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Adelanto Gateway Logistics Center Project

Rare Plant Survey Report

City of Adelanto, San Bernardino County, California

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April 9, 2025

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ACRONYMS AND ABBREVIATIONS

AMSL	above mean sea level
BIOS 6	Biogeographic Information and Observation System
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CNPSEI	California Native Plant Society Electronic Inventory
DBH	diameter at breast height
FCS	FirstCarbon Solutions
GIS	Geographic Information Systems
IPaC	Information for Planning and Consultation
ITP	Incidental Take Permit
MCV	Manual of California Vegetation
MM	Mitigation Measure
MSL	mean sea level
NPPA	Native Plant Protection Act of 1977
NRCS	Natural Resource Conservation Service
PRISM	Parameter-elevation Regressions on Independent Slopes Model
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCOA	Standard Conditions of Approval
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WJTCA	Western Joshua Tree Conservation Act
WSS	Web Soil Survey

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1 - INTRODUCTION

At the request of Mileski Living Trust C/O Synergy Consulting (project applicant), FirstCarbon Solutions (FCS) conducted protocol-level rare plant surveys for the proposed Adelanto Gateway Logistics Center Project (proposed project) located in the City of Adelanto, in San Bernardino County, California. This Rare Plant Survey Report presents the results of special-status and rare plant surveys conducted at the project site by FCS between May 15 and July 30, 2024. The purpose of this Rare Plant Survey Report is to report methods and results of the survey and to assess potential project impacts to special-status plant species.

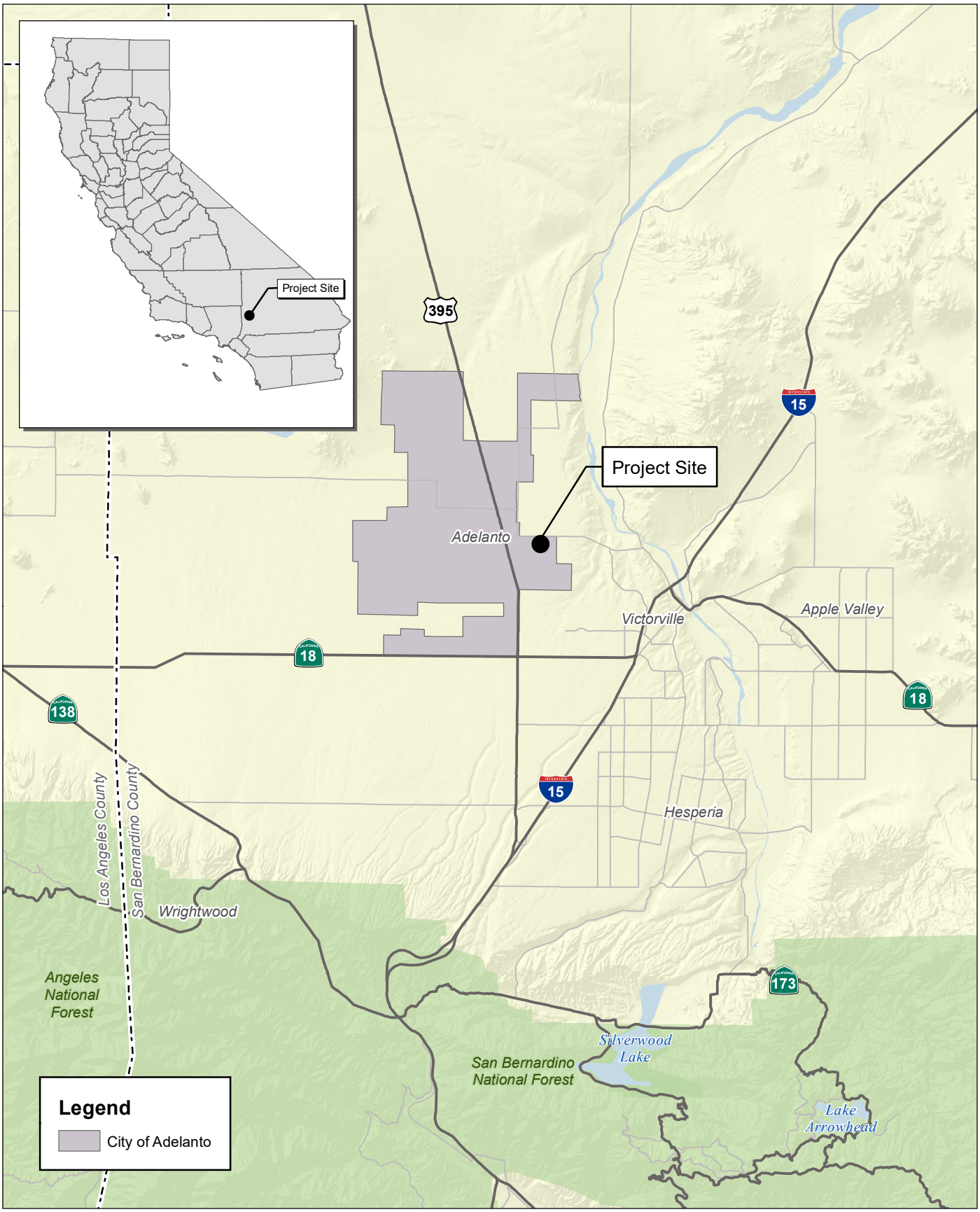
1.1 - Project Location and Description

The approximately 487.20-acre project site is located in the City of Adelanto, in San Bernardino County, California (Exhibit 1). The project site is centered around 34.568588° latitude and -117.387749° longitude. The location of the project site within the Mojave Desert region is shown on Exhibit 1, and the project site boundaries on a recent high-resolution aerial image are shown on Exhibit 2. The project site is located on the *Adelanto, California* United States Geological Survey (USGS) 7.5-minute Topographic Quadrangle Map, Township 6 North, Range 5 West, Section 34 (Exhibit 3). The project site comprises Assessor's Parcel Numbers (APNs): 0459-451-52 through -62 and 0459-841-01 through -19.

The project site is situated in an area characterized by urban development, including the Federal Correctional Complex, Victorville to the east of the site and several corporate businesses, including a trucking company, concrete company, and a diesel engine repair shop to the south. Additionally, a cannabis store, open land, and Adelanto Road are located to the west of the site and Air Expressway, the DHL Supply Chain, and the Southern California Logistics Airport are located to the north. However, undeveloped land is also present to the west, north, and east of the project site. Significant landmarks in the project vicinity include U.S. Route 395, located approximately 0.45 mile west, and the Southern California Logistics Airport, located approximately 0.34 mile north of the project site.

The proposed project would consist of an industrial distribution facility comprised of industrial warehouses and office space.

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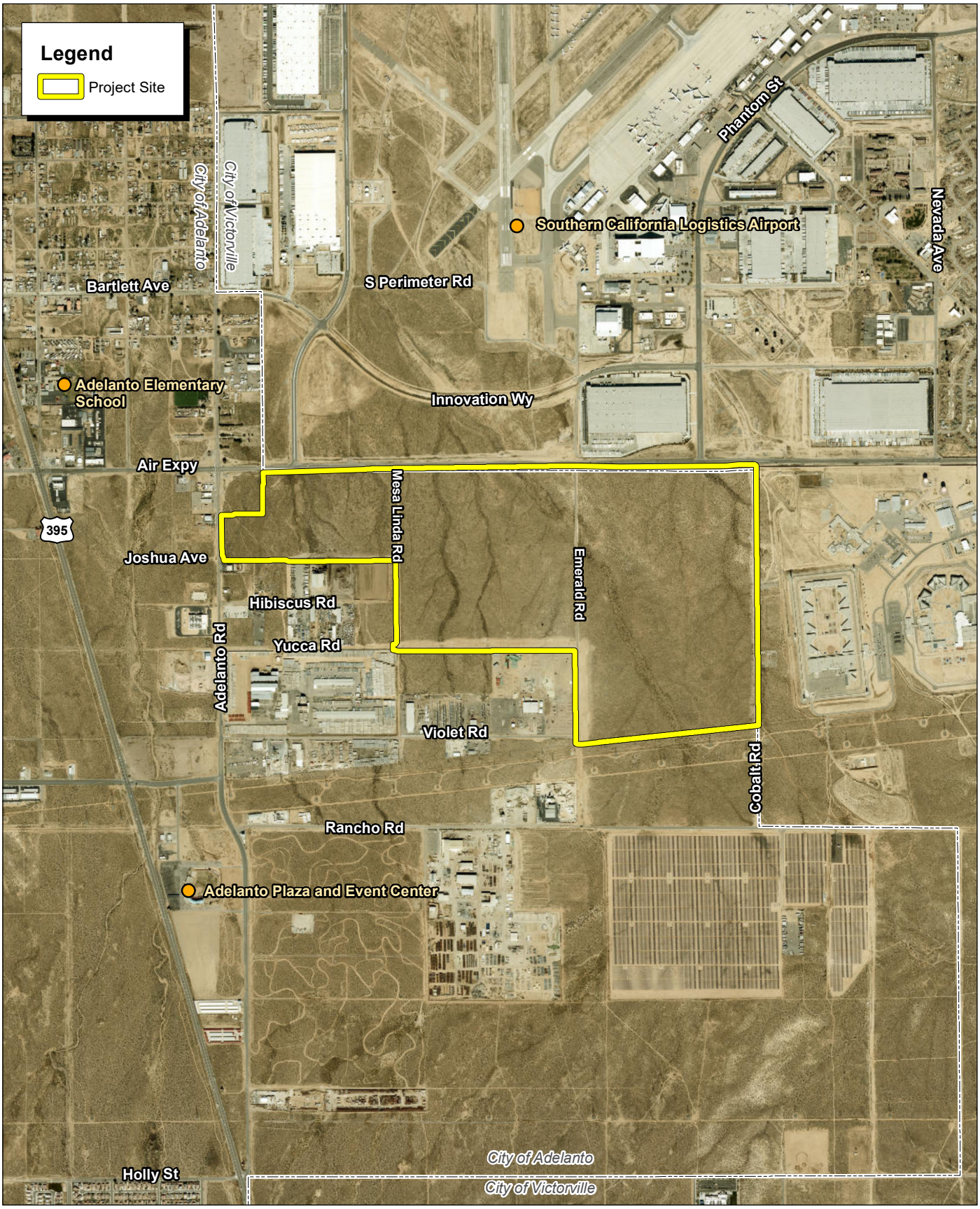
Source: Census 2000 Data, The California Spatial Information Library (CaSIL).

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Exhibit 1
Regional Location Map

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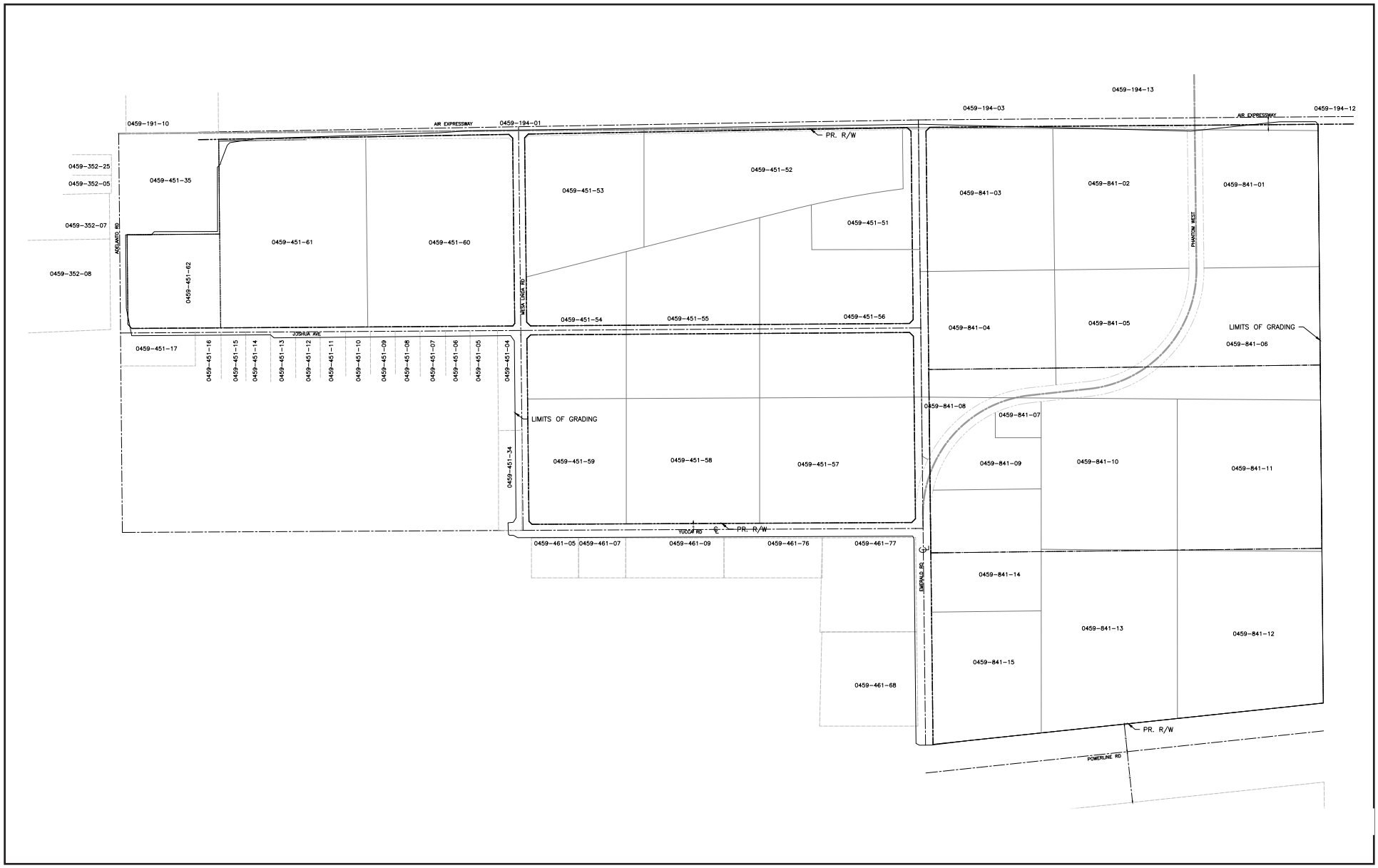
Source: ESRI Aerial Imagery. BLUE Engineering & Consulting, Inc.

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Exhibit 2
Local Vicinity Map

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Source: Blue Engineering & Consulting, Inc. May 1st, 2024.

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Exhibit 3
Site Plan

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2 - REGULATORY SETTING

2.1 - Federal

2.1.1 - Endangered Species Act

The United States Fish and Wildlife Service (USFWS) has jurisdiction over species listed as threatened or endangered under the Endangered Species Act. Section 9 of the Endangered Species Act protects listed species from "take," which is broadly defined as actions taken to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." The Endangered Species Act protects threatened and endangered plants and animals and their critical habitat. Candidate species are those proposed for listing; these species are usually treated by resource agencies as if they were actually listed during the environmental review process.

2.2 - State

2.2.1 - CEQA Guidelines

The California Environmental Quality Act (CEQA) requires public agencies to evaluate potential impacts to special-status species and their habitat. The following CEQA Guidelines Appendix G checklist questions serve as thresholds of significance when evaluating the potential impacts of a proposed project on biological resources. Impacts are considered significant if a project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as being a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or USFWS.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS.
- Have a substantial adverse effect on federally and State protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- 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.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State Habitat Conservation Plan.

2.2.2 - California Endangered Species Act

The State of California enacted the California Endangered Species Act (CESA) in 1984. CESA is similar to the federal Endangered Species Act but pertains to State-listed endangered and threatened species. CESA requires State agencies to consult with the CDFW when preparing CEQA documents to ensure that the State lead agency actions do not jeopardize the continued existence of a listed species or result in the destruction or adverse modification of habitat essential to the continued existence of those species if there are reasonable and prudent alternatives available (Fish and Game Code [FGC] § 2080). CESA directs agencies to consult with the CDFW on projects or actions that could affect listed species, directs the CDFW to determine whether jeopardy would occur, and allows the CDFW to identify "reasonable and prudent alternatives" to the project consistent with conserving the species. CESA allows the CDFW to authorize exceptions to the State's prohibition against take of a listed species if the take is incidental to carrying out an otherwise lawful project that has been approved under CEQA (FGC § 2081).

2.2.3 - California Fish and Game Code

Rare, Threatened, and Endangered Species

Under CESA, the CDFW has the responsibility for maintaining a list of endangered and threatened species (FGC § 2070). Fish and Game Code Sections 2050 through 2098 outline the protection provided to California's rare, endangered, and threatened species. Fish and Game Code Section 2080 prohibits the taking of plants and animals listed under the CESA. Fish and Game Code Section 2081 established an Incidental Take Permit program for State-listed species. The CDFW maintains a list of "candidate species" which it formally notices as being under review for addition to the list of endangered or threatened species.

Native Plant Protection Act

The Native Plant Protection Act of 1977 (NPPA) (FGC § 1900, *et seq*.) prohibits the taking, possessing, or sale within the State of any plants with a State designation of rare, threatened, or endangered (as defined by the CDFW). An exception to this prohibition in the NPPA allows landowners, under specified circumstances, to take listed plant species, provided that the owners first notify the CDFW and give the agency at least 10 days to come and retrieve (and presumably replant) the plants before they are plowed under or otherwise destroyed. Fish and Game Code Section 1913 exempts from take prohibition "the removal of endangered or rare native plants from a canal, lateral ditch, building site, or road, or other right-of-way." Project impacts to these species are not considered significant unless the species are known to have a high potential to occur within the area of disturbance associated with construction of the proposed project.

Sensitive species that would qualify for listing but are not currently listed are afforded protection under CEQA. CEQA Guidelines Section 15065 (Mandatory Findings of Significance) requires that a substantial reduction in numbers of a rare or endangered species be considered a significant effect. CEQA Guidelines Section 15380 (Rare or Endangered Species) provides for the assessment of unlisted species as rare or endangered under CEQA if the species can be shown to meet the criteria

for listing. Unlisted plant species on the California Native Plant Society (CNPS) List ranked 1 and 2 would typically require evaluation under CEQA.

2.2.4 - Sensitive Natural Community Rankings

The CDFW maintains sensitivity rankings of natural vegetation communities in the California Sensitive Natural Communities list.[1] CDFW evaluates natural communities using the NatureServe Heritage Methodology and ranking system that indicates conservation status of communities, accordingly.[2]

- **Rank S1–Critically Imperiled:** At very high risk of extirpation in the jurisdiction due to very restricted range, very few populations or occurrences, very steep declines, severe threats, or other factors.
- **Rank S2–Imperiled:** At high risk of extirpation in the jurisdiction due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors.
- **Rank S3–Vulnerable:** At moderate risk of extirpation in the jurisdiction due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.
- **Rank S4–Apparently Secure:** At a fairly low risk of extirpation in the jurisdiction due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.
- **Rank S5–Secure:** At very low or no risk of extirpation in the jurisdiction due to a very extensive range, abundant populations or occurrences, with little to no concern from declines or threats.

Per the CDFW, natural communities ranked S1–S3 are considered Sensitive Natural Communities to be addressed during CEQA review or other environmental review. Not all the natural communities listed on the 2023 CDFW California Natural Community List are ranked; however, all sensitive natural communities are indicated by a “Y” in the Sensitive column, while those that are not considered sensitive are indicated by an “N” in the Sensitive column.[3] Thus, potential impacts to communities ranked S1-S3 and/or marked “Y” in the Sensitive column on the Sensitive Natural Communities list should be analyzed during the preparation of environmental documents pursuant to CEQA as they may meet the definition of Rare or Endangered under the CEQA Guidelines Section 15380 criteria.

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1 California Department of Fish and Wildlife (CDFW). 2023. Natural Communities List, Sacramento: California Department of Fish and Wildlife. Website: https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities#sensitive%20natural%20communities. Accessed February 19, 2025.

2 NatureServe. 2025. Conservation Status Categories. Website: https://www.natureserve.org/nsexplorer/about-the-data/statuses/conservation-status-categories. Accessed February 19, 2025.

3 California Department of Fish and Wildlife (CDFW). 2025. Natural Communities: Sensitive Natural Communities. Website: https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities/List#sensitive%20natural%20communities. Accessed February 19, 2025.

The California Natural Diversity Database (CNDDB) maintains listings of sensitive communities in the database that were entered in the mid-1990s using a previous classification system. CDFW recommends that these "Legacy Sensitive Natural Communities" be classified using the current Manual of California Vegetation (MCV) system and that they be addressed in the environmental review process under the new classification and current sensitivity rankings.

2.2.5 - California Native Plant Society Rare Plant Rankings

The CNPS maintains a rank of plant species that are native to California and that have low population numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. Following are the definitions of the CNPS ranks:

- **Rank 1A:** Plants presumed extirpated in California and either rare or extinct elsewhere
- **Rank 1B:** Plants rare, threatened, or endangered in California and elsewhere
- **Rank 2A:** Plants presumed extirpated in California but common elsewhere
- **Rank 2B:** Plants rare, threatened, or endangered in California but more common elsewhere
- **Rank 3:** Plants about which more information is needed
- **Rank 4:** Watch List: Plants of limited distribution

Potential impacts to populations of CNPS ranked plants receive consideration under CEQA review. All plants appearing on the CNPS List ranked 1 or 2 are considered to meet the CEQA Guidelines Section 15380 criteria. While only some of the plants ranked 3 and 4 meet the definitions of threatened or endangered species, potential impacts to these species or their habitats should be analyzed during the preparation of environmental documents pursuant to CEQA as they may meet the definition of Rare or Endangered under the CEQA Guidelines Section 15380 criteria.

2.2.6 - Western Joshua Tree Conservation Status

The California Fish and Game Commission received a petition from the Center for Biological Diversity to list the western Joshua tree under CESA on October 21, 2019. The Commission voted to accept the petition for consideration on September 22, 2020, thereby elevating the conservation status of the species to a Candidate for listing under CESA. As a Candidate species, it is afforded the same protections as species that are listed under CESA, including prohibitions of take. Project applicants are required under CESA to obtain an Incidental Take Permit (ITP) from the CDFW for impacts to western Joshua trees and their seedbanks.

Subsequently (in July 2023), the Western Joshua Tree Conservation Act (WJTCA) was signed into law, which prohibits unpermitted killing or removal of Joshua trees and establishes a fund to acquire and manage suitable habitat for the species. Project applicants are required to obtain an ITP through CDFW and, on a per-Joshua tree basis, pay an in lieu mitigation fee to the fund under the WJTCA. In lieu mitigation fees are assessed based on the height of the western Joshua trees and the area where they occur. Project applicants that obtain an ITP through the WJTCA are not required to obtain an ITP through CESA.

2.3 - Regional and Local

2.3.1 - Adelanto North 2035 Comprehensive Sustainable Plan

The Adelanto North 2035 Comprehensive Sustainable Plan (Sustainable Plan) includes two Key Sustainability Features under the category of Open Space and Conservation, including Habitat Mitigation and Desert Open Space and Natural Desert Habitat.

Habitat Mitigation and Desert Open Space

Open Space designations will remain largely undeveloped in direct relationship to the designated growth zones. Areas with sensitive habitat may serve as habitat mitigation areas or be maintained or preserved as a natural resource. Other suitable open space areas may be used for renewable energy improvements, so long as they minimize impacts on plants and wildlife.

Natural Desert Habitat

Natural desert habitat will be preserved through the Open Space designation. Some areas may be re-vegetated, restored, or enhanced to increase their habitat value. Drainage channels and detention basins shall be linked to the open space system—arroyos, open space, and utility easements—to provide for wildlife habitat and movement. New development adjacent to open space areas will minimize wildlife.

2.4 - Definitions

2.4.1 - Special-status Plants

For the purpose of this Rare Plant Survey Report, and consistent with guidance from USFWS, CDFW, CNPS, and CEQA regulations, special-status plant species were defined as the following:

- Plant species listed or proposed for listing as threatened or endangered under the Endangered Species Act;
- Plant species listed or proposed for listing as threatened or endangered under CESA;
- Plant Species recognized as candidates for future listing by agencies with resource management responsibilities, such as the USFWS and the CDFW;
- Plant species, subspecies, and varieties defined as rare or threatened by the California Native Plant Protection Act (California FGC § 1900, *et seq*.);
- Plant species listed by CNPS as California Rare Plant Rank 1, 2, and 3 under CEQA (CEQA Guidelines § 15380) and some Rank 4 plants based on CNPS guidelines; and
- Species that otherwise meet the definition of rare, threatened, or endangered pursuant to Section 15380 of the CEQA Guidelines.

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3 - METHODS

The methods for the rare plant surveys and assessment of potential project impacts follow requirements and protocols established by CDFW and CNPS[4] and included surveys by qualified botanists familiar with the regional flora, appropriate survey timing and frequencies, visitation of appropriate reference sites, and other procedures specified below. Additionally, this Rare Plant Survey Report reviewed and synthesized previous studies and literature, as needed, to provide additional relevant information and context.

3.1 - Literature and Database Reviews

3.1.1 - Existing Documentation

As part of the literature review, an FCS Biologist examined existing environmental documentation for the project site and vicinity, including previous documentation prepared in support of the proposed project. This documentation included literature pertaining to the habitat requirements of special-status plant species with the potential to occur in the project vicinity and federal register listings, protocols, and species data provided by the USFWS and CDFW.

3.1.2 - Topographic Maps and Aerial Photographs

An FCS Biologist reviewed current USGS 7.5-minute topographic quadrangle map(s) and aerial photographs as a preliminary analysis of the existing conditions within the project site and immediate vicinity.[5] Aerial photographs provided a perspective of the current site conditions relative to on-site and off-site land use, plant community locations, and surface soils.

3.1.3 - Soil Surveys

An FCS Biologist reviewed the United States Department of Agriculture (USDA) published soil survey for the area, which provides descriptions of soil series (i.e., group of soils with similar profiles) occurring there.[6] These profiles include major horizons with similar thickness, arrangement, and other important characteristics. These series are further subdivided into soil mapping units that provide specific information regarding soil characteristics. The FCS Biologist reviewed the habitat requirements of special-status plant species to determine whether any exhibited a limited distribution

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[4] California Department of Fish and Wildlife (CDFW). 2018. Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Sensitive Natural Communities.

[5] United States Geological Survey (USGS). 2024. National Geospatial Program. Website: https://www.usgs.gov/core-science-systems/national-geospatial-program/us-topo-maps-america?qt-science_support_page_related_con=4#qt-science_support_page_related_con. Accessed February 19, 2025.

[6] Natural Resources Conservation Service (NRCS). 2025. Web Soil Survey (WSS). United States Department of Agriculture (USDA). Website: https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Accessed February 19, 2025.

based exclusively on soil type and to establish whether the soil conditions in the project site are suitable for any special-status plant species.

3.1.4 - Special-status Species Database Search

An FCS Biologist compiled a list of threatened, endangered, and otherwise special-status plant species previously recorded within the project vicinity based on a search of the USFWS Information for Planning and Consultation (IPaC) database, the CNDDB[7] and the CNPS Electronic Inventory (CNPSEI) of Rare and Endangered Vascular Plants of California for the *Adelanto, California* and *Victorville, California* USGS 7.5-minute Topographic Quadrangle Maps and the 10 surrounding quadrangles. The CNDDB Biogeographic Information and Observation System (BIOS 6) was used to determine the distance between the known occurrences of special-status plant species or populations and the project site.[8]

3.2 - Field Survey

3.2.1 - Survey Personnel

FCS Biologist Kayla Belanger mapped vegetation communities on the project site and led subsequent field surveys, including floristic rare plant surveys, under the direction of FCS Principal Biologist Michael Tuma. Dr. Tuma assisted with species identifications and authored this report. Brief resumes for Ms. Belanger and Dr. Tuma are presented in Appendix A.

3.2.2 - Vegetation Community Mapping

Vegetation community types and boundaries were noted on aerial photos, verified through field observation, and digitized using Esri ArcGIS® Field Maps and ArcGIS software® ArcMap 10.0. By incorporating collected field data and interpreting aerial photography, a map of habitat types, land cover types, and other biological resources within the project site was prepared. Vegetation community nomenclature followed the MCV and the rarity of communities verified on the CDFW Natural Communities List.[9,10]

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[7] California Department of Fish and Wildlife (CDFW). 2025. California Natural Diversity Database (CNDDB) RareFind 5 California Natural Diversity Database Query for Special-Status Species. Website: https://wildlife.ca.gov/Data/CNDDB/Maps-and-Data. Accessed February 19, 2025.

[8] California Department of Fish and Wildlife (CDFW). 2025. Biogeographic Information and Observation System (BIOS 6). Website: https://wildlife.ca.gov/Data/BIOS. Accessed February 19, 2025.

[9] Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. A Manual of California Vegetation, Second Edition. Sacramento, CA: California Native Plant Society.

[10] California Department of Fish and Wildlife (CDFW). 2023. Natural Communities List. Website: https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities#sensitive%20natural%20communities. Accessed February 19, 2025.

3.2.3 - Floristic Plant Surveys

The surveys to search for rare plants were floristic in nature, performed over the entirety of the project site, and followed the CDFW rare plant survey protocol. The surveys were timed to coincide with flowering phenology or other diagnostic features of target species. Prior to entering the field, Ms. Belanger reviewed detailed ecological and taxonomic information, drawings, maps, and photographs about each of the target species to form a search image. All plant species were identified to the level necessary to determine listing status using appropriate taxonomical guides, including The Jepson Manual: Higher Plants of California, The Jepson Manual: Vascular Plants of California, Second Edition, the Jepson eFlora, and Calflora. [11,12] Taxonomic nomenclature used in this study follows the Jepson eFlora for most species and The Jepson Manual: Vascular Plants of California, First Edition, for taxa listed on the CNDDB Special Vascular Plants, Bryophytes, and Lichens List that are no longer recognized in the Jepson eFlora. Common plant names, when not available from The Jepson Manual, were taken from other regionally specific references. Vegetation types and boundaries were noted on aerial photos, verified through field observation, and digitized using Esri ArcGIS software® ArcMap 10.8. By incorporating collected field data and interpreting aerial photography, a map of habitat types, land cover types, and other biological resources within the project site was prepared.

Reference Sites

Reference sites were not visited during the current survey effort.

Precipitation Analysis

To determine whether conditions were suitable for viewing annual and perennial plants with flowering or fruiting bodies, FCS assessed precipitation accumulations during the winter of 2023–2024. FCS compiled precipitation records for the project vicinity, including 30-year normals and the 2023–2024 winter season, from the Oregon State University Parameter-elevation Regressions on Independent Slopes Model (PRISM).[13] The 30-year normals data set provides a baseline of average monthly and annual conditions over the most recent three full decades (1991–2020). Precipitation data for the 2023-2024 winter season was compiled from the PRISM explorer for time-series data for a single location by selecting coordinates for the grid cell that covers the project site. Comparing the 2023–2024 winter season to the 30-year normals allowed for a determination of whether precipitation accumulations were below or above average.

[11] Jepson Flora Project. 2024. Jepson eFlora. Website: https://ucjeps.berkeley.edu/eflora/. Accessed May 15, 2024.

[12] Calflora. 2024. Calflora: Information on California Plants for Education, Research, and Conservation. Website: http://www.calflora.org/. Accessed May 15, 2024.

[13] Oregon State University. 2025. Parameter-elevation Regressions on Independent Slopes Model (PRISM). Website: https://prism.oregonstate.edu. Accessed March 19, 2025.

3.3 - Assessment of Special-status Species Potential for Occurrence

Following characterization of the vegetation communities, habitats, and biological conditions in the project site, FCS evaluated the potential for special-status plant species to occur there to develop a target species list for the floristic rare plant survey. The occurrence potential for each special-status species was classified into one of the following categories:

No Potential for Occurrence or Absent–There is no suitable habitat for the species on the project site or the project site is located outside of the known range of the species.

Low Potential to Occur–Species is known to occur in the project vicinity (within the nine USGS quadrangle search area); however, there is only poor quality or marginal habitat on the project site.

Moderate Potential to Occur–Species is known to occur in the vicinity of the project site (based on recent [within 20 years] CNDDB or other records within 10 miles of the project site or based on professional expertise specific to the project site or species) and there is marginally or partially suitable habitat on the project site. Alternatively, there is marginally or partially suitable habitat on the project site and the project site is within the known range of the species.

High Potential to Occur–Species is known to occur in the vicinity of the project site (based on recent [within 20 years] CNDDB or other records within 5 miles of the project site or based on professional expertise specific to the project site or species), and there is suitable habitat on the project site. Alternatively, there is suitable habitat on the project site and the project site is within the known range of the species.

Present–Species is known to occur on the project site, based on recent (within 20 years) CNDDB or other records, and there is suitable habitat present on the project site or the species was observed on the project site during the field survey(s).

4 - RESULTS

This section summarizes the results of the literature and database reviews and field surveys and data collection.

4.1 - Literature and Database Reviews

4.1.1 - Environmental Setting

Local Setting

The project site is bordered by Air Expressway and the Southern California Logistics Airport to the north, the Federal Correctional Complex, Victorville to the east, and roads and commercial development to the south. There are areas of undeveloped land surrounding the project site on the west and northwest sides. Two roads have been developed across the project site that travel north to south: Mesa Linda Road in the western half of the project site and Emerald Road in the eastern half of the project site.

Regional Setting

The project site is located in the western Mojave Desert region of California. The Mojave Desert region extends from Owens Valley, Inyo County, in the north to Joshua Tree National Park, San Bernardino County and Riverside County in the south; and from Quail Lake, Los Angeles County, in the west to the border with Nevada on the east. This region is dominated by desert scrub vegetation communities, most notably creosote bush and white bursage scrub.

Topography and Hydrology

The elevations on the project site range from approximately 880 to 895 meters (2,887 to 2,936 feet) above mean sea level (AMSL). The project site has mostly flat topography, generally sloping to the north and west and includes a series of small swales that flow northwest across the site.

Precipitation Analysis Results

Oregon State University PRISM climate data for the 4-kilometer-square grid that covers most of the project site indicates an arid climate with relatively dry, cold winters and drier, hot summers. Highest mean monthly precipitation occurs in the winter months, including December (mean = 1.04 inches), January (mean = 0.89 inch), February (mean = 1.23 inches), and March (mean = 0.72 inch). Lowest mean monthly precipitation occurs in summer months, including June (mean = 0.04 inch), May (mean = 0.12 inch), August (mean = 0.12 inch), and September (mean = 0.15 inch). The mean annual precipitation is 5.37 inches, and the mean winter precipitation is 4.77 inches. A total of 5.86 inches of

precipitation fell during the winter of 2023–2024, with most rain (3.25 inches) falling in February 2024 (Table 1).[14]

Table 1: Precipitation for 2023–2024 Winter Season and 30-year Normals

2023–2024 Winter Season		30-year Normals, 1991–2020	
Month	**Precipitation (inches)**	**Month**	**Precipitation (inches)**
October 2023	0.00	October	0.30
November 2023	0.12	November	0.32
December 2023	0.53	December	1.04
January 2024	0.74	January	0.89
February 2024	3.25	February	1.23
March 2024	1.05	March	0.72
Total	**5.86**	**Total**	**4.77**

Source: Oregon State University. 2025. PRISM Climate Data. Website: https://www.prism.oregonstate.edu/. Accessed: Accessed March 19, 2025.

4.1.2 - Soils

The Natural Resource Conservation Service (NRCS) Web Soil Survey (WSS) depicts two soil types in the project site (Exhibit 4):[15]

- Bryman loamy fine sand, 0 to 2 percent slopes (105)

Bryman loamy fine sand is the only soil present on-site, covering the entirety of the project site. This is a well-drained soil characteristic of fan remnants. The parent material for Bryman soils is alluvium derived from granite.

4.1.3 - Database Queries and Analysis

Sensitive Natural Communities

Sensitive natural communities are vegetation communities or special wildlife habitats that are rare or occur in limited distributions or provide specific habitat requirements for special-status plant or wildlife

[14] Oregon State University. 2025. PRISM Climate Data. Website: https://prism.oregonstate.edu. Accessed March 19, 2025.

[15] Natural Resources Conservation Service (NRCS). 2025. Web Soil Survey (WSS). United States Department of Agriculture (USDA). Website: https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Accessed February 19, 2025.

species. According to the CNDDB, there are no Legacy Sensitive Natural Communities with records within 10 miles of the project site.[16]

Special-status Plant Species Database Results

Twenty-three special-status plant species have been recorded within the nine-quad region of the project site; (Appendix B, Table 1). Table 1 in Appendix B includes the species' status, required habitat, and a summary analysis of the potential for each of these species to occur on the project site. Special-status plant species that were determined to have no potential or low potential to occur on-site are included in the table, along with the justification for their exclusion from further discussion. The potential for a species to occur on the project site was based on presence of suitable habitats, soil types, and recency and proximity of species occurrences recorded in the CNPSEI, CNDDB, and Calflora.[17,18,19,20]

High Potential for Occurrence on the Project Site

The project site contains suitable soils, vegetation communities, and other habitat conditions that provide a high potential for occurrence for four special-status plant species:

- Booth's evening-primrose (*Eremothera boothii* ssp. *boothii*): CNPS Rare Plant Rank 2B.3.
- Beaver Dam breadroot (*Pediomelum castoreum*): CNPS Rare Plant Rank 1B.2.
- Mojave fish-hook cactus (*Sclerocactus polyancistrus*): CNPS Rare Plant Rank 1B.2.
- Joshua tree (*Yucca brevifolia*): State Candidate for listing under CESA, protected under WJTCA.

Booth's Evening-primrose

Booth's evening-primrose is an annual forb in the Onagraceae family typically found in Joshua tree woodland and pinyon-juniper woodland. Booth's evening-primrose blooms April through September. There have been five recent and two historical occurrences recorded within 5 miles of the project site and one recent and four historical occurrences have been recorded between 5 and 10 miles from the project site (Exhibit 5). There is suitable habitat for this species in the creosote bush scrub community on the project site.

[16] California Department of Fish and Wildlife (CDFW). 2025. Biogeographic Information and Observation System (BIOS 6). Website: https://wildlife.ca.gov/Data/BIOS. Accessed February 19, 2025.

[17] California Department of Fish and Wildlife (CDFW). 2025. CNDDB RareFind 5 California Natural Diversity Database Query for Special-Status Species. Website: https://wildlife.ca.gov/Data/CNDDB/Maps-and-Data. Accessed February 19, 2025.

[18] California Native Plant Society (CNPS). 2025. California Native Plant Society Rare and Endangered Plant Inventory. Website: http://www.rareplants.cnps.org/. Accessed February 19, 2025.

[19] California Department of Fish and Wildlife (CDFW). 2025. Biogeographic Information and Observation System (BIOS 6). Website: https://wildlife.ca.gov/Data/BIOS. Accessed February 19, 2025.

[20] Calflora: Information on California plants for education, research and conservation. 2025. The Calflora Database. Website: https://www.calflora.org/. Accessed February 19, 2025.

Beaver Dam Breadroot

Beaver Dam breadroot is a perennial forb in the Fabaceae family typically found in Joshua tree woodland and Mojavean desert scrub. This species grows in sandy soils and is often found on roadsides and in washes. Beaver Dam breadroot blooms April through May. There has been one recent and three historical occurrences recorded within 5 miles of the project site and two recent and one historical occurrence has been recorded between 5 and 10 miles from the project site (Exhibit 5). There is suitable habitat for this species in the creosote bush scrub community on the project site.

Mojave Fish-hook Cactus

Mojave fish-hook cactus is a perennial stem forb in the Cactaceae family typically found in Great Basin scrub, Joshua tree woodland, and Mojavean desert scrub. This species usually grows in carbonate soils. Mojave fish-hook cactus blooms April through July. There has been one recent and two historical occurrences recorded within 5 miles of the project site and one recent and two historical occurrences have been recorded between 5 and 10 miles from the project site (Exhibit 5). There is suitable habitat for this species in the creosote bush scrub community on the project site.

Joshua Tree

Joshua tree is a perennial succulent “tree” in the Agavaceae family typically found in Joshua tree woodland and desert scrub. Joshua tree blooms March through June. There have been six recent occurrences recorded within 5 miles of the project site and more than 30 recent and four historical occurrences have been recorded between 5 and 10 miles from the project site (Exhibit 5). There is suitable habitat for this species in the creosote bush scrub community on the project site.

Moderate Potential for Occurrence on the Project Site

The project site contains suitable soils, vegetation communities, and other habitat conditions that provide a moderate potential for occurrence for two special-status plant species:

- Sagebrush loeflingia (*Loeflingia squarrosa* var. *artemisiarum*): CNPS Rare Plant Rank 2B.2.
- Solitary blazing star (*Mentzelia eremophila*): CNPS Rare Plant Rank 4.2.
- Crowned muilla (*Muilla coronata*): CNPS Rare Plant Rank 4.2.

Sagebrush Loeflingia

Sagebrush loeflingia is an annual forb in the Caryophyllaceae family typically found in desert dunes, Great Basin scrub, and desert scrub. This species grows in sandy soils. Sagebrush loeflingia blooms April through May. There has been one recent occurrence recorded between 5 and 10 miles from the project site (Exhibit 5). There is suitable habitat for this species in the creosote bush scrub community on the project site.

Solitary Blazing Star

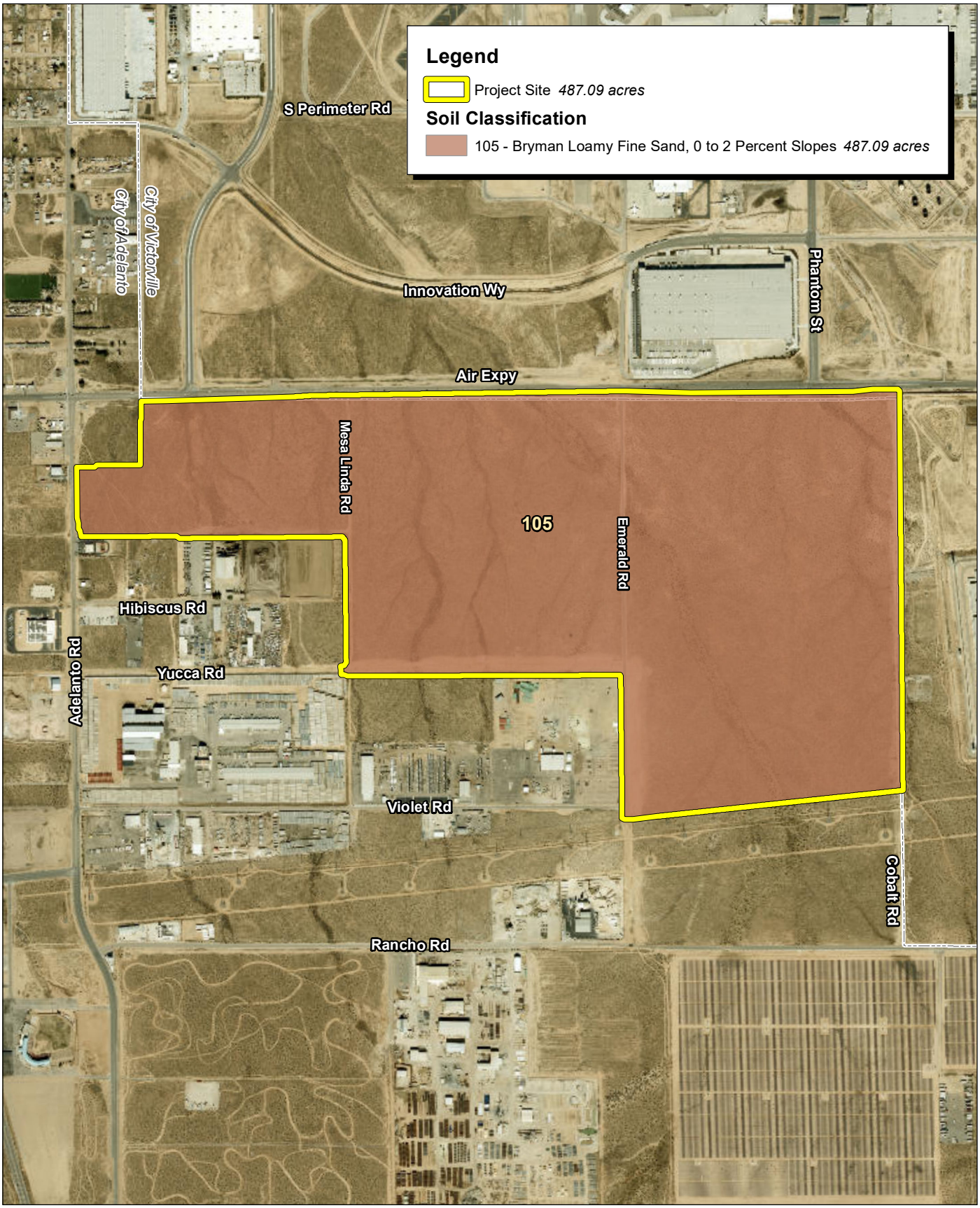
The solitary blazing star is an annual forb in the family Loasaceae that occurs in Mojavean desert scrub communities. This species blooms from March through May. There has been one recent

occurrence of this species recorded within 10 miles of project site (Exhibit 5). There is suitable habitat for this species in the creosote bush scrub community on the project site.

Crowned Muilla

Crowned muilla is a perennial bulbiferous forb in the Themidaceae family typically found in Chenopod scrub, Joshua tree woodland, Mojavean desert scrub, and pinyon-juniper woodland. Crowned muilla blooms March through April and sometimes as late as May. There have been two historical occurrences recorded within 5 miles of the project site and one recent and one historical occurrence has been recorded between 5 and 10 miles from the project site (Exhibit 5). There is suitable habitat for this species in the creosote bush scrub community on the project site.

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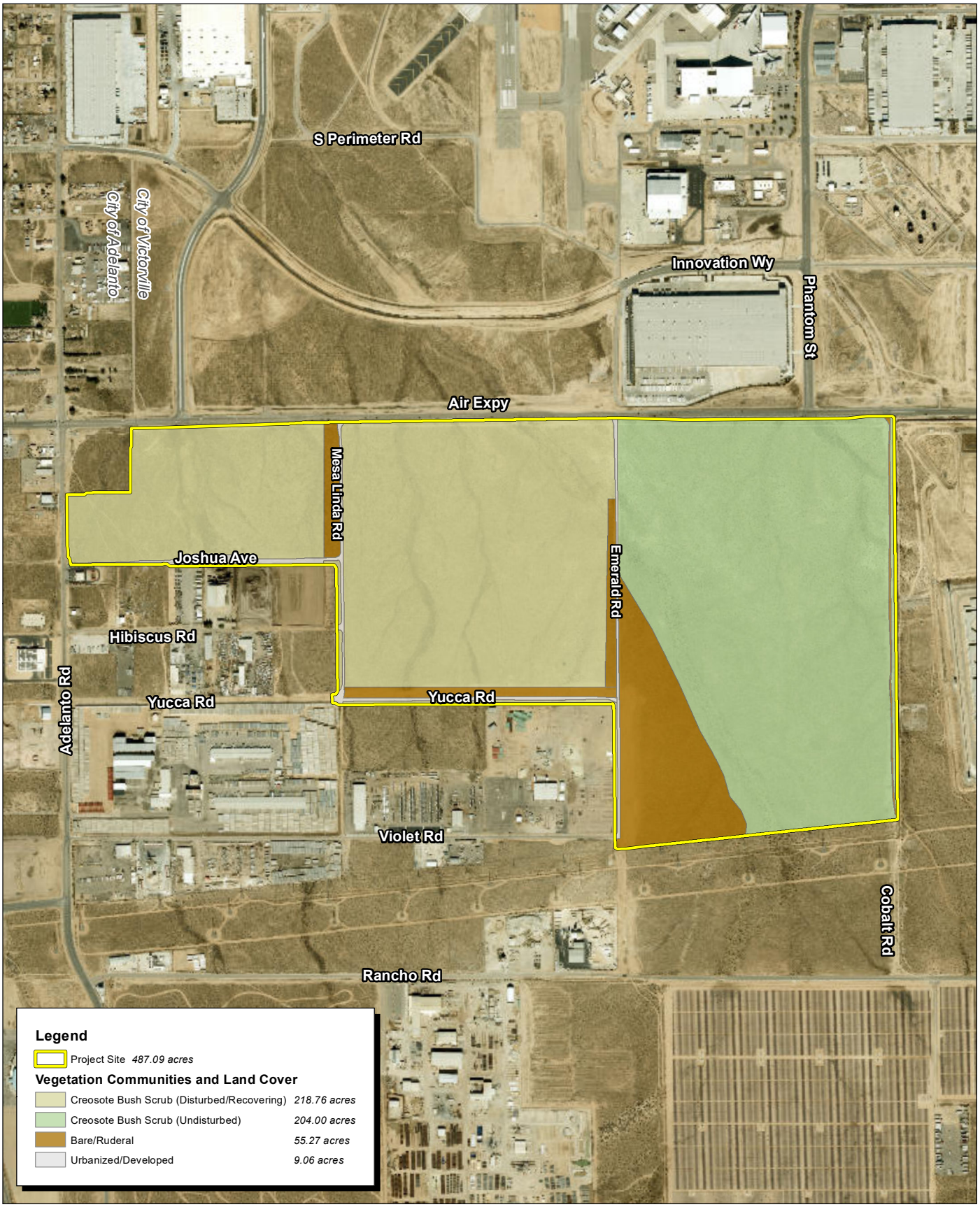
Source: ESRI Aerial Imagery. BLUE Engineering & Consulting, Inc. USDA Soils Data Mart, San Bernardino Mojave River Area.

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Exhibit 4
Soils Map

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Source: ESRI Aerial Imagery. BLUE Engineering & Consulting, Inc.

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Exhibit 5
Vegetation Communities Map

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4.2 - Field Surveys

FCS Biologist Kayla Belanger conducted vegetation community mapping and floristic surveys of the project site, as summarized in Table 2.

Table 2: 2024 Rare Plant Survey Dates, Surveyors, and Survey Conditions

Date	Survey Type	Surveyor(s)	Time	Weather Conditions
5/15/24	Vegetation mapping	Kayla Belanger	9:00 a.m.–2:00 p.m.	Sunny, clear Temp: 60–76°F Wind: 7–10 mph
5/21/24	Floristic Survey	Kayla Belanger	9:00 a.m.–2:00 p.m.	Sunny, clear Temp: 63–74°F Wind: 5–7 mph
5/23/24	Floristic Survey	Kayla Belanger	9:00 a.m.–2:00 p.m.	Sunny, clear Temp: 62–77°F Wind: 9–17 mph
5/30/24	Floristic Survey	Kayla Belanger	9:00 a.m.–2:00 p.m.	Sunny, clear Temp: 63–75°F Wind: 0–5 mph
6/28/24	Floristic Survey	Kayla Belanger	9:30 a.m.–1:30 p.m.	Sunny, clear Temp: 77–91°F, Wind: 0–6 mph
7/30/24	Floristic Survey	Kayla Belanger	9:00 a.m.–2:00 p.m.	Sunny, clear Temp: 82–97°F Wind: 0–17 mph

Notes:
°F = degrees Fahrenheit
mph = miles per hour

4.2.1 - Vegetation Communities and Land Cover Mapping

FCS Biologists recorded one vegetation community, creosote bush scrub, and two land cover types, bare/ruderal and urbanized/developed (Exhibit 6). These vegetation communities and land cover types are described below, including a discussion of dominant and common plant species observed in each community or land cover type. Photographs of the vegetation communities and conditions on the project site are presented in Appendix C.

Creosote Bush Scrub (*Larrea tridentata* Shrubland Alliance)

Creosote bush scrub (MCV: *Larrea tridentata* Shrubland Alliance) is the dominant vegetation community on the project site, covering approximately 422.76 acres of the project site. Creosote bush (*Larrea tridentata*) is the dominant plant in this shrubland community. Other native shrubs in this community include white bursage, shadscale (*Atriplex confertifolia*), fourwing saltbush (*Atriplex canescens*), silver cholla (*Cylindropuntia echinocarpa*), Nevada ephedra (*Ephedra nevadensis*), rubber rabbitbrush (*Ericameria nauseosa*), winterfat (*Krascheninnikovia lanata*), western Joshua tree, desert globemallow (*Sphaeralcea ambigua*), and Anderson's desert thorn (*Lycium andersonii*). The herbaceous vegetation on the western and central parcels consists mostly of common Mediterranean grass (*Schismus barbatus*) and redstem filaree (*Erodium cicutarium*), but also Saharan mustard (*Brassica tournefortii*). Herbaceous vegetation observed on the eastern parcel was more diverse and included native species such as desert mariposa lily (*Calochortus kennedyi*), desert woollystar (*Eriastrum eremicum*), rattlesnake weed (*Euphorbia albomarginata*), Indian rice grass (*Stipa hymenoides*), Mojave lupine (*Lupinus odoratus*), desert dandelion (*Malacothrix glabrata*), and brownplume wirelettuce (*Stephanomeria pauciflora*). This community corresponds to the 33.140.04 *Larrea tridentata* Shrubland Alliance on the CDFW Natural Communities List and is ranked S5 and not considered a sensitive vegetation community.[21,22]

There are a series of drainages crossing the site, generally from south to north, that convey surface water and runoff from the adjacent roads. The desert scrub community in these drainages is more lush and demonstrates growth of larger, greener shrubs that are more dense than is seen in adjacent areas, as well as greater concentrations of drainage-loving species. As these areas also contain creosote bush, they were mapped as creosote bush scrub. There are stands of western Joshua trees in the eastern portion of the project site, but the percent cover of these stands, due to the sparse distribution of immature Joshua and very young mature trees with small canopy extents, does not exceed 1 percent to meet alliance requirements for Joshua tree woodland.[23] These areas are instead considered creosote bush scrub with sparse, emergent western Joshua trees.

The western 218.76 acres of the project site exhibit significant previous surface disturbances (Exhibit 5). The disturbance appeared to have occurred decades ago in a manner that caused significant surface disturbance and removal of vegetation. The creosote bush scrub community on these parcels is in recovery, but shrubs are sparse, species diversity is low, and herbaceous vegetation is dominated by non-native species. The eastern 204.00 acres of the project site exhibit relatively undisturbed lands (Exhibit 5). The creosote bush scrub on this portion of the project site exhibits greater species diversity, population stratification, higher shrub density, and larger individual shrubs.

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[21] Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. A Manual of California Vegetation, Second Edition. California Native Plant Society, Sacramento.

[22] California Department of Fish and Wildlife (CDFW). 2023. Natural Communities List, Sacramento: California Department of Fish and Wildlife. Website: https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities#sensitive%20natural%20communities. Accessed February 19, 2025.

[23] Thomas, K., J. Franklin, T. Keeler-Wolf, and P. Stine. 2004. Mojave Desert Ecosystem Program: Central Mojave Vegetation Database. USGS Western Ecological Research Center & Southwest Biological Science Center.

Recent disturbances observed in this community included illegal dumping, off-highway vehicle (OHV) recreation, and wind-blown trash.

Bare/Ruderal

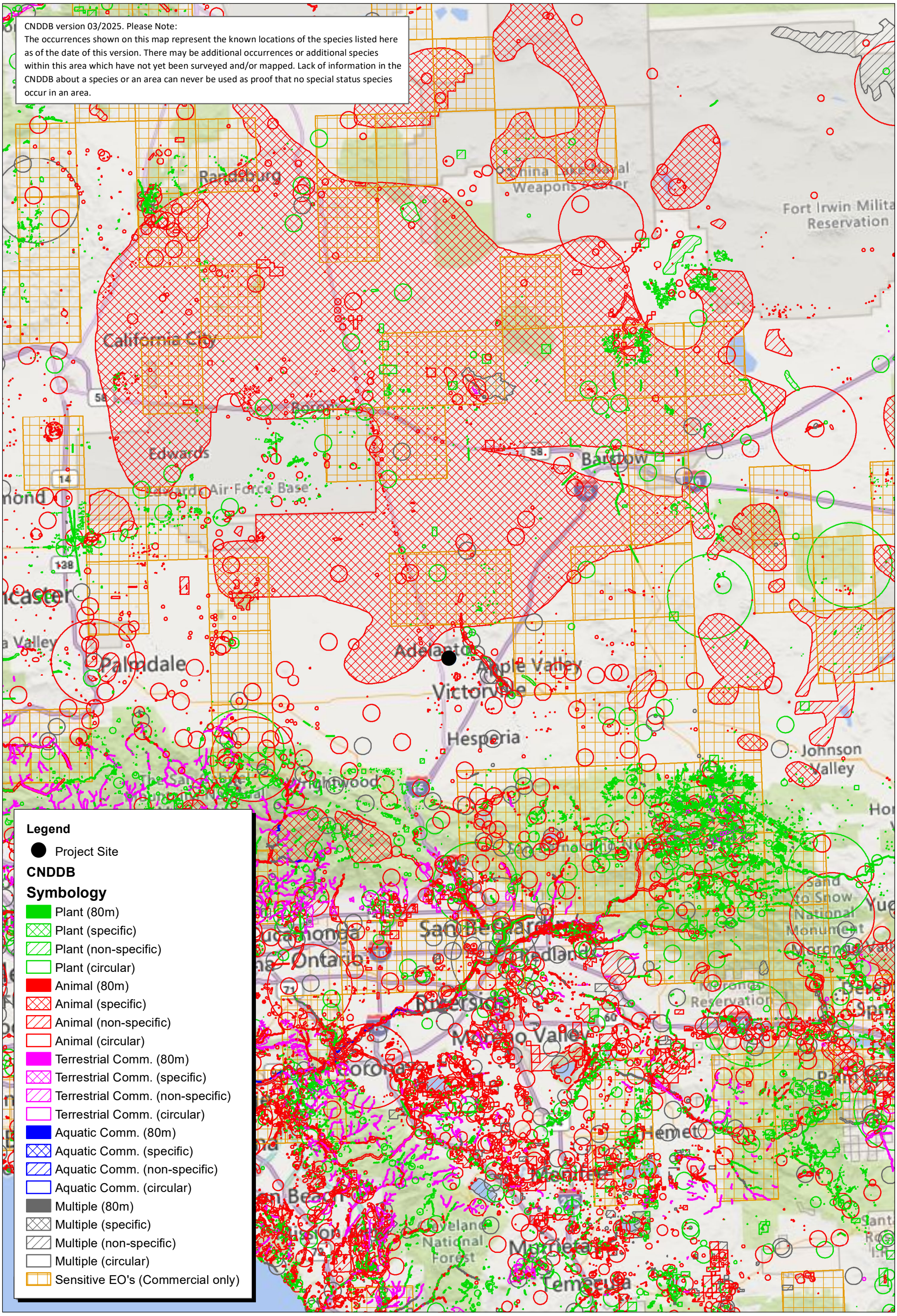
Portions of the project site had been subjected to repeated disturbances that resulted in cleared, bare ground that is being invaded by native and non-native ruderal species. Bare/ruderal areas were observed on dirt access roads crossing the western portion of the project site. Portions of the eastern parcel have been cleared and used for storage of several large dirt piles. Vegetation in these areas is weedy and sparse due to regular use and disturbances and several non-native species, such as common Mediterranean grass, Saharan mustard, prickly lettuce (*Lactuca serriola*), and Russian thistle (*Salsola tragus*). Approximately 55.27 acres of the project site and off-site impact areas are characterized as bare/ruderal.

Developed/Urbanized

Developed/urbanized areas are those areas that have been converted to an impervious surface that does not allow for plant growth (e.g., an asphalt road) or have been developed into commercial or residential development. These areas may be vegetated with non-native, ornamental species that are planted associated with developed residential housing, commercial development, or roadways. Two roads have been developed across the project site that travel north to south: Mesa Linda Road in the western half of the project site and Emerald Road in the eastern half of the project site. These developed/urbanized features account for approximately 9.06 acres of the project site.

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CNDDB version 03/2025. Please Note:
The occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area.



Source: Bing Street Imagery. California Natural Diversity Database (CNDDB), March 2025.

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Exhibit 6
CNDDB Special-status Species Occurrences

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4.2.2 - Floristic Rare Plant Surveys

Target Species

Based on the assessment of potential for occurrence of special-status plant species, the following seven special-status plant species were assessed as having at least a moderate potential to occur on the project site and thus comprised the target species for the floristic rare plant surveys:

- Booth's evening-primrose: bloom period April-September
- Sagebrush loeflingia: bloom period April-May
- Solitary blazing star: bloom period March-May
- Crowned muilla: bloom period March–April (May)
- Beaver Dam breadroot: bloom period April–May
- Mojave fish-hook cactus: bloom period April–July
- Western Joshua tree: bloom period March–June

Field Surveys

FCS Biologist Kayla Belanger conducted floristic surveys on the project site on May 21, May 23, May 30, June 28, and July 30, 2024 (Table 2). Ms. Belanger conferred with FCS Principal Biologist Michael W. Tuma, PhD for assistance with identifications during and following the surveys. A list of all plant species observed on-site during the surveys is provided in Appendix D. A population of one target species, western Joshua tree, was recorded on-site. The other target species were not observed during the surveys.

Survey Limitations

Timing of Surveys

Because of the timing of the contracting for the proposed project, the surveys were initiated late in the annual blooming season for the western Mojave Desert. Thus, the full diversity of species that occur on-site was not observed during the 2024 surveys as numerous annual species that commonly occur in the region would have senesced and been rendered undetectable by May. Though the surveys sampled the later portion of the annual blooming period, the dates of the three surveys in May coincided with the blooming periods of most target species. Just one species, crowned muilla, has an earlier blooming period (March–April) and would have been missed during the 2024 surveys if it was present.

Reference Populations

No reference sites were visited during the implementation of the floristic surveys at the project site. Visiting reference sites where target species were previously recorded would have allowed the Biologist to determine whether these species were visible at these other, nearby sites. This would have allowed the Biologist to form a search image for the target species and informed the Biologist whether the species germinated, bloomed, or otherwise vegetated and was visible at other sites in the vicinity.

Precipitation

Precipitation accumulations for the 2023–2024 winter season were somewhat higher than 30-year normals between 1991–2020 (Table 1). However, most of the rain occurred late in the winter season. Precipitation during the early winter, October 2023 through January 2024, was 1.39 inches, substantially less than 2.55 inches for the 30-year normals. Rainfall in February and March 2024 (4.3 inches) was far more than 1.95 inches for the 30-year normals. The relatively dry early winter of 2023–2024, coupled with the relatively wet late winter, likely influenced germination rates in annual species, flowering rates in perennial species, and growth of plants and plant parts. It may be possible that the seeds of some annual herbaceous species did not germinate in 2024 as most Mojave Desert species are triggered to germinate during significant precipitation events that occur in December and January.[24,25,26,27]

Joshua Tree Population Attributes

A population of western Joshua trees was recorded in the project site, which included 19 genetically distinct individuals (Exhibit 7). FCS Biologists recorded the locations and sizes of the western Joshua trees and prepared a Western Joshua Tree Inventory Report (Appendix E). The population exhibited both sexual and asexual (clonal) reproduction and was dominated by immature and younger mature specimens. Nine (47 percent) were assessed as mature and 10 (53 percent) as immature. Six (32 percent) exhibited evidence of clonal growth in the form of rhizomes. A total of 19 rhizomes (18 live, one dead) were observed associated with those six trees. In total, 36 stems (trunks and rhizomes) were counted on-site. Just three (16 percent) of the western Joshua trees were older, mature specimens with multiple (>4) branches, whereas most western Joshua trees on-site were immature (N=10, 53 percent) or young, mature trees with fewer than four branches (N=6, 31 percent).

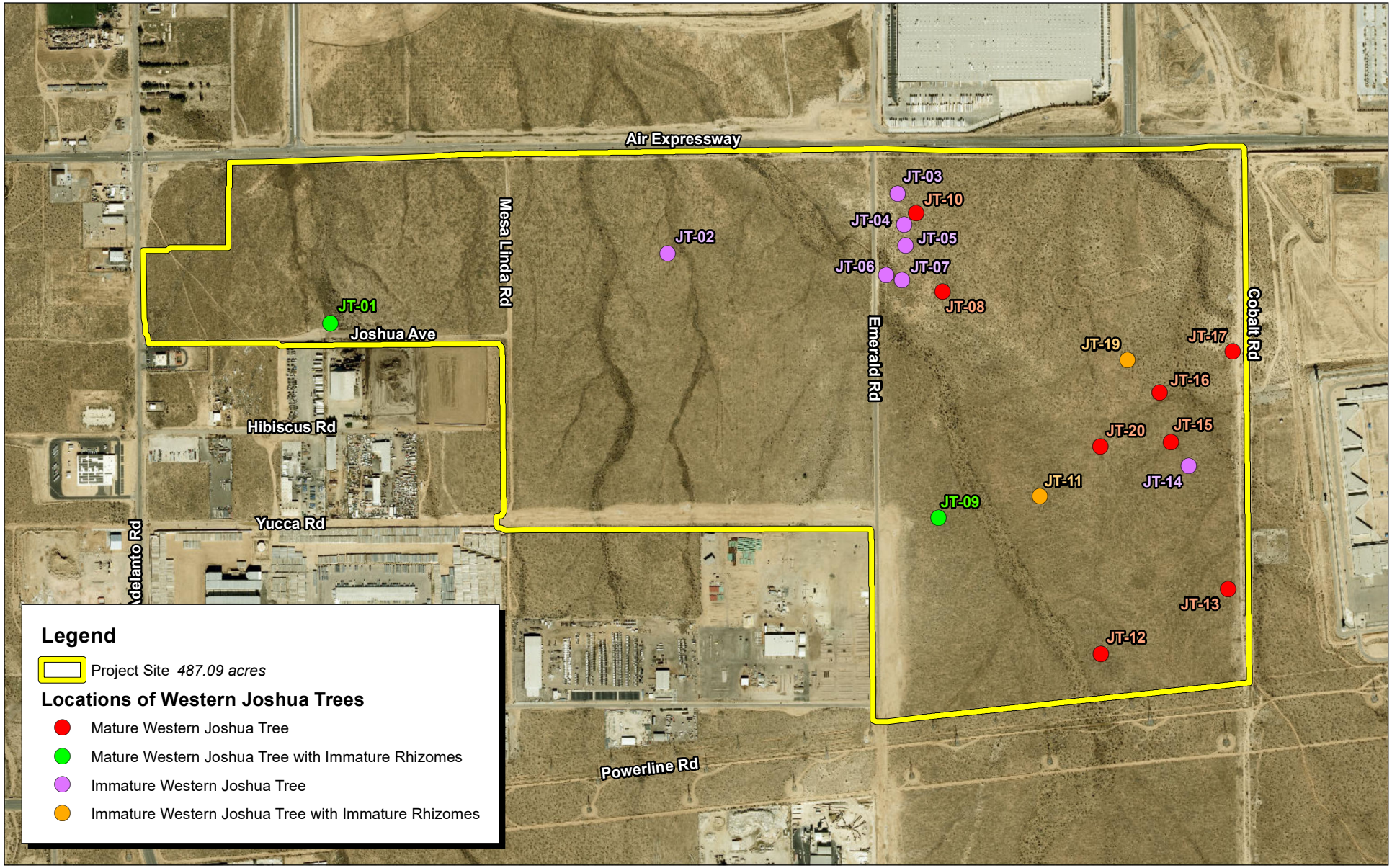
[24] Beatley, J.C. 1974. Phenological events and their environmental triggers in Mojave Desert ecosystems. Ecology 55:856–863.

[25] Juhren, M., F.W. Went, and E. Phillips 1956. Ecology of Desert Plants. IV. Combined Field and Laboratory Work on Germination of Annuals in the Joshua Tree National Monument, California. Ecology 37:318–330.

[26] Went, F.W. 1948. Ecology of Desert Plants. I. Observations on Germination in the Joshua Tree National Monument, California. Ecology 29:242–253.

[27] Went, F.W. and M. Westergaard 1949. Ecology of desert plants. III. Development of plants in the Death Valley National Monument, California. Ecology 30:26–38.

Exhibit 7: Occurrences of Western Joshua Tree on the Project Site



Source: ESRI Aerial Imagery. BLUE Engineering & Consulting, Inc.

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Exhibit 7
Locations of Western Joshua Trees on the Project Site

5 - IMPACT ANALYSIS

5.1 - Project Effects

5.1.1 - Special-status Plants

Western Joshua Tree

The proposed project would remove 19 genetically distinct individual western Joshua trees accounting for 36 stems. The project applicant would obtain take permissions through the WJTCA. Compliance with the WJTCA would likely satisfy CEQA requirements for mitigating project impacts to western Joshua trees.

Additional Special-status Plants

Other special-status species that were assessed as having a moderate to high potential to occur on the project site, including Booth's evening-primrose, sagebrush loeflingia, solitary blazing star, crowned muilla, Beaver Dam breadroot, and Mojave fish-hook cactus, were not detected during the rare plant survey. Though precipitation totals for the winter of 2023–2024 were greater than the 30-year normals, the timing of precipitation may have influenced germination of seeds and growth of plants during the spring of 2024. Reference sites were not visited to determine whether known populations were affected by the unusual precipitation pattern. The precipitation appeared sufficient to have caused germination of seeds in a number of common, native, annual species and sprouting of bulbs in bulb-producing species on the project site, including desert woollystar, desert mariposa lily, desert dandelion, rattlesnake weed, Fremont pincushion (*Chaenactis fremontii*), and Mojave lupine. Thus, the winter precipitation probably would have caused germination in Booth's evening-primrose, solitary blazing star, sagebrush loeflingia, and Beaver Dam breadroot and sprouting in crowned muilla bulbs. The surveys were conducted during periods when blooming of Booth's evening-primrose, solitary blazing star, sagebrush loeflingia, and Beaver Dam breadroot would have been evident and these species detectable. Because these species were not detected on the project site during the 2024 surveys, it is reasonable to conclude that they do not occur there. The surveys were conducted outside of the blooming period for crowned muilla, and the potential for this species to occur on-site remains moderate. The Mojave fish-hook cactus is a conspicuous species that would have been detected if it occurred on-site; thus, it is presumed absent from the project site.

Based on the negative results of the rare plant survey, FCS concludes that Booth's evening-primrose, solitary blazing star, sagebrush loeflingia, Beaver Dam breadroot, and Mojave fish-hook cactus are absent from the project site. There is a moderate potential for crowned muilla to occur on the project site. Therefore, the proposed project is not expected to impact Booth's evening-primrose, solitary blazing star, sagebrush loeflingia, Beaver Dam breadroot, or Mojave fish-hook cactus but may impact crowned muilla. The crowned muilla is a CNPS Rank 4.2 species and, thus, may not meet the

definition of Rare or Endangered under the CEQA Guidelines Section 15380 criteria. The CNPS recommends that

> . . . some level of CEQA review is justified for Rank 4 taxa, and under some circumstances, a full impact analysis is warranted. Taxa that can be shown to meet the criteria for endangered, rare, or threatened status under CEQA Section 15380(d) or that can be shown to be regionally rare or unique as defined in CEQA Section 15125(c) must be fully analyzed in a CEQA document. Some circumstances, such as local rarity, having occurrences peripheral to the taxon's distribution, or having occurrences on unusual substrates or rare and declining habitats, provide justification for treating some Rank 4 taxa occurrences as regionally rare or unique.

The crowned muilla is fairly widespread with occurrences throughout the Mojave Desert in California, including several occurrences in the Adelanto area and numerous throughout the western Mojave Desert. Thus, the species does not appear to demonstrate local rarity nor is the Adelanto area in an area peripheral to its distribution. The species is not known for specializing on certain soil substrates or inhabiting rare or declining habitats. Therefore, if crowned muilla occurs on-site, removal of individuals through project implementation would not be considered a significant impact under CEQA.

5.2 - Significance of On-site Special-status Plants

5.2.1 - Western Joshua Tree

The 19 western Joshua trees on the project site represent a small portion of the population of western Joshua trees that occurs in eastern Adelanto and northwestern Victorville. This area includes both undeveloped and urbanized lands. Most western Joshua trees in this area occur on undeveloped lands, but some persist in developed areas. The removal of 19 western Joshua trees during implementation of the proposed project would represent loss of a small portion of the western Joshua tree population in the area; however, cumulatively, development in the area over the past 50 years has had a more substantial effect on the western Joshua tree population. Within a 5-mile radius of the project site, approximately 25 percent of the lands have been developed, representing a loss of western Joshua tree habitat and a reduction in population size, likely by at least 25 percent. The removal of 19 western Joshua trees from the project site contributes to this loss incrementally but alone represents a minute fraction of the loss of western Joshua trees within 5 miles of the project site due to development of the area. Project applicant participation in the WJTCA ITP process will generate funding for the Western Joshua Tree Conservation Fund that will be used to manage threats to the species and to acquire, conserve, and manage conservation lands for the species.

5.2.2 - Other Special-status Plants

It may be possible that crowned muilla or other rare plant species occur on-site. Any rare plant species that occurs on the project site would represent a small portion of the population of those species that occur in eastern Adelanto and northwestern Victorville. This area includes both undeveloped and urbanized lands. Rare plant species that occur in this area would occur on

undeveloped lands and be absent from developed lands or disturbed lands adjacent to developed lands. The removal of rare plant populations during implementation of the proposed project will represent loss of a small portion of the larger populations in the area; however, cumulatively, development in the area over the past 50 years has had a more substantial effect on rare plant populations. Within a 5-mile radius of the project site, approximately 25 percent of the lands have been developed, representing a loss of habitat and a reduction in population sizes, likely by at least 25 percent. The removal of rare plant populations from the project site would contribute to this loss incrementally but alone represents a minute fraction of the loss of rare plant populations within 5 miles of the project site due to development of the area.

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6 - RECOMMENDATIONS

The following recommendations provide direction for permitting pathways and likely outcomes of mitigating potential project impacts to western Joshua tree.

6.1 - Western Joshua Tree

The proposed project would remove 36 stems of 19 individual western Joshua tree on the project site. The project applicant would be required to obtain an ITP from CDFW through the WJTCA process. The project site is located in the reduced fee area as defined in California Fish and Game Code Section 1927.3 (d), which specifies the following fees for take of western Joshua trees:

A. One thousand dollars ($1,000) for each western Joshua tree 5 meters or greater in height.

B. Two hundred dollars ($200) for each western Joshua tree 1 meter or greater but less than 5 meters in height.

C. One hundred fifty dollars ($150) for each western Joshua tree less than 1 meter in height.

These in lieu mitigation fees would be paid to the Western Joshua Tree Mitigation Fund. For the proposed project, FCS estimates that the in lieu mitigation fee would be $7,800 for take of western Joshua trees on the project site. Prior to CDFW assessing the in lieu mitigation fees, the project applicant would be required to submit an ITP application form. The application form would require data collected by a Certified Arborist or a Biologist with expertise in western Joshua tree data recording. When the application is approved, CDFW will invoice the project applicant with instructions for mailing a check for the in lieu mitigation fee to the corresponding CDFW Regional Office.

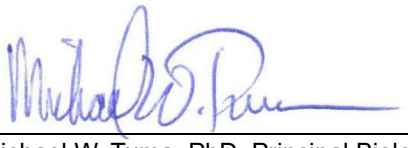
The Western Joshua Tree Inventory Report (Appendix E) provides information needed to support the WJTCA ITP application.

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7 - CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present data and information required for this Rare Plant Survey Report and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Date: April 9, 2025 Signed:



Michael W. Tuma, PhD, Principal Biologist
FirstCarbon Solutions
967 Kendall Drive, #A-537
San Bernardino, CA 92407

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Appendix A:

Professional Qualifications

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FIRSTCARBON SOLUTIONS™

MICHAEL TUMA, PHD, CWB, RPA—PRINCIPAL BIOLOGIST

OVERVIEW

Michael Tuma, PhD, CWB, RPA, has more than 30 years of experience as a professional scientist in environmental consulting, government agency positions, and academic settings. He has project experience in a diversity of market sectors, including renewable energy, land management, transportation, water infrastructure, gas and mineral extraction, and land development. He has a deep understanding of regulatory processes pertaining to Endangered Species Act, California Endangered Species Act, and CEQA compliance, as well as other environmental laws. Dr. Tuma's technical expertise includes desert ecology, population biology, herpetology, biodiversity, and applied conservation, and he is an expert in desert tortoise biology. Dr. Tuma has participated in or led more than 20 rare plant surveys over the past 20 years in California. Dr. Tuma has additional experience conducting anthropological, archaeological, and paleontological research.

Education

- Doctor of Philosophy, Integrative and Evolutionary Biology, University of Southern California, Los Angeles, California, 2016
- Master of Science, Anthropology, University of Southern Mississippi, Hattiesburg, Mississippi, 1998
- Master of Science, Zoology, Eastern Illinois University, Charleston, Illinois, 1993
- Bachelor of Science, Zoology, Truman State University, Kirksville, Missouri, 1991

Permits, Authorizations, and Certifications

- Certified Wildlife Biologist, The Wildlife Society, 2013–present
- Certified Significant Ecological Areas Technical Advisory Committee (SEATAC) Biota Report Preparer, Los Angeles County Department of Regional Planning, 2008–present
- Qualified Biologist, San Bernardino County, 2007–present
- Authorized Biological Consultant, Riverside County, 2006–present
- Authorized Biologist for Agassiz's desert tortoise activities under 10(a)1(A) Recovery Permits (former) and Biological Opinions, US Fish and Wildlife Service (USFWS), August 2005–present
- California Scientific Collecting Permit/California Endangered Species Act (ESA)-Memorandum of Understanding, California Department of Fish and Wildlife (CDFW), August 2005–present
- Registered Professional Archaeologist (RPA), 2000–present

Trainings and Workshops

- Basic Wetland Delineation, Wetlands Training Institute, 2025
- Mohave Ground Squirrel Workshop, The Western Section of The Wildlife Society, 2024
- Desert Tortoise Health Assessments for Translocation Projects, Desert Tortoise Council, 2015
- CEQA Workshop, Association of Environmental Professionals, 2008
- Endangered Species: Regulation, Conservation Planning, and Permits for Development, University of California, Los Angeles Extension, 2008
- Desert Tortoise Health Assessment and Phlebotomy Training, US Geological Survey (USGS), 2007
- Endangered Species Permitting: Strategies and Successful Negotiations Workshop, The Wildlife Society, 2006
- A/E/C Project Management Bootcamp, PSMJ Resources, Inc., 2006

- Introduction to CEQA: A Step-by-Step Approach Workshop, SCWA, 2005
- Western Pond Turtle Workshop: Ecology and Conservation, The Wildlife Society, 2005
- Surveying, Monitoring, and Handling Techniques Workshop, Desert Tortoise Council, 2004

Professional Affiliations

- Adjunct Professor, University of Southern California, March 2019–2022
- Board of Directors Member, Desert Tortoise Council, January 2014–present

RELATED EXPERIENCE AND CLIENT SUMMARY

The Reserve at Sloan Canyon Residential Project IS/MND and MMRP Implementation, Castaic, Los Angeles County, California

FCS prepared a Final IS/MND, a revised BRA, and an Oak Tree Survey, regulatory permit applications, and implementation of the Mitigation, Monitoring, and Reporting Program (MMRP) for The Reserve at Sloan Canyon Residential Project located near Castaic Lake Area in Los Angeles County. The proposed residential project would construct 137 single-family residential lots, four open-space lots, two private recreation lots, and 14 public facility lots on approximately 186.45 acres along Sloan Canyon Road west of Castaic. The open space areas will consist of undisturbed natural areas, open space for passive recreation, parks and open recreational areas, and secondary open space. Dr. Tuma performed rare plant surveys of the project site in 2022 and 2023. Each round of surveys involved conducting three visits of the project site and nearby reference sites to sample the blooming periods of the target rare plant species, which included slender mariposa lily (*Calochortus clavatus* var. *gracilis*), Plummer's mariposa lily (*Calochortus plummerae*), Peirson's morning-glory (*Calystegia peirsonii*), San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*), and white-rabbit tobacco (*Pseudognaphalium leucocephalum*). During the course of the surveys, Dr. Tuma recorded 210 plant taxa on-site, including five rare plant species: slender mariposa lily, short-joint beavertail cactus (*Opuntia basilaris* var. *brachyclada*), and southern California black walnut (*Juglans californica*). Dr. Tuma authored the rare plant survey reports produced for each annual survey.

Palmdale Warehouse Project Biological Planning, Permitting, and Monitoring Services, City of Palmdale, Los Angeles County, California

FCS prepared the Addendum to the Antelope Valley Business Park Specific Plan EIR for the Palmdale Warehouse Project in the City of Palmdale, California. The project site comprised approximately 113.75 acres. The proposed project included the construction of a 1,049,760 square foot industrial warehouse/distribution building and construction of off-site traffic and sidewalk improvements on West Avenue M and 10th Street West. The project plan also included an approximately 12.1-acre on-site area to support Joshua tree woodland conservation. As the Designated Biologist for the project, Dr. Tuma led site surveys to support the planning phase of the project, including rare plant surveys and a western Joahua tree (*Yucca brevifolia*) inventory. Dr. Tuma authored the Biological Resources Analysis, the Biological Resources section of the EIR Addendum, the Rare Plant Survey Report, and the Incidental Take Permit (ITP) application for western Joshua trees and Mohave ground squirrels, among other reports. The rare plant surveys were conducted in 2021 and 2022, and each round of surveys involved conducting three visits of the project site and nearby reference sites to sample the blooming periods of the target rare plant species, which included alkali mariposa-lily (*Calochortus striatus*), white pygmy-

poppy (*Canbya candida*), Mojave paintbrush (*Castilleja plagiotoma*), prickly cryptantha (*Cryptantha clokeyi*), and short-joint beavertail (*Opuntia basilaris* var. *brachyclada*). During the course of the rare plant surveys, Dr. Tuma recorded 64 plant taxa on-site, including two rare plant species: western Joshua tree and crowned muilla (*Muilla coronata*). Dr. Tuma authored the rare plant survey reports produced for each annual survey. Dr. Tuma consulted with the CDFW during processing of the ITP and implemented measures contained within the issued ITP, including production of a Western Joshua Tree Avoidance and Protection Plan, a Western Joshua Tree Seed Collection Plan, and a Habitat Mitigation and Monitoring Plan for the on-site western Joshua tree preservation area, as well as pre-construction surveys for western Joshua trees and rare plants.

Addendum to the Desert Hot Springs General Plan EIR and MMRP Implementation for Project Viento, City of Desert Hot Springs, Riverside County, California

FCS prepared an Addendum to the Desert Hot Springs General Plan EIR and supporting technical studies for Project Viento in the City of Desert Hot Springs, California. Following approval of the Addendum and the project, FCS conducted pre-construction and construction phase measures outlined in the Mitigation, Monitoring, and Reporting Program (MMRP) for the project. The project consisted of the construction of an approximately 3.4-million square-foot sortable multi-story e-commerce warehouse and distribution center for consumer products on approximately 94.62 acres of undeveloped land. As the Designated Biologist for the project, Dr. Tuma coordinated field surveys, including rare plant surveys. The rare plant surveys were conducted in 2021 and 2022, and each round of surveys involved conducting three visits of the project site and nearby reference sites to sample the blooming periods of the target rare plant species, which included Coachella Valley milk-vetch (*Astragalus lentiginosus* var. *coachellae*), Little San Bernardino Mountains linanthus (*Linanthus maculatus* ssp. *maculatus*), and desert sand verbena (*Abronia villosa* var. *aurita*). During the course of the surveys, Dr. Tuma recorded 42 plant taxa on-site. Dr. Tuma authored the rare plant survey reports produced for each annual survey.

Rio Vista Specific Plan EIR, City of Jurupa Valley, Riverside County, California

FCS prepared a project-level EIR for the proposed Rio Vista Specific Plan Project and conducted specialized studies of a 13,000-year-old clone of a Palmer's oak (*Quercus palmeri*) located on the project site. The project included a new Specific Plan that superseded and replaced the approved Rio Vista Specific Plan No. 243. The proposed Specific Plan included approximately 1,200 dwelling units, a 12-acre school site, an 11.4-acre Community Park, and 511 acres of open space for conservation, including an area designated for protection of the Palmer's oak clone. As the Principal Biologist, Dr. Tuma conducted studies of the 13,000-year-old Palmer's oak tree on the project, including a ground-penetrating radar (GPR) study of the subsurface bedrock beneath the Palmer's oak clone locality and a literature review of hydrological characteristics of the site and potential extent of the root system of the Palmer's oak clone. Dr. Tuma authored two memoranda detailing the results of the studies and providing recommendations for protection of the oak and presented the findings of the studies at public Planning Commission and City Council meetings.

Other Relevant FCS Experience

- Western Joshua Tree Inventory of the Watson Logistic Center Project in Apple Valley, San Bernardino County, California
- Rare Plant Surveys and Western Joshua Tree Inventory for the Tentative Tract Map 43807 Project in Palmdale, Los Angeles County, California

- Short-joint Beavertail Cactus Survey for the Joshua Ranch Project in Palmdale, Los Angeles County, California
- Rare Plant Surveys and Western Joshua Tree Inventory for the Adelanto Gateway Logistics Center Project in Adelanto, San Bernardino County, California
- Rare Plant Surveys for the Oak Hill Apartments Project in Marin County, California

Prior Relevant Project Experience

Santa Susana Field Laboratory, Boeing (through contract with MWH Americas, Inc.), Ventura County, California

Dr. Tuma served as the Project Manager for this project between 2006 and 2008. Under one task he designed and conducted field investigations on the extent and size of Braunton's milk-vetch (*Astragalus brauntonii*) population within an area of a USFWS-proposed designated Critical Habitat. He led field efforts, which included conducting vegetation mapping, delineating the Braunton's milk-vetch population within the proposed area, estimating the population size with the use of randomized transects and quadrats, conducting a complete vascular plant inventory within the study area, and authoring a technical report detailing the results of the investigation, which were used by the client in commenting on the proposed area of designated Critical Habitat. Dr. Tuma performed other tasks under this project, including nesting bird surveys, pre-construction surveys for special-status species, and a revegetation/mitigation effort for the California Rare Santa Susana tarplant (*Deinandra minthornii*).

Desert Quartzite Solar Energy Project EIR/EIS and Biological Studies, First Solar, Inc., Riverside County, California

Dr. Tuma served as the Project Manager for this project in 2015 and 2016, and was responsible for client management, biological studies, technical report preparation, and CEQA/NEPA documentation for a large-scale development in east Riverside County, California. His specific duties included reviewing studies prepared by prior consultants, conducting updated field surveys (vegetation mapping, rare plant, and desert tortoise surveys) and technical studies, and preparing the EIR/EIS Biological Resources section and appendices (Invasive Weed Management Plan, Raven Management Plan, Desert Tortoise Translocation Plan, Desert Kit Fox and American Badger Management Plan, Rare Plant Management Plan, and Vegetation Restoration Plan).

Edom Hills Wind Energy Facility, BP Wind Energy North America, Inc., Riverside County, California

Dr. Tuma served as the Project Manager and Lead Authorized Biologist for this project in 2016 and was responsible for conducting a habitat assessment, eolian dune characterization study, and biological monitoring of project activities in support of minimizing the potential for take of Coachella Valley fringe-toed lizard (*Uma inornata*) and Coachella Valley milk-vetch (*Astragalus lentiginosus* var. *coachellae*) during the installation of equipment in two project turbines. He coordinated with the BLM project Biologist to gain approval of biologists to monitor the work, and concurrence for the recommended mitigation measures, which included removing wind-blown sands from portions of the access road and placing the sand in adjacent areas where they could continue transport in the eolian ecosystem. He authored a post-construction memorandum that detailed the restoration of the eolian sand and avoidance of sensitive microhabitats where fringe-toed lizards typically hibernate during the project activities.

FIRSTCARBON SOLUTIONS™

KAYLA BELANGER—BIOLOGIST MANAGER I

OVERVIEW

- More than 12 years of experience

Education

- Bachelor of Science, Biology, Major in Organismal Biology, Minor in Geology, Portland State University, Portland, OR, 2013
- Bachelor of Science, Communication, Portland State University, Portland, OR, 2006

Technical Expertise

- Aeronautical Reconnaissance Coverage Geographic Information System (ArcGIS)
- Wilderness First Aid

Kayla Belanger has more than 12 years of experience in conducting biodiversity surveys, habitat assessments, and biological monitoring. She has a demonstrated history in performing biological resources technical studies and preparing reports that comply with the regulations of CEQA, NEPA, and other local, federal, and State environmental laws. Her strong background in marine biology, mammalogy, ornithology, ecology, and environmental science allows her to perform and oversee species identification and rehabilitation, vegetation and wetlands mapping using ArcGIS, and environmental compliance monitoring. Ms. Belanger is also well equipped in facilitating public outreach programs to educate communities regarding animal behavior, native plant species, ecology, and sustainability.

RELATED EXPERIENCE AND CLIENT SUMMARY

The Reserve at Sloan Canyon Residential Project IS/MND, Los Angeles County, CA

FCS prepared a Final Initial Study/Mitigated Negative Declaration (IS/MND), a revised BRA, and an Oak Tree Survey, rare plant surveys, special-status reptile surveys, bat habitat assessments, and is currently preparing the regulatory permitting documents, implementing a Workers Environmental Awareness Program (WEAP), and conducting pre-construction surveys for The Reserve at Sloan Canyon Residential Project located near Castaic Lake Area in Los Angeles County. The proposed residential project would construct 137 single-family residential lots, four open-space lots, two private recreation lots, and 14 public facility lots on approximately 186.45 acres along Sloan Canyon Road west of Castaic. The open space areas will consist of undisturbed natural areas, open space for passive recreation, parks and open recreational areas, and secondary open space. FCS also peer reviewed the Cultural Resources Assessment (CRA) and the prior IS/MND to identify inaccuracies with the overall results of the project and the conclusions of the review were addressed in the Errata. Ms. Belanger oversaw biologists and conducted focused surveys on bats and reptiles.

Biological, Archaeological, and Paleontological Monitoring and Reporting Services for the Los Angeles Regional Interoperable Communications System, Los Angeles County, CA

FCS provided monitoring and reporting services during the construction of more than 150 land mobile radio (LMR) facilities at sites located primarily in Los Angeles County. The LMR sites contain the

infrastructure and equipment necessary to provide voice communications coverage throughout the County for emergency responders. These locations are widely dispersed across the County in both urban (intensively developed) and rural (less developed) settings and include coastal locations, sites in downtown Los Angeles, remote mountain peaks across the County, and the northern high desert. FCS conducted the biological, archaeological, and paleontological pre-construction and construction monitoring and reporting services in accordance with the Construction Management Requirements outlined in the NEPA Environmental Assessment that FCS prepared for the project. As the Lead Biologist, Ms. Belanger developed the Workers Environmental Awareness Program training for California Condor and provided supervision to other biologists on the project.

10th Street W and W Avenue M Warehouse Project Biological Planning and Permitting Services, City of Palmdale, CA

FCS conducted biological permitting for the Palmdale Warehouse Project located on the southeast corner of the intersection of West Avenue M and 10th Street West. The project site consists of approximately 113.75 acres. The proposed project would include the construction of a 1,049,760 square foot industrial warehouse/distribution building. Approximately 12.1-acre of undisturbed Joshua tree woodland will remain on-site. Off-site construction of traffic and sidewalk improvements on West Avenue M and 10th Street West is expected to occur and will overlap with the construction of the warehouse/distribution building. As the Designated Biologist, Ms. Belanger oversaw all aspects of the construction activity and the biological monitors. She was also the main contact for the California Department of Fish and Wildlife.

Palmdale Warehouse Addendum and Technical Studies, City of Palmdale, CA

FCS prepared the Addendum and supporting technical studies for a new warehouse south of Columbia Way, between 10th Street West and Sierra Highway, in the City of Palmdale, on approximately 78.16 gross acres. The warehouse would have a footprint of 1,005,638 square feet, consisting of a 994,086-square-foot warehouse and 11,552-square-foot office. The proposed project would include 409 automobile parking stalls, 399 trailer stalls, 121 dock-high doors, 35 knock-out or rated doors, three grade-level doors, and 426,870 square feet of detention areas. In addition to the technical studies to be provided by the applicant, FCS prepared an Air Quality, GHG Emissions, and Energy Analysis; BRA; CRA; and Noise Impact Analysis. As the Lead Biologist, Ms. Belanger conducted a habitat assessment to identify the types of animals most likely to inhabit the project area. She also prepared reports and performed wildlife surveys.

Addendum to the Desert Hot Springs General Plan EIR for Project Viento, City of Desert Hot Springs, CA

FCS prepared an Addendum to the Desert Hot Springs General Plan EIR and supporting technical studies for Project Viento in the City of Desert Hot Springs, California. The project applicant, Seefried Industrial Properties, Inc., proposed to construct an approximately 3.4-million square-foot sortable multi-story e-commerce warehouse and distribution center for consumer products on approximately 94.62 acres of undeveloped land. The proposed project would include five levels, consisting of approximately 348,749-square-foot mezzanine, and levels two through five would each be 606,574 square feet. The building footprint would be approximately 649,653 square feet. FCS also prepared technical studies or conducted technical analyses, including Air Quality, GHG Emissions, and Energy Analysis; BRA; Phase I CRA; Paleontological Records Search; and a Noise Impact Analysis. The Addendum was accepted by the City Council in February 2022. Following its approval, FCS provided biological services to ensure project

compliance with the MMRP. FCS Biologists submitted a BUOW Mitigation Plan for CDFW review and implemented the plan, which included monitoring of two burrowing owl nests and passive relocation of owls after conclusion of the nesting season. Other services included consultation with CDFW and USFWS, approval of Designated Biologists and Biological Monitors, preparation of a WEAP, protocol-level pre-construction burrowing owl surveys, establishment of Environmentally Sensitive Areas (ESAs) around active burrowing owl (*Athene cunicularia*) nesting burrows, monitoring of ground-disturbing activities and nesting burrowing owls, evicting burrowing owls from burrows after conclusion of the nesting season, reporting of monitoring activities, and coordination with the City, developer, construction crews, CDFW, and USFWS to ensure that there were no impacts to nesting burrowing owls and other sensitive resources on-site during construction of the project. As the Designated Biologist, Ms. Belanger conducted the BUOW-focused survey for this project. She also oversaw biological monitors and reports.

Other Project Experience

- Tract Map 48307 IS/MND, Los Angeles County, CA
- Warehouse Project Biological Services, City of Lancaster, CA
- Joshua Ranch Property Cactus Survey, City of Palmdale, CA
- Pearblossom Preserve Joshua Tree Survey, City of Palmdale, CA
- Gateway Logistics Center Project Biological Protocol Surveys, City of Adelanto, CA
- Highland Grove II Residential Project IS/MND and Technical Studies, Riverside County, CA
- Highland Grove 4 Residential Project Biological and Regulatory Support Services, Riverside County, CA
- Highland Grove 5 Residential Project CEQA Services, Riverside County, CA
- French Valley Development Project Biological Resources Due Diligence Memorandum, Riverside County, CA

Prior Work Experience

Pacific Rim Conservation, Honolulu, HI

As a Field Ornithologist Technician, Ms. Belanger assisted in developing the first colony of the endangered black-footed albatross (*Phoebastria nigripes*) for the Albatross Translocation Project at the James Campbell National Wildlife Refuge in Oahu, Hawaii. Ms. Belanger also assessed the nutritional needs of the native birds and treated those afflicted with infection (e.g., Avian pox).

Kualoa Ranch Private Nature Preserve, Kaneohe, HI

As a Lead Biologist, Ms. Belanger conducted water quality and environmental assessments, environmental compliance monitoring, and biodiversity surveys throughout the preserve. She performed animal husbandry, rehabilitated various exotic animals, and created nesting boxes and floating bird nests for endemic bird and bat species, including the Hawaiian moorhen (*Gallinula chloropus sanvicensis*) and the hoary bat (*Lasiurus cinereus*). As part of a statewide initiative, Ms. Belanger identified native plant species, propagated them, and created vegetation mapping to reintroduce them throughout the preserve. Ms. Belanger also led 40 to 100 volunteers to restore the lo'i (taro patches) and determine the source of aquifers. In addition, she developed a biology curriculum and educated students and volunteers regarding the identification, evolution, and adaptation of species; native Hawaiian plants; and animal behavior. Ms. Belanger also taught volunteers how to combine the

system of using aquacultural ponds to raise tilapia and shrimp with hydroponics in order to produce their own aquaponic system.

Oregon Zoo, City of Portland, OR

As a Zoo Guide/Biologist, Ms. Belanger educated the public on various environmental topics, including animal species and environmental conservation. She performed animal husbandry and trained small mammals and bird species. She also conducted sensory response assessment of newborn animals (e.g., Humboldt penguins [*Spheniscus humboldti*]). Ms. Belanger also conducted research on the behavior of animals to reduce stereotypy, oversaw bat behavioral fieldwork, and managed the identification of bat species using acoustic detectors.

In addition, Ms. Belanger functioned as a Biological Technician for the Cascades Pika Watch program—a partnership between Oregon Zoo, Point Defiance Zoo and Aquarium, the Columbia River Gorge National Scenic Area, the US Geological Survey, and several researchers that aims to investigate the population pressures on the Columbia River Gorge's pika (*Ochotona*) population. Ms. Belanger collected data using the Global Positioning System to assess pika population, collect data for population assessments, and determine possible climate impacts. She trained volunteers to identify pika species and vocal calls, utilize specialized equipment, and ensure safety by adhering to the National Marine Fisheries Service guidelines.

Oregon Department of Fish and Wildlife, City of Salem, OR

As a Biological and Environmental Technician, Ms. Belanger conducted wetlands and water determination and delineation following the guidelines in the US Fish and Wildlife Service and US Army Corps of Engineers Wetlands Delineation manuals in accordance with the Clean Water Act. Ms. Belanger also prepared biological technical reports for environmental documents and conducted environmental compliance monitoring in accordance with CEQA and NEPA. She assessed various wetland habitat conditions to determine and document the presence, breeding, and relative abundance of amphibians and reptiles. She collected water, soil, and air samples associated with groundwater and coastal pollution and water consumption, and other relevant data to provide site-specific input for the development of land management plans. Additionally, Ms. Belanger mapped breeding and wetland areas, created vegetation mapping, conducted ecological restoration of riparian zone habitats throughout the Columbia river system, and assisted in preparing reports used by the Oregon Department of Fish and Wildlife (ODFW) and other conservation partners to guide restoration at surveyed sites. Ms. Belanger also trained volunteers in species identification and effective data collection.

Green Reef, San Pedro Town, Ambergris Caye, Belize

As a Marine Biologist (Native Mammals Rehabilitation), Ms. Belanger gathered information regarding sea turtle nesting and monitoring from protected areas, including Bacalar Chico National Park and Marine Reserve and Hol Chan Marine Reserve, where she also conducted biodiversity surveys. She performed coral monitoring using the point and line intercept transect methods and analyzed data to determine the percentage of coral cover and the mortality and disease rate of corals. Ms. Belanger also functioned as a liaison between Green Reef and the Belize Fisheries Department, the Coastal Zone Management Authority and Institute, and the Belize Alliance of Conservation Non-Governmental Organizations. Ms. Belanger managed the rehabilitation for manatees (*Trichechus*) and howler monkeys

(*Alouatta*) in Sarteneja, Belize, in congruence with Wildtracks' Manatee Rehabilitation Program. She also promoted sustainable development in Ambergris Caye by educating the communities on reef ecology and species identification, facilitating outreach programs, and creating educational pamphlets and brochures.

ECO, Natural Resources Group Inc., Portland, OR

As a Conservation Crew Leader, Ms. Belanger performed ecological management planning assessments and implemented natural resource protection programs, including flora and fauna field surveys. She collected data, such as land-based sources of pollution, for restoration and enhancement projects. Ms. Belanger coordinated crews and provided project technical assistance and direction to contractors, field staff, work personnel, volunteers, and interns. She was also responsible for training volunteers in habitat restoration and cleanup activities.

Other Relevant Experience

Portland State University, Portland, OR

As part of an ongoing ODFW study, Ms. Belanger conducted pinniped observation and survey fieldwork to identify the types of fish and fish intake of sea lions at the Willamette Falls and Bonneville Dam. She also observed pinniped and fishermen interaction as part of the Oregon Health and Science University study. Ms. Belanger banded less than 60 indigenous bird species using mist netting for the Audubon Society and analyzed the stomach content of pinnipeds, including otoliths, jaw bones, and other relevant bone structures, to determine fish species. She also performed and documented necropsies of harbor seals (*Phoca vitulina*), sea lions (*Otariinae*), harbor porpoises (*Phocoena phocoena*), dolphins (*Delphinidae*), gray whale (*Eschrichtius robustus*), and minke whale (*Balaenoptera acutorostrata*). Ms. Belanger conducted Allen's swamp monkey (*Allenopithecus nigroviridis*) behavioral study for the Oregon Zoo and contributed on a book on sensory physiology that was written by Dr. Randy Zelick.

Internship

Emerging Professional Internship Corps, American Conservation Experience, City of Flagstaff, AZ

Ms. Belanger conducted biological monitoring, which involved bird surveys and banding, vegetation mapping and assessments, herpetology surveys, and water monitoring. She also created educational pamphlets and performed environmental planning and biological and wildlife habitat management assessments in compliance with CEQA/NEPA and other environmental protection laws.

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Appendix B:

Special-status Plant Species Table

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Table 1: Special-status Plant Species that Occur in the Project Vicinity and their Potential for Occurrence on the Project Site

Scientific Name Common Name	Status			Habitat Description[4]	Potential to Occur and Rationale	Included in Impact Analysis
	USFWS[1]	CDFW[2]	CNPS[3]			
Boechera dispar pinyon rockcress	—	—	2B.3	Perennial herb found in Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland. Grows in granitic, gravelly soils. Bloom period: March-June 1,005-2,805 m.	**No Potential for Occurrence:** The project site supports a desert scrub community, but it is outside of the elevation range of the species. There are no recent or historical occurrences of this species within 10 miles of the project site.	No
Canbya candida white pygmy-poppy	—	—	4.2	Annual herb found in Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland. Grows in granitic, gravelly, sandy soils. Bloom period: March-June 600–1,460 m.	**Low Potential to Occur:** The project site supports a desert scrub community and contains suitable soils, however there are no recent records for this species within ten miles of the project site.	No
Castilleja plagiotoma Mojave paintbrush	—	—	4.3	Hemiparasitic perennial herb found in alluvial Great Basin scrub, Joshua tree woodland, lower montane coniferous forest, and pinyon and juniper woodland. Bloom period: April-June 300–2,500 m.	**No Potential for Occurrence:** The project site does not support suitable habitat for this species and there are no recent occurrences within 10 miles of the project site.	No
Chorizanthe spinosa Mojave spineflower	—	—	4.2	Annual herb found in chenopod scrub, Joshua tree woodland, Mojavean desert scrub, and playas. Sometimes grows in alkaline soils. Bloom period: March-July 6–1,300 m.	**Low Potential to Occur:** The project site supports desert scrub community but there are no recent occurrences of this species within 10 miles of the project site.	No

Scientific Name Common Name	Status USFWS[1]	 CDFW[2]	 CNPS[3]	Habitat Description[4]	Potential to Occur and Rationale	Included in Impact Analysis
Cymopterus deserticola desert cymopterus	—	—	1B.2	Perennial herb found in Joshua tree woodland and Mojavean desert scrub. Grows in sandy soils. Bloom period: March-May 625–1,500 m.	**Low Potential to Occur:** The project site supports desert scrub and sandy soil but there are no recent occurrences of this species within 10 miles of the project site.	No
Diplacus johnstonii Johnston's monkeyflower	—	—	4.3	Annual herb found in lower montane coniferous forest. Typically found in disturbed areas and on roadsides. Grows in gravelly, rocky, scree soils. Bloom period: May-August 975–2,920 m.	**No Potential for Occurrence:** The project is outside of the elevation range for the species. There are no recent occurrences of the species within 10 miles of the project site.	No
Diplacus mohavensis Mojave monkeyflower	—	—	1B.2	Annual herb found in Joshua tree woodland and Mojavean desert scrub. Often found in washes. Sometimes grows in gravelly, sandy soils. Bloom period: April-June 600–1,270 m.	**Low Potential to Occur:** Project site supports a desert scrub community and sandy soil but there are no recent occurrences of the species within 10 miles of the project site.	No
Dudleya abramsii ssp. *affinis* San Bernardino Mountains dudleya	—	—	1B.2	Perennial herb found in pavement pebble plain, pinyon and juniper woodland, and upper montane coniferous forest. Sometimes grows in carbonate, granitic, quartzite soils. Bloom period: April-July 1,200–2,600 m.	**No Potential for Occurrence:** The project is outside of the elevation range for the species. There are no recent occurrences of the species within 10 miles of the project site.	No
Eremothera boothii ssp. *boothii* Booth's evening-primrose	—	—	2B.3	Annual herb found in Joshua tree woodland, pinyon and juniper woodland, and desert scrub communities. Bloom period: April-September 285–2,400 m.	**High Potential to Occur:** The project site supports a desert scrub community. There are multiple recent occurrences of this species within 5 miles of the project site.	Yes

Scientific Name Common Name	Status USFWS[1]	 CDFW[2]	 CNPS[3]	Habitat Description[4]	Potential to Occur and Rationale	Included in Impact Analysis
Johnstonella costata ribbed cryptantha	—	—	4.3	Annual herb found in desert dunes, Mojavean desert scrub, and Sonoran desert scrub. Grows in sandy soils. Bloom period: February-May -60–500 m.	**No Potential for Occurrence:** The project is outside of the elevation range for the species. There are no recent occurrences of the species within 10 miles of the project site.	No
Loeflingia squarrosa var. *artemisiarum* sagebrush loeflingia	—	—	2B.2	Annual herb found in desert dunes, Great Basin scrub, and Sonoran desert scrub. Grows in sandy soils. Bloom period: April-May 700–1,615 m.	**Moderate Potential to Occur:** The project site supports a desert scrub community and sandy soils. There is one recent occurrence of this species within 10 miles of the project site.	Yes
Lycium torreyi Torrey's box-thorn	—	—	4.2	Perennial shrub found in Mojavean desert scrub and Sonoran desert scrub. Typically found in desert valleys, streambanks, and washes. Grows in rocky, sandy soils. Bloom period: (January-February) March-June (September-November) -50–1,220 m.	**Low Potential to Occur:** The project site supports a desert scrub community and sandy soil but there are no recent occurrences of this species within 10 miles of the project site.	No
Mentzelia eremophila solitary blazing star	—	—	4.2	Annual herb found in Mojavean desert scrub. Bloom period: March-May 700–1,220 m.	**Moderate Potential to Occur:** The project site supports a desert scrub community. There is one recent occurrence of this species within 10 miles of the project site.	Yes
Monardella exilis Mojave monardella	—	—	4.2	Annual herb found in chenopod scrub, desert dunes, Great Basin scrub, Joshua tree "woodland", lower montane coniferous forest, Mojavean desert scrub, and pinyon and juniper woodland. Grows in sandy soils.	**Low Potential to Occur:** The project site supports a desert scrub community and sandy soil but there are no recent occurrences of this species within 10 miles of the project site.	No

Scientific Name Common Name	Status			Habitat Description[4]	Potential to Occur and Rationale	Included in Impact Analysis
	USFWS[1]	CDFW[2]	CNPS[3]			
				Bloom period: April-September 600–2,050 m.		
Muilla coronata crowned muilla	—	—	4.2	Perennial bulbiferous herb found in chenopod scrub, Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland. Bloom period: March-April (May) 670–1,960 m.	**Moderate Potential to Occur:** The project site supports a desert scrub community. There is one recent occurrence of this species within 10 miles of the project site.	Yes
Opuntia basilaris var. *brachyclada* short-joint beavertail	—	—	1B.2	Perennial cactus found in chaparral, Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland. Bloom period: April-June (August) 425–2,015 m.	**Low Potential to Occur:** Project site supports a desert scrub community but there are no recent occurrences of this species within 10 miles of the project site.	No
Pediomelum castoreum Beaver Dam breadroot	—	—	1B.2	Perennial herb found in Joshua tree woodland and Mojavean desert scrub. Typically found in roadsides and washes. Grows in sandy soils. Bloom period: April-May 605–1,525 m.	**High Potential to Occur:** The project site supports a desert scrub community and sandy soils. There is one recent occurrence of this species within 5 miles of the project site.	Yes
Pentachaeta aurea ssp. *aurea* golden-rayed pentachaeta	—	—	4.2	Annual herb found in chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland, and valley and foothill grassland. Bloom period: March-July 80–1,850 m.	**No Potential for Occurrence:** The project site is outside of the known range of the species. There are no recent occurrences of this species within 10 miles of the project site.	No
Sclerocactus polyancistrus Mojave fish-hook cactus	—	—	4.2	Perennial cactus found in Great Basin scrub, Joshua tree woodland, and	**High Potential to Occur:** The project site supports a desert scrub community.	Yes

Scientific Name Common Name	Status USFWS[1]	 CDFW[2]	 CNPS[3]	Habitat Description[4]	Potential to Occur and Rationale	Included in Impact Analysis
				Mojavean desert scrub. Usually grows in carbonate soils. Bloom period: April-July 640–2,320 m.	There is one recent occurrence of this species within 5 miles of the project site.	
Scutellaria bolanderi ssp. *austromontana* southern mountains skullcap	—	—	1B.2	Perennial rhizomatous herb found in chaparral, cismontane woodland, and lower montane coniferous forest. Grows in mesic soils. Bloom period: June-August 425–2,000 m.	**No Potential for Occurrence:** The project site does not support suitable habitat for the species. There are no recent occurrences of this species within 10 miles of the project site.	No
Selaginella asprella bluish spike-moss	—	—	4.3	Perennial rhizomatous moss found in cismontane woodland, lower montane coniferous forest, pinyon and juniper woodland, subalpine coniferous forest, and upper montane coniferous forest. Grows on granitic, rocky substrate. Bloom period: July 1,600–2,700 m.	**No Potential for Occurrence:** The project site does not support suitable habitat for the species and may be outside of the known range of the species. There are no recent occurrences of this species within 10 miles of the project site.	No
Symphyotrichum defoliatum San Bernardino aster	—	—	1B.2	Perennial rhizomatous herb found in cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, meadows and seeps, and valley and foothill grassland. Typically found on the banks of ditches, streams, and springs. Grows in mesic or vernally mesic soils. Bloom period: July-November 2–2,045 m.	**No Potential for Occurrence:** The project site does not support suitable habitat for the species. There are no recent occurrences of this species within 10 miles of project site.	No

Scientific Name Common Name	Status USFWS[1]	 CDFW[2]	 CNPS[3]	Habitat Description[4]	Potential to Occur and Rationale	Included in Impact Analysis
Yucca brevifolia Joshua tree	—	SC	—	Perennial monocotyledonous tree found in desert scrub and Joshua tree woodland. Bloom period: March-June 400–2,300 m.	**Present:** The project site supports a desert scrub community and western Joshua trees were recorded on-site in 2024. There are multiple recent occurrences of this species within 5 miles of the project site.	Yes

Code Designations

[1] Federal Status: 2025 USFWS Listing

FE = Listed as endangered under the Endangered Species Act
FT = Listed as threatened under the Endangered Species Act
FC = Candidate for listing (threatened or endangered) under Endangered Species Act
FD = Delisted in accordance with the Endangered Species Act
— = Not federally listed

[2] State Status: 2025 CDFW Listing

SE = Listed as endangered under the California Endangered Species Act
ST = Listed as threatened under the California Endangered Species Act
SC = Candidate for listing under the California Endangered Species Act
SSC = Species of Special Concern as identified by CDFW
CFP = Listed as fully protected under California law
CR = Species identified as rare by CDFW
— = Not state listed

[3] CNPS: 2025 CNPS Listing

Rank 1A Plants presumed Extinct in California.
Rank 1B Plants Rare, Threatened, or Endangered in California and elsewhere.
Rank 2 Plants Rare, Threatened, or Endangered in California, but more numerous elsewhere.
Rank 3 Plants about which we need more information—A Review List.
Rank 4 Plants of limited distribution—A Watch List.
Blooming period: Months in parentheses are uncommon.

[4] **Habitat description:** Habitat description adapted from CNDDB (CDFW 2025) and CNPS online inventory (CNPS 2025).

Appendix C:

Site Photographs

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Photograph 1: View of the *Larrea tridentata* Shrubland Alliance in the western portion of the project site, facing northeast. This ground surface in this area of the project site had been significantly disturbed in the past and the scrub community there in recovery.



Photograph 2: View of the *Larrea tridentata* Shrubland Alliance in the eastern portion of the project site, facing north.



Photograph 3: View of the *Larrea tridentata* Shrubland Alliance on the western portion of the project site and development adjacent to the site, facing south.



Photograph 4: View of the *Larrea tridentata* Shrubland Alliance and development adjacent to the project site, facing east.



Photograph 5: View of the *Larrea tridentata* Shrubland Alliance in the central portion of the project site, facing northeast. This ground surface in this area of the project site had been significantly disturbed in the past and the scrub community there in recovery.



Photograph 6: View of the *Larrea tridentata* Shrubland Alliance in the eastern portion of the project site, facing west. The scrub community in this portion of the project site is less disturbed than the scrub community on the western and central portions of the project site.



Photograph 7: View of the *Larrea tridentata* Shrubland Alliance in the eastern portion of the project site, facing west.



Photograph 8: View of the *Larrea tridentata* Shrubland Alliance in the eastern portion of the project site, facing west.



Photograph 9: View of the *Larrea tridentata* Shrubland Alliance in the eastern portion of the project site, facing west.



Photograph 10: View of the *Larrea tridentata* Shrubland Alliance in a drainage in the eastern portion of the project site, facing west.



Photograph 11: View of the *Larrea tridentata* Shrubland Alliance in a drainage in the eastern portion of the project site, facing west.



Photograph 12: View of the *Larrea tridentata* Shrubland Alliance in the eastern portion of the project site, facing west.

Appendix D:

List of Plant Species Observed On-site

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Table 1: Plant Species Observed

Common Name	*Scientific Name*	Status
White bursage	*Ambrosia salsola*	Native
Fourwing saltbush	*Atriplex canescens*	Native
Dapple pod locoweed	*Astragalus lentiginosus* var. *variabilis*	–
Desert mariposa lily	*Calochortus kennedyi*	Native
silver cholla	*Cylindropuntia echinocarpa*	Native
Nevada Mormon tea	*Ephedra nevadensis*	Native
desert woollystar	*Eriastrum eremicum*	Native
rubber rabbitbrush	*Ericameria nauseosa var.*	–
Canada horseweed	*Erigeron canadensis*	Native
redstem stork's bill	*Erodium cicutarium*	Cal-IPC: L
rattlesnake sandmat	*Euphorbia albomarginata*	Native
short podded mustard	*Hirschfeldia incana*	Cal-IPC: M
foxtail barley	*Hordeum murinum*	Cal-IPC: M
winterfat	*Krascheninnikovia lanata*	Native
prickly lettuce	*Lactuca serriola*	Non-native
creosote bush	*Larrea tridentata*	Native
Mojave royal lupine	*Lupinus odoratus*	Native
Anderson's desert thorn	*Lycium andersonii*	Native
desert dandelion	*Malacothrix glabrata*	Native
alfalfa	*Medicago sativa*	Non-native
Jerusalem thorn	*Parkinsonia aculeata*	Non-native
Russian thistle	*Salsola tragus*	Cal-IPC: L
common Mediterranean grass	*Schismus barbatus*	Cal-IPC: L
desert globemallow	*Sphaeralcea ambigua*	Native
brownplume wirelettuce	*Stephanomeria pauciflora*	Native
Indian rice grass	*Stipa hymenoides*	Native
African mustard	*Strigosella africana*	Non-native
Athel tree	*Tamarix aphylla*	Cal-IPC: L
Joshua tree	*Yucca brevifolia*	State Candidate

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Appendix E:

Western Joshua Tree Inventory Report

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Memorandum

Date: March 24, 2025

To: Michael Mileski, Mileski Living Trust C/O Synergy Consulting

From: Michael W. Tuma, PhD, Principal Biologist, FirstCarbon Solutions

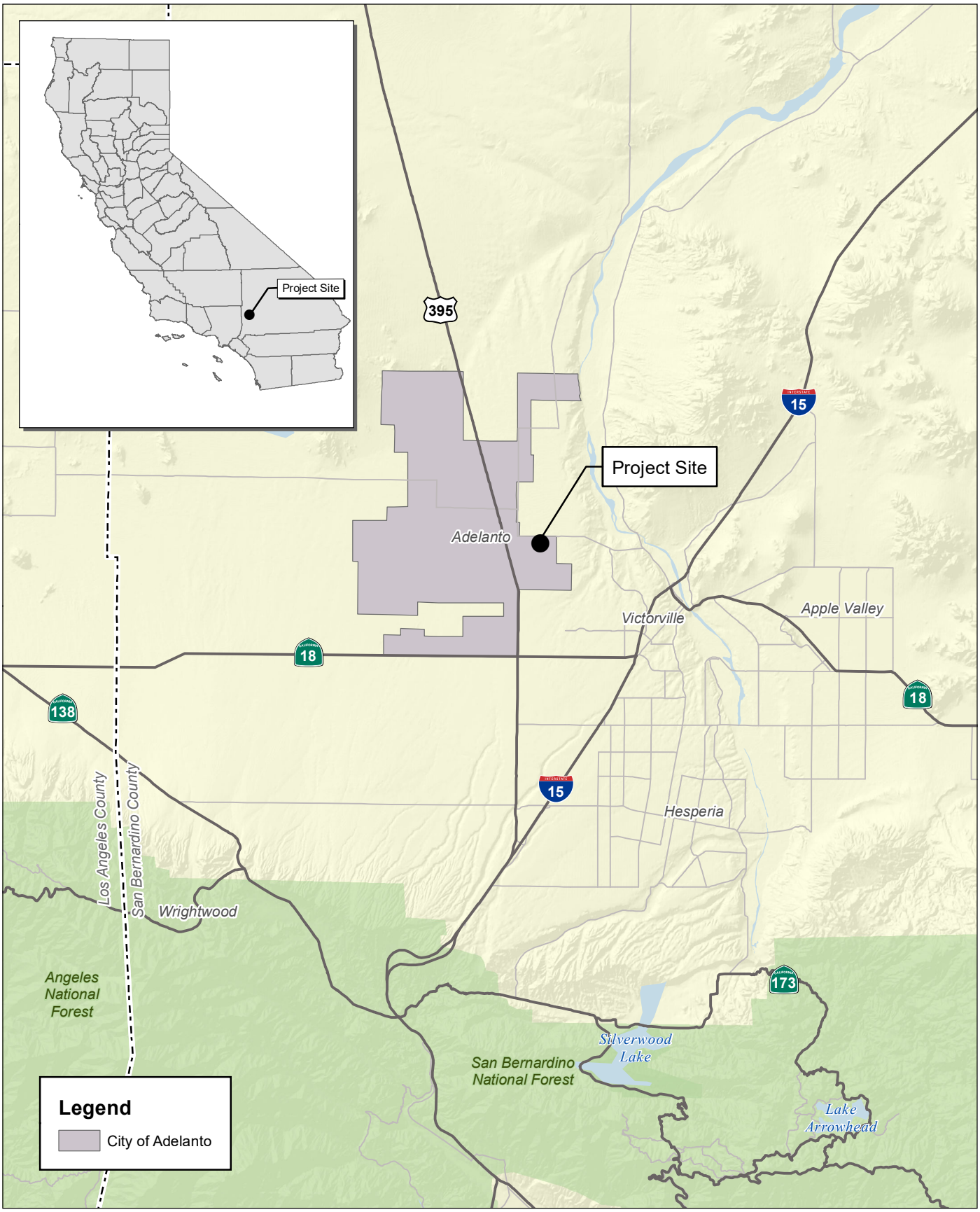
Subject: Joshua Tree Inventory Report for the Proposed Adelanto Gateway Logistics Center Project

INTRODUCTION

At the request of Mileski Living Trust C/O Synergy Consulting, FirstCarbon Solutions (FCS) conducted an inventory of western Joshua trees (*Yucca brevifolia*) at the proposed Adelanto Gateway Logistics Center Project (proposed project) located in the City of Adelanto in San Bernardino County, California. The inventory included a survey of the project site to search for western Joshua trees, record their locations, and perform measurements of their stems. This memorandum also includes a review of permitting needs for the Western Joshua Tree Conservation Act Incidental Take Permit (ITP) process.

PROJECT LOCATION AND DESCRIPTION

The approximately 487.20-acre project site is located in the City of Adelanto, in San Bernardino County, California (Exhibit 1). The project site is centered around 34.568588° latitude and -117.387749° longitude. The location of the project site within the Mojave Desert region is shown on Exhibit 1, and the project site boundaries on a recent high-resolution aerial image are shown on Exhibit 2. The project site is located on the *Adelanto, California* United States Geological Survey (USGS) 7.5-minute Topographic Quadrangle Map, Township 6 North, Range 5 West, Section 34 (Exhibit 3). The project site comprises Assessor's Parcel Numbers (APNs): 0459-451-52 through -62 and 0459-841-01 through -19.



Source: Census 2000 Data, The California Spatial Information Library (CaSIL).

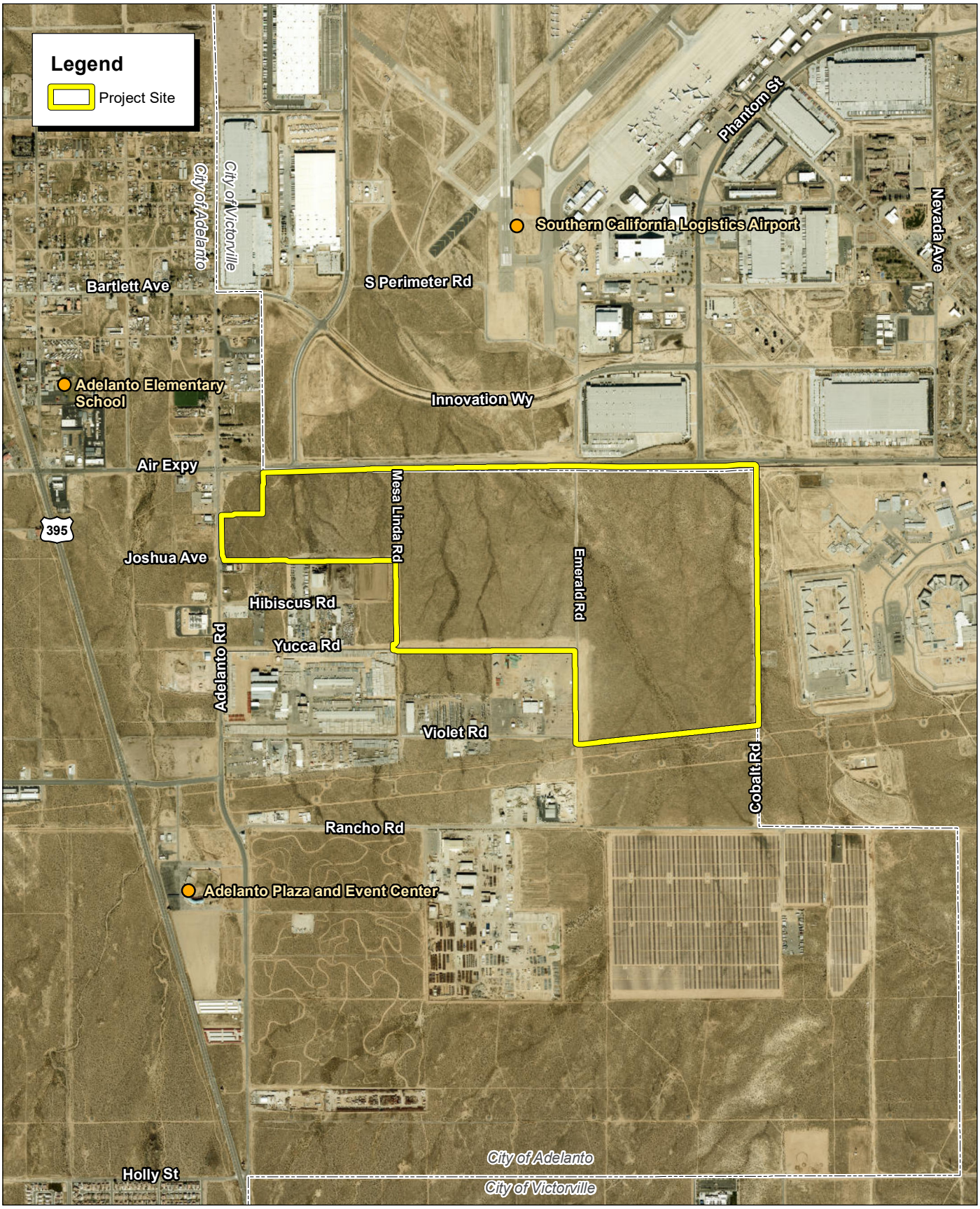
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5 2.5 0 5
Miles

Exhibit 1
Regional Location Map

60520001 • 03/2025 | 1_regional.mxd

MILESKI LIVING TRUST C/O SYNERGY CONSULTING
ADELANTO GATEWAY LOGISTICS CENTER PROJECT
WESTERN JOSHUA TREE INVENTORY REPORT



Source: ESRI Aerial Imagery. BLUE Engineering & Consulting, Inc.

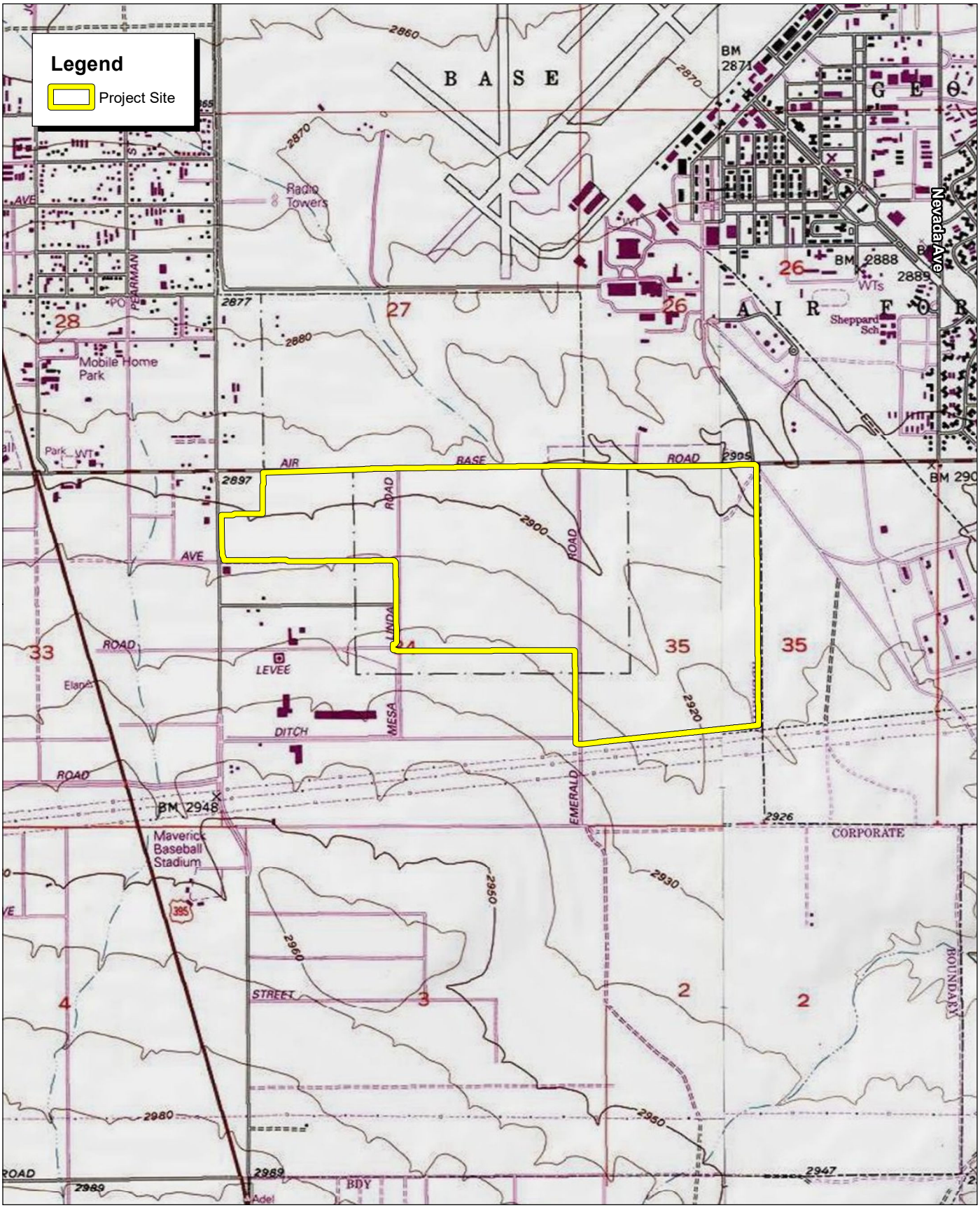
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2,000 1,000 0 2,000
Feet

Exhibit 2
Local Vicinity Map
Aerial Base

60520001 • 03/2025 | 2_local_vicinity_aerial.mxd

MILESKI LIVING TRUST C/O SYNERGY CONSULTING
ADELANTO GATEWAY LOGISTICS CENTER PROJECT
WESTERN JOSHUA TREE INVENTORY REPORT



Source: USGS Adelanto & Victorville 7.5' Quadrangle / T06N R05W Sec 26,27,34,35.

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2,000 1,000 0 2,000
Feet

Exhibit 3
Local Vicinity Map
Topographic Base

The project site is situated in an area characterized by urban development, including the Federal Correctional Complex to the east of the site and several corporate businesses, including a trucking company, concrete company, and a diesel engine repair shop to the south. Additionally, a cannabis store, open land, and Adelanto Road are located to the west of the site and Air Expressway, the DHL Supply Chain, and the Southern California Logistics Airport are located to the north. However, undeveloped land is also present to the west, north, and east of the project site. Significant landmarks in the project vicinity include U.S. Route 395 located approximately 0.45 mile west and the Southern California Logistics Airport located approximately 0.34 mile north of the project site.

The proposed project would consist of an industrial distribution facility comprised of industrial warehouses and office space.

CONSERVATION STATUS OF WESTERN JOSHUA TREES

The California Game and Fish Commission received a petition from the Center for Biological Diversity to list the western Joshua tree under the California Endangered Species Act (CESA) on October 21, 2019. The Commission voted to accept the petition for consideration on September 22, 2020, thereby elevating the conservation status of the species to a Candidate for listing under CESA. As a Candidate species, it is afforded the same protections as species that are listed under CESA, including prohibitions of take. Project applicants are required under CESA to obtain an ITP from the California Department of Fish and Wildlife (CDFW) for impacts to western Joshua trees and their seedbanks.

Subsequently (in July 2023), the Western Joshua Tree Conservation Act (WJTCA) was signed into law, which prohibits unpermitted killing or removal of Joshua trees and establishes a fund to acquire and manage suitable habitat for the species. Project applicants are required to obtain an ITP through CDFW and, on a per-Joshua tree basis, pay an in lieu mitigation fee to the fund under the WJTCA. In lieu mitigation fees are assessed based on the height of the western Joshua trees and the area where they occur. Project applicants that obtain an ITP through the WJTCA are not required to obtain an ITP through CESA.

METHODS

FCS Biologists performed a survey of the project site to search for western Joshua trees. Survey transects were spaced at 10 meters, allowing for visual coverage of 100 percent of the project site. The Biologists collected tree measurement data and assessments of maturity and asexual reproduction. The location of each individual Joshua tree was recorded using ArcGIS Collector. The approximate height and canopy width of each tree was recorded using the Arboreal–Tree Height app. Each Joshua tree was assessed for clonal or asexual reproduction via rhizomes, branch sprouts, or basal sprouts, and each stem emerging from the ground was counted and measured.

RESULTS

The FCS Biologist recorded a total of 19 live, genetically distinct western Joshua trees on the project site (Exhibit 4). Four of the western Joshua trees (JT-01, JT-09, JT-11, and JT-19) exhibit clonal growth, with 1 to 6 rhizomes per individual. Seven western Joshua trees (JT-02, JT-03, JT-04, JT-05, JT-06, JT-07, and JT-14) on the project site are immature single-trunk specimens; and two (JT-11 and JT-19) are immature specimens with immature rhizomes. Eight western Joshua trees (JT-08, JT-10, JT-12, JT-13, JT-15, JT-16, JT-17, and JT-20) are mature, single-trunk specimens; and two (JT-01 and JT-09) are mature specimens with immature rhizomes. A total of 36 stems, comprising trunks and rhizomes, were recorded on-site. Twenty western Joshua tree stems (trunks and rhizomes) are less than 1 meter in height (Size Class A); 14 stems are between 1 and 5 meters in height (Size Class B); and two stems are greater than 5 meters in height (Size Class C). Attributes of the western Joshua trees recorded on-site are provided in Attachment A. Photographs of the western Joshua trees recorded on-site are presented in Attachment B.

RECOMMENDATIONS FOR PERMITTING

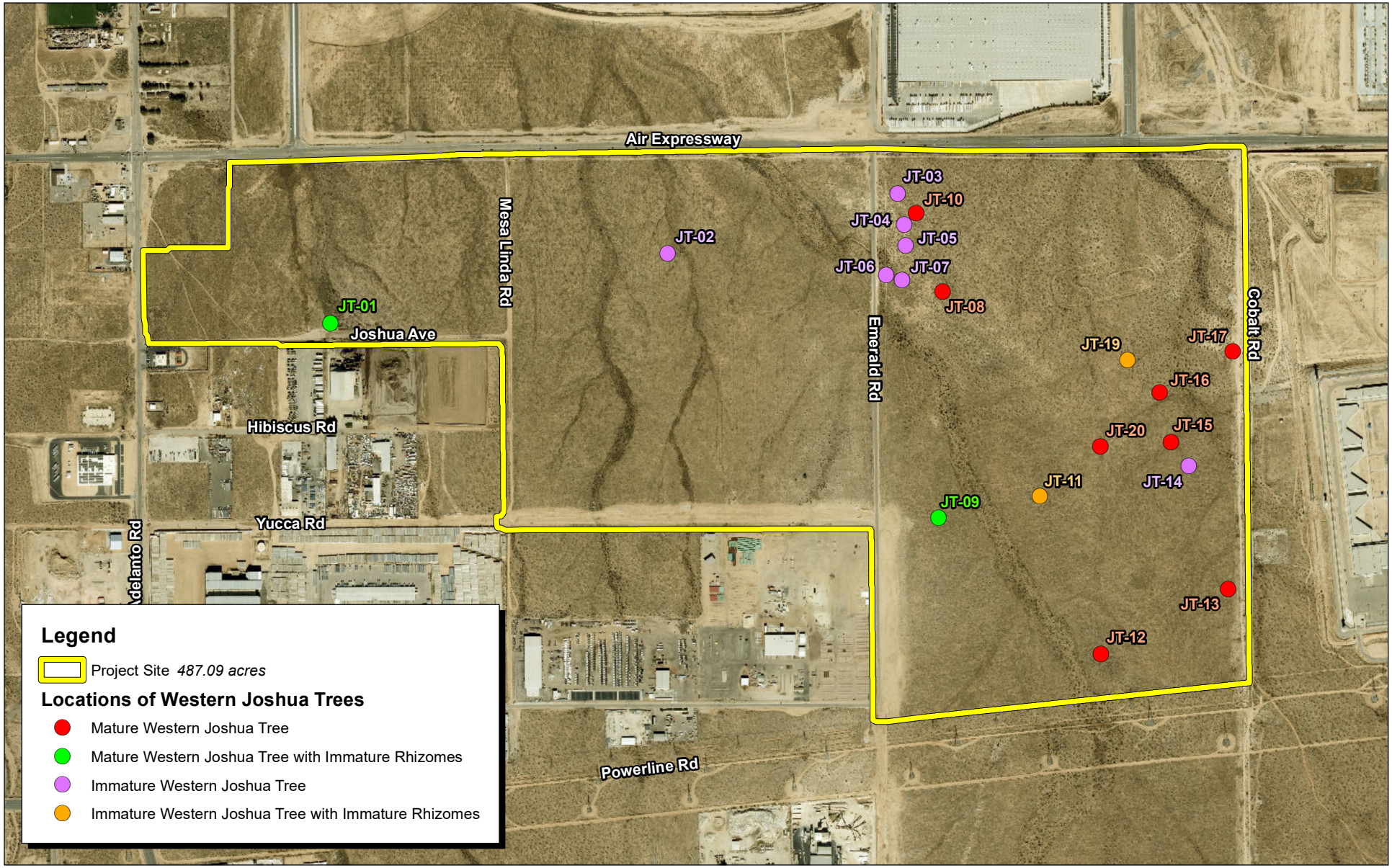
The project applicant would be required to obtain an ITP from CDFW through the WJTCA process. The project site is located in the reduced fee area as defined in California Fish and Game Code Section 1927.3 (d), which specifies the following fees for take of western Joshua trees:

A. One thousand dollars ($1,000) for each western Joshua tree 5 meters or greater in height.

B. Two hundred dollars ($200) for each western Joshua tree 1 meter or greater but less than 5 meters in height.

C. One hundred fifty dollars ($150) for each western Joshua tree less than 1 meter in height.

These in lieu mitigation fees would be paid to the Western Joshua Tree Mitigation Fund. For the proposed project, FCS estimates that the in lieu mitigation fee would be $7,800 for take of western Joshua trees on the project site. Prior to CDFW assessing the in lieu mitigation fees, the project applicant would be required to submit an ITP application form. The application form would require data collected by a Certified Arborist or a Biologist with expertise in western Joshua tree data recording. Although CDFW would process the ITP applications “as expeditiously as possible,” FCS estimates that the approval process could take as long as 6–12 months. When the application is approved, CDFW will invoice the project applicant with instructions for mailing a check for the in lieu mitigation fee to the corresponding CDFW Regional Office.



Source: ESRI Aerial Imagery. BLUE Engineering & Consulting, Inc.

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1,000 500 0 1,000
Feet

Exhibit 4
Locations of Western Joshua Trees on the Project Site

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Attachment A:

Western Joshua Tree Inventory

Western Joshua Tree Inventory and Attribute Table for the Adelanto Gateway Logistics Center Project

Tree ID	Latitude	Longitude	Size Class	Stem Length	Additional Notes
JT-01	34.568704	117.396082	A	1.14	Immature main trunk with 6 live immature rhizomes
JT-01a	34.568704	117.396082	A	0.27	Immature rhizome stem
JT-01b	34.568704	117.396082	A	0.22	Immature rhizome stem
JT-01c	34.568704	117.396082	A	0.28	Immature rhizome stem
JT-01d	34.568704	117.396082	A	0.23	Immature rhizome stem
JT-01e	34.568704	117.396082	A	0.85	Immature rhizome stem
JT-01f	34.568704	117.396082	A	0.23	Immature rhizome stem
JT-02	34.570037	117.387973	B	1.57	Immature single trunk
JT-03	34.571204	117.382437	B	2	Immature single trunk
JT-04	34.570589	117.382295	B	2.1	Immature single trunk
JT-05	34.570179	117.382265	B	2.4	Immature main trunk with 1 dead immature rhizome
JT-06	34.56981	117.382731	B	2.2	Immature single trunk
JT-07	34.569493	117.382352	A	0.57	Immature single trunk, most leaves yellowed
JT-08	34.569257	117.381383	B	3.1	Mature single trunk
JT-09	34.564748	117.381516	B	2.3	Mature main trunk with 5 live immature rhizomes
JT-09a	34.564748	117.381516	A	0.13	Immature rhizome stem
JT-09b	34.564748	117.381516	A	0.1	Immature rhizome stem
JT-09c	34.564748	117.381516	A	0.11	Immature rhizome stem
JT-09d	34.564748	117.381516	A	0.1	Immature rhizome stem
JT-09e	34.564748	117.381516	A	0.12	Immature rhizome stem
JT-10	34.570809	117.381998	B	3	Mature single trunk
JT-11	34.565166	117.379079	B	2.2	Immature main trunk with 4 live immature rhizomes
JT-11a	34.565166	117.379079	A	0.84	Immature rhizome stem
JT-11b	34.565166	117.379079	A	0.13	Immature rhizome stem
JT-11c	34.565166	117.379079	A	0.12	Immature rhizome stem
JT-11d	34.565166	117.379079	A	0.17	Immature rhizome stem

Tree ID	Latitude	Longitude	Size Class	Stem Length	Additional Notes
JT-12	34.562037	117.37764	C	6.1	Mature single trunk
JT-13	34.563303	117.37457	B	2.4	Mature single trunk
JT-14	34.565755	117.375499	B	2.3	Immature single trunk
JT-15	34.566222	117.375928	B	4.1	Dead main trunk with 1 live mature rhizome
JT-16	34.567214	117.376177	C	6.3	Mature single trunk
JT-17	34.568024	117.374424	B	3.6	Mature single trunk
JT-19	34.567871	117.376953	A	0.6	Immature main trunk with 2 live immature rhizomes
JT-19a	34.567871	117.376953	A	0.45	Immature rhizome stem
JT-19b	34.567871	117.376953	A	0.16	Immature rhizome stem
JT-20	34.566152	117.377622	B	3.4	Mature single trunk

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Attachment B:

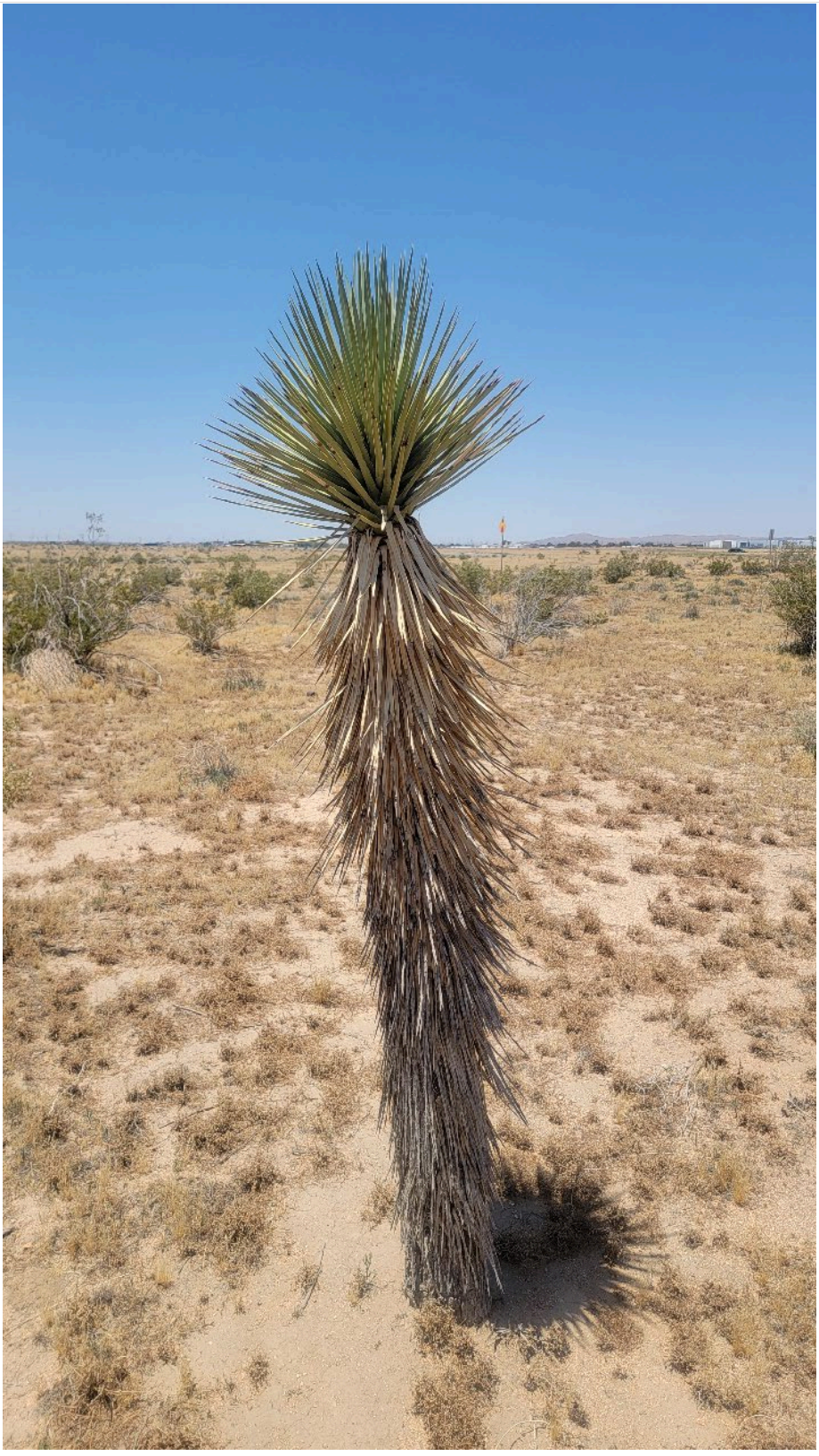
Western Joshua Tree Photographs



Photograph 1: Western Joshua tree JT-01 with rhizome stems 01a, 01b, 01c, 01d, 01e, and 01f



Photograph 2: Western Joshua tree JT-02



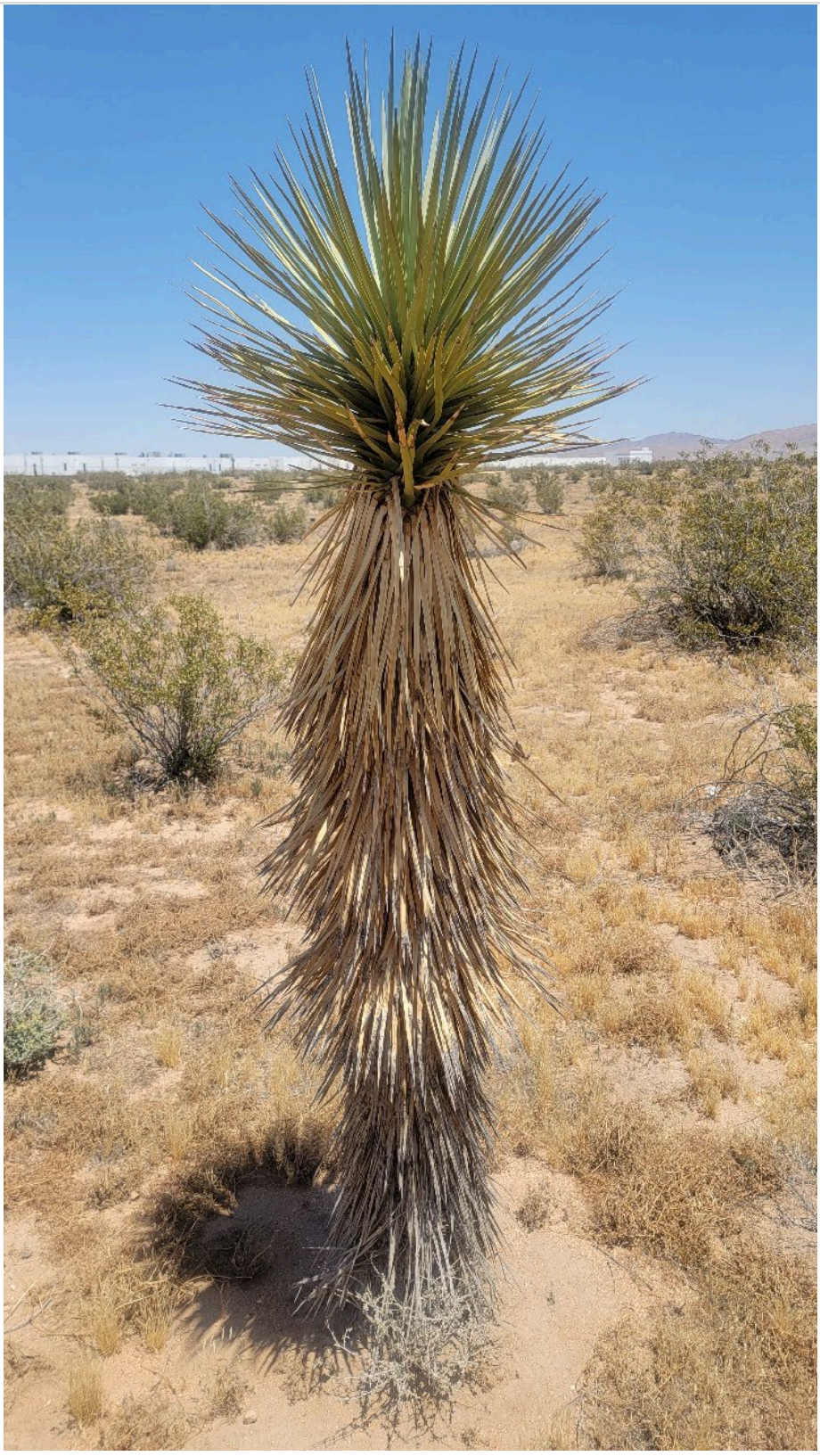
Photograph 3: Western Joshua tree JT-03



Photograph 4: Western Joshua tree JT-04



Photograph 5: Western Joshua tree JT-05



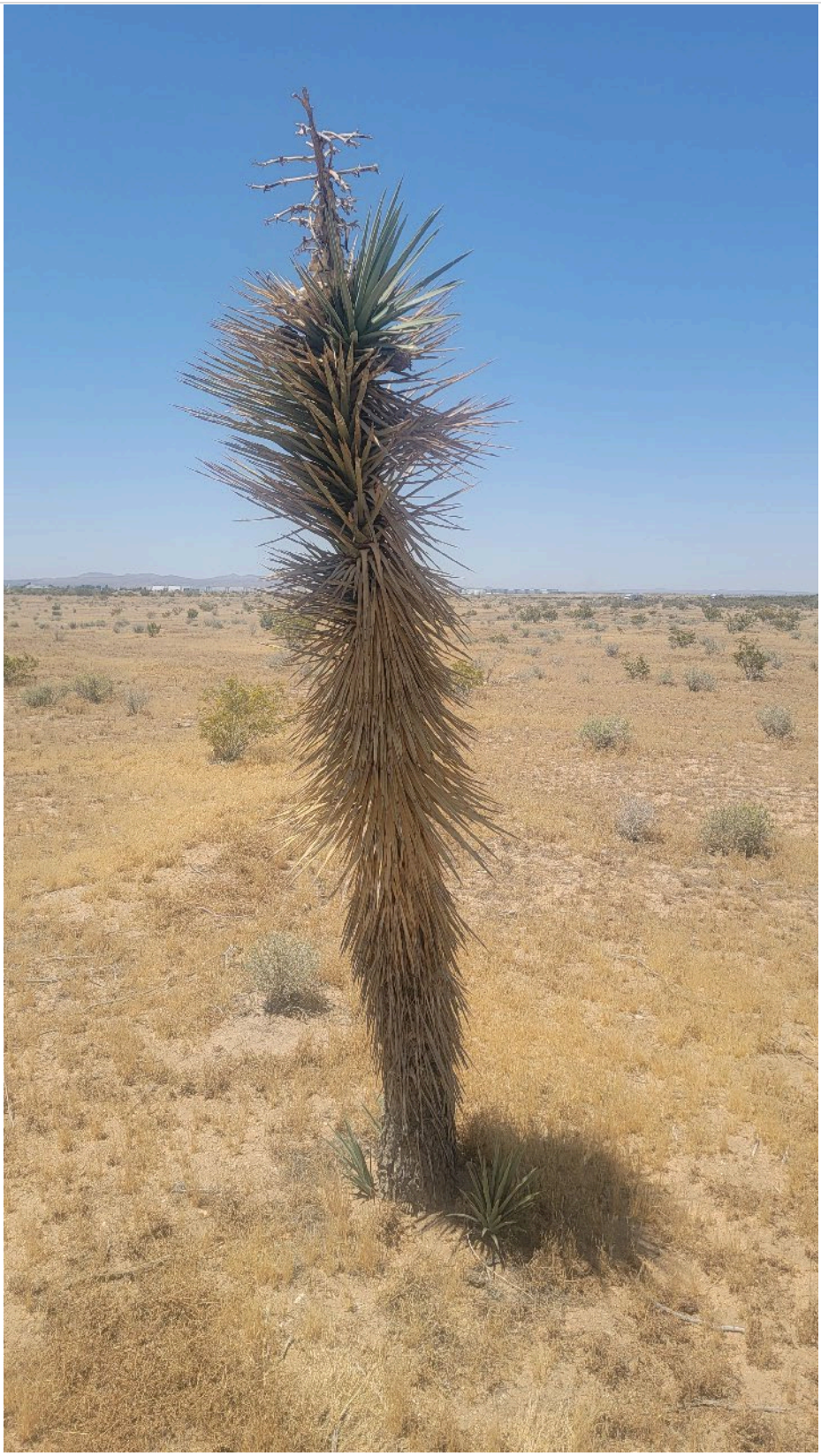
Photograph 6: Western Joshua tree JT-06



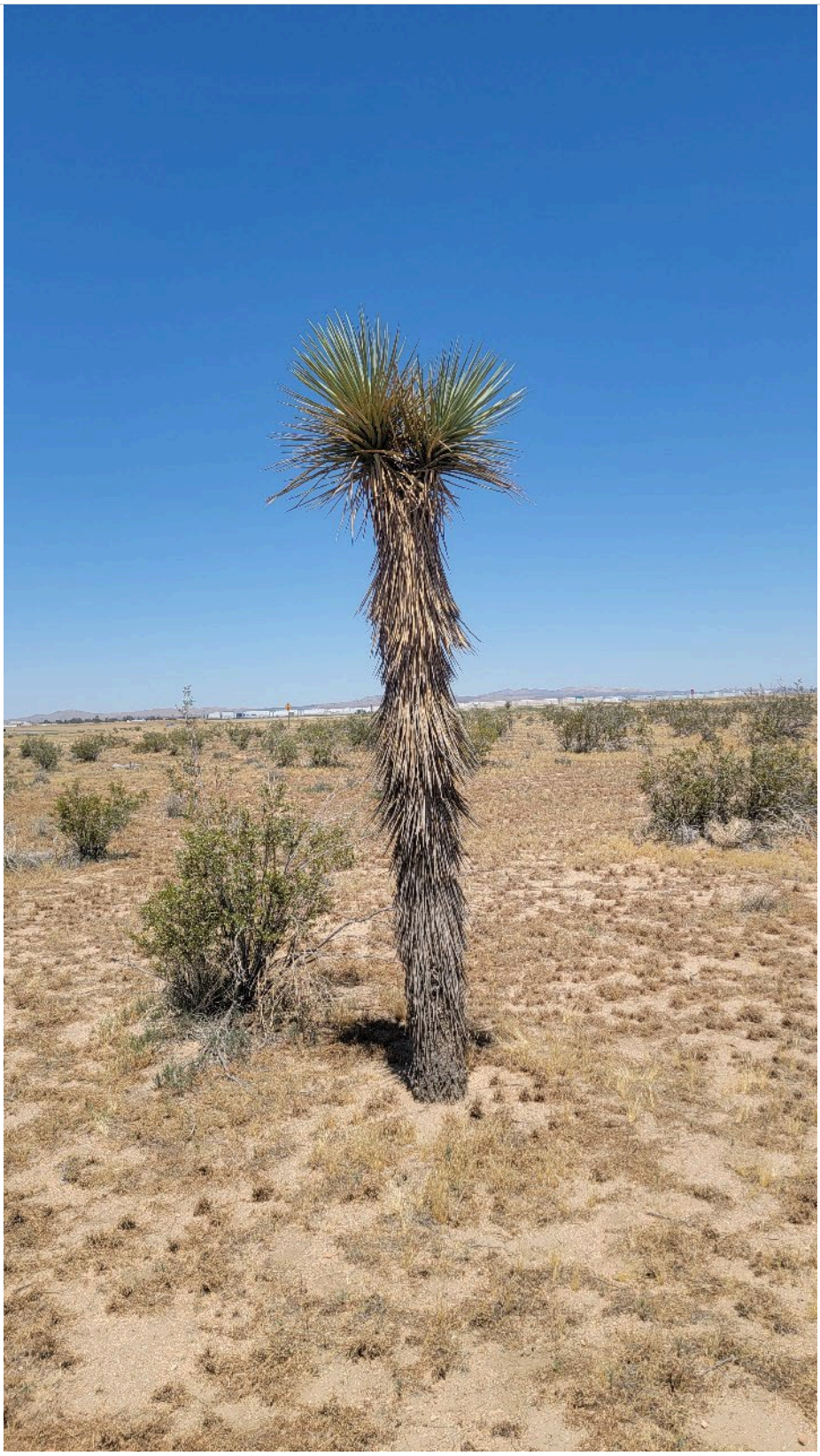
Photograph 7: Western Joshua tree JT-07



Photograph 8: Western Joshua tree JT-08



Photograph 9: Joshua Tree JT-09 with rhizome stems 09a, 09b, 09c, 09d, and 09e



Photograph 10: Western Joshua tree JT-10



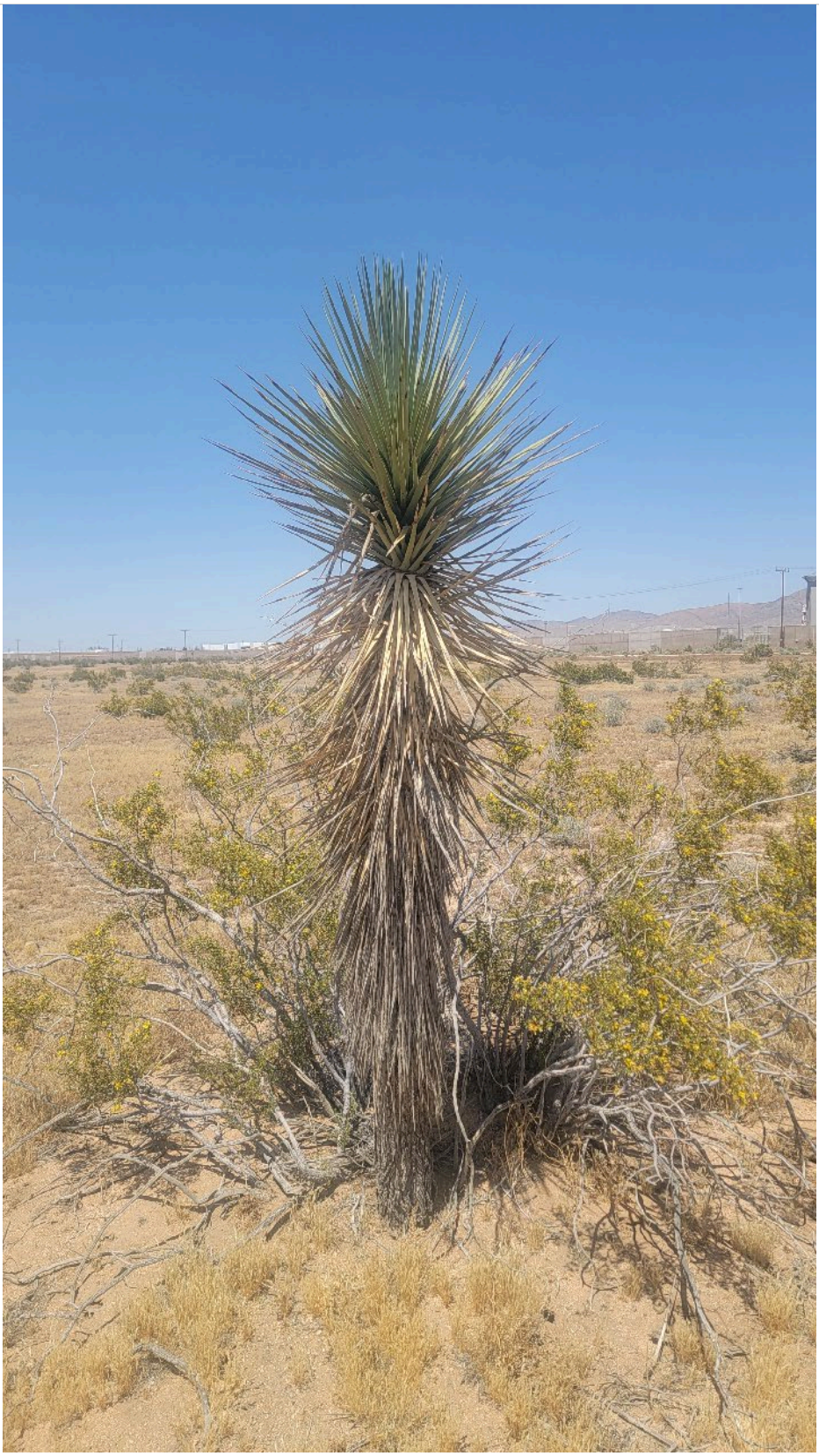
Photograph 11: Western Joshua tree JT-11 with rhizome stems 11a, 11b, 11c, and 11d



Photograph 12: Western Joshua tree JT-12



Photograph 13: Western Joshua tree JT-13



Photograph 14: Western Joshua tree JT-14



Photograph 15: Western Joshua tree JT-15



Photograph 16: Western Joshua tree JT-16



Photograph 17: Western Joshua tree JT-17



Photograph 18: Western Joshua tree JT-19



Photograph 19: Western Joshua tree JT-20

Appendix F:

California Native Species Field Survey Form

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CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code BEL24F0060
Quad code 3411754
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Yucca brevifolia*

Common name: western Joshua tree

Date of field work (mm-dd-yyyy): 05-31-2024

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Kayla F. Belanger

Affiliation: First Carbon Solutions (FCS)

Address: 3378 Lathrop Ave , Simi Valley, CA 93063

Email: kayla.belanger@comcast.net

Phone: (503) 789-6517

Other observers:

DETERMINATION

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other: 6 years experience in conducting Yucca brevifolia surveys

Identification explanation: I have been conducting Yucca brevifolia health assessments and surveys for the past 6 years and am very confident with my identification of this species

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 20

Collection? No **Collection number:**

Museum/Herbarium:

PLANT INFORMATION

Phenology:

vegetative	flowering	fruiting
100 %	0 %	0 %

SITE INFORMATION

Habitat description: Sandy loamy soil dominated primarily with Creosote bush and white bursage vegetation

Slope: 2%

Landowner/manager: Private

Aspect: North and west

Site condition + population viability: Fair

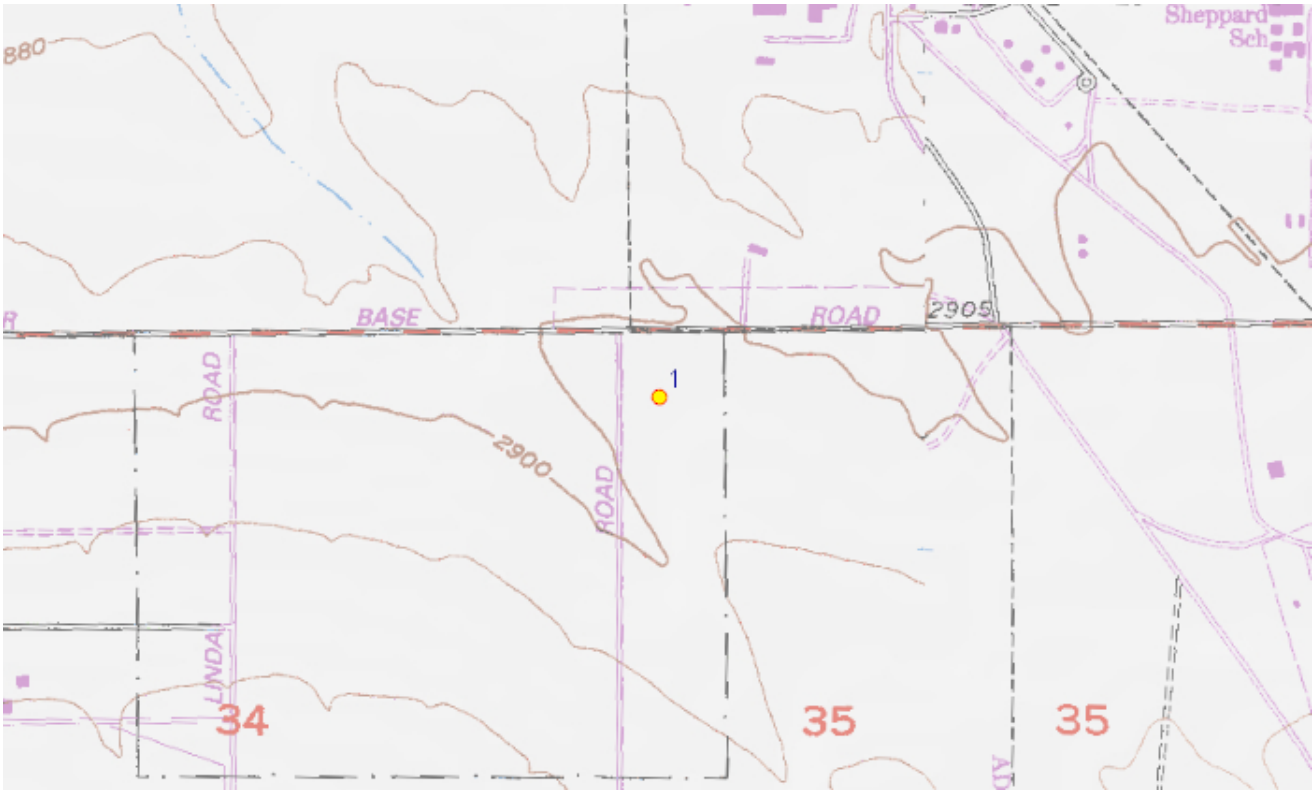
Immediate & surrounding land use: The project site is bordered by Air Expressway and the Southern California Logistics Airport to the north, the Victorville Federal Corrections Complex to the east, and roads and commercial development to the south.

Visible disturbances: Dirt access roads run throughout the site, trash is on site, and dumping of soil and woodchip debris piles have been documented

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Adelanto	2907	34.57080	-117.38199	464961	3825515	11
	Public Land Survey	**Feature Comment**						
1	S T06N R05W 35	Western Joshua tree						

The mapped feature is accurate within: 5 m

Source of mapped feature: GPS points taken during survey

Mapping notes:

Location/directions comments:

Attachment(s): 60520001_JT_Photos.zip, Photos of Yucca brevifolia individuals on site