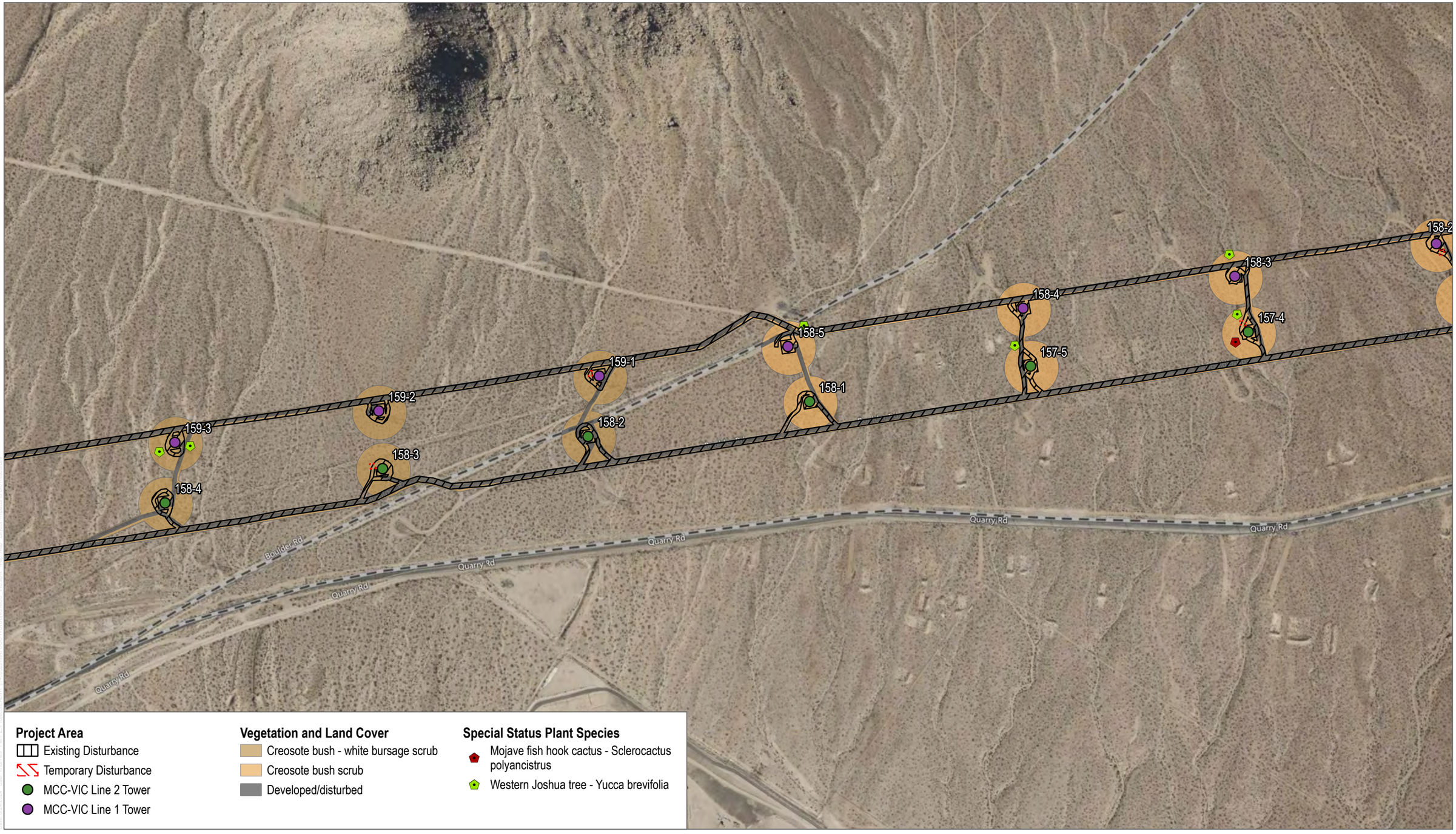
DUDEK

0 200 400 Feet

FIGURE 4.2-5-167

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

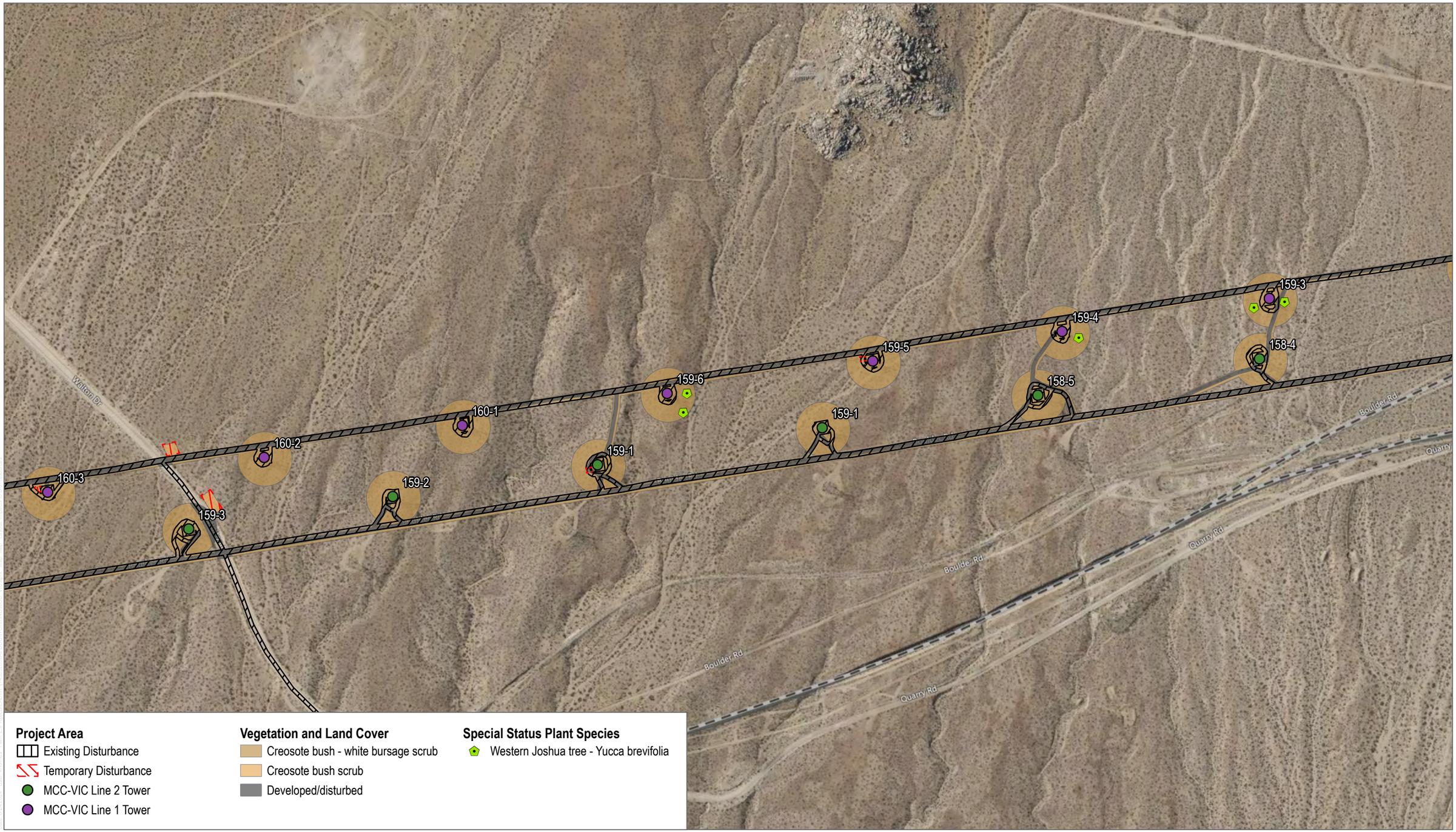
DUDEK

0 200 400 Feet

FIGURE 4.2-5-168

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-169

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

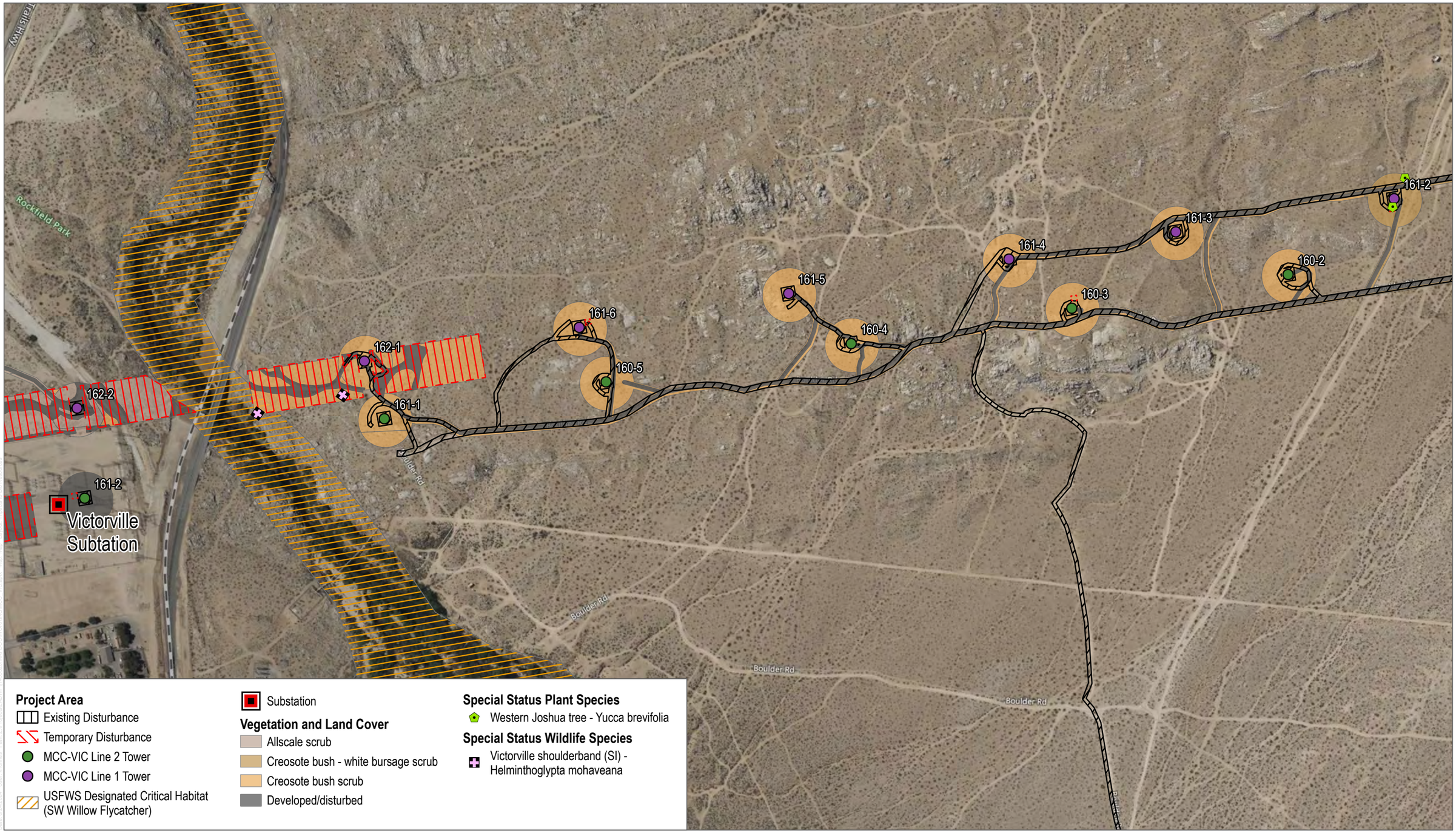
DUDEK

0 200 400 Feet

FIGURE 4.2-5-170

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

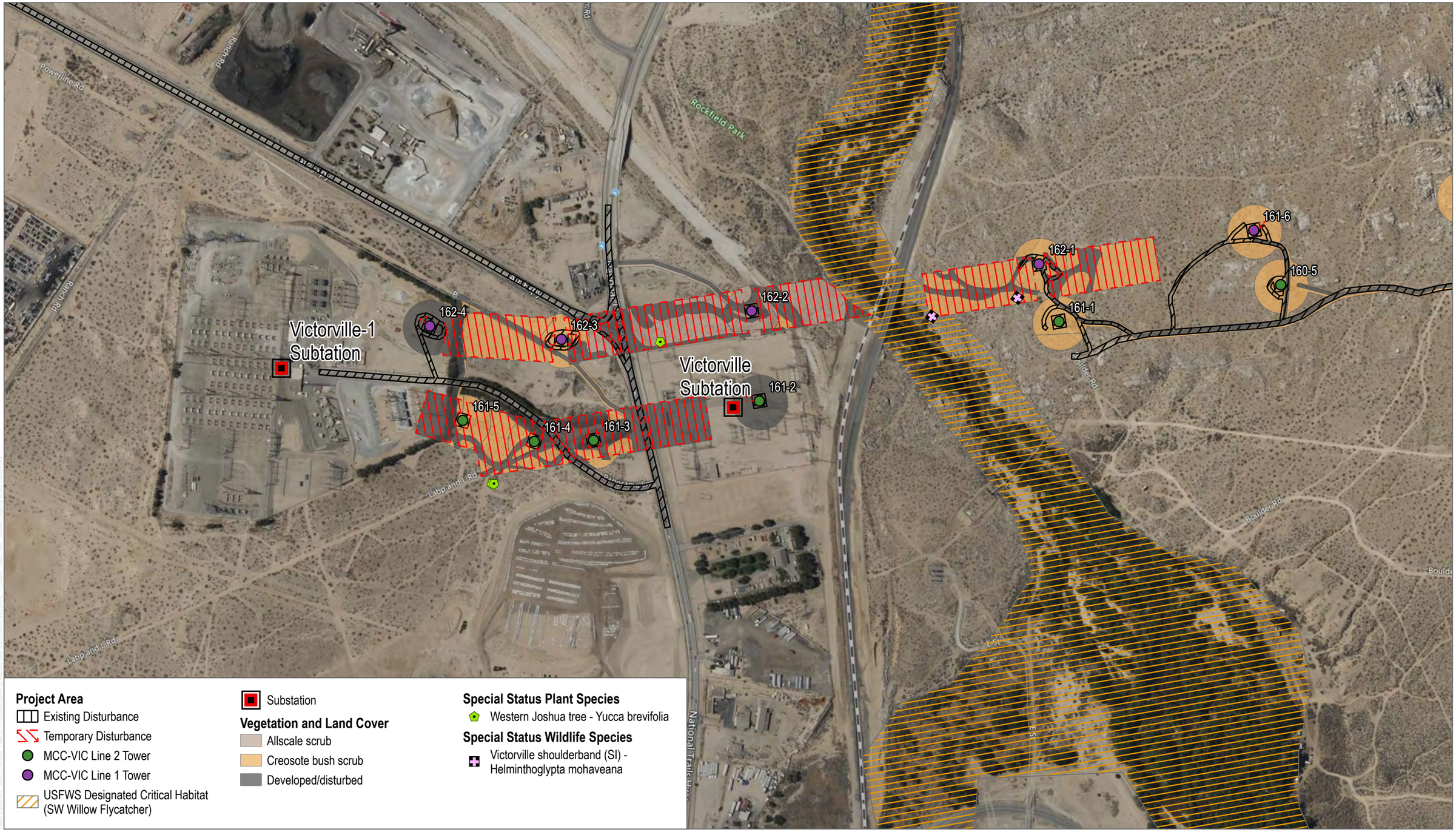
DUDEK

0 200 400 Feet

FIGURE 4.2-5-171

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project



SOURCE: NIFLD 2022; State of California 2021; CDFW 2024

DUDEK

0 200 400 Feet

FIGURE 4.2-5-172

Impacts to Biological Resources

McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project

4.3 Cultural Resources

This section describes existing conditions related to cultural resources, identifies associated regulatory requirements, evaluates potential Project and cumulative impacts, and identifies mitigation measures for any significant or potentially significant impacts related to implementation of the of the McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project ("Project" or "proposed Project"). The purpose of the Project is to accommodate incoming renewable energy resources from the East territory region, along the West of River Path 46 transmission corridor in order to help the Los Angeles Department of Water and Power (LADWP) achieve state and local requirements for greenhouse gas reductions and an increased renewable energy portfolio. Tribal Cultural Resources are separately addressed in Section 4.5, Tribal Cultural Resources. Tribal Cultural Resources are a defined class of resources under state law, which include sites, features, places, cultural landscapes, and sacred places or objects that have cultural value or significance to a Tribe.

Cultural resources can reflect the history, diversity, and culture of the region, as well as the people who created them. Cultural resources are unique in that they are often the only remaining evidence of human activity that occurred in the past. Cultural resources can be natural or built, purposeful or accidental, physical, or intangible. They encompass archaeological, traditional, and built environment resources, including but not necessarily limited to buildings, structures, objects, districts, and sites. Cultural resources include locations where important events occurred, traditional cultural places, sacred sites, and places associated with important people.

The following discussion is based on the confidential record search information gathered from the Nevada Cultural Resource Information System and the confidential cultural resources record search report, also known as a Class I Report, prepared for the LADWP and the Bureau of Land Management (BLM) for the proposed Project, unless otherwise referenced, the title of which is Class I Cultural Resources Record Search Report for the McCullough-Victorville Transmission Line Retrofit Project (Aspen 2024). Intensive pedestrian surveys of the Project Area are on-going; thus the results of the survey and resource evaluations are pending and will be available at a future date.

4.3.1 Existing Conditions

Definitions of Cultural Resources

A **cultural resource** is defined as any object or specific location of past human activity, occupation, or use, identifiable through historical documentation, inventory, or oral evidence. Cultural resources can be separated into three categories: archaeological, built environment, and tribal cultural resources.

Archaeological resources include both historic era and prehistoric remains of past human activity. Historic era resources can consist of structural remnants (e.g., cement foundations), historic era objects (e.g., bottles and cans), and sites (e.g., refuse deposits or scatters). Prehistoric resources can include lithic scatters, ceramic scatters, quarries, habitation sites, temporary camps/rock rings, ceremonial sites, and trails.

Built environment resources consist of standing historic era buildings and structures, the latter of which includes canals, roads, trails, bridges, ditches, and cemeteries.

Pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15064.5, **historical resource** is a term used to define a prehistoric or historic aged resource that is recommended eligible, determined eligible, or listed on the California Register of Historical Resources (CRHR). Any cultural resource that is determined eligible or listed on the National Register of Historic Places (NRHP) is automatically eligible for listing in the CRHR and is considered a significant resource for the purpose of this analysis.

A **unique archaeological resource,** as defined by CEQA Section 21083.2(g), is a resource that, besides merely adding to the current body of knowledge, meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Definitions of Project Area and Study Area

The **Project Area** is defined as all areas of proposed ground disturbance, such as, access roads, laydown yard, staging areas, tower disturbance footprint, and wire pull sites.

The **Study Area** is defined as a 1-mile buffer around the Project Area. The Study Area is primarily used for cultural record search purposes to gain an understanding of the anticipated site types that may occur within the Project Area.

Precontact Setting

Southern California's desert region has a long history of human occupation. Prehistoric material culture within this region has been organized according to periods or patterns that define technological, social, economic, and ideological elements. Within these periods, archaeologists have defined a chronology specific to the prehistory of the desert region. The Mojave Desert region is divided into four major periods; Paleoindian Period, Lake Mojave Period, Pinto Period, and the Late Holocene which includes the Gypsum, Rose Springs, and Late Precontact complexes.

Paleoindian Period (11,500 to 10,000 BC)

The Clovis cultural complex confidently dates to the Pleistocene. It is marked by the characteristic fluted projectile points of the same name. Fluted points appear more often in the north and west than in other sectors of the Mojave with concentrations in the drainage basins of Pleistocene China Lake and Thompson Lake. These were areas of substantial external stream runoff that would have been well watered into the early Holocene. The nature of Paleo-Indian cultural systems remains poorly defined, but they were probably a highly mobile people living in small temporary camps near permanent water sources.

Lake Mojave Period (10,000 to 6000 BC)

Most Lake Mojave Period sites within the northern Mojave Desert and southwestern Great Basin are very early Holocene lakeshore occupations. The subsistence strategy during this period was presumably one of hunting and utilization of lacustrine resources. The best examples of sites from this period are associated with the shoreline of

Pleistocene Lake Mojave. Other sites associated with the Lake Mojave Complex were found near Fort Irwin, China Lake, Rosamond Lake, and Twentynine Palms, located near the margins of extinct pluvial lakes. Other scholars suggest this heavy orientation to lakeshore settlement is merely the "construct of site formation processes and the geomorphology of the region," i.e., these lakeshore archaeological sites were the easiest to find. Artifacts include percussion-flaked foliate points and knives, Lake Mojave and Silver Lake projectile points with long stems, and a tool kit of scrapers, gravers, perforating tools, choppers, crescents, and hammerstones. Extra-local materials are common and suggest extensive annual foraging ranges; marine shell beads likewise imply wide spheres of interaction. Small numbers of groundstone implements occur regularly within these components, although wear on these tools is often light and suggests there was little reliance on vegetal resources.

Extensive residential accumulations are known in addition to workshops and small camps. The large sites appear to be functionally the same as smaller ones and represent locations of recurrent use rather than different settlement types. Thus, the Lake Mojave pattern appears to reflect a forager-like strategy organized around relatively small social units. Available settlement data indicate it was not extensive lakeside marshes that attracted human occupation, but rich resource patches in a host of environmental niches. Faunal remains from archaeological sites dating to this period reflect reliance on smaller taxa such as jackrabbits, rabbits, rodents and some reptiles. However, this focus on smaller taxa seems inconsistent with the abundance of heavy projectile points, bifaces and formalized scrapers that appear suited for large game.

Pinto Period (6000 to 2000 BC)

The Pinto complex has the most widespread expression of any of the early cultural complexes. There appears to be a broad continuity in the flaked stone technologies of the Lake Mojave and Pinto complexes, both of which are characterized by extensive use of stones tools, and by the regular use of bifacial and unifacial core/tool forms. The signature stemmed, indented-base Pinto series projectile points show high levels of blade reworking and appear to have used the tips for thrusting spears rather than as darts. Reduced stone tool diversity may indicate a reduction in foraging range, meanwhile the continuing presence of marine shell indicates regular interaction with coastal groups.

The most important distinction between the Lake Mojave and Pinto assemblages relates to the prevalence of ground stone implements. Milling tools are moderately abundant in nearly all known Pinto deposits and sometimes occur in high frequency. This is a characteristic of a subsistence shift that occurred during this period, with a great focus on the exploitation of plants. Revised dating indicates that intensive levels of plant processing began by about 7,000 years before present. This coincides with the emergence of similar economies along the coast.

Late Holocene; Gypsum Period (2000 BC to 200 AD)

The Gypsum complex is defined by the presence of a range of corner-notched (Elko), concave base (Humboldt) and well-shouldered contracting-stemmed (Gypsum) point forms, and an increase in the prevalence of millingstones and manos. It is thought, following the possible introduction of the pestle and mortar, that these technological developments point to the consumption of increased seeds and mesquite. The most confounding aspect of the Gypsum complex is its evident scarcity in the southern and eastern reaches of the desert. The Gypsum complex emerged during a time when conditions were somewhat wetter and cooler than during the Middle Holocene. During the early part of this complex, it is thought that settlement and subsistence were centered near streams. At the same time, it appears that there were increases in trade and social complexity. Gypsum sites are more numerous than those of preceding occupations and are found over a more diverse array of locations. Artifact assemblages

include evidence of ritual activities including quartz crystals, paint, and rock art, as well as numerous bifaces. Exploitation of deer, jackrabbits, cottontails, and rodents is also evident.

In apparent association with Gypsum and Elko points forms, perishable artifacts were found in Newberry Cave, south of Box Canyon in the Mojave Desert. Among the artifacts uncovered were an atlatl hook and dart, sandals, cordage, tortoise shell bowls, and split-twig figurines which were dated to approximately 1000 BC. Newberry Cave also contained other items that pointed to ritual activity such as quartz crystals painted green, pictographs, and red, green, white, black, and purple pigment samples.

Late Holocene; Rose Springs Period (200 to 1100 AD)

The Rose Springs complex is marked by the regional appearance of the bow and arrow beginning about 200 AD. Common artifacts include Eastgate and Rose Springs series projectile points, stone knives, drills, pipes, bone awls, various milling implements, marine shell ornaments, and large quantities of obsidian. Rose Springs sites are commonly found near springs, along washes, and sometimes along lakeshores. Evidence of architecture includes wickiups (an oval shaped structure covered with grasses), pit houses (an in-ground structure), and other types of structures suggesting intensive occupation. Populations in the desert appear to have reached their peak during this time, as well as continuing to foster a complex culture. Most of the obsidian has been sourced to the Coso Volcanic Field demonstrating either travel to the southern Owens Valley or trade with people living in that vicinity. Shell beads and steatite found in Rose Spring Period sites portray established trade routes with coastal peoples. There is also evidence of Anazazi influence with the appearance of turquoise and pottery. This apparent network of trade, or collection highlights the increase in cultural complexity. The use of sheep, elk, deer, jackrabbits, rabbits, and rodents dominated animal exploitation. As most of the lakes dried up during the Late Holocene, settlement patterns seem to have shifted from association with permanent water sources to more ephemeral ones. By approximately 1100 AD, Numic and Takic speaking began to spread across much of the Great Basin.

Time-sensitive projectile points from this period include the Rose Spring, Eastgate, Cottonwood, and Desert Side-Notched series. It has been argued that assemblages with Cottonwood points and no Desert Side-Notched points represent an earlier occupation than sites with both Cottonwood and Desert Side-notched points and that the earlier occupation is associated with the Hakataya influence from the Southwest. In the western Mojave Desert, diagnostic materials from this period include various types or examples of poorly understood brownware pottery and Desert Side-Notched series projectile points.

Of notable, and calculable, affect during the Rose Spring Period was the development of the Medieval Climatic Anomaly (MCA). It is generally agreed now that the MCA began about AD 800, peaked in the mid-1100s, and ended about AD 1350. The MCA brought in warmer and dryer conditions on a population already possibly strained by over exploitation of resources because of proficient use of the bow and arrow in hunting techniques which ironically fostered a larger population initially.

Late Holocene: Late Precontact Period (1100 AD to Contact)

After about 1100 AD, environmental conditions continued to deteriorate, populations appear to have declined, new technologies were introduced, and several separate cultural complexes emerged that are believed to represent the prehistoric aspects of known ethnographic groups. Late Prehistoric occupation sites represent a variety of types including a few major villages with associated cemeteries, special purpose sites, and seasonal sites. Following the MCA, the Little Ice Age brought about cooler temperatures (more than 0.5°C below modern temperatures) and wetter seasonal precipitation bringing on a gradual re-expansion of juniper woodland.

Regional developments across the Mojave include Anasazi interest in the turquoise mining in the Mojave Trough, Yuman influence from the Colorado River, and Numic Paiute and Shoshone culture that likely spread eastward from the western Mojave Desert circa AD 1000. Artifact assemblages consist of Desert Side-Notched series projectile points, buffware and brownware ceramics, shell and steatite beads, slate pendants, incised stones, and a variety of milling tools. Obsidian use dropped off, while the use of cryptocrystalline silica increased.

Ethnographic Setting

At the time of European contact, the Project Area was occupied by several groups, including the Serrano, Southern Paiute, and Chemehuevi. Brief information for each of these groups is presented below.

Serrano

The Desert Serrano/Vanyume population was centered around the well-watered Mojave River area, but their territory probably included most of the north faces of both the San Bernardino and San Gabriel mountains, from as far west as the Elizabeth Lake/Lake Hughes area in Los Angeles County, to as far east as Yucaipa Valley in San Bernardino County.

The Serrano, including the Desert Serrano/Vanyume, Cahuilla, and Tongva all spoke languages that were members of the Takic branch of the Northern Uto-Aztecan Language Family. Their neighbors, the Kawaiisu (to the northwest) and the Chemehuevi (to the northeast) spoke languages that were members of the Numic branch of the Northern Uto-Aztecan Language Family.

The Serrano relied on hunting and gathering of plants for subsistence, with the occasional fishing. Both large and small mammals were hunted such as deer, antelope, rabbits, small rodents, and various birds like quail. Plant staples included seeds like acorns, pinion nuts and chia, bulbs, blooms, tubers, and roots of various plants like berries, yucca, barrel cactus, and mesquite. It is noted that fire was used as a management tool to increase the yields of certain plants.

The Serrano lived in rounded dwellings, domed structures with tule thatching built over an excavated area. These structures were built with fire pits and primarily served as sleeping areas with tule mats. The majority of the daily norm was conducted outdoors under square ramadas, or in the open.

The Serrano artifact assemblage is similar to that of the neighboring Cahuilla and includes musical instruments such as rattles and flutes; utensils and ornaments such as fire drills, mortars, metates, pipes, beads, awls, and projectile points from wood, shell, bone, and stone. The Serrano were talented pottery and basket makers. Baskets were often made of deergrass, and yucca fibers. Their pots were made of coiled clay smoothed out with a paddle and set in the sun to dry before being fired in a pit. The brownware pottery was sometimes decorated with circular designs and lines in either red or black. The Serrano were also known for their petroglyphs. Abstract and geometric designs are often seen with representational figures of sheep, lizards and human beings. Some state that their petroglyphs were records of important events, rough maps, and artistic representations of native life.

Southern Paiute

Many researchers suggest the Southern Paiute, and other Numic speaking peoples, started to move into the Great Basin and Colorado Plateau around 1000 AD. Prior to European contact, the Paiute territory extended from present day southern California to southern Nevada, northern Arizona, and south-central Utah. Unique cultural

materials are used to define Southern Paiute populations in the region. Brownware pottery is a characteristic of Southern Paiute sites along with Desert Side-notched and Cottonwood triangular projectile points. Distinctive basketry, including twined and coiled baskets, triangular knives, unshaped manos and millingstones, shell beads, slate pendants, and the occasional mortar and pestle are also unique to Southern Paiute sites.

The Southern Paiute had a mixed subsistence routine. They were agrarian but also relied on hunting and gathering. It is suggested that the Anasazi or the Lower Colorado Cultural Groups introduced the Southern Paiute to agriculture, who then began to experiment by planting small areas of corn, beans, and pumpkin. Wild plant foods consisted of yucca, grass seeds, agave, prickly pear, and roots. Small game, such as Big horned sheep, rabbits, deer, and ground squirrels were often the targets of their hunting forays.

Chemehuevi

The Chemehuevi people are the most southern group of the Southern Paiute Indians, who are linguistically related to the greater Uto-Aztecan language family. The name Chemehuevi was given by the Mohave, a name they used for all Southern Paiute people. The Chemehuevi call themselves Numu, meaning “People.” The Chemehuevi likely entered the river area between 1833 and 1859 and made an alliance with the Mohave which allowed them plots of land to cultivate within Mohave territory. Chemehuevi belief even held that Southern Fox, and “the woman with whom the Sun conceived twin sons” called the Whipple Mountains home.

Traditionally the Chemehuevi were seasonal hunter gatherers who ranged over the eastern half of the Mojave Desert. Small family groups would migrate hunting small game and gathering wild plants.

Historic Setting

Historic Background Early High Desert Exploration to 1880s Railroads

The first known Euro-American visitors to the Mojave Desert via the Cajon Pass were Lieutenant Pedro Fages and a small party of soldiers, who traversed the pass and skirted along the north side of the San Gabriel Mountains toward the west in 1769. In 1776, while exploring a route across the Mojave Desert from San Gabriel, Father Francisco Garces, who had accompanied the expedition of Juan Bautista de Anza, passed through the Victor Valley area. The Garces party is believed to have camped approximately 1.5 miles southeast of present-day Hesperia. In 1826, Jedidiah Smith pioneered a section of the Mormon Trail from Needles to Mission San Gabriel through the Victorville/Hesperia area. General John Fremont and Kit Carson followed this route during an 1842 U.S. Army expedition to explore the Mojave Desert. In the following years, hundreds of settlers used the trail to come to California.

In 1848, the Treaty of Guadalupe Hidalgo ended the Mexican-American War and marked the beginning of the American Period (1848 to present). The discovery of gold the same year initiated the 1849 California Gold Rush, bringing thousands of miners and settlers from the eastern United States to California, most of whom settled in the north. For those settlers who chose to come to southern California, much of their economic prosperity was fueled by cattle ranching, rather than by gold. This prosperity, however, came to a halt in the 1860s as a result of severe floods and droughts, which put many of the original rancho grantees into bankruptcy, resulting in loss of their land to their creditors, who were often recently arrived immigrants from the eastern United States.

Several early historic trails cross the High Desert portion of the Mojave Desert. This includes the "Old Spanish Trail," the Mojave Trail, and the Old Government Road which were first developed as prehistoric Indian trails. In the 1850s they were used by Mormon immigrants and Mormon freighting companies trading between Salt Lake City and Los Angeles, and by early immigrants to California.

On March 3, 1853, Congress passed a military appropriations bill allocating funds for the survey of all possible routes for a Pacific railroad. This inaugurated an extensive series of studies including Mojave Desert area surveys made by Lt. Robert Stockton Williamson and Lt. Amiel Weeks Whipple. During the same time period when the railroad surveys were undertaken (1850s to 1860s), traffic and travel across the desert region increased dramatically. One of the pioneer trail blazers was Edward F. Beale. He received the job, using government appropriated funds, of opening a wagon road along the 35th Parallel alignment from the Needles area to Barstow, and he completed the task in 1857. Known as the Old Government Road, the route was increasingly utilized by the military, emigrants, miners, and trade caravans. This, in turn, resulted in a gradual growth of regional settlement. Settlements were isolated, but they did develop in the 1860s and 1870s, prior to completion of the first railroad crossing the High Desert portion of the Mojave Desert in 1883.

Improved transportation, and a military presence at Fort Mojave, brought the first permanent settlers to the central portion of the Mojave High Desert. The construction of the Southern Pacific line, later known as the Atchison, Topeka, and Santa Fe, between Needles and Mojave was completed on July 12, 1883, and the railroad from Barstow to San Bernardino through the Cajon Pass was completed in 1885. These are landmark events in the history of the Mojave Desert, as completion of these two railroad alignments quickly and permanently impacted all desert development. Many small towns and sidings were established. Mining activity expanded across the High Desert. Agricultural development soon followed with increased settlement and mining throughout the western Mojave High Desert region from Barstow to Needles.

Late-Nineteenth Century High Desert Settlement, Mining Transportation, and Electronic Lines

Although some High Desert settlement and mining took place from the 1850s to the 1880s, the completion of the east-west railroad corridor from Mojave to Needles in 1883, and the north-south railroad corridor from Barstow to San Bernardino in 1885, are landmark events in the history of the Mojave High Desert. Completion of these two railroad alignments quickly and permanently impacted all desert development. Many small towns and sidings were established. Homesteading and agricultural development soon followed with increased settlement and mining throughout the Mojave High Desert region from Mojave to Needles. Many wagon roads built during this period were constructed so as to link to various railheads, stations, and sidings connected to these railroad alignments, especially those along the Santa Fe railroad alignment.

Most importantly, for the first time, transmission lines (currently referred to as electronic linear features) crossed the Mojave High Desert region adjacent to the 1883 Santa Fe railroad alignments, ushering in the modern age of communication. Plans were made to construct telephone lines along the Santa Fe railroad from San Bernardino to Needles in 1905. No long-distance telegraph lines, telephone lines, or power transmission lines are known to have been built in the Central Mojave Desert region during this time period, apart from those directly adjacent to the railroad alignments. Recognizing the importance and the potential growth of the communications and power sectors, however, Congress passed an Act on February 15, 1901, which made provisions to "provide for the issuance of revocable permits for rights-of-way across public lands under general regulations to be authorized by the Secretary of the Interior" (31 Stat. 790). After a decade of exponential growth, members of Congress realized that they needed to make some modifications to the earlier 1901 Act. So, on March 4, 1911, the United States Congress acted to "authorize easements for telephone, telegraph and power transmission lines with the Secretary

of the Interior to grant rights-of-way for those lines for a period not exceeding fifty years" (36 Stat. 1253). This act was in effect an amendment to the February 15, 1901, Act of Congress. This legislation set the stage for an explosion of transmission lines and other right-of-way applications crossing the Central Mojave Desert region beginning in 1911. Today, the Mojave High Desert region is literally crisscrossed by various permitted linear right-of-way alignments.

Early High Desert Powerline Construction Leading to Construction of the Edison San Bernardino-Boulder Line and the LADWP Boulder-Los Angeles Transmission Lines

One of the first power line projects to impact the High Desert region was an approximately 240-mile-long transmission line constructed in 1911/1912 between the town of Bishop in the Sierra foothills on the north and the city of San Bernardino on the south, by the Southern Sierras Power Company.

It would be approximately another 20 years, however, until power transmission lines would march east across the Mojave Desert towards the Colorado River, and from the Colorado River to Los Angeles. December 21, 1928, is the date that Congress acted to authorize the "Boulder Canyon Act," thereby paving the way for a public works project of massive size and far-reaching scope.

Preceding construction of the power lines built from San Bernardino to Boulder City, is the telephone and telegraph line constructed in 1930 by the Pacific Telephone & Telegraph Company. This line extended from Township 1 North, Range 10 West to a point on the California/Nevada state line. It was initially 100.07 miles long.

On October 28, 1930, the Bureau of Reclamation signed a contract with the Southern Sierras Power Company and the Nevada-California Power Company for the construction of a 222-mile-long power transmission line from San Bernardino to a substation at Boulder City, and the delivery of power to the construction site. The transmission line served two purposes: transmission of power to the Boulder Dam site during construction, and from the Dam to markets in Southern California following completion of the Dam. Construction of the line began in December 1930, and was completed in late April 1931.

Construction of the LADWP Boulder Dam-Los Angeles Transmission Lines-CA-SBR-7694H

Construction of the original Los Angeles Department of Water and Power Boulder Dam-Los Angeles Transmission Lines took place from 1933 to 1940 in association with the construction of the Boulder Canyon Project, later named Hoover Dam. Congress had previously authorized construction of Boulder Dam and associated works in 1928, after Los Angeles guaranteed the purchase of electricity from the dam. The McCullough-Victorville Transmission Lines 1 and 2 (MCC-VIC L1 and L2) were built to transmit electricity at 287.5 kilovolts (kV) over approximately 266 miles, with 275 kV arriving at the receiving station in Los Angeles. In order to send the high voltage in a reliable manner, new designs for towers, hardware, conductors, clamps, and lightning protection were necessitated. The MCC-VIC L1 and L2 originally carried three electric lines each on single circuit towers, specifically designed for use in the desert due to the higher probability of lightning strikes. As completed, the single circuit towers were the largest in the world and, until 1952, carried the only voltage above 220 kV in the world. These single-circuit towers are still the most common type of electric transmission tower. The majority of literature discussing the CA-SBR-7694H transmission lines focuses on engineering advancements related to tower, hardware, cables, and conductor technology developed for construction of the transmission lines, substations, and switchyards.

This historic-age resource, CA-SBR-7694-H: LADWP Boulder Transmission Lines 1, 2, and 3, was first recorded in detail by David W. Powers in 1993. They were determined eligible for listing in the National Register of Historic Places (NRHP) under Criterion A for their association with the construction of Boulder Dam, and the industrial, economic, and urban development that occurred in metropolitan Los Angeles from the mid-1930s through the 1940s, and under Criterion C for their unique engineering and structural characteristics, thus the transmission lines qualify as historical resources under CEQA. Van Wormer and Dolan's 1999 evaluation found that the LADWP Boulder Transmission Lines meet all seven aspects of integrity (location, design, setting, materials, workmanship, feeling and association), despite alterations that have occurred since original construction because the overall structural system consisting of steel towers in the Mojave Desert is still largely intact and the lines still function as originally designed.

Cultural Resources Data Collection Methodology and Results

As of the writing of this analysis, cultural resources surveys and evaluations are on-going and the results are expected to be available by Spring 2025. This analysis is based on the following assumptions:

- All cultural resources identified within the Project Area (whether identified at the time of this writing or ahead of construction once final disturbance areas are all determined) that are considered historical resources, unique archaeological resources under CEQA, or human remains will be avoided.
- All Project components, such as access roads, wire pull sites, laydown yards, and staging areas, will be subjected to an intensive cultural resources assessment survey and study prior to construction.
- Long linear access roads that extend outside the current Study Area will be subject to a record search and an intensive cultural resources assessment study prior to construction.
- Should the Project Area change, shift or increase in size, the additional footprint will be subjected to an intensive cultural resources assessment study prior to construction.
- Should future survey efforts identify historical resources, unique archaeological resources, or human remains within the Project Area that cannot be avoided, those resources will be managed according to the mitigation measures outlined in this Environmental Impact Report (EIR).
- The existing towers along MCC-VIC L1 and L2 can be replaced with in-kind structures or with structures that follow the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings and the alignment will not change. Replacing structures with in-kind structures or with structures following one of the above-mentioned guidelines, will avoid significant adverse effects to this historical resource.

Records Search

Between December 2023 and February 2024, Aspen Environmental Group (Aspen), in coordination with LADWP and the BLM, completed a full record search of the Study Area. This information is the basis for the subsequent impact analysis.

Between December 2023 and February 2024, an in-person record search was conducted at the South-Central Coastal Information Center (SCCIC), located at California State University, Fullerton and the Nevada Cultural Resources Information System. The record search included the entire Study Area. These record searches included a review of the NRHP, California Register of Historical Resources (CRHR) and historic maps and aerial photographs.

In addition, information was supplemented by site records and reports provided by the BLM, Needles Field Office in 2020/2021.

The record search identified a total of 226 previously conducted studies within the Study Area. Of the 226 previous studies identified, 192 crosses over and cover some portion of the Project Area and span from 1937 to 2016.

The record search also resulted in the identification of 1,001 previously recorded cultural resources within the Study Area, 111 of those are located within the Project Area. These resources include 46 precontact age resources primarily consisting of lithic scatters and quarries, and 49 historic age resources primarily consisting of energy infrastructure and can scatters and dumps, an additional 8 of these sites containing both precontact and historic components, known as multicomponent, and 8 resources of unknown age. Twelve previously recorded resources have been determined or recommended NRHP eligible and are thus considered historical resources for the purposes of CEQA. Those resources are presented below in Table 4.3-1.

Table 4.3-1. Historical Resources within the Project Area

Primary Number	NVCRIS Trinomial	Age	Description	Land Ownership
P-36-000140	N/A	Precontact	Opal Mtn. Site; Rhyolite Quarry	BLM
P-36-000434	N/A	Multicomponent	Quarry/Chipping Stations/Historic Period Locus	BLM, California State, Military
P-36-002100	N/A	Precontact	Toomey Hills Quarry; Yermo Quarry	BLM
P-36-002910	N/A	Historic	National Old Trails Highway; Historic Route 66	BLM
P-36-003168	N/A	Precontact	Toomey Powerline Site	BLM
P-36-003176	N/A	Precontact	Transmission Line Road Site; Private Road Site	BLM
P-36-003183	N/A	Precontact	Quarry	BLM, Military
P-36-003186	N/A	Precontact	Aboriginal Rock Cairn Complex	BLM
P-36-007694	26CK6237; 26CK6238; 26CK6241	Historic	LADWP Boulder Transmission Lines	BLM, CA State
P-36-010315	26CK9229	Historic	Edison Company Boulder Dam-San Bernardino Electrical Transmission Line	BLM
P-36-023423	N/A	Historic	Powerline Road / Stoddard Valley Road Retaining Walls and Water Diversion Feature	BLM
P-36-027410	N/A	Historic	Barstow Road / State Route 247	BLM

Source: Aspen 2024.
NVCRIS = Nevada Cultural Resource Information System; N/A = not applicable; BLM = U.S. Bureau of Land Management

4.3.2 Relevant Plans, Policies, and Ordinances

State

California Environmental Quality Act

Various laws apply to the evaluation and treatment of cultural resources. CEQA requires lead agencies to evaluate cultural resources by determining whether these evaluations meet sets of specified criteria that make such resources eligible to the CRHR. Those cultural resources eligible to the CRHR are historical resources. The evaluation then influences the analysis of potential impacts to such historical resources and the mitigation that may be required to reduce any such impacts.

CEQA and the CEQA Guidelines define significant cultural resources under two regulatory definitions: historical resources and unique archaeological resources. A historical resource is defined as a "resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources," or "a resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code," or "any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the agency's determination is supported by substantial evidence in light of the whole record" (14 CCR 15064.5[a]). Historical resources that are automatically listed in the CRHR include California historical resources listed in or formally determined eligible for the NRHP and California Registered Historical Landmarks from No. 770 onward (Public Resources Code Section 5024.1[d]).

Under CEQA, a resource is generally considered historically significant if it meets the criteria for listing in the CRHR. In addition to being at least 50 years old, a resource must meet one or more of the following four criteria (Public Resources Code Section 5024.1):

- Criterion 1, is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Criterion 2, is associated with the lives of persons important in our past;
- Criterion 3, embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Criterion 4, has yielded, or may be likely to yield, information important in prehistory or history.

In addition, historical resources must also possess integrity of location, design, setting, materials, workmanship, feeling, and association (14 CCR 4852[c]).

Even if a resource is not listed or determined to be eligible for listing in the CRHR, CEQA requires the lead agency to make a determination as to whether the resource is a historical resource as defined in California Public Resources Code (PRC) Section 5020.1(j) or 5024.1.

In addition to historical resources, archaeological artifacts, objects, or sites can meet CEQA's definition of a unique archaeological resource, even if the resource does not qualify as a historical resource (14 CCR 15064.5[c][3]). Archaeological artifacts, objects, or sites are considered unique archaeological resources if it can be clearly

demonstrated that, without merely adding to the current body of knowledge, there is a high probability that the resource meets any of the following criteria (PRC Section21083.2[g]):

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

To determine whether a proposed project may have a significant effect on the environment, staff analyzes the project's potential to cause a substantial adverse change in the significance of historical or unique archaeological resources. The magnitude of an impact depends on:

- the affected historical resource(s);
- the specific historic significances of any potentially impacted historical resource(s);
- how the historical resource(s) significance is manifested physically and perceptually;
- appraisals of those aspects of any historical resource's integrity that figure importantly in the manifestation of the resource's historical significance; and
- how much the impact will change historical resource integrity appraisals.

Title 14, California Code of Regulations Section 15064.5(b) defines a "substantial adverse change" as the "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired."

4.3.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to cultural resources are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to cultural resources would occur if the project would:

1. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.
3. Disturb any human remains, including those interred outside of dedicated cemeteries.

4.3.4 Impacts Analysis

Threshold CUL-1. Would the Project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

Construction

Archaeology and Unanticipated Discoveries

Less than Significant with Mitigation Incorporated. As described above in Section 4.3.1, Cultural Resources Data Collection and Methodology, there are seven known archaeological resources, mostly precontact lithic scatters and quarries, within the Project Area that are considered historical resources under CEQA. As of the writing of this analysis, cultural resource surveys and evaluations are on-going, the results of which will not be known until Spring 2025. While the exact scope and disturbance areas of the Project will not be known until the Project is designed, the following assumptions are made for the purposes of this analysis:

- All cultural resources identified within the Project Area (whether identified at the time of this writing or ahead of construction once final disturbance areas are all determined) that are considered historical resources, unique archaeological resources under CEQA, or human remains will be avoided.
- All Project components, such as access roads, wire pull sites, laydown yards, and staging areas, will be subjected to an intensive cultural resources assessment survey and study prior to construction.
- Long linear access roads that extend outside the current Study Area will be subject to a record search and an intensive cultural resources assessment survey and study prior to construction.
- Should the Project Area change, shift, or increase in size, the additional footprint will be subjected to an intensive cultural resources assessment study prior to construction.
- Should future survey efforts identify historical resources, unique archaeological resources, or human remains within the Project Area that cannot be avoided, those resources will be managed according to the mitigation measures outlined in this EIR.

As mentioned above, it is assumed that the Project will avoid known historical archaeological resources; however, significant impacts absent mitigation could still occur if it is determined during the design process that avoidance is not feasible. Therefore, implementation of Mitigation Measure (MM)-CUL-1 (Retain a qualified Project Archeologist), MM-CUL-2 (Treatment Plan), MM-CUL-3 (Cultural Resources Monitoring Plan), MM-CUL-4 (Worker Environmental Awareness Program), MM-CUL-5 (Archaeological Monitoring), and MM-CUL-6 (Monitoring Report) would reduce the overall impact to known historical resources to less-than-significant levels by requiring qualified personnel to develop and implement appropriate treatment of significant sites that cannot be avoided and thus subject to construction related impacts by:

1. requiring archaeologists to monitor all Project related ground disturbance that has the potential to impact archaeological resources qualifying as historical resources,
2. requiring construction personnel to be properly trained on the cultural sensitivity of the Project, and
3. outlining the steps to take in the event of a discovery.

Implementation of MM-CUL-1 through MM-CUL-6 would protect cultural resources from inadvertent damage or destruction during construction and ensure that cultural resources which cannot be avoided are properly curated. Therefore, impacts to known historical archaeological resources would be less than significant with incorporation of MM-CUL-1 through MM-CUL-6.

As with any project that involves ground disturbing activity, there is the potential for unknown buried resources to be encountered during the course of the Project, especially considering the amount of previously recorded resources that were identified during the record search located within and directly adjacent to the Project Area. Inadvertent disturbance of an unidentified cultural resource, that could be considered a historical resource, could damage or destroy the resource or change its context. In the event of an inadvertent discovery, the proposed project would be subject to PRC Section 21083.2(i) regarding provisions related to the accidental discovery of archaeological resources. These provisions include immediately halting construction work in the vicinity of the find (within a 50-foot buffer), and LADWP retaining a qualified archaeologist meeting Secretary of Interior standards to evaluate the significance of and determine appropriate treatment for the resource in accordance with the provisions of CEQA Guidelines Section 15064.5 and the National Historic Preservation Act. If an unanticipated buried resource is encountered, and if the currently unidentified resource were determined to be eligible for listing in the CRHR, the Project activities could result in a significant impact to the resource without mitigation. Implementation of MM-CUL-1 (Retain a qualified Project Archeologist), MM-CUL-2 (Treatment Plan), MM-CUL-3 (Cultural Resources Monitoring Plan), MM-CUL-4 (Worker Environmental Awareness Program), MM-CUL-5 (Archaeological Monitoring), MM-CUL-6 (Monitoring Report), and MM-CUL-7 (Unanticipated Discoveries) would reduce the overall impact to an unknown historical resource by: (1) requiring qualified personnel to monitor all Project related ground disturbance that has the potential to impact archaeological resources qualifying as historical resources, (2) requiring construction personnel to be properly trained on the cultural sensitivity of the Project, (3) requiring a report on all findings so information gathered is added to the archaeological record for future research, and (4) outlining the steps to take in the event of a discovery. Implementation of mitigation measures MM-CUL-1 through MM-CUL-7 would allow for proper evaluation and treatment of an unanticipated archaeological resource and ensure that impacts to unanticipated discoveries would be less than significant.

Built Environment

Less than Significant with Mitigation Incorporated. As described above in Section 4.3.1, Cultural Resources Data Collection and Methodology, five known built environment resources within the Project Area are considered historical resources under CEQA. These are: two existing transmission lines (i.e., the Edison Company Boulder Dam-San Bernardino Electrical Transmission Line and the LADWP Boulder Transmission Lines), which are the subject of this Project; the existing Powerline Road; Route 66; and State Route 247. While the exact scope and disturbance areas of the Project will not be known until the Project has been designed, the following assumptions are made for the purposes of this analysis:

- All cultural resources identified within the Project Area (whether identified at the time of this writing or ahead of construction once final disturbance areas are all determined) that are considered historical resources, unique archaeological resources under CEQA, or human remains will be avoided.
- All Project components, such as access roads, wire pull sites, laydown yards, and staging areas, will be subjected to an intensive cultural resources assessment survey and study prior to construction.
- Long linear access roads that extend outside the current Study Area will be subject to a record search and an intensive cultural resources assessment survey and study prior to construction.
- Should the Project Area change, shift, or increase in size, the additional footprint will be subjected to an intensive cultural resources assessment study prior to construction.

- Should future survey efforts identify historical resources, unique archaeological resources, or human remains within the Project Area that cannot be avoided, those resources will be managed according to the mitigation measures outlined in this EIR.
- The existing towers along MCC-VIC L1 and L2 can be replaced with in-kind structures or with structures that follow the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings and the alignment will not change. Replacing structures with in-kind structures or with structures following one of the above-mentioned guidelines, will avoid significant adverse effects to this historical resource.

The proposed Project will involve either replacement of existing towers and/or raising the height of existing towers along the entire alignment of MCC-VIC L1 and L2. These lines are part of the NRHP/CRHR eligible LADWP Boulder Transmission Lines, which are eligible under Criterion A/1 for their association with a historical event (regional power transmission), and Criterion C/3 for their distinctive characteristics of a type, period, or method of construction, particularly for the type of towers used along the alignment. It is assumed that any towers slated for replacement will be replaced with in-kind structures and that the alignment will remain the same. Replacing existing structures with in-kind structures would not materially alter this historical resource in an adverse manner and would allow for its continued and intended use to transmit power. It is also assumed that all other historical built environment resources would be avoided. If avoidance of historical built environment resources is not feasible, or the replacement of towers along the MCC-VIC L1 and L2 alignment cannot be replaced with in-kind structures or with structures following one of the above mentioned Secretary of the Interior's Standards, Project activities could result in a change to the significance of the resource. Implementation of MM-CUL-8 (Built Environment Treatment Plan) would reduce the overall impact to a built environment resource by requiring the preparation and implementation of a treatment plan that is specific to that resource type and includes documentation of the resource and public interpretation to facilitate future public research, and impacts to historical built environment resources would be less than significant with MM-CUL-8.

Operation

No Impact. Ground-disturbing activities do not appear to be part of the standard operation or maintenance profile of the proposed Project. No impacts on historical resources are expected during normal operation and maintenance of the proposed Project.

Threshold CUL-2. Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Construction

Less than Significant with Mitigation Incorporated. As described above in Section 4.3.1, Cultural Resources Data Collection and Methodology, there are no known unique archaeological resources within the Project Area. While the exact scope and disturbance areas of the Project will not be known until the Project is designed, the following assumptions are made for the purposes of this analysis:

- All cultural resources identified within the Project Area (whether identified at the time of this writing or ahead of construction once final disturbance areas are all determined) that are considered historical resources, unique archaeological resources under CEQA, or human remains will be avoided.

- All Project components, such as access roads, wire pull sites, laydown yards, and staging areas, will be subjected to an intensive cultural resources assessment survey and study prior to construction.
- Long linear access roads that extend outside the current Study Area will be subject to a record search and an intensive cultural resources assessment survey and study prior to construction.
- Should the Project Area change, shift, or increase in size, the additional footprint will be subjected to an intensive cultural resources assessment study prior to construction.
- Should future survey efforts identify historical resources, unique archaeological resources, or human remains within the Project Area that cannot be avoided, those resources will be managed according to the mitigation measures outlined in this EIR.

As with any project that involves ground disturbing activity, there is the potential for unknown buried resources to be encountered during the course of the Project, especially considering the amount of previously recorded resources that were identified through the record search located directly adjacent to and within the Project Area. Inadvertent disturbance of an unidentified cultural resource, that could be considered a unique archaeological resource, could damage or destroy the resource or change its context. If an unanticipated buried resource is encountered, and if the currently unidentified resource were determined to be a unique archaeological resource, the Project activities could result in a significant impact to the resource without mitigation. Implementation of MM-CUL-1 (Retain a qualified Project Archeologist), MM-CUL-2 (Treatment Plan), MM-CUL-3 (Cultural Resources Monitoring Plan), MM-CUL-4 (Worker Environmental Awareness Program), MM-CUL-5 (Archaeological Monitoring), MM-CUL-6 (Monitoring Report), and MM-CUL-7 (Unanticipated Discoveries) would reduce the overall impact to a unique archaeological resource by (1) requiring qualified personnel to monitor all Project related ground disturbance that have the potential to impact cultural resources, including unique archaeological resources; (2) requiring construction personnel to be properly trained on the cultural sensitivity of the Project; (3) requiring a report on all findings so the information is added to the archaeological record; and (4) outlining the steps to take in the event of a discovery. Implementation of MM-CUL-1 through MM-CUL-7 would allow for proper evaluation and treatment of an unanticipated unique archaeological resource. Therefore, impacts to unanticipated discoveries would be less than significant.

Operation

No Impact. Ground-disturbing activities do not appear to be part of the standard operational or maintenance profile of the Project. No impacts to unique archaeological resources are anticipated during normal operation and maintenance activities.

Threshold CUL-3. Would the Project disturb any human remains, including those interred outside of dedicated cemeteries?

Construction

Less than Significant with Mitigation Incorporated. As described above in Section 4.3.1, Cultural Resources Data Collection and Methodology, there are no known burials or human remains within the Project Area, thus no known burials or human remains would be impacted. While the exact scope and disturbance areas of the Project will not be known until the Project is designed, the following assumptions are made for the purposes of this analysis:

- All cultural resources identified within the Project Area (whether identified at the time of this writing or ahead of construction once final disturbance areas are all determined) that are considered historical resources, unique archaeological resources under CEQA, or human remains will be avoided.

- All Project components, such as access roads, wire pull sites, laydown yards, and staging areas, will be subjected to an intensive cultural resources assessment survey and study prior to construction.
- Long linear access roads that extend outside the current Study Area will be subject to a record search and an intensive cultural resources assessment survey and study prior to construction.
- Should the Project Area change, shift, or increase in size, the additional footprint will be subjected to an intensive cultural resources assessment study prior to construction.
- Should future survey efforts identify historical resources, unique archaeological resources, or human remains within the Project Area that cannot be avoided, those resources will be managed according to the mitigation measures outlined in this EIR.

As with any project that involves ground disturbing activity, there is the possibility that burials or human remains, including cremains, could be encountered during ground disturbance related to the Project. In the event unknown buried remains are discovered, they shall be treated in compliance with PRC Section 5097.98(b) and (e), Section 5097.99, and Section 5097. MM-CUL-9 (Treatment of Human Remains) provides more details regarding the code requirements, and its implementation would facilitate compliance with these codes. Additionally, implementation of MM-CUL-1 (Retain a qualified Project Archeologist), MM-CUL-2 (Treatment Plan), MM-CUL-3 (Cultural Resources Monitoring Plan), MM-CUL-4 (Worker Environmental Awareness Program), MM-CUL-5 (Archaeological Monitoring), MM-CUL-6 (Monitoring Report), and MM-CUL-7 (Unanticipated Discoveries) would reduce the overall impact to a unknown buried human remains by (1) requiring qualified personnel to monitor all Project related ground disturbance that have the potential to impact cultural resources, including human remains; (2) requiring construction personnel to be properly trained on the cultural sensitivity of the Project; (3) requiring a report on all findings so the information is added to the archaeological record; and (4) outlining the steps to take in the event of a discovery. Implementation of MM-CUL-1 through MM-CUL-9 would allow for proper evaluation and treatment of an unanticipated human remains discovery. Therefore, impacts to human remains would be less than significant.

Operation

No Impact. Ground-disturbing activities do not appear to be part of the standard operational or maintenance profile of the Project. No impacts to human remains are anticipated during normal operation and maintenance activities.

4.3.5 Mitigation Measures

The following mitigation measures are required to address potentially significant impacts to cultural resources.

MM-CUL-1 Retain a qualified Project Archeologist**.** Prior to Project implementation, a Project Archaeologist whose training and background conforms to the US Secretary of the Interior's Professional Qualifications Standards, as published in Title 36, Code of Federal Regulations, part 61 (36 C.F.R., part 61), holds a valid Bureau of Land Management (BLM) Cultural Resources Use Permit, and has experience working in the California Desert District, will be retained by LADWP to oversee all cultural resources compliance for the Project. The resume of the selected Project Archaeologist shall be sent to LADWP and BLM for their records.

MM-CUL-2 Treatment Plan**.** Prior to start of construction, the Project Archaeologist shall develop and implement a Treatment Plan specific to those significant eligible resources that cannot be avoided by construction. This plan shall address the expected loss of significant archaeological data through the scientific excavation, analysis, and interpretation of the site's archaeological materials.

At a minimum, the Treatment Plan shall describe the methodology proposed for archaeological excavation, transportation and storage of all archaeological material, laboratory and analysis methods, curation of archaeological material at a specified repository or repatriation of resources at the BLM's discretion, and schedule for subsequent reporting. A draft of the Treatment Plan must be submitted to LADWP and the BLM for a 30-day review and approval period. The Treatment Plan must be approved by LADWP and the BLM before construction commences. If the resource(s) subject to treatment is/are located on BLM lands, additional permitting requirements, such as obtaining an Archaeological Resources Protection Act (ARPA) permit, shall be required.

MM-CUL-3 Cultural Resources Monitoring Plan. Prior to start of construction, the Project Archaeologist shall develop a Cultural Resource Monitoring Plan (CRMP or Plan) that addresses the details of all activities and provides procedures that must be followed to reduce the potential impacts to undiscovered buried archaeological resources associated with the proposed Project. A draft of the Plan must be submitted to LADWP and the BLM for a 30-day review and approval period. The Plan must be approved by LADWP and the BLM before construction commences.

At a minimum, the Plan shall:

- Describe the methodology and a program for avoiding and monitoring significant eligible cultural resources identified in a Class III Cultural Survey Report approved by the BLM that can be avoided during Project construction;
- Require protective fencing or other markers, at the BLM's discretion, be erected and maintained to protect these resources from inadvertent adverse effects during construction;
- Include maps and a narrative discussion of areas considered to be of high sensitivity for discovery of buried archaeological resources, in the event they are encountered during construction;
- Detail the specific protocols for monitoring construction activities in these high-sensitivity areas;
- Detail the methods, consultation procedures, and timelines for addressing all post-review discoveries;
- Identify the person(s) expected to perform monitoring tasks, their responsibilities, and the reporting relationships between Project construction management and the mitigation and compliance monitoring team;
- Specify daily monitoring reporting and identify the forms and/or documentation that need to be completed daily during monitoring;
- Address the authority given to the qualified archaeological monitors to temporarily halt ground disturbance during construction. If a cultural resource over 50 years of age is found (or if younger, but determined exceptionally significant by the BLM on federal lands or LADWP on private lands; or considered a unique archaeological resource under CEQA), ground disturbance shall be halted or redirected in the immediate vicinity of the discovery sufficient to ensure that the resource is protected from ground disturbance. Monitoring and daily reporting shall continue during the Project's ground-disturbing activities elsewhere. Additional procedures regarding halting ground disturbance, like communication protocols and flagging the resource for avoidance plus a 50-foot buffer, to address a post-review discovery or unanticipated effects shall be described in the Plan.

MM-CUL-4 Work Environmental Awareness Program**.** Prior to the start of construction and for the duration of ground disturbance activities, the Project Archaeologist shall develop a Worker Environmental Awareness Program (WEAP). This training shall be given to all Construction Contractor staff including all subconsultants within one (1) week of employment at the Project site, for all areas along the linear facilities routes, and at laydown areas, access roads, and other ancillary areas such as staging areas or construction yards. The training shall be prepared by the Project Archaeologist and may be conducted by the Project Archaeologist or designated Field Director. The Project Archaeologist shall be available (by telephone or in person) to answer questions posed by employees related to the identification and protection of cultural resources. The training may be discontinued when ground disturbance is completed or suspended but must be resumed if ground disturbance resumes. Training shall include:

- A detailed discussion of applicable laws, and penalties under the law;
- Samples or visuals of artifacts that might be found in the project vicinity;
- A brief overview of the cultural sensitivity of the Project and the surrounding area;
- A discussion of what such artifacts may look like when partially buried, or wholly buried and then freshly exposed;
- A discussion of what prehistoric and historical archaeological deposits look like at the surface and when exposed during construction, and the range of variation in the appearance of such deposits;
- Express instruction that only the Project Archaeologist, alternate Project Archaeologist, and supervisory cultural resource field staff have the authority to halt ground disturbance in the area of a discovery to an extent sufficient to ensure that the resource is protected from further impacts, as determined by the Project Archaeologist;
- Instruction that employees are to halt work on their own in the vicinity of a potential cultural resources discovery and shall contact their supervisor and the Project Archaeologist or supervisory cultural resource field staff, and that redirection of work would be determined by the construction supervisor and the Project Archaeologist;
- An informational brochure that identifies reporting procedures in the event of a discovery; and
- A log signed by each worker indicating that they have received the training.

This is a mandatory training, and all construction personnel must attend prior to beginning work on the Project's sites. A copy of the sign-in sheet shall be kept ensuring compliance with this mitigation measure and will be provided to LADWP and the BLM after each WEAP training is given.

MM-CUL-5 Archaeological Monitoring**.** Qualified archaeological monitors, overseen by a BLM-approved Field Director and the selected Project Archaeologist, shall be present for initial grading activities in undisturbed soil, in areas of high sensitivity, or within 500 feet of a known significant cultural resource. The archaeological monitor(s) shall complete daily monitoring forms. The Project Archaeologist will have the authority to increase or decrease the monitoring effort should the monitoring results indicate that a change is warranted, in consultation with LADWP and BLM.

MM-CUL-6 Monitoring Report**.** Within six (6) months of finishing construction of the Project, a Cultural Resources Monitoring Report shall be prepared and provided to the BLM and LADWP. The report shall include evidence of the required WEAP for the construction staff held during the required

pre-construction meeting(s) and evidence that any artifacts have been treated in accordance with procedures stipulated in the Cultural Resources Monitoring Plan (MM CUL-3).

MM-CUL-7 Unanticipated Discoveries. During Project construction, should unanticipated archaeological resources be discovered during grading, foundation work, or other construction activities, all construction work occurring within 50 feet of the find shall immediately stop until the Project Archaeologist can evaluate the significance of the find and determine (in consultation with the BLM if the find is on federal land and/or LADWP's designated point of contact if the find is on private land, as appropriate) whether additional study or testing is warranted. Depending upon the significance of the find, the archaeological monitors, as directed by the Project Archaeologist, may record the find and allow work to continue. If the discovery proves significant and cannot be avoided, treatment of the resource will be conducted in accordance with the approved Treatment Plan (MM CUL-2). During the assessment and recovery time, construction work may proceed in other areas.

MM-CUL-8 Built Environment Treatment Plan. Prior to construction, if the existing towers along MCC-VIC L1&2 cannot be replaced with in-kind structures or with structures that follow the Secretary of the Interior's Standards (SOIS) for the Treatment of Historic Properties, LADWP will retain the services of a qualified architectural historian meeting the Secretary of the Interior's Professional Qualification Standards for Architectural History to prepare and implement a Built Environment Treatment Plan in coordination with the LADWP and the BLM. The treatment plan shall include, but is not limited to, photo-documentation, creation of a website for public research, and public interpretation of the resource in accordance with BLM Manual 8170. The treatment plan will be submitted to LADWP and the BLM for a 30-day review and approval prior to implementation and prior to the start of construction.

If subsequent significant eligible built environment resources other than MCC-VIC L1&2 are identified within the Project Area and avoidance is determined to be infeasible as Project design is finalized, the preparation and implementation of a separate treatment plan shall be required specific to the type of resource that cannot be avoided. The treatment plan shall include, but is not limited to, photo-documentation, creation of website for public research, and public interpretation of the resource. The treatment plan will be submitted to LADWP and the BLM for a 30-day review and approval prior to implementation and prior to the start of construction.

MM-CUL-9 Treatment of Human Remains. In accordance with State of California law (Health & Safety Code §7050.5; Public Resources Code §5097.98), if human remains are found, all ground disturbing activities shall halt within 165 feet (50 meters) of the discovery. The BLM and the County Coroner shall be notified within 24 hours of the discovery. No further excavation or disturbance of the discovery or any nearby area reasonably suspected to overlie potential remains shall occur until the County Coroner has determined whether the remains are subject to its authority. The County Coroner must make this determination within two (2) working days of notification of the discovery (pursuant to Health & Safety Code §7050.5, subd. (b)). If the County Coroner determines that the remains do not require an assessment of cause of death and that the remains are, or are believed to be Native American, the Coroner must notify the Native American Heritage Commission (NAHC) by telephone within 24 hours, which must in turn immediately notify those persons it believes to be the Most Likely Descendant (MLD) of the deceased Native American. The MLD shall complete its inspection and make recommendations within 48 hours of being granted access to the site. The

MLD may recommend means for treatment or disposition, with appropriate dignity, of the human remains and any associated grave goods.

4.3.6 Level of Significance After Mitigation

Threshold CUL-1. Would the Project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

With implementation of MM-CUL-1 through MM-CUL-8 identified above, impacts to historical resources would be less than significant.

Threshold CUL-2. Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

With implementation of MM-CUL-1 through MM-CUL-8 identified above, impacts to archaeological resources would be less than significant.

Threshold CUL-3. Would the Project disturb any human remains, including those interred outside of dedicated cemeteries?

With implementation of MM-CUL-1 through MM-CUL-9 identified above, impacts to human remains would be less than significant.

4.3.7 Cumulative Effects

Impacts to cultural resources tend to be site specific and are assessed on a site by site basis and generally mitigated on a project by project basis. Cumulative projects would be required to assess impacts to cultural resources. Additionally, as needed, projects would incorporate individual mitigation for site-specific significant cultural resources present on each individual project site. Furthermore, the Project does not propose activities that could directly or indirectly contribute to an increase in a cumulative impact to cultural resources, as the mitigation measures provided above in this analysis ensures any significant cultural resources identified during pedestrian surveys or construction activities would be properly evaluated, recorded, and treated or avoided, if feasible. Therefore, the Project, in combination with the past, present, and reasonably foreseeable future projects in the Project vicinity, would result in less-than-significant cumulative impacts to cultural resources, and no further mitigation measures are required. Therefore, the Project's contribution to cumulative impacts would not be cumulatively considerable. As such, cumulative impacts on cultural resources would be less than significant.

4.3.8 Reference

Aspen 2024. Confidential. Class I Cultural Resources Record Search Report for the McCullough-Victorville Transmission Line Retrofit Project. Prepared for LADWP and BLM.

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4.4 Paleontological Resources

This section describes the existing conditions of paleontological resources, identifies associated regulatory requirements, evaluates potential Project and cumulative impacts, and identifies mitigation measures for any significant or potentially significant impacts related to implementation of the McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project ("Project" or "proposed Project"). The purpose of the proposed Project is to accommodate incoming renewable energy resources from the East territory region, along the West of River (WOR) Path 46 transmission corridor in order to help the Los Angeles Department of Water and Power (LADWP) achieve state and local requirements for greenhouse gas (GHG) reductions and an increased renewable energy portfolio.

4.4.1 Existing Conditions

The LADWP utility corridor in which the transmission lines are found (Project alignment) is within the Mojave Desert Geomorphic Province of California and extends into the Mojave Desert region of Nevada. This province and region are characterized by isolated mountain ranges separated by expanses of desert plains with interior enclosed drainage and many playas. The area contains numerous faults that control the topography of the region (CGS 2002). Numerous geological units and time are spanned within this area and are crossed by the Project alignment. Below are generalized descriptions of the geological units that the Project alignment crosses and their general associated paleontological sensitivity. More detailed geological and Potential Fossil Yield Classification information can be found within Appendix D, Paleontological Resources Review. Geological ages referenced below are from the International Stratigraphic Chart by Cohen et al. (2023).

Quaternary Geological Units

Young alluvial sediments (Holocene): Young alluvial sediments are usually composed of varying amounts sand, silt, gravels, cobbles, and boulders that are poorly to moderately sorted and loose to lightly compacted and include wash, landslide, aeolian, and fan deposits that are generally too young (less than 11,700 years) to preserve paleontological resources. These units generally have not been shown to produce fossil resources and so are assigned low paleontological sensitivity, but that sensitivity transitions to high with depth. Sediments underlying these young units and the depth of disturbance should be considered when deciding whether paleontological monitoring is needed (BLM 2022). The Project's geotechnical report notes these sediments occurring anywhere from 0 to 56.5 feet below ground surface along the transmission line corridor. For exact locations and depths, refer to the geotechnical report (GeoPentech 2021).

Old alluvial sediments (late Pleistocene): Old alluvial sediments generally consist of varying amounts of silt, sand, gravel, cobbles, and boulders, and poorly to moderately sorted, compacted to lightly consolidated sediments, and include old fan deposits, old landslide deposits, and old wash deposits. These types of late Pleistocene (approximately 11,700 to 129,000 years ago) deposits may preserve a large diversity of terrestrial vertebrates and occasionally freshwater vertebrates and invertebrates. Old alluvial sediments have high paleontological sensitivity (BLM 2022). The Project's geotechnical report shows these sediments occurring anywhere from 0 to 56.5 feet below ground surface along the transmission line corridor. For exact locations and depths, refer to the geotechnical report (GeoPentech 2021).

Lake Manix sediments or equivalent (Manix Formation/Manix Lake Beds) (late to middle Pleistocene): Lake Manix sediments consist of rounded gravel and gravelly sand of pluvial lacustrine deposits that are mostly unconsolidated, fine-grained, light grayish-green colored sand, silt, mud, and clay from fresh water (lacustrine) lakes and saline

(playa) dry lakes. These late to middle Pleistocene (approximately 11,700 to 774,000 years ago) Lake Manix equivalent sediments are slightly to moderately consolidated, moderately dissected fine-grained sand, silt, mud, and clay from lake, playa, and estuarine deposits of various types, including lacustrine and old lacustrine deposits. Significant fossils from the Lake Manix sediments include lacustrine invertebrates (mollusks, crustaceans), vertebrates (fish, numerous reptiles, numerous birds, amphibians), and terrestrial mammals (horse, sloth, wolf, bear, sabertooth cat, camels, llama, proboscideans, and numerous rodents). Lake Manix sediments and their equivalent have high paleontological sensitivity (BLM 2022; Buwalda 1914; Byers 1960; Mindat.org 2024).

Very old alluvial sediments (early Pleistocene): Very old alluvial sediments generally consist of moderately to well-consolidated, highly dissected boulder, cobble, gravel, sand, and silt deposits and include very old alluvial fan and very old alluvial deposits. These types of early Pleistocene (approximately 1.8 to 2.58 million years ago [mya]) deposits may preserve a large diversity of terrestrial vertebrates and occasionally freshwater vertebrates and invertebrates. Very old alluvial sediments have high paleontological sensitivity (BLM 2022). The Project's geotechnical report shows these sediments occurring anywhere from 0 to 51.5 feet below ground surface along the transmission line corridor. For exact locations and depths, refer to the geotechnical report (GeoPentech 2021).

Neogene and Paleogene/Cenozoic Geological Units

Avawatz Formation (early Pliocene to late Miocene)/Sediments that compared favorably to the Avawatz Formation: There is an unknown unit that the access roads cross that compares favorably to the Barstow/Avawatz Formations. This early Pliocene to late Miocene (approximately 3.6 to 11.63 mya) formation is characterized by four informal members: a coarse conglomerate (fanglomerate), green and brown clays (lake beds), resistant breccia (atmoclastic breccia), and arkosic sands and tuffs (fluviatile deposits) (Henshaw 1940). The formation unconformably underlies a coarse conglomerate believed to be Quaternary in age. Mammalian fossils are known from the upper 4th member, the fanglomerate. The Avawatz Formation contains the best known early Clarendonian (North American Land Mammal Age [NALMA]) mammal fossils and vertebrate fossil trackways (notably birds, camels, and felids) from the Mojave Desert. These tracks occur in the upper part of the formation, the lake beds (Henshaw 1940; Lofgren et al. 2006). The Avawatz Formation has high paleontological sensitivity (BLM 2022).

Barstow Formation (late to middle Miocene)/Sediments including or attributed to the Barstow Formation: The Barstow Formation consists of moderately consolidated sedimentary rocks of fluvial and lacustrine origin with a few pyroclastic strata, interbedded sandstones and shales, poorly bedded conglomerates and breccias, fanglomerates, massive to coarsely laminated limestone, sandstones, and tuff. This late to middle Miocene (approximately 7.24 to 20.44 mya) formation has produced numerous significant Barstovian and Hemingfordian NALMA fossils, which include numerous plants, invertebrates (insects, crustaceans, arthropods, mollusks), reptiles (tortoises), birds (raptors, geese, quail, wading birds), and mammals (antelope, camels, canids, horses, proboscideans, oreodont, peccary, bear-dog, dog-bears, rhino). The formation is unconformably overlain by Quaternary alluvium. The Barstow Formation and sediments attributed to the formation have very high paleontological sensitivity (BLM 2022; Dibblee 1967; Hershey 1902).

Volcanics (Miocene), possible associated with Barstow Formation: Miocene (approximately 5.33 to 23.03 mya) volcanic units are located within the Calico Mountains, where the Barstow Formation is highly prevalent; therefore, these extrusive volcanic, pyroclastic, and sedimentary rocks may be unrecognized or unknown units associated the Barstow Formation. Although no fossils have been reported from these sediments, due to their location and possible association with the Barstow Formation, they have the potential to preserve fossils and would have high paleontological sensitivity (BLM 2022).

Hector Formation (Oligo-Miocene): The Oligo-Miocene (approximately 20.44 to 27.82 mya) Hector Formation consists of tan-grayish brown tuffaceous sandstone, orangish brown-reddish brown tuffaceous sandstone, brown-brownish gray conglomeratic sandstone, "marker tuff bed," tuffaceous sandstone with coarse conglomeratic sandstone with tuff bed, and a coarsely conglomeratic northern facies. The Hector Formation unconformably underlies Pleistocene alluvium. This formation contains important late Arikareean and early Hemingfordian (NALMA) mammals, including camelids, horses, oreodonts, mustelids, and amphicyonids, and has high paleontological sensitivity (BLM 2022; Woodburne et al. 1974).

Paleozoic Geological Units

Bird Spring Formation (early Permian to late Mississippian): The early Permian to late Mississippian (approximately 290 to 330.9 mya) Bird Spring Formation consists of gray limestone and dolomite, separated by shale and sandstone, and rests unconformably on the Monte Cristo Limestone. Marine microfossils and macroinvertebrate fossils have been recovered from the formation, as have conodonts. The Bird Spring Formation has moderate paleontological sensitivity (BLM 2022; Hewett 1931).

Monte Cristo Formation (middle to early Mississippian): This middle to early Mississippian (approximately 330.9 to 358.9 mya) formation primarily contains limestones and dolomites. Invertebrate fossils consisting of corals, bryozoans, articulate brachiopods, mollusks, crinoids, trilobites, and ostracods are found within the formation. It unconformably underlies the Bird Spring Formation and overlies the Sultan Limestone geological unit. The Monte Cristo Formation has moderate paleontological sensitivity (BLM 2022; Hewett 1931, 1956).

Sultan Limestone (early Mississippian to middle Devonian): This early Mississippian to middle Devonian (approximately 346.7 to 393.3 mya) geological unit consists of dark gray to brown dolostone with numerous stromatoporoids (sponges) and represents shallow marine carbonates with shallow marine invertebrate fauna that have been recovered from the middle and upper portions of the unit. It underlies the Monte Cristo Formation and is underlain by the Good Springs Dolomite geological unit. The Sultan Limestone geological unit has moderate paleontological sensitivity (BLM 2022; Hewett 1931, 1956).

Good Springs Dolomite (middle Devonian to late Cambrian): This middle Devonian to late Cambrian (approximately 382.7 to 497 mya) geological unit consists of thinly bedded light and dark gray mottled dolomite with manganese, with sandy shale locally at the top of the unit. It underlies the Sultan Limestone geological unit. It contains common invertebrate/plants, intermittently. The Good Springs Dolomite geological unit has moderate paleontological sensitivity (BLM 2022; Hewett 1931).

Metasedimentary Rocks (all ages): These rocks of marine and terrestrial origin are composed of metamorphosed sedimentary units of carbonate, shales, and sandstones that can be found within hillslope materials such as colluvium, talus, regolith, and landslide deposits. Fossils are rare, but the potential for preservation exists. Most of these units have an unknown paleontological sensitivity (BLM 2022).

Volcanic Deposits/Granite Deposits/Metamorphic Deposits/Precambrian Rocks (all ages): Precambrian (greater than 538.8 mya) volcanic, granitic, and metamorphic rocks do not contain any fossils. These units have low to no paleontological sensitivity, and as such, do not require further paleontological review.

4.4.2 Relevant Plans, Policies, and Ordinances

The laws and regulations regarding paleontological resources are implemented at the federal level and include protection measures on federal lands (i.e., federally managed lands such as those of the U.S. Department of the Interior and Bureau of Land Management). The California Environmental Quality Act (CEQA) is the primary state law governing and affecting the management and protection of paleontological resources at the state level. Relevant regulations at the local level include the Countywide Plan EIR. A description of the applicable laws, regulations, and guidelines is provided in the following subsections.

Federal

Paleontological Resources Protection Act of 2009

The Paleontological Resources Protection Act (PRPA) was signed into law as part of the Omnibus Public Lands Management Act (OPLMA) of 2009. The OPLMA-PRPA requires the Secretary of the Interior to manage and protect paleontological resources on federal land using scientific principles and expertise and requires federal agencies to develop appropriate plans for inventorying, monitoring, and the scientific and educational use of paleontological resources, in accordance with applicable agency laws, regulations, and policies. Where possible, these plans should emphasize interagency coordination and collaborative efforts with non-federal partners, the scientific community, and the general public. The OPLMA-PRPA is the authority for federal land managing agencies for permits to collect paleontological resources, as well as curation of these resources in an approved repository. It provides authority for the protection of significant paleontological resources on federal lands, including criminal and civil penalties for fossil theft and vandalism.

State

California Environmental Quality Act

CEQA is the principal statute governing environmental review of programs occurring in the state. CEQA requires lead agencies to determine if a project would have a significant impact on paleontological resources. In particular, Appendix G (part V) of the CEQA Guidelines provides guidance relative to significant impacts on paleontological resources, stating that "a project will normally result in a significant impact on the environment if it will…directly or indirectly destroy a unique paleontological resource or site or unique geologic feature." According to the Standard Environmental Reference chapter for paleontology, prepared by the California Department of Transportation (Caltrans 2014), the significance of a paleontological resource may be stated for a particular fossil species, fossil assemblage, or for a rock unit as a whole. There are two generally recognized types of paleontological significance:

- **National:** A National Natural Landmark–eligible paleontological resource is an area of national significance defined by the Code of Federal Regulations (CFR) (36 CFR 62) that contains an outstanding example of fossil evidence of the development of life on earth.
- **Scientific:** Definitions of a scientifically significant paleontological resource can vary by jurisdictional agency and paleontological practitioner.

This document uses an abbreviated summary defining significance in paleontological resources: All vertebrate fossils that can be related to a stratigraphic context are significant and are considered significant nonrenewable paleontological resources. Invertebrate and plant fossils, as well as other environmental indicators associated with

vertebrate fossils, are considered significant. Certain invertebrate and plant fossils that are regionally rare or uncommon, or help to define stratigraphy, age, or taxonomic relationships, are considered significant.

Additional guidelines for paleontological resource evaluation and management are provided by the Society of Vertebrate Paleontology (SVP 2010).

Generally, scientifically significant paleontological resources are identified sites or geological deposits containing individual fossils or assemblages of fossils that are unique or unusual, diagnostically or stratigraphically important, and add to the existing body of knowledge in specific areas, stratigraphically, taxonomically, or regionally (SVP 2010). Particularly important are fossils found in situ (undisturbed) in primary context (i.e., fossils that have not been subjected to disturbance subsequent to their burial and fossilization). As such, they aid in stratigraphic correlation, particularly those offering data for the interpretation of tectonic events, geomorphologic evolution, paleoclimatology, the relationships between aquatic and terrestrial species, and evolution in general. Discovery of in-situ fossil-bearing deposits is rare for many species, especially vertebrates. Terrestrial vertebrate fossils are often assigned greater significance than other fossils because they are rarer than other types of fossils.

The Society of Vertebrate Paleontology (SVP 2010) provides the following definitions of significance:

- Significant Nonrenewable Paleontological Resources are fossils and fossiliferous deposits here restricted to vertebrate fossils and their taphonomic and associated environmental indicators. This definition excludes invertebrate and botanic fossils except when present within a given vertebrate assemblage. Certain plant and invertebrate fossils or assemblages may be defined as significant by a project paleontologist, local paleontologist, specialist, or special interest groups, or by lead agencies or local governments.
- A Significant Fossiliferous Deposit is a rock unit or formation that contains significant nonrenewable paleontological resources, here defined as comprising one or more identifiable vertebrate fossils, large or small, and any associated invertebrate and plant fossils, traces, and other data that provide taphonomic, taxonomic, phylogenetic, ecologic, and stratigraphic information (ichnites and trace fossils generated by vertebrate animals [e.g., trackways or nests and middens, which provide datable material and climatic information]). Paleontological resources are considered to be older than recorded history and/or older than 5,000 years before present (BP).

Local

San Bernardino Countywide Plan

San Bernardino County has numerous fossils reported from within its geological units, and so the protection of these fossil resources is addressed in the San Bernardino Countywide Plan Draft EIR (County of San Bernardino 2019). Following are the Mitigation Measures provided in the Countywide Plan EIR to address paleontological resources:

CUL-5 In areas of documented or inferred paleontological resource presence, development projects proposed on previously undisturbed soils shall require consultation with a qualified paleontologist meeting the standards of the Society for Vertebrate Paleontology [SVP] (2010). The initial consultation may be provided by a qualified paleontologist on staff at the County Museum. The qualified paleontologist will determine the degree of paleontological resource sensitivity, as outlined below, and will recommend a project specific paleontological resources monitoring and mitigation plan (PRMMP). This plan will address specifics of monitoring and mitigation for the

development project, and will take into account updated geologic mapping, geotechnical data, updated paleontological records searches, and any changes to the regulatory framework. This PRMMP should usually meet the standards of the SVP (2010), unless the project is on BLM [Bureau of Land Management] land or subject to federal jurisdiction, in which case the BLM standards (2009) should be used. The following provisions would be typical for units mapped with the different levels of paleontological sensitivity:

- High (SVP)/Class 4–5 (BLM)—All projects involving ground disturbances in previously undisturbed areas sediments mapped as having high paleontological sensitivity will be monitored by a qualified paleontological monitor on a full-time basis under the supervision of the Qualified Paleontologist. Undisturbed sediments may be present at the surface, or present in the subsurface, beneath earlier developments. This monitoring will include inspection of exposed sedimentary units during active excavations within sensitive geologic sediments. The monitor will have authority to temporarily divert activity away from exposed fossils to evaluate the significance of the find and, should the fossils be determined to be significant, professionally and efficiently recover the fossil specimens and collect associated data. Paleontological monitors will use field data forms to record pertinent location and geologic data, will measure stratigraphic sections (if applicable), and collect appropriate sediment samples from any fossil localities.
- Low to High (SVP)/Class 2 to Class 4–5 (BLM)—All projects involving ground disturbance in previously undisturbed areas mapped with low-to-high paleontological sensitivity will only require monitoring if construction activity will exceed the depth of the low sensitivity surficial sediments. The underlying sediments may have high paleontological sensitivity, and therefore work in those units might require paleontological monitoring, as designated by the Qualified Paleontologist in the PRMMP. When determining the depth at which the transition to high sensitivity occurs and monitoring becomes necessary, the Qualified Paleontologist should take into account: a) the most recent local geologic mapping, b) depths at which fossils have been found in the vicinity of the project area, as revealed by the museum records search, and c) geotechnical studies of the project area, if available.
- Low (SVP)/Class 2–3 (BLM)—All projects involving ground disturbance in previously undisturbed areas mapped as having low paleontological sensitivity should incorporate worker training to make construction workers aware that while paleontological sensitivity is low, fossils might still be encountered. The Qualified Paleontologist should oversee this training as well as remain on-call in the event fossils are found. Paleontological monitoring is usually not required for sediments with low (Low / Class 2–3) paleontological sensitivity.
- None (SVP)/Class 1 (BLM)—Projects determined by the Qualified Paleontologist to involve ground-disturbing activities in areas mapped as having no paleontological sensitivity (i.e., plutonic igneous or high-grade metamorphic rocks) will not require further paleontological mitigation measures.

CUL-6 In the event of any fossil discovery, regardless of depth or geologic formation, construction work will halt within a 50-ft. radius of the find until its significance can be determined by a Qualified Paleontologist. Significant fossils will be recovered, prepared to the point of curation, identified by qualified experts, listed in a database to facilitate analysis, and deposited in a designated paleontological curation facility in accordance with the standards of the SVP (2010) and BLM (2009). A repository will be identified and a curatorial arrangement will be signed prior to collection

of the fossils. Although the San Bernardino County Museum is specified as the repository for fossils found in the county in the current General Plan (San Bernardino County 2007), the museum may not always be available as a repository. Therefore, any accredited institution may serve as a repository.

4.4.3 Thresholds of Significance

The significance criteria used to evaluate the Project impacts to paleontological resources are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to paleontological resources would occur if the Project would:

1. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

4.4.4 Impacts Analysis

PALEO-1. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than Significant with Mitigation. This study determined that tower work involving earth-moving activities within previously undisturbed, moderate -and high-sensitivity geological units has the potential to adversely impact paleontological resources. The remainder of the facilities would either not be sited on paleontologically sensitive sediments or would not be subject to ground disturbance during routine maintenance.

All Project activities along the Project alignment meeting the above-referenced criteria will need to be reviewed by a qualified vertebrate paleontologist meeting the Society of Vertebrate Paleontology (SVP 2010) criteria who will develop a "statement of potential impacts." This statement will be based on the following four criteria and will either state that a paleontological resources monitoring and mitigation plan must be written to accompany facility maintenance, or that due to geological, structural, or mechanical reasons, a plan of impact mitigation is not necessary:

1. Planned activity and depth of excavation into native sediment
2. Geological units that might be encountered
3. Paleontological resource records search results for the surrounding area
4. Field survey results

Evaluation of the maintenance program will be used to develop the Project-specific paleontological resources monitoring and mitigation plan that will include excavation monitoring and resource recovery program, followed by cleaning, stabilization and inventory of specimens; a report describing results and submittal to the LADWP and the designated repository; and curation of specimens into a local established museum repository.

The Countywide Plan EIR (County of San Bernardino 2019) requires a paleontological principal investigator to develop the resource impact mitigation plan based on established measures, as described in Section 4.4.5, Mitigation Measures.

Project-Specific Paleontological Resources Assessment Protocols

Qualified Paleontologist

A qualified paleontologist as defined by the Society of Vertebrate Paleontology (SVP 2010) is a practicing scientist who is recognized in the paleontological community as a professional and can demonstrate familiarity and proficiency with paleontology in a stratigraphic context. A paleontological principal investigator will have the equivalent of the following qualifications:

- A graduate degree in paleontology or geology, and/or a publication record in peer reviewed journals, and demonstrated competence in field techniques, and preparation, identification, curation, and reporting in the state or geologic province in which the project occurs. An advanced degree is less important than demonstrated competence and regional experience.
- At least 2 full years professional experience as assistant to a project paleontologist with administration and project management experience, supported by a list of projects and referral contacts.
- Proficiency in recognizing fossils in the field and determining their significance.
- Expertise in local geology, stratigraphy, and biostratigraphy.
- Experience collecting vertebrate fossils in the field.

Records Search

A paleontological records search will be completed by the qualified paleontologist through an institution to determine the location of any previously recorded fossil discoveries within and near the Project alignment.

Assessment

The assessment will include a summary of the records search results and survey, if appropriate, and Project-specific mitigation to be implemented during construction activities.

Upon implementation of MM-PALEO-1 listed below, any potential impacts to paleontological resources would be reduced to a level of less than significant.

4.4.5 Mitigation Measures

The following mitigation measures will ensure that impacts to paleontological resources are maintained below a level of significance.

MM-PALEO-1 Paleontological Resources Monitoring and Mitigation Plan. The following recommendations will ensure that impacts to paleontological resources are maintained below a level of significance.

- A paleontological principal investigator, as defined by the Society of Vertebrate Paleontology (SVP 2010), will prepare a paleontological resources monitoring and mitigation plan and provide and supervise a trained paleontological monitor who will be present during ground-disturbing activities at identified facilities with fossiliferous sediments. The monitor will be empowered to temporarily halt or redirect ground-disturbing activities to ensure avoidance of adverse impacts to paleontological resources. The monitor will be equipped to rapidly remove

any large fossil specimens encountered during excavation. During monitoring, samples will be collected and processed to recover microvertebrate fossils. Processing will include wet screen washing and microscopic examination of the residual materials to identify small vertebrate remains.

- Upon encountering a large deposit of bone, salvage of all bone in the area will be conducted with additional field staff and in accordance with modern paleontological techniques.
- All fossils collected during the Project will be prepared to a reasonable point of identification. Excess sediment or matrix will be removed from the specimens to reduce the bulk and cost of storage. Itemized catalogs of all material collected and identified will be provided to the museum repository, along with the specimens.
- A report documenting the results of the monitoring and salvage activities and the significance of the fossils will be prepared.
- All fossils collected during this work, along with the itemized inventory of these specimens, will be deposited in a museum repository for permanent curation and storage.

4.4.6 Level of Significance After Mitigation

With implementation of mitigation measure MM-PALEO-1 impacts to paleontological resources would be reduced to a less-than-significant level.

4.4.7 Cumulative Effects

Potential cumulative impacts to paleontological resources would result from projects that combine to create an environment where fossils, exposed on the surface, are vulnerable to destruction by earthmoving equipment, looting by the public, and natural causes such as weathering and erosion. The majority of impacts to paleontological resources are site-specific and are therefore generally mitigated on a project-by-project basis. Cumulative projects would be required to assess impacts to paleontological resources. Additionally, as needed, projects would incorporate individual mitigation for site-specific geological units present on each individual project site. Furthermore, the proposed Project does not propose construction (including grading/excavation) or design features that could directly or indirectly contribute to an increase in a cumulative impact to paleontological resources, as the mitigation measure provided in this analysis ensures any significant paleontological resources uncovered during Project excavations would be properly analyzed and salvaged by the on-site paleontological monitor. Therefore, the Project, in combination with the past, present, and reasonably foreseeable future projects in the Project vicinity, would result in less-than-significant cumulative impacts to paleontological resources, and no further mitigation measures are required. Moreover, impacts to paleontological resources would be avoided and/or mitigated with implementation of a paleontological mitigation program during excavations into paleontologically sensitive geological units. Therefore, the Project's contribution to cumulative impacts would not be cumulatively considerable. As such, cumulative impacts on paleontological resources would be less than significant.

4.4.8 References

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4.5 Tribal Cultural Resources

This section describes existing conditions related to tribal cultural resources (TCRs), identifies associated regulatory requirements, evaluates potential Project and cumulative impacts, and identifies mitigation measures for any significant or potentially significant impacts related to implementation of the of the McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project ("Project" or "proposed Project"). The purpose of the Project is to accommodate incoming renewable energy resources from the East territory region, along the West of River Path 46 transmission corridor in order to help the Los Angeles Department of Water and Power (LADWP) achieve state and local requirements for greenhouse gas reductions and an increased renewable energy portfolio.

TCRs include sites, features, places, cultural landscapes, and sacred places or objects that have cultural value or significance to a California Native American tribe. To qualify as a TCR, the resource must either: (1) be listed on, or be eligible for listing on, the California Register of Historical Resources (CRHR) or other local historic register as defined in California Public Resources Code (PRC) Section 5020.1 subdivision (k); or (2) a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Section 5024.1(c). In applying the criteria set forth in Section 5024.1(c) for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

Assembly Bill (AB) 52 requires that the California Environmental Quality Act (CEQA) Lead Agency send a formal notice and invitation to consult about a proposed project to California Native American tribes traditionally and culturally affiliated with the geographic area of the proposed project. The purpose of this consultation is to obtain tribal information and direction related to the potential significant effects on TCRs that may result from a project (PRC Section 21080.3.1[d]). Consultation must include discussion of specific topics or concerns identified by tribes. This section describes the AB 52 consultation process, the results of that process, and potential impacts of the proposed Project related to TCRs.

The following discussion is based on (1) the confidential record search information gathered from the Nevada Cultural Resource Information System (NVCRIS); (2) the confidential cultural resources record search report, also known as a Class I Report, prepared for the Los Angeles Department of Water and Power (LADWP) and the Bureau of Land Management (BLM) for the proposed Project, unless otherwise referenced, the title of which is Class I Cultural Resources Record Search Report for the McCullough-Victorville Transmission Line Retrofit Project (Aspen 2024), and (3) the results of AB 52 consultation.

4.5.1 Existing Conditions

Prehistoric Setting

Southern California's desert region has a long history of human occupation. Prehistoric material culture within this region has been organized according to periods or patterns that define technological, social, economic, and ideological elements. Within these periods, archaeologists have defined a chronology specific to the prehistory of the desert region. The Mojave Desert region is divided into four major periods; Paleoindian Period, Lake Mojave Period, Pinto Period, and the Late Holocene which includes the Gypsum, Rose Springs, and Late Precontact complexes. Please refer to Section 4.3, Cultural Resources, for a detailed description of the prehistory of the Project Area.

Ethnographic Setting

At the time of European contact, the Project Area was occupied by several groups, including the Serrano, Southern Paiute, and Chemehuevi. Brief information for each of these groups is presented below.

Serrano

The Desert Serrano/Vanyume population was centered around the well-watered Mojave River area, but their territory probably included most of the north faces of both the San Bernardino and San Gabriel mountains, from as far west as the Elizabeth Lake/Lake Hughes area in Los Angeles County, to as far east as Yucaipa Valley in San Bernardino County.

The Serrano, including the Desert Serrano/Vanyume, Cahuilla, and Tongva all spoke languages that were members of the Takic branch of the Northern Uto-Aztecan Language Family. Their neighbors, the Kawaiisu (to the northwest) and the Chemehuevi (to the northeast) spoke languages that were members of the Numic branch of the Northern Uto-Aztecan Language Family.

The Serrano relied on hunting and gathering of plants for subsistence, with the occasional fishing. Both large and small mammals were hunted such as deer, antelope, rabbits, small rodents, and various birds like quail. Plant staples included seeds like acorns, pinion nuts and chia, bulbs, blooms, tubers, and roots of various plants like berries, yucca, barrel cactus, and mesquite. It is noted that fire was used as a management tool to increase the yields of certain plants.

The Serrano lived in rounded dwellings, domed structures with tule thatching built over an excavated area. These structures were built with fire pits and primarily served as sleeping areas with tule mats. The majority of the daily norm was conducted outdoors under square ramadas, or in the open.

The Serrano artifact assemblage is similar to that of the neighboring Cahuilla and includes musical instruments such as rattles and flutes; utensils and ornaments such as fire drills, mortars, metates, pipes, beads, awls, and projectile points from wood, shell, bone, and stone. The Serrano were talented pottery and basket makers. Baskets were often made of deergrass and yucca fibers. Their pots were made of coiled clay smoothed out with a paddle and set in the sun to dry before being fired in a pit. The brownware pottery was sometimes decorated with circular designs and lines in either red or black. The Serrano were also known for their petroglyphs. Abstract and geometric designs are often seen with representational figures of sheep, lizards and human beings. Some state that their petroglyphs were records of important events, rough maps, and artistic representations of native life.

Southern Paiute

Many researchers suggest the Southern Paiute, and other Numic speaking peoples, started to move into the Great Basin and Colorado Plateau around 1000 AD. Prior to European contact, the Paiute territory extended from present day southern California to southern Nevada, northern Arizona, and south-central Utah. Unique cultural materials are used to define Southern Paiute populations in the region. Brownware pottery is a characteristic of Southern Paiute sites along with Desert Side-notched and Cottonwood triangular projectile points. Distinctive basketry, including twined and coiled baskets, triangular knives, unshaped manos and millingstones, shell beads, slate pendants, and the occasional mortar and pestle are also unique to Southern Paiute sites.

The Southern Paiute had a mixed subsistence routine. They were agrarian but also relied on hunting and gathering. It is suggested that the Anasazi or the Lower Colorado Cultural Groups introduced the Southern Paiute to agriculture, who then began to experiment by planting small areas of corn, beans, and pumpkin. Wild plant foods consisted of yucca, grass seeds, agave, prickly pear, and roots. Small game, such as Big horned sheep, rabbits, deer, and ground squirrels were often the targets of their hunting forays.

Chemehuevi

The Chemehuevi people are the most southern group of the Southern Paiute Indians, who are linguistically related to the greater Uto-Aztecan language family. The name Chemehuevi was given by the Mohave, a name they used for all Southern Paiute people. The Chemehuevi call themselves Numu, meaning "People." The Chemehuevi likely entered the river area between 1833 and 1859 and made an alliance with the Mohave which allowed them plots of land to cultivate within Mohave territory. Chemehuevi belief even held that Southern Fox, and "the woman with whom the Sun conceived twin sons" called the Whipple Mountains home.

Traditionally the Chemehuevi were seasonal hunter gatherers who ranged over the eastern half of the Mojave Desert. Small family groups would migrate hunting small game and gathering wild plants.

Project Notification

CEQA requires lead agencies to consult with all California Native American tribes that have traditional and cultural affiliation with the geographic area of a project, and that have previously requested consultation. To invoke an agency's requirement to consult under CEQA, a tribe must first send the lead agency a written request for formal notification of any projects within the geographic area with which they are traditionally and culturally affiliated (PRC Section 21080.3.1[b]). LADWP notified all contacts provided by the Native American Heritage Commission that have traditional and cultural affiliation with the geographic area of the proposed Project. Letters including information about the Project, and an invitation to consult regarding the Project were mailed via USPS mail on October 18, 2023. Letters were sent to the following 29 tribes:

- Agua Caliente Band of Cahuilla Indians
- Augustine Band of Cahuilla Mission Indians
- Cabazon Band of Mission Indians
- Cahuilla Band of Indians
- Chemehuevi Indian Tribe
- Colorado River Indian Tribes
- Fort Mojave Indian Tribe
- Gabrieleno Band of Mission Indians - Kizh Nation
- Gabrieleno/Tongva San Gabriel Band of Mission Indians
- Gabrielino /Tongva Nation
- Gabrielino Tongva Indians of California Tribal Council
- Gabrielino-Tongva Tribe
- Juaneno Band of Mission Indians Acjachemen Nation – Belardes
- Juaneno Band of Mission Indians Acjachemen Nation 84A
- Kern Valley Indian Community

- Los Coyotes Band of Cahuilla and Cupeño Indians
- Morongo Band of Mission Indians
- Pala Band of Mission Indians
- Pechanga Band of Indians
- Quechan Tribe of the Fort Yuma Reservation
- Ramona Band of Cahuilla
- Rincon Band of Luiseno Indians
- San Fernando Band of Mission Indians
- San Manuel Band of Mission Indians
- Santa Rosa Band of Cahuilla Indians
- Serrano Nation of Mission Indians
- Soboba Band of Luiseno Indians
- Torres-Martinez Desert Cahuilla Indians
- Twenty-Nine Palms Band of Mission Indians

Summary of AB 52 Tribal Consultation

LADWP received four responses from the Kern Valley Indian Community, Morongo Band of Mission Indians, San Manuel Band of Mission Indians, and Twenty-Nine Palms Band of Mission Indians. The discussion below provides a high-level summary of AB 52 consultations, as information exchanged during the consultation process is confidential.

Kern Valley Indian Community

Kern Valley Indian Community requested formal consultation on March 18, 2024, via an email response. LADWP responded via email on March 19, 2024. A formal consultation meeting has not yet occurred; however, Kern Valley Indian Community expressed concern with impacts to TCRs generally and requested to participate in cultural resources surveys and monitor the project. Consultation is ongoing.

Morongo Band of Mission Indians

Morongo Band of Mission Indians requested formal consultation via an email on December 12, 2023. LADWP had a formal consultation meeting with Morongo Band of Mission Indians on April 4, 2024, in which they mentioned concern over disturbance in the Cronese Basin. Consultation is ongoing.

San Manuel Band of Mission Indians

San Manuel Band of Mission Indians requested formal consultation via email on November 16, 2023. Initial emails were exchanged with LADWP and San Manuel Band of Mission Indians on November 17, 2023, and December 5, 2023. San Manuel Band of Mission Indians requested to review both the cultural resources study and the geotechnical report before moving ahead with a meeting. Consultation is ongoing.

Twenty-Nine Palms Band of Mission Indians

Twenty-Nine Palms Band of Mission Indians requested formal consultation via email on November 7, 2023. LADWP had a formal consultation meeting on December 7, 2023. The tribe has no concerns with the Project since it is an existing transmission line in a previously disturbed area. Consultation was concluded on May 3, 2024.

Project Assumptions

As of the writing of this analysis, AB 52 consultations are ongoing, as are cultural resources surveys and evaluations. This analysis is based on the information provided thus far during formal AB 52 consultations and following assumptions:

- All cultural resources identified within the Project Area (whether identified at the time of this writing or during future continued AB 52 consultation meetings) that are considered TCRs will be avoided.

4.5.2 Relevant Plans, Policies, and Ordinances

State

California Native American Tribes, Lead Agency Tribal Consultation Responsibilities, and Tribal Cultural Resources

CEQA provides definitions for California Native American tribes, lead agency responsibilities to consult with California Native American tribes, and TCRs. AB 52 establishes a formal role for California Native American tribes in the CEQA process. If consultation is requested, CEQA lead agencies are required to consult with tribes about potential TCRs, a recognized category of "historical resources" within the Survey Area and immediately surrounding area; the potential significance of project impacts; the development of project alternatives; and the type of environmental document that should be prepared.

A "California Native American tribe" is a "Native American tribe located in California that is on the contact list maintained by the Native American Heritage Commission (NAHC) for the purposes of Chapter 905 of the Statutes of 2004" (PRC Section 21073). Lead agencies implementing CEQA are responsible for consultation with California Native American tribes about TCRs within specific timeframes, observant of tribal confidentiality, and if TCRs could be impacted by a CEQA project, lead agencies are to exhaust the consultation to points of agreement or termination.

TCRs are either of the following:

1. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
   a. Included or determined to be eligible for inclusion in the CRHR.
   b. Included in a local register of historical resources as defined in the Public Resources Code, Section 5020.1(k).
2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in the Public Resources Code, Section 5024.1(c).

In applying these criteria, the lead agency shall consider the significance of the resource to a California Native American tribe (PRC Section 21074[(a]). To qualify as a TCR, it must be: (1) listed on or eligible for listing on the CRHR or a local historic register, or (2) a resource that the lead agency, at its discretion and supported by substantial evidence, determines should be treated as a TCR (PRC Section 21074). TCRs include "non-unique archaeological resources" that, instead of being important for "scientific" value as a resource, can also be significant because of the sacred and/or cultural tribal value of the resource. Tribal representatives are considered experts appropriate for providing substantial evidence regarding the locations, types, and significance of TCRs within their traditionally and cultural affiliated geographic area (PRC Section 21080.3.1[a]). A cultural landscape that meets the criteria of PRC Section 21074(a), is a TCR to the extent that the landscape is geographically defined in terms of its size and scope (PRC Section 21074[b]). Historical resources, unique archaeological resources, and non-unique archaeological resources, as defined at PRC Sections 21084.1, 21083.2(g), and 21083.2(h), may also be TCRs if they conform to the criteria of PRC Section 21074(a).

CEQA also states that a project with an impact that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment (PRC Section 21084.2).

4.5.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to TCRs are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to TCRs would occur if the project would:

1. 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:
    a. 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).
    b. 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.

4.5.4 Impacts Analysis

Threshold TCR-1. 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:

a. 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)?

Construction

Less than Significant with Mitigation Incorporated. There are no known TCRs listed or eligible for listing on the CRHR, or other state registers, NRHP, or local register of historical resource that have been identified within the Project Area, therefore no impacts would occur to during construction.

While AB 52 consultation meeting are ongoing and the exact scope and disturbance areas of the Project will not be known until the Project is designed, the following assumptions are made for the purposes of this analysis:

- All cultural resources identified within the Project Area (whether identified at the time of this writing or during future continued AB 52 consultation meetings) that are considered TCRs will be avoided.

As with any project that involves ground disturbing activity, there is the potential for unknown buried resources to be encountered during the course of the Project, especially considering the amount of previously recorded resources that were identified during the record search located within and directly adjacent to the Project Area, as described in Section 4.3, Cultural Resources. Inadvertent disturbance of an unidentified cultural resource, that could be considered a TCR, could damage or destroy the resource or change its context. In the event of an inadvertent discovery, the proposed Project would be subject to PRC Section 21083.2(i) regarding provisions related to the accidental discovery of archaeological resources. These provisions include immediately halting construction work in the vicinity of the find (within a 50-foot buffer), and LADWP retaining a qualified archaeologist meeting Secretary of Interior standards to evaluate the significance of and determine appropriate treatment for the resource in accordance with the provisions of CEQA Guidelines Section 15064.5 and the National Historic Preservation Act, and if necessary, contact local Native American tribes regarding the find. If an unanticipated buried resource is encountered, and if the currently unidentified resource were determined to be a TCR eligible for listing in the CRHR or local register, the Project activities could result in a significant impact to the resource without mitigation. Implementation of Mitigation Measure (MM)-TCR-1 (Native American Monitoring), MM-CUL-1 (Retain a qualified Project Archeologist), MM-CUL-2 (Treatment Plan), MM-CUL-3 (Cultural Resources Monitoring Plan), MM-CUL-4 (Worker Environmental Awareness Program), MM-CUL-5 (Archaeological Monitoring), MM-CUL-6 (Monitoring Report), MM-CUL-7 (Unanticipated Discoveries), and MM-CUL-9 (Treatment of Human Remains) would reduce the overall impact to an unknown TCR by (1) requiring qualified personnel to monitor all Project related ground disturbance that has the potential to impact archaeological resources qualifying as TCRs, (2) requiring construction personnel to be properly trained on the cultural sensitivity of the Project, (3) requiring a report on all findings so information gathered is added to the archaeological record for future research and knowledge, and (4) outlining the steps to take in the event of a discovery. Implementation of MM-TCR-1, MM-CUL-1 through MM-CUL-7, and MM-CUL-9 would allow for proper evaluation and treatment of an unanticipated resource and ensure that impacts to unanticipated discoveries would be less than significant.

Operation

No Impact. Ground-disturbing activities do not appear to be part of the standard operation or maintenance profile of the proposed Project. No impacts on TCRs are expected during normal operation and maintenance of the proposed Project.

b. 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.

Construction

Less than Significant with Mitigation Incorporated. There are no known TCRs determined by the lead agency in its discretion that have been identified within the Project Area, therefore no impacts would occur to during construction.

While AB 52 consultation meeting are ongoing and the exact scope and disturbance areas of the Project will not be known until the Project is designed, the following assumptions are made for the purposes of this analysis:

1. All cultural resources identified within the Project Area (whether identified at the time of this writing or during future continued AB 52 consultation meetings) that are considered TCRs will be avoided.

As with any project that involves ground disturbing activity, there is the potential for unknown buried resources to be encountered during the course of the Project, especially considering the amount of previously recorded resources that were identified during the record search located within and directly adjacent to the Project Area, as described in Section 4.3, Cultural Resources. Inadvertent disturbance of an unidentified cultural resource, that could be determined to be a TCR by the lead agency, could damage or destroy the resource or change its context. In the event of an inadvertent discovery, the proposed project would be subject to PRC Section 21083.2(i) regarding provisions related to the accidental discovery of archaeological resources. These provisions include immediately halting construction work in the vicinity of the find (within a 50-foot buffer), and LADWP retaining a qualified archaeologist meeting Secretary of Interior standards to evaluate the significance of and determine appropriate treatment for the resource in accordance with the provisions of CEQA Guidelines Section 15064.5 and the National Historic Preservation Act, and if necessary, contact local Native American tribes regarding the find. If an unanticipated buried resource is encountered, and if the currently unidentified resource were determined to be a TCR by the lead agency in its discretion, the Project activities could result in a significant impact to the resource without mitigation. Implementation of MM-TCR-1 (Native American Monitoring), MM-CUL-1 (Retain a qualified Project Archeologist), MM-CUL-2 (Treatment Plan), MM-CUL-3 (Cultural Resources Monitoring Plan), MM-CUL-4 (Worker Environmental Awareness Program), MM-CUL-5 (Archaeological Monitoring), MM-CUL-6 (Monitoring Report), MM-CUL-7 (Unanticipated Discoveries), and MM-CUL-9 (Treatment of Human Remains) would reduce the overall impact to an unknown TCR by: (1) requiring qualified personnel to monitor all Project related ground disturbance that has the potential to impact archaeological resources qualifying as TCRs, (2) requiring construction personnel to be properly trained on the cultural sensitivity of the Project, (3) requiring a report on all findings so information gathered is added to the archaeological record for future research and knowledge, and (4) outlining the steps to take in the event of a discovery. Implementation of MM-TCR-1, MM-CUL-1 through MM-CUL-7, and MM-CUL-9 would allow for proper evaluation and treatment of an unanticipated TCR and ensure that impacts to unanticipated discoveries would be less than significant.

Operation

No Impact. Ground-disturbing activities do not appear to be part of the standard operation or maintenance profile of the proposed Project. No impacts on TCRs are expected during normal operation and maintenance of the proposed Project.

4.5.5 Mitigation Measures

In addition to MM-CUL-1 through MM-CUL-7 and MM-CUL-9, the following mitigation measure is required to address potentially significant impacts to TCRs.

MM-TCR-1 Native American Monitoring. Prior to any ground disturbances within the Project Area, LADWP shall enter into a contract with and retain Native American monitors designated by Tribal representatives pursuant to its AB 52 consultation efforts. These monitors shall have the same authority as the archaeological monitors for this Project. Documentation of retention shall be submitted to the BLM and kept on file with LADWP.

4.5.6 Level of Significance After Mitigation

Threshold TCR-1. 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:

- ***a. 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)?***
- ***b. 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.***

With implementation of MM-CUL-1 through MM-CUL-7, MM-CUL-9, and MM-TCR-1, impacts to TCRs would be less than significant.

4.5.7 Cumulative Effects

Impacts to TCRs tend to be site specific and are assessed on a site-by-site basis and generally mitigated on a project by project basis. Cumulative projects would be required to assess impacts to TCRs. Additionally, as needed, projects would incorporate individual mitigation for site-specific significant resources present on each individual project site. Furthermore, the Project does not propose activities that could directly or indirectly contribute to an increase in a cumulative impact to TCRs, as the mitigation measures provided above in this analysis ensures any TCRs identified during construction activities would be properly evaluated, recorded, and treated or avoided, if feasible. As such, the Project, in combination with the past, present, and reasonably foreseeable future projects in the Project vicinity, would result in less-than-significant cumulative impacts to TCRs, and no further mitigation measures are required.

Therefore, the Project's contribution to cumulative impacts would not be cumulatively considerable. As such, cumulative impacts on TCRs would be less than significant.

4.5.8 Reference

Aspen. 2024. *Confidential Class I Cultural Resources Record Search Report for the McCullough-Victorville Transmission Line Retrofit Project.* Prepared for LADWP and BLM.

5 Other CEQA Considerations

5.1 Introduction

California Environmental Quality Act (CEQA) Guidelines Section 15126 requires Environmental Impact Reports (EIRs) to include a discussion of the significant environmental effects of a project, the unavoidable significant environmental effects if the project is implemented, any irreversible changes should the project be implemented, and growth-inducing impacts. The following section incorporates these analyses, as required by CEQA.

5.2 Effects Found Not to Be Significant

CEQA Guidelines Section 15128 requires that an EIR briefly describe potential environmental effects that were determined not to be significant and therefore were not discussed in detail in the EIR. The environmental issues discussed in the following sections are not considered significant, and the reasons for the conclusion of non-significance are discussed below. For an analysis of each of these topics, please see the Initial Study prepared for the Project in Appendix A of this EIR.

5.2.1 Aesthetics

The Project would result in less-than-significant impacts to aesthetics for the following reasons:

Substantial Adverse Effect on a Scenic Vista: While there are no known and designated scenic vistas in the Project area, the existing 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 U.S. Bureau of Land Management (BLM). Trail-based recreationists within the northernmost portion of the Mojave National Preserve encompassing the southern extent of the Clark Mountain Range are also afforded views of the Project area landscape. Furthermore, existing spur access roads, transmission towers, and transmission line infrastructure are visible from segments of Interstate (I) 40, I-15, state highways, local roadways, and from public lands managed by BLM. However, because the line and color contrast of access and spur roads are currently evident in the existing landscape, proposed activities within the existing Los Angeles Department of Water and Power (LADWP) right-of-way (ROW) would not substantially affect existing views in the Project area. Due to the existing presence of spur roads along the utility 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 already exists throughout the Project area landscape, and following construction, views containing the slightly taller steel lattice towers or hardware assembly replacements would not be substantially altered. As such, a **less-than-significant impact** would occur.

Scenic Resources within a State Scenic Highway: 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 nearly 20 miles south of the Project (Caltrans 2023). Therefore, due to distance and the presence of intervening vertical features, the proposed Project would not damage scenic resources within a state scenic

highway. Eligible state scenic highways in San Bernardino County and near the Project utility corridor include State Route (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 2023). The Project may be briefly visible from segments of the roadways; however, as Project construction activities would be temporary and located within pre-disturbed areas of the utility corridor where 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. Furthermore, the Project 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. None of the proposed construction activities would substantially alter views. Given the above, no substantial adverse effect on scenic resources within a state scenic highway would occur. Under operation, the utility corridor would look virtually the same as under existing conditions. As such, a **less-than-significant impact** would occur.

Degrade Existing Visual Character or Quality: While much of the area surrounding the utility corridor is sparsely developed, the desert landscape has been noticeably altered by the transmission infrastructure, I-15, SR-247, and SR-127 infrastructure, and limited rural residential and agricultural development. The Project would not include the construction of any infrastructure that would be visually incompatible with the existing aesthetic of the utility corridor. Project construction would require establishing a temporary work area at each tower structure that could temporarily degrade the existing visual character or quality of public views of that site and its surroundings. However, construction activities would occur for up to 45 months along the 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. Furthermore, after construction is complete, each work site would be restored to its original condition to the maximum extent feasible. Once construction and restoration activities cease, the visual effects of grading activities would be scattered throughout the utility corridor and would create similar line, color, and texture contrast as nearby existing access and spur roads. In several instances, proposed activities would simply restore 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 utility corridor and, after construction is complete, the upgraded towers would continue to display a scale, form, line, color, and texture similar to the conditions of the existing towers. Therefore, the level of noticeable change to the corridor is anticipated to be low, additional line and texture contrasts would not dominate the setting, and grading activities would not substantially alter the existing character of the utility corridor or the high desert landscape.

Indirect impacts associated with the 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. As such, a **less-than-significant impact** would occur.

New Substantial Light or Glare: During Project construction, the increased presence of construction vehicles, equipment, and materials, including traffic control signage, may result in a slight increase in daytime glare; however, these impacts would be short-term and temporary in nature, and therefore would not be considered substantial. In addition, Project activities would be carried out within an existing utility corridor in which maintenance vehicles can occasionally be seen by passing motorists. No new lighting would be installed along access roads or work areas, and nighttime construction lighting would not substantially disrupt any light-sensitive receptors as the transmission

lines travel through relatively undeveloped and sparse lands. All other construction activities would also produce negligible visual change in light or glare as the towers would continue to display a tall, geometric form, angular steel lattice lines, and a greyish color. After construction is complete, the level of noticeable change to the utility corridor is anticipated to be low, and the Project would not introduce any new permanent or significant sources of light or glare that would adversely affect day or nighttime views. As such, a **less-than-significant impact** would occur.

5.2.2 Agriculture and Forestry Resources

The Project would result in less-than-significant or no impacts to agriculture and forestry resources for the following reasons:

Conversion of Farmland to Non-Agricultural Use: Several work areas would be located either within, adjacent, or near to Prime Farmland or Farmland of Statewide Importance. Specifically, the work areas for Towers MCV1_123-4 to 128-1 and MCV2_122-4 to 127-1 would be within or adjacent to Prime Farmland and Farmland of Statewide Importance (DOC 2024a). However, all work areas and construction activities would be located within already existing tower sites and other pre-disturbed areas. The area of disturbance involved with the construction process may temporarily preclude farming activities at work areas within or adjacent to Prime Farmland or Farmland of Statewide Importance. Construction at these sites would only last for approximately 14 days, and the property owner would be notified of these temporary construction activities prior to the start of construction at each site. The proposed construction activities would not substantially hinder agricultural activities relative to existing conditions. At the end of this construction period, each site would be restored and returned to its original condition to the extent feasible. Therefore, no Farmland would be converted to non-agricultural uses. As such, **no impact** would occur.

Conflict with Zoning for Agricultural Use or Williamson Act Contract: The Project utility corridor area is not subject to a Williamson Act contact, although, Williamson Act contract land is located closest to the nearest transmission tower approximately 890 feet northwest of MCV1_116-4 (DOC 2024b). Considering that the average work area at each tower location would be 60 by 60 feet, construction activity at MCV1_116-4 is not anticipated to impact any Williamson Act contract. Therefore, no Williamson Act contract land would be affected. As such, **no impact** would occur.

Conflict with Zoning for Forest Land or Timberland: The Project would be located in an already existing LADWP utility corridor with various zoning designations, although it is zoned primarily for Resource Conservation and is not considered forest land, timberland, or a timberland production zone as defined in the California Public Resources Code or Government Code. There is not any forest land near the utility corridor as it is found within the Mojave Desert. As such, the proposed Project would not conflict with existing zoning for, or cause rezoning for, forest land, timberland, or timberland zoned Timberland Production. As such, **no impact** would occur.

Loss of Forest Land or Convert Forest Land to Non-Forest Use: As described in the threshold above, the Project does not contain forest land. Thus, the proposed Project would not result in the loss of forest land or conversion of forest land to non-forest use. As such, **no impact** would occur.

Change in Existing Environment that Could Result in the Conversion of Farmland to Non-Agricultural Use or Conversion of Forest Land to Non-Forest Use: The majority of the proposed work areas are located on BLM land, in which agricultural uses (except grazing) are not allowed. There are various grazing allotments that the transmission lines traverse through. However, construction activities would be limited to existing distributed areas and would be short term in nature. Thus, the Project would not prevent grazing from occurring. After construction of the Project, existing land uses would remain in place. As such, a **less-than-significant impact** would occur.

5.2.3 Air Quality (Odors)

The Project would result in less-than-significant impacts to air quality for the following reasons:

Result in Other Emissions (Such as Odors): Odors would be potentially generated from vehicles and equipment exhaust emissions during construction of the 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. Regarding long-term operations, the Project would not change the routine inspection and maintenance of the existing transmission lines and would not result in any sources of substantial odors. As such, a **less-than-significant impact** would occur.

5.2.4 Energy

The Project would result in less than significant or no impacts to energy for the following reasons:

Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources: Project construction would result in energy use primarily associated with use of off-road construction equipment, on-road hauling and vendor trucks, worker vehicles, and helicopters. Construction is conservatively anticipated to consume 1,578,859 gallons of petroleum over a period of approximately 45 months (1,379 days). For comparison, approximately 83 billion gallons of petroleum will likely be consumed in California over the course of the Project's construction phase (EIA 2023). The Project would be subject to California Air Resources Board's (CARB) In-Use Off-Road Diesel Vehicle Regulation that applies to certain off-road diesel engines, vehicles, or equipment greater than 25 horsepower. Overall, the Project would not involve characteristics that require equipment that would be less energy-efficient than at comparable construction sites in the region or state. Furthermore, energy demand and long-term maintenance of the lines would be similar to existing baseline conditions and are not anticipated to require additional energy demand. As such, a **less-than-significant impact** would occur.

Conflict With or Obstruct a State or Local Plan for Renewable Energy or Energy Efficiency: The proposed Project would follow applicable energy standards and regulations during the construction phases. In addition, the Project would be built and operated in accordance with all existing, applicable regulations at the time of construction. Furthermore, as mentioned above, the Project is required to accommodate incoming renewable energy resources along the WOR Path 46 transmission corridor and to ensure the continued safe and reliable operation of the lines; the additional 475 megawatts would contribute more than 15% toward LADWP's Renewables Portfolio Standard as part of LADWP's commitment to be 100% carbon-free by 2035, 10 years ahead of the state's target (LADWP 2023). While energy consumption would be required during construction, operation of the project would ultimately assist in the implementation of state and local plans for renewable energy. Therefore, there would be no conflicts with plans for renewable energy and energy efficiency. As such, **no impact** would occur.

5.2.5 Geology and Soils

The Project would result in less than significant or no impacts to geology and soils for the following reasons:

Rupture of a Known Earthquake Fault: Several of the Project's proposed work areas are located near an Alquist-Priolo Earthquake Fault Zone (DOC 2024c). Fault lines that cross the transmission alignment and that have the potential to generate future surface ruptures include the Calico, Lenwood, and Helendale faults (GeoPentech 2021). These faults encompass existing transmission towers MCV2_120-5 to 121-5, MCV2_131-5 to 136-1, as

well as towers MCV2_151-2 and MCV2_152-3. Additional faults, the Stateline and Soda Mountain faults, occur within the Project area but have not been assigned to an Earthquake Fault Zone. These faults traverse the transmission corridor between towers MCV2_26-6 and 27-4, as well as between MCV2_78-3 and 80-4. Quaternary active faults have not been mapped by the U.S. Geological Survey or the Nevada Bureau of Mines and Geology in the Nevada segment (GeoPentech 2021). Construction would be temporary, lasting up to approximately 45 months on each transmission line and up to 14 days at each work area, moving sequentially along the 162-mile utility corridor. The upgraded transmission towers would be in the exact same or slightly offset from the exact same location as the current towers; therefore, tower site conditions would not substantially change relative to existing conditions. Due to the infrequency of human presence in the proposed work areas and due to the temporary nature of the construction activities, the Project would not substantially expose people or structures to adverse impacts related to fault rupture. After construction is complete, each tower site and work area would be restored to its original condition to the extent feasible, and operational activities of the transmission lines would return to normal. As such, a **less-than-significant impact** would occur.

Strong Seismic Ground Shaking**:** The Project is located within the seismically active Southern California region and, like all locations within the region, could be subject to strong seismic ground shaking in the event of an earthquake. While construction workers would have the potential to be exposed to seismic ground shaking during construction processes, the risk of loss, injury, or death would not be adverse relative to other areas in Southern California. The 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. Furthermore, Project features 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 upgraded transmission towers from ground movement. After construction, each tower site and work area would be restored to its original condition to the extent feasible, and operational activities of the transmission lines would return to normal. As such, a **less-than-significant impact** would occur.

Seismic-Related Ground Failure Including Liquefaction**:** Many of the Project's work areas are located in areas that are not susceptible to liquefaction (County of San Bernardino 2023a). The data collected in the geotechnical investigation revealed that liquefaction and other ground deformation is negligible along the transmission line. However, at MCV2 towers 1-1, 69-5, 75-5, 113-5, 124-2, and 153-2, seismically induced settlement has the potential to occur due to the presence of younger and looser alluvium (GeoPentech 2021). In the event that a work area would be located on potentially liquefiable soils, the grading activities would not expose people or structures to risk related to liquefaction as minimal grading would occur at each work area. No habitable structures are proposed, and the Project would not increase the population in the Project area. Furthermore, Project features 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 upgraded transmission towers from ground movement. After construction, each tower site and work area would be restored to its original condition to the extent feasible, and operational activities of the transmission lines would return to normal. As such, a **less-than-significant impact** would occur.

Landslides**:** The Project is not located within any mapped landslide zones; however, the Project traverses a wide variety of terrain ranging from flat to relatively steep with a diverse set of rock units (GeoPentech 2021). Many of the proposed work sites are located on undeveloped flat land, which would not have the potential to be impacted by a landslide. However, areas of the Project are within steeper topography and are generally more susceptible to land sliding. Various Project areas have been mapped to have relatively high landslide susceptibility, but most of the work areas would be located on flat land (GeoPentech 2021). 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 (2 to 6 inches at each site, where needed) and the risk to construction workers from landslides would be negligible. Given this, it is unlikely that landslide movements would be generated by excavation associated with the Project. Project features would be constructed in accordance with applicable federal, state, and LADWP design standards related to seismic criteria, and would not substantially change tower site seismic conditions relative to existing conditions. After construction, each tower site and work area would be restored to its original condition to the extent feasible, and operational activities of the transmission lines would return to normal. Therefore, the Project would not result in changes to structures or population levels susceptible to risk from landslide. As such, a **less-than-significant impact** would occur.

Soil Erosion or Loss of Topsoil: The proposed grading activities would have the potential to contribute to erosion or loss of topsoil at the tower work sites. The proposed Project would result in approximately 1,437 acres of grading across the 1,740 tower sites, not including access road grading. This would make an average of approximately 1.2 acres of grading per tower site. Additionally, applicable regulations that prevent erosion and loss of topsoil during construction would be implemented for the Project. This would include preparation of and compliance with a Stormwater Pollution Prevention Plan (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. 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. Once construction is complete, no change in soil erosion or loss of topsoil attributable to the Project would occur. Thus, the proposed Project is not anticipated to result in substantial soil erosion or loss. As such, a **less-than-significant impact** would occur.

Located on a Geologic Unit that is Unstable or that Would Become Unstable: The Project is not located within any mapped landslide zones, and many of the proposed work sites are located on undeveloped flat land which would not have the potential to be impacted by a landslide (GeoPentech 2021). However, areas of the Project within steeper topography, are generally more susceptible to land sliding, and some areas of the Project have been mapped to have relatively high landslide susceptibility (GeoPentech 2021). Although, the amount of grading per work site would be minimal and landslide risks at each work area would be considered negligible. In addition, most of the work areas are not located in areas that are susceptible to liquefaction and liquefaction is therefore considered negligible along the transmission alignment (GeoPentech 2021). For these reasons, lateral spreading would be unlikely to occur in the proposed work areas. Furthermore, Project activities would not involve removal of groundwater, oil, or gas, and as such, the Project would not result in on- or off-site subsidence. 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 (USGS 2015). While collapse has the potential to occur within or near the Project area, the Project would not be expected to exacerbate or trigger collapse, as it would involve mostly minor grading activities and the reinforcement, replacement, or raising of existing transmission towers.

In the event that geologic instability were to occur in the Project area, the 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, up to a maximum of 276 workers would be present in the Project area for approximately up to 45 months. Project features would be designed and installed pursuant to existing federal, state, and LADWP engineering and design standards related to seismic criteria, which would minimize the potential for the transmission towers to be damaged by geologic instability. After construction, each tower site and work area would be restored to its original condition to the extent feasible, and operational activities of the transmission lines would return to normal. As such, a **less-than-significant impact** would occur.

Expansive Soils: The Project area is generally underlain by quaternary alluvium, volcanic rock, granitic rock, and sandstone, shale, and gravel deposits (USGS 2015). In the event that soil expansion was to occur in the Project area, it would not create substantial risks to life or property. The Project would not involve construction of habitable structures that would increase the population in the Project area, and the presence of on-site workers in the Project area would be temporary. However, Project features would be designed and installed pursuant to existing federal, state, and LADWP engineering and design standards related to seismic criteria, which would reduce potential damage to the transmission towers from ground movement, including movement from expansive soils. After construction, each tower site and work area would be restored to its original condition to the extent feasible, and operational activities of the transmission lines would return to normal. As such, a **less-than-significant impact** would occur.

Septic Tanks/Alternative Wastewater Disposal Systems: No septic tanks or alternative wastewater disposal systems are proposed under the Project. As such, **no impact** would occur.

5.2.6 Greenhouse Gas Emissions

The Project would result in less-than-significant impacts to greenhouse gas emissions for the following reasons:

Generate Emissions that May Have a Significant Impact and Conflict with an Applicable Plan, Policy, or Regulation Adopted for the Purpose of Reducing Emissions: The Project would be consistent with the County of San Bernardino Greenhouse Gas Reduction Plan Update, the Southern California Association of Governments' 2020 RTP/SCS, CARB's 2017 and 2022 Scoping Plans, and would not conflict with the state's trajectory toward future GHG reductions. Therefore, the Project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment and would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. As such, a **less-than-significant impact** would occur.

5.2.7 Hazards and Hazardous Materials

The Project would result in less than significant or no impacts to hazards and hazardous materials for the following reasons:

Create a Significant Hazard Through Routine Transport, Use, or Disposal of Hazardous Materials: 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. The transport, use, and disposal of construction-related hazardous materials would occur in conformance with applicable federal, state, and local regulations governing such activities. After construction, the operational activities along the transmission lines would not change. As such, a **less-than-significant impact** would occur.

Create a Significant Hazard Through Upset and Accident Conditions: 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 described in the threshold above, construction activities may involve limited transport, storage, use, or disposal of some hazardous materials. There is also the potential that areas used for agriculture or areas that have been used for agriculture in the past would contain residual pesticides in the soil that is being excavated. However, there are only a handful of work areas under the Project that are within or adjacent to land currently being used for agriculture (MCV1_124-4 to 127-4

and MCV2_123-4 to 126-4). The majority of the Project area is located in undeveloped areas of the Mojave Desert. Therefore, the potential for encountering pesticides of high concentration is low. Furthermore, the 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 and excavation would be operated using oil, fuel, lubricating grease, coolants and hydraulic fluids. Such impacts would generally be temporary, due to the short-term nature of construction. In the unlikely event hazardous materials are spilled during construction, impacts would be temporary, minor, and localized, because such spills would be required to be properly controlled and safely removed in accordance with existing regulations that would ensure that construction impacts related to reasonably foreseeable upset and accident conditions involving the release of hazardous materials would be less than significant. Operational activities along the transmission lines would not change upon implementation of the Project. As such, a **less-than-significant impact** would occur.

Hazardous Emissions or Materials, Substances, or Waste Within One-Quarter Mile of an Existing or Proposed School: There is one school within 0.25 miles of the Highway 127 access road through Baker, which is not located on or adjoining any work zones. 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 Project would not alter any land uses or introduce any new sources of hazardous materials. Furthermore, the activities associated with the proposed tower raising 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.

Location Included on a List of Hazardous Materials Sites: Six properties within the Project vicinity are listed on sites that have documented releases of hazardous materials or wastes. Only two of these sites are on lists compiled pursuant to Government Code Section 65962.5 (leaking underground storage tank cases located at 17400 D Street in Victorville, and 40873 Sunrise Canyon in Yermo). Both of these sites have received regulatory closure, and remaining contamination, if any, would be limited to subsurface impacts (soil, soil vapor, or groundwater). Other sites not listed on the Cortese Lists would have similar subsurface impacts. Work areas along the utility corridor would mainly occur within BLM land and are not located directly on contaminated sites. Except for towers being replaced, which requires excavation up to 30 feet below ground surface, construction activities would not require deep excavations. As discussed under "Regulatory Databases," hazardous materials sites with ongoing cleanups do not appear to overlap the proposed Project, so these excavations are not likely to occur on hazardous material release sites. 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 tower reinforcement, replacement, and raising 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, a **less-than-significant impact** would occur.

Located Within an Airport Land Use Plan or Within Two Miles of a Public or Public Use Airport: Four public use airports were identified within 5 miles of the proposed Project area and access roads. Airport impact areas, as defined in airport-specific airport land use plans and buffer zones defined by state aviation administrations, do not overlap proposed work areas, but may overlap access roads (Coffman 2008; County of San Bernardino 1992; NDOT n.d.; Town of Apple Valley 1995). The Project's construction activities, aside from rehabilitation of existing access roads, are not planned within access roads. As such, **no impact** would occur.

Impair Implementation of or Physically Interfere with an Adopted Emergency Response or Evacuation Plan: The proposed Project would be constructed in adherence with all applicable federal, state, and local building codes including but not limited to, the California Building Code, Fire Code, and the San Barnardino County Municipal Code related to access requirements to allow for emergency services access at all structures. During construction, emergency access to the Project area would be adequately maintained to provide emergency services to construction workers along the transmission lines in the event of an emergency. Operational activities of the transmission lines related to adopted emergency response plans would return to normal which would not interfere with an adopted emergency response or emergency evacuation plan. Department vehicle and emergency vehicle access would continue to be provided via access roads that run along the entire transmission alignment throughout the duration of the Project. As such, a **less-than-significant impact** would occur.

Expose People or Structures to a Significant Risk of Loss, Injury, or Death Involving Wildland Fires: The proposed Project would be located in primarily undeveloped areas of the Mojave Desert. The Vegetation Element in the California Desert Conservation Area (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 2023b). The Project would involve the temporary presence of construction workers in the Project area (up to 276 personnel on site for approximately up to 45 months), who would be temporarily exposed to wildland fire in the event that one was to occur. 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, a **less-than-significant impact** would occur.

5.2.8 Hydrology and Water Quality

The Project would result in less than significant or no impacts to hydrology and water quality for the following reasons:

Violate Water Quality Standards or Waste Discharge Requirements: In the event that stormwater runoff was to be generated during construction activities, sediment runoff or runoff containing pollutants from construction equipment present on site would have the potential to be transported offsite. Therefore, water quality standards and waste discharge requirements related to construction and stormwater runoff would apply to the 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 Qualified SWPPP Developer, which would identify structural and nonstructural best management practices (BMPs) to be implemented by the Qualified SWPPP Practitioner during the construction phase. LADWP would also develop and implement an erosion control plan for the Project. These required 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 Project would not violate any water quality standards or waste discharge requirements. After construction, each tower site and work area would be restored to its original condition to the extent feasible, and operational conditions and activities would not be altered by the Project such that water or waste standards or requirements would be violated. As such, a **less-than-significant impact** would occur.

Deplete Groundwater Supplies or Interfere with Groundwater Recharge: Water demands associated with the proposed Project would primarily consist of water used for dust control during construction that would be transported to the work sites in a water truck and could be sourced from various different water providers that could be accessing groundwater or imported surface water. Regardless, considering the general scope of activities involved, the volumes of water required would be temporary, relatively small, dispersed over a large area, and likely would not increase water use in the Project area to the extent that groundwater supplies in any one of the groundwater basins would become substantially depleted. Furthermore, the only impervious surfaces that would be installed in association with the Project are the towers being completely replaced and the new footings associated with tower raising. Replaced towers and tower footings are not anticipated to increase the total amount of impervious surface at tower sites as they would be installed in place of or slightly offset from the previous tower or tower footing, and as construction impacts would be maintained entirely within pre-disturbed areas within existing tower sites. Groundwater could potentially be encountered during construction activities when deep excavations are involved and/or when groundwater levels are high. However, the proposed grading activities would be relatively shallow and are not anticipated to require dewatering. During the tower raising activities, new footings would be placed in the ground at a depth of approximately 30 feet but would not require dewatering even if groundwater was encountered, and runoff would still be directed to pervious areas where recharge can still occur. Therefore, it is not anticipated that groundwater would be required to be pumped or adversely affected. Operational activities of the transmission lines would have negligible changes related to groundwater use or groundwater recharge. As such, a **less-than-significant impact** would occur.

Result In Substantial Erosion or Siltation: Numerous drainage features such as ephemeral washes and swales traverse the Project area; however, the proposed construction activities are not anticipated to impact any drainage feature or alter the stream course of any feature. Furthermore, no proposed construction activities are anticipated to result in temporary or permanent fill of any stream or river. The construction activities 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 would ensure that impacts related to erosion and siltation during construction activities would remain less than significant. During operation, any water features within the Project area that may have been affected by construction activities would be reestablished while drainage patterns and overall operational activities would not be substantially altered. As such, a **less-than-significant impact** would occur.

Increase the Rate or Amount of Surface Runoff Which Would Result in Flooding: As described in the thresholds above, the Project would not alter the course of a stream or river and would not substantially increase the amount of impervious surface in the Project area, as new towers and tower footings would be installed in place of or slightly offset from prior towers and footings. Because the 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. The proposed tower raising activities may result in minor alternations to the drainage patterns within the Project area. 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. After construction, each tower site and work area would be restored to its original condition to the extent feasible, and operational activities of the transmission lines would return to conditions that are effectively very similar to existing conditions in terms of drainage patterns. As such, a **less-than-significant impact** would occur.

Runoff Water Which Would Exceed the Capacity of Existing or Planned Stormwater Drainage Systems or Provide Substantial Additional Sources of Polluted Runoff: As described in the thresholds above, the Project would not increase the amount of runoff from the Project area; therefore, the Project would not affect the capacity of stormwater drainage systems. However, storm events occurring during construction 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 applicable water quality regulations would ensure that impacts related to polluted runoff during construction would not be significant. After construction, each tower site and work area would be restored to its original condition to the extent feasible, and operational activities of the transmission lines would return to normal. As such, a **less-than-significant impact** would occur.

Impede or Redirect Flood Flows: There are several 100-year flood hazard areas near Barstow and Baker (DWR 2024). While some of the Project's proposed work sites may be located within or near a 100-year flood hazard area, the proposed construction activities do not involve installation of new permanent or habitable structures nor anything that is substantially more substantive than what currently exists and, as such, no floods flows would be redirected. As such, **no impact** would occur.

In Flood Hazard, Tsunami, or Seiche Zones, Risk Release of Pollutants: Some of the Project's proposed work sites may be located within or near an identified 100-year flood hazard area, however the proposed construction activities do not involve the storage or handling of bulk quantities of hazardous materials and would be required to manage any hazardous materials in a manner consistent with existing regulatory requirements that would ensure a less than significant risk of release of pollutants. The Project area is not immediately adjacent to any large, enclosed permanent bodies of water, and therefore, would not be subject to inundation by seiche. The Project area is located over 80 miles northeast of the Pacific Ocean, and therefore, would not be susceptible to inundation by tsunami. After construction, each tower site and work area would be restored to its original condition to the extent feasible, and operational activities of the transmission lines would occur largely similar to existing conditions. As such, a **less-than-significant impact** would occur.

Conflict with Implementation of a Water Quality Control Plan or Sustainable Groundwater Management Plan: During Project construction, all ground disturbing activities would be conducted in accordance with a National Pollutant Discharge Elimination System (NPDES) 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 Qualified SWPPP Developer, which would identify structural and nonstructural BMPs to be implemented by the Qualified SWPPP Practitioner during the construction phase. LADWP would also develop and implement an erosion control plan for the proposed Project. These required BMPs would minimize direct impacts to surface water quality and would also be consistent with the Regional Water Quality Control Board's Basin Plan, the water quality control plan for the region. With implementation of BMPs as outlined in the SWPPP and erosion control plan, the proposed Project would not conflict or obstruct implementation of the Basin Plan.

In relation to sustainable groundwater management, the water needs of the 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 and would not conflict or obstruct implementation of the sustainable management of the groundwater basin. After construction, each tower site and work area would be restored to its original condition to the extent feasible, and operational activities of the transmission lines related to water quality and water supply would return to normal. Normal operational conditions and activities would not require water supplies. As such, a **less-than-significant impact** would occur.

5.2.9 Land Use and Planning

The Project would result in less than significant or no impacts to land use and planning for the following reasons:

Physically Divide an Established Community: The proposed work sites are located in undeveloped areas of the Mojave Desert, with the exception of several work sites near Barstow that are within or near agricultural fields. However, these agricultural fields do not constitute an established community. Because the transmission alignment already exists and is not within an established community, it would not have the potential to divide such a community. As such, **no impact** would occur.

Conflict with Any Applicable Land Use Plan, Policy, or Regulation of an Agency with Jurisdiction Over the Project Adopted for the Purpose of Mitigating an Environmental Effect: The Project area falls within the jurisdiction of numerous land use plans, including but not limited to, BLM plans such as the CDCA Plan and Desert Renewable Energy Conservation Plan (DRECP), as well as the County of San Bernardino General Plan. The consistency of the Project with these plans is addressed below.

On BLM-administered lands, the proposed action is subject to the 1980 CDCA Plan, as amended. As part of the Federal Land Policy and Management Act, 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 two 500-kilovolt power lines (the subject transmission lines of this Project) as pre-existing lines. Per the CDCA Plan, existing facilities within designated corridors may be maintained and upgraded or improved in accordance with existing right-of-way grants or by amendments to right-of-way grants.

Phase I of the DRECP was approved on September 14, 2016, by the BLM. This phase of the BLM DRECP is a Land Use Plan Amendment to the CDCA Plan and identifies priority areas for renewable energy development while setting aside areas for conservation and recreation. The BLM DRECP Land Use Plan Amendment 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 (CDNCLs), and non-ACEC areas. The Project extends through areas covered by the DRECP.

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 CDNCLs. Phase I of the DRECP designated 4.2 million acres as part of the CDNCLs. Much of this land was already a part of the CDNCLs (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. CDNCLs are closed to all energy development. Phase II of the DRECP focuses on better aligning local, state, and federal renewable energy development and conservation plans, policies, and goals.

The proposed Project is predominately within the boundaries of the County of San Bernardino General Plan. The land use and zoning designations for almost all of the work sites are Resource Conservation (County of San Bernardino 2014). The 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. The Project merely includes improvements and retrofits to existing infrastructure. Therefore, the Project would be consistent with the purposes of the Resource Conservation land use and zoning designations for the transmission alignment set forth in the County General Plan (County of San Bernardino 2014). After construction is complete, each tower site and work

area would be restored to its original condition to the extent feasible, and operational activities of the transmission lines would return to normal. As such, a **less-than-significant impact** would occur.

5.2.10 Mineral Resources

The Project would result in no impact to mineral resources for the following reasons:

Loss of Availability of a Known Mineral Resource of Value: Portions of the Project area pass through Mineral Resource Zone 3a, as designated by the Department of Conservation, and identified by the County on Policy Map NR-4 within the Natural Resources Element of San Bernardino's recently adopted Countywide Plan (County of San Bernardino 2020). A designation of Mineral Resource Zone 3a is given to areas containing known mineral deposits that may qualify as mineral resources. A portion of the Project passes through Surface Mining and Reclamation Act Study Area Open-File Report (OFR) 92-06 that has a Mineral Land Classification of Concrete Aggregate (DOC 2024d). However, because the Project would occur within a CDCA-designated utility corridor primarily used for linear utility ROW, the Project would not affect extraction of leasable minerals as these operations are not currently present within the corridor. 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 (DOC 2023). Operational activities of the transmission lines would return to normal. 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. As such, **no impact** would occur.

Loss of Availability of a Locally Important Mineral Resource Recovery Site: Because the Project would occur within a CDCA-designated utility corridor primarily used for linear utility ROW, the Project would not affect extraction of leasable minerals as no operations are currently present within the corridor. No construction or operational impacts related to locally important mineral resources would occur. As such, **no impact** would occur.

5.2.11 Noise

The Project would result in less-than-significant impacts to noise for the following reasons:

Generation of a Substantial Increase in Ambient Noise Levels: Although relatively few in number, noise-sensitive uses (residential) do exist in the vicinity of the Project area. Noise from on-site construction activities have the potential to expose nearby sensitive receptors to noise levels above established standards. The nearest off-site sensitive receptors to the Project alignment are residences located approximately 9 miles south of Barstow, adjacent to existing towers MCV1_139-6 through 140-2. Several residences are located approximately 150 feet from the nearest structures. Along the remainder of the Project alignment, distances from noise-sensitive receivers to the nearest structure locations range from approximately 600 feet to 2,600 feet. For the most part, construction activities would require the use of standard construction equipment such as loaders, dozers, soil compaction equipment, water trucks and cranes. Additional equipment would include specialized stringing equipment, hydraulic tower lifting systems as well as helicopters.

Noise in this analysis is expressed in terms of L_{eq}, (dBA) which is the average sound level for any specific time period. The highest noise levels are predicted to occur at residences nearest to the existing and proposed transmission structures when noise levels would be as high as 74 dBA L_{eq} during grading. More typically, construction activity noise at nearby receivers would range from approximately 52 to 74 dBA L_{eq}. The existing daytime ambient noise levels for residences at these locations are estimated to range from approximately 37 to

47 dBA L_{eq}. Therefore, construction would temporarily increase noise levels at nearby sensitive receptors, relative to ambient noise levels under existing conditions.

Although nearby off-site residences would be exposed to elevated construction noise levels, the increased noise levels would typically be relatively short-term at any one location and would cease upon completion of construction. It is anticipated that construction would take place primarily within the allowable hours of San Bernardino County (7:00 a.m. to 7:00 p.m.) and Clark County (6:00 a.m. to 10:00 p.m.) and would not occur at any time on Sunday or on national holidays. In the event that construction is required to extend beyond these times, extended hours permits would be required and obtained by LADWP. Therefore, construction would not violate San Bernardino County or Clark County standards for construction.

However, construction noise levels would be substantially higher than existing ambient daytime noise levels, particularly for the construction activities proposed in proximity to the nearest adjacent noise-sensitive receivers. For this reason, temporary noise impacts from construction would be potentially significant. However, Mitigation Measure (MM) NOI-1 has been set forth to reduce construction noise associated with the Project and to ensure that nearby receptors are informed of construction activities. The measures listed in MM-NOI-1, in conjunction, would result in a substantial decrease in construction noise and would reduce impacts to a less than significant level.

Where the terrain is steep or access is limited, helicopter use may be required for replacement of existing tower structures, tower construction, and conductor pulling and tensioning. Helicopter operations would be limited to daytime working hours and would be short-term in nature. Furthermore, they would primarily be used in remote locations, far from residential or other noise-sensitive uses, would be used rather infrequently (a few weeks per year), and for relatively short durations (a few hours per day during daytime working hours). For these reasons, noise impacts from construction helicopter use would be considered less than significant.

During construction of the Project, up to 276 worker trips, 30 vendor truck trips, and 32 haul truck trips would be generated daily. Increases in construction traffic (and associated traffic noise) in the vicinity of the Project area would be temporary and dispersed. Once construction equipment is delivered to the designated laydown and equipment staging locations along the transmission line, equipment and construction material would be transported to work areas within the utility corridor, as needed. Based on the distance between work areas, the construction trucks and equipment would occasionally use highways such as I-15 to access the next work area or travel along existing roads, access roads or spur roads. Increases in construction traffic (and associated traffic noise) 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. Therefore, potential increases in construction traffic noise in the vicinity of the work sites would be less than significant.

Upon completion of Project construction, on-site construction noise as well as on-road construction worker and truck trips would cease. Maintenance would be performed as needed and noise from such activities would be similar to that under the existing conditions. LADWP would require that the proposed 570-kilovolt transmission lines be designed to meet an audible noise limit of 55 dBA at the edge of alignment ROW which is also the limit under existing conditions. Operation of the Project would require maintenance trips which would be same as under existing operations. As such, given the above reasons, a **less-than-significant impact** would occur.

Generation of Excessive Groundborne Vibration or Groundborne Noise Levels: Construction activities may expose persons to excessive groundborne vibration or groundborne noise, causing a potentially significant impact. Information from Caltrans indicates that continuous vibrations with a peak particle velocity (PPV) of approximately

0.2 inches per second (ips) is considered annoying (Caltrans 2020). For context, heavier pieces of construction equipment, such as a bulldozer that may be expected on work sites, have peak particle velocities of approximately 0.089 ips or less at a reference distance of 25 feet (FTA 2018). At the distance from the nearest residence to the construction area (approximately 150 feet) and with the anticipated construction equipment, the vibration level would be approximately 0.006 ips PPV. At the closest sensitive receptors, vibration levels would not exceed the vibration threshold of annoyance of 0.2 ips PPV. The estimated worst-case construction vibration level of 0.006 ips PPV, would be well below the guidance limit of 0.2 to 0.3 ips PPV for preventing damage to residential structures (Caltrans 2020). Once operational, the Project is not expected to feature major producers of groundborne vibration. As such, a **less-than-significant impact** would occur.

Within the Vicinity of a Private Airstrip or Airport Land Use Plan or Within Two Miles of a Public or Public Use Airport, Expose People in the Project Area to Excessive Noise Levels: The Project is not located in the vicinity of an airstrip. Additionally, the Project is not located within an airport land use plan. The nearest airport is the Barstow-Daggett Airport Comprehensive Land Use Plan, located approximately 1.3 miles to the south of the Project area. Based on the San Bernardino County Comprehensive Land Use Plan, the Project site is located approximately 1.5 miles outside of the airport's 65 dBA CNEL noise contour (County of San Bernardino 1992). Thus, the Project would not expose people residing or working in the Project area to excessive noise levels from an airport or a private airstrip. As such, a **less-than-significant impact** would occur.

5.2.12 Population and Housing

The Project would result in no impacts to population and housing for the following reasons:

Induce Population Growth in an Area: The proposed Project does not include any new residences or businesses and is not intended to induce growth but to serve existing and projected electricity demands. No new homes or businesses would result, and the infrastructure upgrades would not generate new growth as the Project would not enable any new development to occur. As such, **no impact** would occur.

Displace People or Housing: The Project area consists of an existing utility corridor and there are no homes that exist within the proposed work areas. No people or housing would be removed necessitating the construction of replacement housing elsewhere. As such, **no impact** would occur.

5.2.13 Public Services

The Project would result in less than significant or no impacts to public services for the following reasons:

Fire Protection: The need for new or altered fire facilities is typically associated with an increase in population. As the proposed Project would not alter population in the Project area, the Project would also 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. After construction, each tower site and work area would be restored to its original condition to the extent feasible, and operational activities of the transmission lines related to fire protection would return to normal. As such, a **less-than-significant impact** would occur.

Police Protection: The need for new or altered police facilities is typically associated with an increase in population. As the proposed Project would not alter population in the Project area, the Project would also 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. After construction, each tower site and work area would be restored to its original condition to the extent feasible, and operational activities of the transmission lines related to police protection would return to normal. As such, a **less-than-significant impact** would occur.

Schools: The need for new or altered schools is typically associated with an increase in population. As the proposed Project would not alter population in the Project area, the Project would also not alter the ability of existing schools to accommodate students to the extent that new or expanded school facilities, materials, or staff would be required. After construction, each tower site and work area would be restored to its original condition to the extent feasible, and operational activities of the transmission lines related to school services would return to normal. As such, **no impact** would occur.

Parks: The need for new or altered parks is typically associated with an increase in population. As the proposed Project would not alter population in the Project area, the Project would also not alter the ability of parks to serve the region to the extent that new or expanded parks would be required. After construction, each tower site and work area would be restored to its original condition to the extent feasible, and operational activities of the transmission lines related to park services would return to normal. As such, **no impact** would occur.

Other Public Facilities: 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 the proposed Project would not alter population in the Project area, the Project would also not result in the need for libraries or other government administrative services to the extent that new or expanded facilities would be required. After construction, each tower site and work area would be restored to its original condition to the extent feasible, and operational activities of the transmission lines related to library or other services would return to normal. As such, **no impact** would occur.

5.2.14 Recreation

The Project would result in no impacts to recreation for the following reasons:

Increase the Use of Neighborhood and Regional Parks or Other Recreational Facilities: During times of active construction within the LADWP 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 to 3 days on average and up to 14 days for tower replacement. As such, interruptions in off-highway-vehicle 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 Project during construction or operations. The Project would also not result in population increases resulting in an increased need for park facilities. As such, **no impact** would occur.

Include Recreational Facilities or Require the Construction or Expansion of Recreational Facilities: The proposed Project does not include recreational facilities or require the construction or expansion of recreational facilities. As such, **no impact** would occur.

5.2.15 Transportation

The Project would result in less than significant or no impacts to transportation for the following reasons:

Conflict with a Program, Plan, Ordinance, or Police Addressing the Circulation System: The construction on MCV1 and MCV2, would occur for up to 45 months during which up to approximately 276 construction workers would be sequentially accessing 1,740 individual sites located along the utility alignment. Several construction trucks would be required at each site (motor graders, boring rigs, excavators, skid steer loaders, dump trucks, water trucks, wheel/track loaders, and various small utility vehicles). The number of construction workers traveling to and from Project sites every day would vary per construction phase. However, approximately 276 construction workers would carpool and travel to and from the site(s) each day. Although, the number of construction workers traveling to and from Project work sites every day would vary per construction phase. Once construction equipment is delivered to the designated laydown and equipment staging locations along the transmission line, equipment and construction material would be transported to work areas within the existing utility corridor, as needed. Laydown and staging areas would be required for materials storage, construction equipment, construction vehicles, and temporary construction offices. Based on the distance between work areas, the construction trucks and equipment would occasionally use highways such as I-15 to access the next work area or travel along existing roads, access roads or spur roads. 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. Therefore, the addition of these trips would not adversely affect roadways or effects would be short-term, minor, and localized and negligible when viewed in a regional context. Additionally, these trips would be distributed across the 162-mile Project area throughout the 45-month construction period. Therefore, potential increases in construction traffic in the vicinity of the work sites would be negligible, temporary, and dispersed on roadways. Operational traffic conditions would not change under the Project. As such, a **less-than-significant impact** would occur.

Conflict with CEQA Guidelines Section 15064.3, Subdivision (b): Even though worker and truck trips would generate vehicle miles traveled (VMT), once construction is completed, the construction-related traffic would cease and would return to pre-construction conditions. Car-pooling will be encouraged and facilitated by the contractor to reduce single occupancy worker trips. However, measures to reduce the VMT generated by workers and trucks are limited, and there are no thresholds or significance criteria for temporary, construction related VMT. Project construction would be generally consistent with construction activities in terms of the temporary nature of activities, trip generation characteristics, and the types of vehicles and equipment required. Project construction would be temporary and therefore would not cause a significant VMT impact. Operational traffic conditions would not be changed by the Project. As such, a **less-than-significant impact** would occur.

Increase Hazards Due to a Geometric Design Feature or Incompatible Uses: 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 exiting 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. The contractor would obtain all necessary encroachment, oversized load and/or haul permits to transport equipment and materials by trucks on County and Caltrans facilities. As such, a **less-than-significant impact** would occur.

Result in Inadequate Emergency Access: The proposed Project would be located primarily in undeveloped areas within an existing utility corridor. While existing unpaved access roads would be used throughout the 45-month construction period, these access roads are located within the existing utility corridor. Temporary use of these access roads would not hinder emergency access. No lane closures in the public ROW or driveway closures are anticipated that would impact adopted emergency access or response plans. As such, **no impact** would occur.

5.2.16 Utilities and Service Systems

The Project would result in less than significant or no impacts to transportation for the following reasons:

Require Relocation or Construction of New or Expanded Water, Wastewater Treatment or Storm Water Drainage, Electric Power, Natural Gas, or Telecommunications Facilities: Proposed construction activities would not increase the amount of water used or wastewater generated at the work sites, however, the Project would use water for dust control during construction. This water would be transported to work sites via a water truck. Thus, no new or expanded water or wastewater treatment facilities would be required. Proposed construction activities within an existing utility corridor would not lead to increased stormwater flows from any of the work sites and no new or expanded storm water drainage facilities would be required. The purpose of the Project is to increase transmission capacity of the existing electrical transmission line and outside of the proposed activities already described and analyzed throughout this document, no other new or expanded electrical power facilities are required that have not been addressed herein. Project construction and operation would have no need for natural gas or telecommunication infrastructure or alterations to such infrastructure. As such, **no impact** would occur.

Sufficient Water Supplies Available to Serve the Project and Reasonably Foreseeable Future Development During Normal, Dry and Multiple Dry Years: 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. After construction, each tower site and work area would be restored to its original condition to the extent feasible, and operational activities of the transmission lines related to water supply would return to normal. As such, a **less-than-significant impact** would occur.

Determination by the Wastewater Treatment Provider That It Has Adequate Capacity to Serve the Project's Projected Demand in Addition to Existing Commitments: The Project's proposed construction activities would not increase the amount of wastewater produced in the Project area. As such, **no impact** would occur.

Generate Solid Waste in Excess of State or Local Standards, or in Excess of Capacity of Local Infrastructure, or Otherwise Impair the Attainment of Solid Waste Reduction Goals: The Project's grading activities would involve removal of earth materials and placement of excavated soils along existing access roads. The tower raising activities may produce minimal amounts of construction debris. 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 Project. After construction, each tower site and work area would be restored to its original condition to the extent feasible, and operational activities of the transmission lines would return to normal. As such, a **less-than-significant impact** would occur.

Comply with Federal, State, and Local Management and Reduction Statutes and Regulations Related to Solid Waste: The proposed Project would comply with federal, state, and local statutes and regulations related to solid waste. As described in the threshold above, construction debris generated by the 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. After construction, each tower site and work area would be restored to its original condition to the extent feasible, and operational activities of the transmission lines related to applicable solid waste statues and regulations would return to normal. As such, a **less-than-significant impact** would occur.

5.2.17 Wildfire

The Project would result in less than significant or no impacts to wildfire for the following reasons:

Substantially Impair an Adopted Emergency Response or Evacuation Plan: The proposed Project would be constructed in adherence to the requirements set forth in Title 24, Part 9 of the California Building Code (the Fire Code). During construction of the Project, emergency access to the Project area would be adequately maintained to provide emergency services to construction workers along the transmission lines in the event of an emergency. After construction, each tower site and work area would be restored to its original condition to the extent feasible, and operational activities of the transmission lines related to adopted emergency response plans would return to normal, which would not interfere with an adopted emergency response or emergency evacuation plan. Department vehicle and emergency vehicle access would continue to be provided via access roads that run along the entire transmission line alignment. As such, a **less-than-significant impact** would occur.

Exacerbate Wildfire Risks and Thereby Expose Project Occupants to Pollutant Concentrations: The proposed Project would be located within an existing utility corridor extending through primarily vacant areas of the Mojave Desert, all of which precludes the spread of wildland fire. The alignment is not located in a designated Very High Fire Hazard Severity Zone and the Project does not include the construction of any infrastructure or buildings that would exacerbate fire risk (CAL FIRE 2023). The Project does not propose any new residential development or allow for any new occupants and would be constructed in adherence to the requirements set forth in the Fire Code. During construction, emergency access to the Project area would be maintained. After construction of the proposed Project is complete, each tower site and work area would be restored to its original condition to the extent feasible, and operational activities of the transmission lines related to wildfire risks would return to normal which would not exacerbate wildfire risks for project occupants (as none are proposed), does not allow for any new occupants. As such, a **less-than-significant impact** would occur.

Installation or Maintenance of Associated Infrastructure that May Exacerbate Fire Risk or Result in Temporary or Ongoing Impacts to the Environment: The proposed Project would include the construction and maintenance of utility infrastructure that has the potential to exacerbate fire risks. The Project would be constructed in adherence to the requirements set forth in the Fire Code. During construction, emergency access to the area would be maintained. In the unlikely event of a fire emergency in the Project area, the San Bernardino County Fire Protection District would respond along the entire California segment of the alignment. In the Nevada segment, Clark County Fire Department would respond. Any fire event that occurs would be unlikely to significantly exacerbate fire risks that would result in temporary or ongoing impacts to the environment as the Project is located within the Mojave Desert where fire risk and the potential of fires to spread is low. After construction of the proposed Project is complete, each tower site and work area would be restored to its original condition to the extent feasible, and operational activities of the transmission lines related to fire risks would return to normal which would not exacerbate fire risks beyond existing conditions. As such, a **less-than-significant impact** would occur.

Expose People or Structures to Significant Risks as a Result of Runoff, Post-Fire Slope Instability, or Drainage Changes: The proposed Project would be located within an existing utility corridor extending through primarily vacant areas of the Mojave Desert. Project construction would result in ground surface disruption that could temporarily alter on-site drainage patterns. However, runoff in the Project area would be managed through implementation of the BMPs outlined in the SWPPP. Upon operation, the Project would maintain the general existing drainage pattern of the utility corridor and its surrounding area. As such, **no impact** would occur.

5.3 Significant and Unavoidable Environmental Effects

CEQA Guidelines Section 15126(b) further directs EIRs to address impacts from a project that will result in significant impacts, including those that cannot be mitigated below a level of significance. A summary of all the environmental issue areas and the resultant significance and listing of mitigation measures is found in Chapter 1, Executive Summary, of this EIR. To summarize, the following issue areas would result in significant impacts even after mitigation measures have been incorporated, thus resulting in unavoidable impacts:

- Air Quality

5.4 Significant Irreversible Changes

CEQA Guidelines mandate that EIRs address any significant irreversible environmental changes that would occur if a Project were implemented (14 CCR 15126[c]). An impact would fall into this category if (14 CCR 15126.2[d]):

- The Project would involve a large commitment of nonrenewable resources.
- The primary and secondary impacts of the Project would generally commit future generations of people to similar uses.
- The Project involves uses in which irreversible damage could result from any potential environmental incidents associated with the Project.
- The proposed consumption of resources is not justified (e.g., the project results in wasteful use of energy).

Determining whether the proposed Project may result in significant irreversible effects requires a determination of whether key resources would be degraded or destroyed in such a way that there would be little possibility of restoring them. Construction of the Project would result in the use of nonrenewable resources and energy sources, including fossil fuels, natural gas, and electricity. Fossil fuels would be used to power construction equipment as well as to power vendor delivery trucks and construction employee vehicles. Construction equipment would also use electricity and natural gas. Use of these energy sources would be considered a permanent commitment of resources. In addition, a variety of resource materials would be used during the construction process, including steel for tower upgrades and replacements, structure hardware, rebar, concrete, and other materials. Once these materials and fuels are used for purposes of construction, the commitment of such materials and fuels would be considered irreversible. However, the proposed Project, when taking into consideration the global use of these materials, would not result in a large commitment of these resources.

Construction

Construction of the proposed Project would result in the use of nonrenewable resources and energy sources, including fossil fuels, natural gas, and electricity. Fossil fuels would be used to power construction equipment as well as to power vendor delivery trucks and construction employee vehicles. Construction equipment would also

use electricity and natural gas. Use of these energy sources would be considered a permanent commitment of resources. However, Project impacts related to consumption of nonrenewable resources during construction are considered to be less than significant because the Project would not use unusual or wasteful amounts of energy or construction materials. Refer to Section 5.2.4, Energy, above for a brief discussion of energy use during construction of the proposed Project. As described therein, there is sufficient capacity to serve construction of the proposed Project.

In addition to energy resources, a variety of nonrenewable resource materials would be used to construct the proposed facilities, including steel for tower upgrades and replacements, structure hardware, rebar, concrete, and other materials. Once these materials and fuels are used for construction, the commitment of such materials would represent the loss of nonrenewable resources and would be considered irreversible. However, these construction materials and fuels would likely be committed to other development projects in the region if not used for this Project. Moreover, the resources used for construction of Project features would be typical of similar transmission line projects and maintenance activities within the region. Therefore, although irretrievable commitments of resources would result from construction of the proposed Project, such changes would be **less than significant**.

Operation

The proposed Project would be located within an existing utility corridor extending through primarily vacant, undeveloped areas of the Mojave Desert within state and federal lands. Once constructed, it is reasonable to assume that Project facilities would use nonrenewable energy resources, such as gas for utility corridor maintenance activities, which would be an irreversible commitment of such resources. However, once operational, Project components would not consume more energy on a daily basis than is currently consumed under existing conditions and maintenance activities. Thus, the proposed energy consumption would not be considered a significant irreversible environmental effect.

Although the resources used for the Project would be permanently committed and therefore would be considered irreversible, the proposed Project would not consume an unusual or wasteful amount of energy or materials and would comply with California Building Energy Efficiency Standards (24 CCR Part 6). The Project and the design of the proposed upgrades are all subject to regulations that are working to reduce the amount of nonrenewable resources from development projects. Although sustainability measures would reduce the use of materials and energy during construction and operation of the Project, they would nevertheless be unavailable for other uses. The resources used for the Project would be permanently committed and, therefore, would be considered irreversible.

Although they are unanticipated, irreversible changes may also occur from environmental damage incurred by the operation of the Project, such as spill or release of hazardous material or accidental fire resulting from mechanical or industrial failure. However, it is assumed that all new uses of hazardous materials would occur pursuant to applicable laws and regulations. That is, any use involving hazardous materials would obtain and comply with a valid materials license specifying the requisite safety measures for the use, handling, storage, transportation, and disposal of these materials. Therefore, this would not be considered a significant irreversible environmental effect or cause irreversible environmental damage.

5.5 Growth-Inducing Impacts

Section 15126.2(e) of the CEQA Guidelines requires a discussion of how the potential growth-inducing impacts of a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Induced growth is distinguished from the direct employment, population, or housing growth of a project (14 CCR 15126.2[e]). If a project has characteristics that "may encourage

and facilitate other activities that could significantly affect the environment, either individually or cumulatively," then these aspects of the project must be discussed as well. Induced growth is any growth that exceeds planned growth and results from new development that would not have taken place in the absence of that project. Typically, the growth-inducing potential of a project is considered significant if it stimulates population growth or a population concentration above what is assumed in local and regional land use plans, or in projections made by regional planning authorities, such as the Southern California Association of Governments (SCAG).

The CEQA Guidelines also indicate that growth should not be assumed to be either beneficial or detrimental (14 CCR 15126.2[e]). According to Section 15126.2(e) of the CEQA Guidelines, a project may foster economic or population growth, or additional housing, either indirectly or directly, in a geographical area if it meets any one of the following criteria:

- The Project would remove obstacles to population growth.
- Increases in the population may tax existing community service facilities, causing significant environmental effects.
- The Project would encourage and facilitate other activities that could significantly affect the environment.

As discussed in detail in Chapter 3, Project Description, of this EIR, the Project involves maintenance and rehabilitation of access roads and transmission towers, including reinforcing, replacing, or raising towers, as well as replacing hardware at every tower, and this Draft EIR assumes full buildout of the Project for analysis.

The Project utility corridor area is in primarily vacant, undeveloped areas of the Mojave Desert within state and federal lands. While much of the area surrounding the utility corridor is sparsely developed, the desert landscape has been noticeably altered by electrical transmission infrastructure, I-15, SR-247, and SR-127 infrastructure, as well as limited rural residential and agricultural development located near the communities of Primm, Nevada; Daggett, California; Yermo, California; and Victorville, California. The Project would not involve the development of additional housing. However, the Project would require the temporary hiring of construction workers throughout construction.

According to SCAG's Demographics and Growth Forecast, employment is anticipated to grow from 856,000 in 2022 to 962,000 by 2030 within San Bernardino County (SCAG 2023). Project completion is expected in early 2029. Total employees/staff required for the Project is estimated to be up to approximately 276 employees per day during construction, which would be 0.26%[1] of the County's total employment growth (106,000 jobs) by 2030. However, these employees would be temporary and would only last through the duration of the construction phase. After construction is complete, construction employees would no longer be required, and operational conditions of the transmission lines would return to normal. As such, the increase in employment would be minimal in comparison to the anticipated increase of the SCAG Growth Forecast. Therefore, the Project would not stimulate population growth or a population concentration above what is assumed in local and regional land use plans, or in projections made by regional planning authorities.

Indirect growth can also occur by a project installing infrastructure that can support further growth. The proposed Project does not include any new residences or businesses and is not intended to induce growth, but rather, to serve existing and projected electricity demands. No residential development would be allowed. The Project would be served by existing public services and connected to existing utilities. Therefore, indirect growth inducement into a new area would not occur.

[1] 276 / 106,000 = 0.00260377 x 100 = 0.26%

Overall, the Project would indirectly stimulate temporary population growth through the addition of up to approximately 276 new employees per day. This growth would be consistent with employment growth envisioned in local and regional land use plans and in projections made by regional planning authorities (SCAG 2023).

Mitigation Measures and Project Design Features

The following mitigation measures would be included in the Project.

MM-NOI-1 Construction Noise Reduction. The Los Angeles Department of Water and Power and/or its construction contractor(s) shall comply with the following measures during construction:

1. For construction activities occurring within 1,000 feet of residential uses within the County of San Bernardino, construction activities shall not occur between the hours of 7:00 p.m. and 7:00 a.m. Monday through Saturday, or on Sundays or national holidays. In the event that construction is required to extend beyond these times, extended hours' permits shall be required.
2. Equipment (e.g., portable generators) shall be shielded from sensitive uses using local temporary noise barriers or enclosures or shall otherwise be designed or configured to minimize noise at nearby noise-sensitive receptors.
3. Staging of construction equipment shall not occur within 150 feet of any noise- or vibration-sensitive land uses.
4. All noise-producing equipment and vehicles using internal combustion engines shall be equipped with mufflers; air-inlet silencers, where appropriate; and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specification. Mobile or fixed "package" equipment (e.g., arc-welders, air compressors) shall be equipped with shrouds and noise control features that are readily available for that type of equipment.
5. All mobile or fixed noise-producing equipment used for the project that are regulated for noise output by a local, state, or federal agency shall comply with such regulations.
6. Idling equipment shall be kept to a minimum and moved as far as practicable from noise-sensitive land uses.
7. Electrically powered equipment shall be used instead of pneumatic or internal-combustion-powered equipment, where feasible.
8. Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive receptors.
9. The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only.

The following Project Design Features would be included in the Project:

GHG – Construction Standards. The "developer" shall submit for review and obtain approval from County Planning of a signed letter agreeing to include as a condition of all construction contracts/subcontracts requirements to reduce GHG emissions and submitting documentation of compliance. The developer/construction contractors shall do the following:

a) Implement the approved Coating Restriction Plans.

b) Select construction equipment based on low GHG emissions factors and high-energy efficiency. All diesel/gasoline-powered construction equipment shall be replaced, where possible, with equivalent electric or compressed natural gas equipment.

c) Grading contractor shall provide the implement the following when possible:

1) training operators to use equipment more efficiently.

2) identifying the proper size equipment for a task can also provide fuel savings and associated reductions in GHG emissions

3) replacing older, less fuel-efficient equipment with newer models

4) use GPS for grading to maximize efficiency

d) Grading plans shall include the following statements:

- "All construction equipment engines shall be properly tuned and maintained in accordance with the manufacturers specifications prior to arriving on site and throughout construction duration."
- "All construction equipment (including electric generators) shall be shut off by work crews when not in use and shall not idle for more than 5 minutes."

e) Schedule construction traffic ingress/egress to not interfere with peak-hour traffic and to minimize traffic obstructions. Queuing of trucks on and off site shall be firmly discouraged and not scheduled. A flag person shall be retained to maintain efficient traffic flow and safety adjacent to existing roadways.

f) Recycle and reuse construction and demolition waste (e.g. soil, vegetation, concrete, lumber, metal, and cardboard) per County Solid Waste procedures.

g) The construction contractor shall support and encourage ridesharing and transit incentives for the construction crew and educate all construction workers about the required waste reduction and the availability of recycling services.

5.6 References

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6 Alternatives

6.1 Introduction

Pursuant to the California Environmental Quality Act (CEQA) Guidelines, an Environmental Impact Report (EIR) is required to "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project" (14 CCR 15126.6[a]). An EIR "must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation" (14 CCR 15126.6[a]). This alternatives discussion is required even if these alternatives "would impede to some degree the attainment of the project objectives, or would be more costly" (14 CCR 15126.6[b]).

The CEQA Guidelines further provide that the range of alternatives is guided by a "rule of reason," such that only those alternatives necessary to permit a reasoned choice are included (14 CCR 15126.6[f]). The EIR need only examine alternatives that could feasibly attain most of the basic objectives of the project. "Among the factors that may be taken into account when addressing feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries … and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site."

The inclusion of an alternative in an EIR does not constitute definitive evidence that the alternative is in fact "feasible." The final decision regarding the feasibility of alternatives lies with the decision maker the given project, who must make the necessary findings addressing the potential feasibility of an alternative, including whether it meets most of the basic project objectives or reduces the severity of significant environmental effects pursuant to CEQA (California Public Resources Code, Section 21081; see also 14 CCR 15091). The decision maker for this project is the Los Angeles Department of Water and Power's (LADWP) Board of Commissioners.

Beyond these factors, the Guidelines require the analysis of a "no project" alternative and an evaluation of alternative location(s) for the project, if feasible. Based on the alternatives analysis, an environmentally superior alternative is to be designated. If the environmentally superior alternative is the "no project" alternative, then the EIR shall identify an environmental superior alternative among the other alternatives.

6.2 Project Objectives

In developing the alternatives to be addressed in this chapter, consideration was given to the ability to meet the basic objectives of the proposed McCullough-Victorville Transmission Lines 1 and 2 Upgrade Project (Project) and eliminate or substantially reduce the identified significant environmental impacts. As stated in Chapter 3, Project Description, of this EIR, the proposed Project requires permits and approvals from the Los Angeles Department of Water and Power Board of Commissioners, the U.S. Bureau of Land Management, the California Department of Fish and Wildlife, the Regional Water Quality Control Board, the San Bernardino County, the State Water Resources Control Board, and the U.S. Army Corps of Engineers.

The underlying purpose of the Project is to accommodate incoming renewable energy resources from the East territory region, along the West of River (WOR) Path 46 transmission corridor in order to help LADWP achieve state and local requirements for greenhouse gas (GHG) reductions and an increased renewable energy portfolio. As required as set forth in the CEQA Guidelines, the Project's specific objectives are provided below:

- Reduce the environmental impacts associated with greenhouse gas emissions and create a more sustainable environment.
- Assist LADWP in meeting Renewable Portfolio Standard (RPS) goals by increasing LADWP's transmission capacity by 475 megawatts (MW).
- Meet LADWP's future electrical energy demands.
- Allow interconnection and expansion of LADWP's renewable energy in the East territory, along the WOR Path 46 transmission corridor.
- Increase LADWP's system reliability and flexibility in the utilization of renewable energy sources.
- Enable the delivery of renewable energy.
- Minimize the environmental disturbance of transmission upgrades by constructing improvements within an existing transmission corridor; avoiding sensitive resources to the extent feasible; and minimizing the number of new access routes.

6.3 Alternatives Considered but Rejected

As set forth in CEQA Guidelines Section 15126.6(c), an EIR should identify any alternatives that were considered for analysis but rejected as infeasible and briefly explain the reasons for rejection. According to the CEQA Guidelines, among the factors that may be used to eliminate an alternative from detailed consideration are the alternative's failure to meet most of the basic project objectives, the alternative's infeasibility, or the alternative's inability to avoid significant environmental impacts. The following discussion presents information on alternatives to the Project that were considered but rejected. These alternatives are not discussed in further detail and have been eliminated from further consideration.

6.3.1 New Transmission Line Corridor

In accordance with CEQA Guidelines, Section 15126.6(f)(2), LADWP attempted to identify a feasible alternative off-site location within the Project area that could be available for the development of the Project. Pursuant to CEQA Guidelines, Section 15126.6(f)(2)(A), the key question and first step in analysis of the off-site location is whether any of the significant effects of the Project would be avoided or substantially lessened by moving the Project to another location.

After review of available alignments and corridors within the Project vicinity, no large-scale corridors exist that could accommodate the proposed Project. Additionally, LADWP does not have ownership or easements elsewhere within the vicinity of the existing transmission line. Furthermore, the intent of the project is to increase the rating of the Path 46 West of Colorado River Transmission corridor so if it is moved to another corridor then it would not meet its objective to achieve the Path rating. Therefore, relocating the Project to a new or alternate location is considered infeasible, and no new transmission line alignments or corridors were carried forward in this analysis.

6.3.2 Full Replacement Alternative

As discussed in Section 6.2 above, the underlying purpose of the Project is to accommodate incoming renewable energy resources from the East territory region, along the West of River (WOR) Path 46 transmission corridor in order to help LADWP achieve state and local requirements for GHG reductions and an increased renewable energy portfolio. Upgrades and improvements to the existing transmission line are required in order to accommodate the incoming renewable energy resources.

Approximately 1,508 towers (86%) of the 1,740 towers are in critical need of repair and would be reinforced under the Project, while approximately 153 towers would need to be replaced entirely. These activities would constitute the majority of the work to occur under the proposed Project. Most steel member activities are expected to occur within existing tower disturbance areas or laydown and staging areas. Construction equipment that may be used in tower reinforcement efforts are cranes, manlifts, water trucks, lowboy trailers, flatbed trucks, and hand tools.

LADWP considered constructing all new transmission towers along the entire transmission line corridor in order to accommodate the transmission line upgrades. This alternative would result in the replacement of all 1,740 towers, and thus result in more environmental impacts associated with increased tower disturbance areas as well as be logistically infeasible due to the line outages that would be required for a complete rebuilding effort. Therefore, because this alternative would result in more environmental impacts than the proposed Project, this alternative is considered infeasible, and the full replacement alternative was not carried forward in this analysis.

6.3.3 Paving Access Roads Alternative

As discussed in Section 4.1, Air Quality, of this EIR, construction of the Project would result in a net increase of criteria pollutants (i.e., NO_X, $PM_{2.5}$, and PM_{10}). Implementation of Mitigation Measure (MM) AQ-1 and MM-AQ-2 would reduce the Project's impacts; however, emissions of NO_X, $PM_{2.5}$, and PM_{10} would remain significant and unavoidable. For long-term operations, the proposed maintenance activities to service the upgraded transmission lines would be similar in nature and scale to the maintenance activities that are currently conducted for the existing lines. Therefore, the Project's operational criteria air pollutant emissions would be similar to existing baseline conditions. The Project would result in no impact pertaining to long-term operations.

The primary driver for the significant and unavoidable air quality impacts has to do with construction worker and construction travel along unpaved dirt roadways in order to access each tower pad along the transmission corridor. As such, LADWP considered an alternative under which paving of each access road would be undertaken. However, the paving of the access roads would still require that construction workers and equipment travel along each access road in order to complete the paving activities, thereby still resulting in the need to travel along unpaved dirt roadways. In addition, the paving would result in more permanent impacts to any waterways along the ROW and would require more maintenance and upkeep over the life of the project. Therefore, because this alternative would result in the same environmental impacts than the proposed Project, this alternative is considered infeasible, and an alternative which includes paving all access roads was not carried forward in this analysis.

6.4 Alternative Under Consideration

This section discusses the alternatives to the Project, including the No Project Alternative, under consideration. The No Project Alternative, which is a required element of an EIR pursuant to Section 15126.6(e) of the CEQA Guidelines, examines the environmental effects that would occur if the Project were not to proceed. The other alternatives are discussed as part of the "reasonable range of alternatives" selected by the lead agency.

The purpose of the proposed Project is to accommodate incoming renewable energy resources from the East territory region, along the West of River (WOR) Path 46 transmission corridor in order to help the Los Angeles Department of Water and Power (LADWP) achieve state and local requirements for GHG reductions and an increased renewable energy portfolio.

Given the nature of the Project, the location of the Project, and modifications incorporated into the Project design and construction, no feasible alternatives are available to evaluate, other than the No Project Alternative.

Under the No Project Alternative, development of the Project would not occur as discussed in Chapter 3, Project Description, of this EIR. The Project site would remain unchanged, and no upgrade or replacement activity would occur. The No Project Alternative would have no workforce or vehicle trips compared to the proposed Project beyond continued routine operational upkeep, consistent with existing practices.

In accordance with the CEQA Guidelines Section 15126.6(d), the discussion of the environmental effects of the alternatives may be less detailed than the discussion of the impacts of the Project. Table 6-1 provides a summary of the comparison of the impacts of the no project alternative with the Project; an analysis of the Environmentally Superior Alternative is provided in Section 6.5. To summarize these Project alternatives, as suggested in CEQA Guidelines Section 15126.6(d), a matrix was prepared to summarize and compare the impacts of each Project alternative (Table 6-1).

Table 6-1. Comparison of Project and Alternative Impacts

Environmental Topic	Project Impact	No Project Alternative
Air Quality	Significant and Unavoidable	▼ No Impact
Biological Resources	Less than Significant with Mitigation	▼ No Impact
Cultural Resources	Less than Significant with Mitigation	▼ No Impact
Paleontological Resources	Less than Significant with Mitigation	▼ No Impact
Tribal Cultural Resources	Less than Significant with Mitigation	▼ No Impact

Notes:

Green – No Impact or Less than Significant, Yellow – Less than Significant with Mitigation, Red – Significant and Unavoidable
▲ Impacts would be greater than those of the proposed Project.
= Impacts would be comparable to those of the proposed Project
▼ Impacts would be reduced when compared to those of the proposed Project.

6.4.1 Existing Conditions

The proposed Project would upgrade the two existing 500 kilovolt (KV) transmission lines that run parallel to each other and are supported on approximately 1,740 single-circuit towers and spanning over 160 miles from McCullough Switching Station in Searchlgiht Nevada, through several mountain ranges, into the Mojave Desert and ending at the Victorville Switching Station in California. The utility corridor is located entirely within the Mojave Desert, generally is isolated away from development, and largely crosses undeveloped state and federal lands, including lands under the jurisdiction of California State Lands Commission and BLM (Aspen 2020). The Project also crosses rural and low-density residential land uses on non-federal land in San Bernardino County, California and Clark County, Nevada (Aspen 2020). Existing development within the utility corridor consists of access roads, tower disturbance footprints, the transmission towers and transmission lines themselves, as well as their associated hardware.

6.4.2 No Project Alternative

Under the No Project Alternative, development of the Project would not occur as discussed in Chapter 3, Project Description, of this EIR. The Project site would remain unchanged, and no upgrade or replacement activity would occur. The No Project Alternative would have no workforce or vehicle trips compared to the proposed Project.

6.4.2.1 Environmental Analysis

Air Quality

As discussed in Section 4.1, Air Quality, of this EIR, construction of the Project would result in a net increase of criteria pollutants (i.e., NO_X, $PM_{2.5}$, and PM_{10}). Implementation of MM-AQ-1 and MM-AQ-2 would reduce the Project's impacts; however, emissions of NO_X, $PM_{2.5}$, and PM_{10} would remain significant and unavoidable. For long-term operations, the proposed maintenance activities to service the upgraded transmission lines would be similar in nature and scale to the maintenance activities that are currently conducted for the existing lines. Therefore, the Project's operational criteria air pollutant emissions would be similar to existing baseline conditions. The Project would result in no impact pertaining to long-term operations.

Under the No Project Alternative, no new construction activities would occur, and the existing towers and transmission lines would remain in place and continue to operate as they are under existing conditions. Therefore, because no new emissions would occur under the No Project Alternative, there would be **no construction air quality impacts**. This Alternative would result in a **significant reduction** in air emissions when compared to the proposed Project.

Biological Resources

As discussed in Section 4.2, Biological Resources, of this EIR, with implementation of mitigation measures MM-BIO-1 through MM-BIO-19, impacts to biological resources would be reduced to a less than significant level. For long-term operations, the proposed maintenance activities to service the upgraded transmission lines would be similar in nature and scale to the maintenance activities that are currently conducted for the existing lines. Therefore, the Project's operational impacts to biological resources would be similar to existing baseline conditions.

Under the No Project Alternative, no new construction activities would occur, and the existing towers and transmission lines would remain in place and continue to operate as they are under existing conditions. Therefore, because no new construction activities with the potential to affect biological resources would occur under the No Project Alternative, there would be **no construction impacts to biological resources**. This Alternative would result in a **significant reduction** in impacts when compared to the proposed Project.

Cultural Resources

As discussed in Section 4.3, Cultural Resources, of this EIR, with implementation of mitigation measures MM-CUL-1 through MM-CUL-9, impacts to cultural resources would be reduced to a less than significant level. For long-term operations, the proposed maintenance activities to service the upgraded transmission lines would be similar in nature and scale to the maintenance activities that are currently conducted for the existing lines. Therefore, the Project's operational impacts to cultural resources would be similar to existing baseline conditions.

Under the No Project Alternative, no new construction activities would occur, and the existing towers and transmission lines would remain in place and continue to operate as they are under existing conditions. Therefore, because no new construction activities with the potential to affect cultural resources would occur under the No Project Alternative, there would be **no construction impacts to cultural resources**. This Alternative would result in a **significant reduction** in impacts when compared to the proposed Project.

Paleontological Resources

As discussed in Section 4.4, Paleontological Resources, of this EIR, with implementation of mitigation measure MM-PALEO-1 impacts to paleontological resources would be reduced to a less than significant level. For long-term operations, the proposed maintenance activities to service the upgraded transmission lines would be similar in nature and scale to the maintenance activities that are currently conducted for the existing lines. Therefore, the Project's operational impacts to paleontological resources would be similar to existing baseline conditions.

Under the No Project Alternative, no new construction activities would occur, and the existing towers and transmission lines would remain in place and continue to operate as they are under existing conditions. Therefore, because no new construction activities with the potential to affect paleontological resources would occur under the No Project Alternative, there would be **no construction impacts to paleontological resources**. This Alternative would result in a **significant reduction** in impacts when compared to the proposed Project.

Tribal Cultural Resources

As discussed in Section 4.5, Tribal Cultural Resources, of this EIR, with implementation of mitigation measures MM-CUL-1 through MM-CUL-9, impacts to cultural resources would be reduced to a less than significant level. For long-term operations, the proposed maintenance activities to service the upgraded transmission lines would be similar in nature and scale to the maintenance activities that are currently conducted for the existing lines. Therefore, the Project's operational impacts to tribal cultural resources would be similar to existing baseline conditions.

Under the No Project Alternative, no new construction activities would occur, and the existing towers and transmission lines would remain in place and continue to operate as they are under existing conditions. Therefore, because no new construction activities with the potential to affect tribal cultural resources would occur under the

No Project Alternative, there would be **no construction impacts to tribal cultural resources**. This Alternative would result in a **significant reduction** in impacts when compared to the proposed Project.

6.4.2.2 Project Objectives

Under the No Project Alternative, development of the Project would not occur as discussed in Chapter 3, Project Description, of this EIR. The Project site would remain unchanged, and no upgrade or replacement activity would occur. The No Project Alternative would have no workforce or vehicle trips compared to the proposed Project. As shown in Table 6-2, the No Project Alternative does not meet any of the Project's objectives.

Table 6-2. Summary of No Project Alternative Success at Meeting Project Objectives

Project Objective	Does the No Project Alternative Meet Objective?
Reduce the environmental impacts associated with greenhouse gas emissions and create a more sustainable environment.	**No.** While the No Project Alternative would reduce construction air quality impacts, under the No Project Alternative the transmission line upgrades would not occur, and overall GHG emissions associated with LADWP's energy portfolio would remain unchanged. Therefore, the GHG emission reductions through renewable energy generation and supply would not be achieved. The No Project Alternative would not be a step in creating a more sustainable environment.
Assist LADWP in meeting RPS goals by increasing LADWP's transmission capacity by 475 megawatts (MW).	**No.** The No Project Alternative would not increase LADWP's transmission capacity, and therefore, this Alternative would not assist LADWP in meeting RPS goals.
Meet LADWP's future electrical energy demands.	**No.** The No Project Alternative would not increase LADWP's transmission capacity, and therefore, this Alternative would not help LADWP meet its future electrical energy demands.
Allow interconnection and expansion of LADWP's renewable energy in the East territory, along the WOR Path 46 transmission corridor.	**No.** The No Project Alternative would not increase LADWP's transmission capacity, and therefore would preclude expansion of LADWP's renewable energy capabilities in the Project region.
Increase LADWP's system reliability and flexibility in the utilization of renewable energy sources.	**No.** The No Project Alternative would not increase LADWP's transmission capacity, and therefore, would also prevent LADWP's ability to provide system reliability and flexibility in the utilization of renewable energy sources.
Enable the delivery of renewable energy.	**No.** The No Project Alternative would not increase LADWP's transmission capacity, and therefore would prevent the delivery of renewable energy.
Minimize the environmental disturbance of transmission upgrades.	**Yes.** The No Project Alternative would not result in any disturbances or upgrades and would therefore not result in no environmental impacts along the transmission corridor.

6.5 Environmentally Superior Alternative

As indicated in Table 6-1, the No Project Alternative, would result in the fewest environmental impacts, all of which are during construction, and therefore would be considered the Environmentally Superior Alternative. Pursuant to CEQA Guidelines Section 15126.6(e)(2), if the No Project Alternative is the environmentally superior alterative, the

EIR shall also identify an environmentally superior alternative among the other alternatives. However, as discussed in Section 6.3, no other alternatives are feasible to carry forward in the alternatives analysis because they are all equally, if not more impactful, than the proposed Project. Additionally, the No Project Alternative would preclude LADWP from upgrading its system to increase the use of renewable energy supplies and therefore be in direct conflict with contributing over 15% towards LADWP's Renewable Portfolio Standard as part of LADWP's most recent commitment under the RPS to provide 100% carbon-free energy to customers by 2035 and 10 years ahead of the State's target. As such, other than the No Project Alternative, the proposed Project would result in the fewest environmental impacts while still meeting all of the Project objectives and also allowing LADWP to enhance the provision of renewable energy sources consistent with the RPS.

6.6 References

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7 List of Preparers

7.1 Los Angeles Department of Water and Power

Matthew Kerby – Project Manager
Nadia Parker – Environmental Supervisor
Jane Hauptman – Environmental Affairs Officer

7.2 Dudek

Nicole Cobleigh – Project Manager
Michele Finneyfrock – Deputy Project Manager
Matthew Morales – Air Quality Specialist
Michael Cady – Senior Biologist
Tracy Park – Biologist
Gabe Romero – Environmental Analyst
Kyle Holmes – GIS Specialist
Lis Varela – Formatting Specialist

7.3 Subconsultants

Aspen Environmental Group – Cultural and Tribal Cultural Resources

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