BIOLOGICAL TECHNICAL REPORT

FOR THE

OTTAWA BUSINESS CENTER PROJECT

LOCATED IN THE CITY OF VICTORVILLE SAN BERNARDINO COUNTY, CALIFORNIA

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1.0 INTRODUCTION

1.1 Background and Scope of Work

This document provides the results of general biological surveys and focused biological surveys for the Ottawa Business Center Project (the Project) located in the City of Victorville, San Bernardino County, California. This report identifies and evaluates impacts to biological resources associated with the proposed Project in the context of the California Environmental Quality Act (CEQA), and State and Federal regulations such as the Endangered Species Act (ESA), Clean Water Act (CWA), and the California Fish and Game Code.

The scope of this report includes a discussion of existing conditions for an overall 53.96-acre Study Area, including the onsite portion of the Project (51.92 acres) and the offsite improvements areas (2.04 acres). The report documents all methods employed regarding the general biological surveys and focused biological surveys, the documentation of botanical and wildlife resources identified (including special-status species), and an analysis of impacts to biological resources. Methods of the study include a review of relevant literature, field surveys, and a Geographical Information System (GIS)-based analysis of vegetation communities. As appropriate, this report is consistent with accepted scientific and technical standards and survey guideline requirements issued by the U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Wildlife (CDFW), the California Native Plant Society (CNPS), and other applicable agencies/organizations.

The field study focused on a number of primary objectives that would comply with CEQA requirements, including (1) general reconnaissance survey and vegetation mapping; (2) general biological surveys; (3) habitat assessments for special-status plant species; (4) Joshua tree surveys; (5) habitat assessments for special-status wildlife species and focused wildlife surveys; and (6) a jurisdictional delineation. Observations of all plant and wildlife species were recorded during the general biological surveys.

1.2 Project Location

The Project site is in the City of Victorville, San Bernardino County, California [Exhibit 1 – Regional Map] and is located within Section 27 of the U.S. Geological Survey (USGS) 7.5" quadrangle map Hesperia, California [Exhibit 2 – Vicinity Map]. The Project site is bordered by Ottawa Street to the south, Hesperia Road to the west, Terra Linda Street to the north and the railroad to the east.

1.3 Project Description

The Project Applicant proposes development of the 51.92-acre Project site with a 996,194 square foot (sf) warehouse building with 986,194 sf allocated to warehousing and logistics related uses and 10,000 sf allocated to office use. The proposed building would feature 120 truck trailer dock doors on the northern elevation and 116 truck trailer dock doors on the southern elevation (236 total dock doors). The Project would include 328 parking stalls along the eastern and western edges of the Project site and 306 truck trailer parking stalls on the

northern and southern edges of the Project site. Access to the Project site would be provided by two driveways along Ottawa Street on the southern edge of the Project site. The Project would include a proposed rail spur which connects to the Burlington North Santa Fe Railroad along the eastern edge of the proposed building. The Project site is vacant and undeveloped under existing conditions.

2.0 METHODOLOGY

In order to adequately identify biological resources in accordance with the requirements of CEQA, Glenn Lukos Associates (GLA) assembled biological data consisting of three main components:

- Delineation of aquatic resources (including wetlands and riparian habitat) subject to the jurisdiction of the U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board (Regional Board), and CDFW;
- Performance of vegetation mapping for the Project site; and
- Performance of habitat assessments, and site-specific biological surveys, to evaluate the presence/absence of special-status species in accordance with the requirements of CEQA.

The focus of the biological surveys was determined through initial site reconnaissance, a review of the CNDDB [CDFW 2021], CNPS 8th edition online inventory (CNPS 2021), Natural Resource Conservation Service (NRCS) soil data, other pertinent literature, and knowledge of the region. Site-specific general surveys within the Project site were conducted on foot in the proposed development areas for each target plant or animal species identified below.

Vegetation was mapped directly onto a 200-scale (1" = 200') aerial photograph following the currently accepted List of Vegetation Alliances and Associations (or Natural Communities List). The list is based on A Manual of California Vegetation, Second Edition or MCVII, which is the California expression of the National Vegetation Classification. Vegetation communities not listed under the above-mentioned vegetation classification systems were named based on the dominant plant species present.

2.1 Summary of Surveys

GLA conducted biological studies in order to identify and analyze actual or potential impacts to biological resources associated with development of the Project site. Table 2-1 below provides a summary list of survey dates, survey types and personnel. Observations of all plant and wildlife species were recorded during each of the above-mentioned survey efforts. The studies conducted include the following:

- Performance of vegetation mapping;
- Performance of site-specific habitat assessments and biological surveys to evaluate the potential presence/absence of special-status species (or potentially suitable habitat) to the satisfaction of CEQA and federal and state regulations; and

- Delineation/evaluation of aquatic resources (including wetlands and riparian habitat) potentially subject to the jurisdiction of the U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board (Regional Board), and CDFW.

Table 2-1. Summary of Biological Surveys for the Project Site.

Survey Type	2021 Survey Dates	Biologists
General Biological Survey and Habitat Assessments	1/28	JF
Burrowing Owl Surveys	4/14, 5/18, 6/9, 7/2	JF
Desert Tortoise Surveys	4/14	JF
Joshua Tree Inventory	4/14, 5/28	JF
Rare Plant Surveys	4/14, 6/9	JF
Mohave Ground Squirrel Surveys	Visual Survey: 4/12 First Trapping Session: 4/22 to 4/26 Second Trapping Session: 5/21 to 5/25 Third Trapping Session: 7/1 to 7/5	PV
Vegetation Mapping	9/9	JF/CW
Jurisdictional Delineation	9/9	JF/CW

JF = Jason Fitzgibbon; CW = Chris Waterston; PV = Philippe Vergne (ENVIRA)

Individual plants and wildlife species are evaluated in this report based on their "special-status." For the purpose of this report, plants were considered "special-status" based on one or more of the following criteria:

- Listing through the Federal and/or State Endangered Species Act (ESA);
- Occurrence in the CNPS Rare Plant Inventory (Rank 1A/1B, 2A/2B, 3, or 4); and/or
- Occurrence in the CNDDB inventory.

Wildlife species were considered "special-status" based on one or more of the following criteria:

- Listing through the Federal and/or State ESA; and
- Designation by the State as a Species of Special Concern (SSC) or California Fully Protected (CFP) species.

Vegetation communities and habitats were considered "special-status" based on one or more of the following criteria:

- Global (G) and/or State (S) ranking of category 3 or less based on CDFW (see Section 3.2.2 below for further explanation); and
- Riparian habitat.

2.2 Botanical Resources

A site-specific survey program was designed to accurately document the botanical resources within the Project site, and consisted of five components: (1) a literature search; (2) preparation of a list of target special-status plant species and sensitive vegetation communities that could occur within the Project site; (3) general field reconnaissance surveys; (4) vegetation mapping according to the List of Vegetation Alliances and Associations; and (5) habitat assessments and focused surveys for special-status plants.

2.2.1 Literature Search

Prior to conducting fieldwork, pertinent literature on the flora of the region was examined. A thorough archival review was conducted using available literature and other historical records. These resources included the following:

- California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39) (CNPS 2021); and

- CNDDB for the USGS 7.5' quadrangles: Hesperia and surrounding quadrangles (CNDDB 2021).

2.2.2 Vegetation Mapping

Vegetation communities within the Project site were mapped according to the List of Vegetation Alliances and Associations (or Natural Communities List). The list is based on A Manual of California Vegetation, Second Edition or MCVII, which is the California expression of the National Vegetation Classification. Where necessary, deviations were made when areas did not fit into exact habitat descriptions. These vegetation communities were named based on the dominant plant species present. Plant communities were mapped in the field directly onto a 200-scale (1"=200') aerial photograph. A vegetation map is included as Exhibit 4. Representative site photographs are included as Exhibit 5.

2.2.3 Special-Status Plant Species and Habitats Evaluated for the Project Site

A literature search was conducted to obtain a list of special status plants with the potential to occur within the Project site. The CNDDB was initially consulted to determine well-known occurrences of plants and habitats of special concern in the region. Other sources used to develop a list of target species for the survey program included the CNPS online inventory (2021).

Based on this information, vegetation profiles and a list of target sensitive plant species and habitats that could occur within the Project site were developed and incorporated into a mapping and survey program to achieve the following goals: (1) characterize the vegetation associations and land use; (2) prepare a detailed floristic compendium; (3) identify the potential for any special status plants that may occur within the Project site; and (4) prepare a map showing the distribution of any sensitive botanical resources associated with the Project site, if applicable.

2.2.5 Botanical Surveys

GLA biologist Jason Fitzgibbon visited the site on April 14 and June 9, 2021 to conduct general and focused plant surveys. Surveys were conducted in accordance with accepted botanical survey guidelines (CDFG 2009, CNPS 2001, USFWS 2000). As applicable, surveys were conducted at appropriate times based on precipitation and flowering periods. An aerial photograph, a soil map, and/or a topographic map were used to determine the community types and other physical features that may support sensitive and uncommon taxa or communities within the Project site. Surveys were conducted by following meandering transects within target areas of suitable habitat. All plant species encountered during the field surveys were identified and recorded following the above-referenced guidelines adopted by CNPS (2010) and CDFW by Nelson (1984). A complete list of the plant species observed is provided in Appendix A. Scientific nomenclature and common names used in this report follow Baldwin et al (2012), and Munz (1974).

Joshua Tree Inventory

Pursuant to the *City of Victorville Municipal Code Title 13 Chapter 13.33 – Preservation and Removal of Joshua Trees*, as part of the botanical surveys conducted for the Project site, GLA biologist Jason Fitzgibbon performed an inventory/survey of all Joshua tree (*Yucca brevifolia*) individuals at the site, including dead trees. The Joshua tree inventory was performed on April 14 and May 18, 2021. Each Joshua tree was mapped and given a specific identifying number. Data was collected for each tree, including height and canopy measurements, and a health rating assessment. The health rating was based on the appearance of the tree, including the presence of dead branches and/or damage to the tree. Trees were placed in one of the following five categories: Very Good (greater than 75%), Average (60% to 75%), Poor (45% to 60%), Very Poor (less than 45%) and Dead (0%). The results of the Joshua tree inventory is provided in Section 4.4.1 below.

2.3 Wildlife Resources

Wildlife species were evaluated and detected during field surveys by sight, call, tracks, and scat. Site reconnaissance was conducted in such a manner as to allow inspection of the entire Project site by direct observation, including the use of binoculars. Observations of physical evidence and direct sightings of wildlife were recorded in field notes during the visit. Scientific nomenclature and common names for vertebrate species referred to in this report follow the Complete List of Amphibian, Reptile, Bird, and Mammal Species in California (CDFG 2008), Standard Common and Scientific Names for North American Amphibians, Turtles, Reptiles, and Crocodilians 6th Edition, Collins and Taggert (2009) for amphibians and reptiles, and the American Ornithologists' Union Checklist 7th Edition (2009) for birds. The methodology (including any applicable survey protocols) utilized to conduct general surveys, habitat assessments, and/or focused surveys for special-status animals are included below.

2.3.1 General Surveys

Birds

During the general biological and reconnaissance survey within the Project site, birds were detected incidentally by direct observation and/or by vocalizations, with identifications recorded in field notes.

Mammals

During general biological and reconnaissance survey within the Project site, mammals were identified and detected incidentally by direct observations and/or by the presence of diagnostic sign (i.e., tracks, burrows, scat, etc.).

Reptiles and Amphibians

During general biological and reconnaissance surveys within the Project site, reptiles and amphibians were identified incidentally during surveys. Habitats were examined for diagnostic reptile sign, which include shed skins, scat, tracks, snake prints, and lizard tail drag marks. All reptiles and amphibian species observed, as well as diagnostic sign, were recorded in field notes.

2.3.2 Special-Status Animal Species Reviewed

A literature search was conducted in order to obtain a list of special-status wildlife species with the potential to occur within the Project site. Species were evaluated based on two factors: 1) species identified by the CNDDB as occurring (either currently or historically) on or in the vicinity of the Project site, and 2) any other special-status animals that are known to occur within the vicinity of the Project site, or for which potentially suitable habitat occurs on the Project site.

2.3.3 Habitat Assessment for Special Status Animal Species

GLA biologist Jason Fitzgibbon conducted habitat assessments for special-status animal species on April 14, 2021. An aerial photograph, soil map and/or topographic map were used to determine the community types and other physical features that may support special-status and uncommon taxa within the Project site. As further discussed below, Philippe Vergne (ENVIRA) conducted an initial visual survey of the site on March 20, 2021 to determine the potential for Mohave ground squirrel (*Xerospermophilus mohavensis*), prior to conducting focused trapping sessions for the ground squirrel.

2.3.4 Focused Surveys for Special-Status Animals Species

Burrowing Owl

GLA biologist Jason Fitzgibbon conducted focused surveys for the burrowing owl (*Athene cunicularia*) for all suitable habitat areas within the Project site. Surveys were conducted in accordance with survey guidelines described in the 2012 CDFG Staff Report on Burrowing Owl

Mitigation. The guidelines stipulate that four focused survey visits should be conducted between February 15 and July 15, with the first visit occurring between February 15 and April 15. The remaining three visits should be conducted three weeks apart from each other, with at least one visit occurring between June 15 and July 15. Focused surveys were conducted on April 14, May 18, June 9 and July 2, 2021. As recommended by the survey guidelines, the survey visits were conducted between morning civil twilight and 10:00 AM. Weather conditions during the surveys were conducive to a high level of bird activity.

Surveys were conducted by walking meandering transects throughout areas of suitable habitat. Transects were spaced between 7 m and 20 m apart, adjusting for vegetation height and density, in order to provide adequate visual coverage of the survey areas. At the start of each transect, and at least every 100 m along transects, the survey area was scanned for burrowing owls using binoculars. All suitable burrows were inspected for diagnostic owl sign (e.g., pellets, prey remains, whitewash, feathers, bones, and/or decoration) in order to identify potentially occupied burrows. Exhibit 7 provides locations of suitable burrows mapped during the transect surveys. Table 2-2 summarizes the burrowing owl survey visits. The results of the burrowing owl surveys are documented in Section 4.0 of this report.

Table 2-2. Summary of Burrowing Owl Surveys

Survey Date	Biologist	Start/End Time	Start/End Temperature	Start/End Wind Speed (mph)	Cloud Cover
4/14/21	JF	0645/0956	46/56	3/4	Clear
5/18/21	JF	0555/0900	58/80	6/10	Clear
6/9/21	JF	0540/0900	51/70	0/4	Clear
7/2/21	JF	0524/0846	63/82	2/5	Clear

JF = Jason Fitzgibbon

Desert Tortoise

GLA biologist Jason Fitzgibbon conducted a focused survey for the desert tortoise (*Gopherus agassizii*) in all suitable habitat areas within the Project site. The survey was conducted in accordance with the 2010 and 2018 USFWS Mojave Desert Tortoise Pre-project Survey Protocol, which for "small project areas" (less than 500 acres) requires 10 m wide belt transects to cover the entire Action Area, which is defined to be any lands subject to ground-disturbing activities associated with the Project and coincides with the Project footprint for the purposes of this report [Exhibit 8 – Desert Tortoise Survey Map]. The survey guidelines limit individual biologists to surveying a maximum of 80 acres per day. The Project study area contains less than 80 acres of suitable habitat for desert tortoise (maximum of 53.96 acres), so the focused protocol survey effort was carried out over a single day.

The focused survey was conducted on April 9, 2021. Pursuant to the 2010 survey guidelines, the survey was conducted during favorable climatic conditions when air temperatures were most conducive to desert tortoise activity. Air temperature was measured at 5 centimeters above ground surface, in an area of full sun, and did not exceed 68˚ F. No desert tortoise or desert tortoise sign was observed within the Project site.

Mohave Ground Squirrel

ENVIRA biologist Philippe Vergne performed focused trapping surveys for the Mohave ground squirrel (*Xerospermophilus mohavensis*, MGS). The following summarizes the methods used to survey the Project site for MGS. The results are summarized in Section 4.0 of this report. A complete survey report prepared by ENVIRA is included as Appendix B of this Biological Technical Report.

Survey methods were derived from generally accepted professional standards including the 2010 CDFG Mohave Ground Squirrel Survey Guidelines (CDFG 2010); and performed under the auspices of a Memorandum of Understanding (MOU) with the CDFW. Accordingly, a methodical pedestrian-survey of the study area was conducted to visually evaluate the limits of suitable habitat on April 12, 2021.

Since no MGS were detected during the visual survey, but antelope ground squirrels (AGS) were observed, and potential burrows and scat were observed on site, MGS focused trapping surveys were initiated. The first two trapping sessions occurred from April 22 to 26, 2021 and from May 21 to May 25, 2021. Census occurred within one live-trapping grid, situated in the Project site's highest quality habitat.

Per protocol since no MGS were captured during trapping surveys one and two, a third five-day trapping session was conducted from July 1 to July 5, 2021.

Within the grid, 100 traps were deployed at roughly 35-meter spacing. The grid consisted of a ten-by-ten array covering approximately 19 acres. Standard small-mammal aluminum, foldable, ventilated 12–inch Sherman Traps were used within the Project site for sampling purposes. The bait used consisted of crushed four-way grains with horse supplement. Folding cardboard boxes held down by dirt were deployed as shade covers for each trap as appropriate. Traps and shade covers were configured to provide the greatest shade cover possible.

Temperature readings were taken and recorded every hour, at one foot above the ground and at ground level in the shade. Traps were checked every 1-2 hours depending on temperature and other environmental influential factors (i.e., pregnant or lactating females in traps, feral dogs on grid, cold weather, presence of juveniles, etc.). Traps were open within one hour after sunrise and closed within one hour before sunset. Traps were closed when air temperature reached 90 °F. Traps were not opened until morning temperatures reached near 50 °F. No rain occurred during the surveys. Weather data for each trapping session is provided within the appended survey report.

2.4 Jurisdictional Delineation

Prior to beginning the field delineation, a 200-scale color aerial photograph and the previously cited USGS topographic maps were examined to determine the locations of potential areas of Corps/CDFW jurisdiction. Suspected jurisdictional areas were field checked for the presence of definable channels and/or wetland vegetation, soils and hydrology. Potential wetland habitats at

the subject site were evaluated using the methodology set forth in the U.S. Army Corps of Engineers 1987 Wetland Delineation Manual[1] (Wetland Manual) and the 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Supplement (Arid West Supplement)[2]. The presence of an Ordinary High Water Mark (OHWM) was determined using the 2008 Field Guide to Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States[3] in conjunction with the Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States.[4] While in the field the limits of the OHWM, wetlands, and CDFW jurisdiction were recorded using GPS technology and/or on copies of the aerial photography.

3.0 REGULATORY SETTING

The proposed Project is subject to state and federal regulations associated with a number of regulatory programs. These programs often overlap and were developed to protect natural resources, including state- and federally listed plants and animals; aquatic resources including rivers and creeks, ephemeral streambeds, wetlands, and areas of riparian habitat; other special-status species which are not listed as threatened or endangered by the state or federal governments; and other special-status vegetation communities.

3.1 State and/or Federally Listed Plants or Animals

3.1.1 State of California Endangered Species Act

California's Endangered Species Act (CESA) defines an endangered species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease." The State defines a threatened species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an Endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as rare on or before January 1, 1985 is a threatened species." Candidate species are defined as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the

[1] Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experimental Station, Vicksburg, Mississippi.

[2] U.S. Army Corps of Engineers. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Supplement (Version 2.0). Ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-06-16. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

[3] Lichvar, R. W., and S. M. McColley. 2008. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. ERDC/CRREL TR-08-12. Hanover, NH: U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory. (http://www.crrel.usace.army.mil/library/technicalreports/ERDC-CRREL-TR-08-12.pdf).

[4] Curtis, Katherine E. and Robert Lichevar. 2010. Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. ERDC/CRREL TN-10-1. Hanover, NH: U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory.

commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list." Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the Fish and Game Commission. Unlike the Federal Endangered Species Act (FESA), CESA does not list invertebrate species.

Article 3, Sections 2080 through 2085, of the CESA addresses the taking of threatened, endangered, or candidate species by stating "No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided." Under the CESA, "take" is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Exceptions authorized by the state to allow "take" require permits or memoranda of understanding and can be authorized for endangered species, threatened species, or candidate species for scientific, educational, or management purposes and for take incidental to otherwise lawful activities. Sections 1901 and 1913 of the California Fish and Game Code provide that notification is required prior to disturbance.

3.1.2 Federal Endangered Species Act

The FESA of 1973 defines an endangered species as "any species that is in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as "any species that is likely to become an Endangered species within the foreseeable future throughout all or a significant portion of its range." Under provisions of Section 9(a)(1)(B) of the FESA it is unlawful to "take" any listed species. "Take" is defined in Section 3(18) of FESA: "...harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Further, the USFWS, through regulation, has interpreted the terms "harm" and "harass" to include certain types of habitat modification that result in injury to, or death of species as forms of "take." These interpretations, however, are generally considered and applied on a case-by-case basis and often vary from species to species. In a case where a property owner seeks permission from a Federal agency for an action that could affect a federally listed plant and animal species, the property owner and agency are required to consult with USFWS. Section 9(a)(2)(b) of the FESA addresses the protections afforded to listed plants.

3.1.3 State and Federal Take Authorizations for Listed Species

Federal or state authorizations of impacts to or incidental take of a listed species by a private individual or other private entity would be granted in one of the following ways:

- Section 7 of the FESA stipulates that any federal action that may affect a species listed as threatened or endangered requires a formal consultation with USFWS to ensure that the action is not likely to jeopardize the continued existence of the listed species or result in destruction or adverse modification of designated critical habitat. 16 U.S.C. 1536(a)(2).
- In 1982, the FESA was amended to give private landowners the ability to develop Habitat Conservation Plans (HCP) pursuant to Section 10(a) of the FESA. Upon development of

an HCP, the USFWS can issue incidental take permits for listed species where the HCP specifies at minimum, the following: (1) the level of impact that will result from the taking, (2) steps that will minimize and mitigate the impacts, (3) funding necessary to implement the plan, (4) alternative actions to the taking considered by the applicant and the reasons why such alternatives were not chosen, and (5) such other measures that the Secretary of the Interior may require as being necessary or appropriate for the plan.

- Sections 2090-2097 of the CESA require that the state lead agency consult with CDFW on projects with potential impacts on state-listed species. These provisions also require CDFW to coordinate consultations with USFWS for actions involving federally listed as well as state-listed species. In certain circumstances, Section 2080.1 of the California Fish and Game Code allows CDFW to adopt the federal incidental take statement or the 10(a) permit as its own based on its findings that the federal permit adequately protects the species under state law.

3.2 California Environmental Quality Act

3.2.1 CEQA Guidelines Section 15380

CEQA requires evaluation of a project's impacts on biological resources and provides guidelines and thresholds for use by lead agencies for evaluating the significance of proposed impacts. Sections 5.1.1 and 5.2.2 below set forth these thresholds and guidelines. Furthermore, pursuant to the CEQA Guidelines Section 15380, CEQA provides protection for non-listed species that could potentially meet the criteria for state listing. For plants, CDFW recognizes that plants on Lists 1A, 1B, or 2 of the CNPS *Inventory of Rare and Endangered Plants in California* may meet the criteria for listing and should be considered under CEQA. CDFW also recommends protection of plants, which are regionally important, such as locally rare species, disjunct populations of more common plants, or plants on the CNPS Lists 3 or 4.

3.2.2 Special-Status Plants, Wildlife and Vegetation Communities Evaluated Under CEQA

Federally Designated Special-Status Species

Within recent years, the USFWS instituted changes in the listing status of candidate species. Former C1 (candidate) species are now referred to simply as candidate species and represent the only candidates for listing. Former C2 species (for which the USFWS had insufficient evidence to warrant listing) and C3 species (either extinct, no longer a valid taxon or more abundant than was formerly believed) are no longer considered as candidate species. Therefore, these species are no longer maintained in list form by the USFWS, nor are they formally protected. This term is employed in this document, but carries no official protections. All references to federally protected species in this report (whether listed, proposed for listing, or candidate) include the most current published status or candidate category to which each species has been assigned by USFWS.

For this report the following acronyms are used for federal special-status species:

- FE Federally listed as Endangered

- FT Federally listed as Threatened
- FPE Federally proposed for listing as Endangered
- FPT Federally proposed for listing as Threatened
- FC Federal Candidate Species (former C1 species)
- FSC Federal Species of Concern (former C2 species)

State-Designated Special-Status Species

Some mammals and birds are protected by the state as Fully Protected (SFP) Mammals or Fully Protected Birds, as described in the California Fish and Game Code, Sections 4700 and 3511, respectively. California SSC are designated as vulnerable to extinction due to declining population levels, limited ranges, and/or continuing threats. This list is primarily a working document for the CDFW's CNDDB project. Informally listed taxa are not protected, but warrant consideration in the preparation of biotic assessments. For some species, the CNDDB is only concerned with specific portions of the life history, such as roosts, rookeries, or nest sites.

For this report the following acronyms are used for State special-status species:

- SE State-listed as Endangered
- ST State-listed as Threatened
- SR State-listed as Rare
- SCE State Candidate for listing as Endangered
- SCT State Candidate for listing as Threatened
- SFP State Fully Protected
- SP State Protected
- SSC State Species of Special Concern

CNDDB Global/State Rankings

The CNDDB provides global and state rankings for species and communities based on a system developed by The Nature Conservancy to measure rarity of a species. The ranking provides a shorthand formula about how rare a species/community is, and is based on the best information available from multiple sources, including state and federal listings, and other groups that recognize species as sensitive (e.g., Bureau of Land Management, Audubon Society, etc.). State and global rankings are used to prioritize conservation and protection efforts so that the rarest species/communities receive immediate attention. In both cases, the lower ranking (i.e., G1 or S1) indicates extreme rarity. Rare species are given a ranking from 1 to 3. Species with a ranking of 4 or 5 is considered to be common. If the exact global/state ranking is undetermined, a range is generally provided. For example, a global ranking of "G1G3" indicates that a species/community global rarity is between G1 and G3. If the animal being considered is a subspecies of a broader species, a "T" ranking is attached to the global ranking. The following are descriptions of global and state rankings:

Global Rankings

- G1 – Critically imperiled globally because of extreme rarity (5 or fewer occurrences), or because of some factor(s) making it especially vulnerable to extinction.
- G2 – Imperiled globally because of rarity (6-20 occurrences), or because of some other factor(s) making it very vulnerable to extinction throughout its range.
- G3 – Either very rare and local throughout its range (21 to 100 occurrences), or found locally (even abundantly at some of its locations) in a restricted range (e.g., a physiographic region), or because of some other factor(s) making it vulnerable to extinction throughout its range.
- G4 – Uncommon but not rare; some cause for long-term concern due to declines or other factors.
- G5 – Common, widespread and abundant.

State Rankings

- S1 – Extremely rare; typically 5 or fewer known occurrences in the state; or only a few remaining individuals; may be especially vulnerable to extirpation.
- S2 – Very rare; typically between 6 and 20 known occurrences; may be susceptible to becoming extirpated.
- S3 – Rare to uncommon; typically 21 to 50 known occurrences; S3 ranked species are not yet susceptible to becoming extirpated in the state but may be if additional populations are destroyed.
- S4 - Uncommon but not rare; some cause for long-term concern due to declines or other factors.
- S5 - Common, widespread, and abundant in the state.

California Native Plant Society

The CNPS is a private plant conservation organization dedicated to the monitoring and protection of sensitive species in California. The CNPS's Eighth Edition of the *California Native Plant Society's Inventory of Rare and Endangered Plants of California* separates plants of interest into five ranks. CNPS has compiled an inventory comprised of the information focusing on geographic distribution and qualitative characterization of Rare, Threatened, or Endangered vascular plant species of California. The list serves as the candidate list for listing as threatened and endangered by CDFW. CNPS has developed five categories of rarity that are summarized in Table 3-1.

Table 3-1. CNPS Ranks 1, 2, 3, & 4, and Threat Code Extensions

CNPS Rank	Comments
Rank 1A – Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere	Thought to be extinct in California based on a lack of observation or detection for many years.
Rank 1B – Plants Rare, Threatened, or Endangered in California and Elsewhere	Species, which are generally rare throughout their range that are also judged to be vulnerable to other threats such as declining habitat.
Rank 2A – Plants presumed Extirpated in California, But Common Elsewhere	Species that are presumed extinct in California but more common outside of California
Rank 2B – Plants Rare, Threatened or Endangered in California, But More Common Elsewhere	Species that are rare in California but more common outside of California
Rank 3 – Plants About Which More Information Is Needed (A Review List)	Species that are thought to be rare or in decline but CNPS lacks the information needed to assign to the appropriate list. In most instances, the extent of surveys for these species is not sufficient to allow CNPS to accurately assess whether these species should be assigned to a specific rank. In addition, many of the Rank 3 species have associated taxonomic problems such that the validity of their current taxonomy is unclear.
Rank 4 – Plants of Limited Distribution (A Watch List)	Species that are currently thought to be limited in distribution or range whose vulnerability or susceptibility to threat is currently low. In some cases, as noted above for Rank 3 species, CNPS lacks survey data to accurately determine status in California. Many species have been placed on Rank 4 in previous editions of the "Inventory" and have been removed as survey data has indicated that the species are more common than previously thought. CNPS recommends that species currently included on this list should be monitored to ensure that future substantial declines are minimized.
Extension	**Comments**
.1 – Seriously endangered in California	Species with over 80% of occurrences threatened and/or have a high degree and immediacy of threat.
.2 – Fairly endangered in California	Species with 20-80% of occurrences threatened.
.3 – Not very endangered in California	Species with <20% of occurrences threatened or with no current threats known.

3.3 Jurisdictional Waters

3.3.1 Army Corps of Engineers

Pursuant to Section 404 of the Clean Water Act, the Corps regulates the discharge of dredged and/or fill material into waters of the United States. The term "waters of the United States" is defined in Corps regulations at 33 CFR Part 328.3(a) as:

(1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
(2) All interstate waters including interstate wetlands;
(3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect foreign commerce including any such waters:
(i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
(ii) From which fish or shell fish are or could be taken and sold in interstate or foreign commerce; or
(iii) Which are used or could be used for industrial purpose by industries in interstate commerce...
(4) All impoundments of waters otherwise defined as waters of the United States under the definition;
(5) Tributaries of waters identified in paragraphs (a) (1)-(4) of this section;
(6) The territorial seas;
(7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1)-(6) of this section.
(8) Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 123.11(m) which also meet the criteria of this definition) are not waters of the United States.

In the absence of wetlands, the limits of Corps jurisdiction in non-tidal waters, such as intermittent streams, extend to the OHWM which is defined at 33 CFR 328.3(e) as:

> *...that line on the shore established by the fluctuation of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.*

Wetland Definition Pursuant to Section 404 of the Clean Water Act

The term “wetlands” (a subset of “waters of the United States”) is defined at 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support...a prevalence of vegetation typically adapted for life in saturated soil conditions." In 1987 the Corps published the Wetland Manual to guide its field personnel in determining jurisdictional wetland boundaries. The methodology set forth in the Wetland

Manual and the Arid West Supplement generally require that, in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibit at least minimal hydric characteristics. While the Wetland Manual and Arid West Supplement provide great detail in methodology and allow for varying special conditions, a wetland should normally meet each of the following three criteria:

- More than 50 percent of the dominant plant species at the site must be hydrophytic in nature as published in the most current national wetland plant list;

- Soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., a gleyed color, or mottles with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions); and

- Whereas the Wetland Manual requires that hydrologic characteristics indicate that the ground is saturated to within 12 inches of the surface for at least five percent of the growing season during a normal rainfall year, the Arid West Supplement does not include a quantitative criteria with the exception for areas with "problematic hydrophytic vegetation", which require a minimum of 14 days of ponding to be considered a wetland.

Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al.

Pursuant to Article I, Section 8 of the U.S. Constitution, federal regulatory authority extends only to activities that affect interstate commerce. In the early 1980s the Corps interpreted the interstate commerce requirement in a manner that restricted Corps jurisdiction on isolated (intrastate) waters. On September 12, 1985, the U.S. Environmental Protection Agency (EPA) asserted that Corps jurisdiction extended to isolated waters that are used or could be used by migratory birds or endangered species, and the definition of "waters of the United States" in Corps regulations was modified as quoted above from 33 CFR 328.3(a).

On January 9, 2001, the Supreme Court of the United States issued a ruling on ***Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al.*** (SWANCC). In this case the Court was asked whether use of an isolated, intrastate pond by migratory birds is a sufficient interstate commerce connection to bring the pond into federal jurisdiction of Section 404 of the Clean Water Act.

The written opinion notes that the court's previous support of the Corps' expansion of jurisdiction beyond navigable waters (***United States v. Riverside Bayview Homes, Inc.***) was for a wetland that abutted a navigable water and that the court did not express any opinion on the question of the authority of the Corps to regulate wetlands that are not adjacent to bodies of open water. The current opinion goes on to state:

> ***In order to rule for the respondents here, we would have to hold that the jurisdiction of the Corps extends to ponds that are not adjacent to open water. We conclude that the text of the statute will not allow this.***

Therefore, most lawyers believe that the court's opinion goes beyond the migratory bird issue and says that no isolated, intrastate water is subject to the provisions of Section 404(a) of the Clean Water Act (regardless of any interstate commerce connection). However, the Corps and EPA have issued a joint memorandum which states that they are interpreting the ruling to address only the migratory bird issue and leaving the other interstate commerce clause nexuses intact.

Rapanos v. United States and Carabell v. United States

On June 5, 2007, the EPA and Corps issued joint guidance that addresses the scope of jurisdiction pursuant to the Clean Water Act in light of the Supreme Court's decision in the consolidated cases ***Rapanos v. United States*** and ***Carabell v. United States*** ("Rapanos"). The chart below was provided in the joint EPA/Corps guidance.

For sites that include waters other than Traditional Navigable Waters (TNWs) and/or their adjacent wetlands or Relatively Permanent Waters (RPWs) tributary to TNWs and/or their adjacent wetlands, as set forth in the bulleted list below, the Corps must apply the "significant nexus" standard.

For "isolated" waters or wetlands, the joint guidance also requires an evaluation by the Corps and EPA to determine whether other interstate commerce clause nexuses, not addressed in the SWANCC decision are associated with isolated features on project sites for which a jurisdictional determination is being sought from the Corps.

The Corps and EPA will assert jurisdiction over the following waters:

- Traditional navigable waters.
- Wetlands adjacent to traditional navigable waters.
- Non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months).
- Wetlands that directly abut such tributaries.

The Corps and EPA will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a TNW:

- Non-navigable tributaries that are not relatively permanent.
- Wetlands adjacent to non-navigable tributaries that are not relatively permanent.
- Wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary.

The agencies generally will not assert jurisdiction over the following features:

- Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent or short duration flow).

- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

The agencies will apply the significant nexus standard as follows:

- A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters.
- Significant nexus includes consideration of hydrologic and ecologic factors.

3.3.2 Regional Water Quality Control Board

The State Water Resource Control Board and each of its nine Regional Boards regulate the discharge of waste (dredged or fill material) into waters of the United States[5] and waters of the State. Waters of the United States are defined above in Section II.A and waters of the State are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code 13050[e]).

Section 401 of the CWA requires certification for any federal permit or license authorizing impacts to waters of the U.S. (i.e., waters that are within federal jurisdiction), such as Section 404 of the CWA and Section 10 of the Safe Rivers and Harbors Act, to ensure that the impacts do not violate state water quality standards. When a project could impact waters outside of federal jurisdiction, the Regional Board has the authority under the Porter-Cologne Water Quality Control Act to issue Waste Discharge Requirements (WDRs) to ensure that impacts do not violate state water quality standards. Clean Water Act Section 401 Water Quality Certifications, WDRs, and waivers of WDRs are also referred to as orders or permits.

State Wetland Definition

The State Board Wetland Definition and Procedures define an area as wetland as follows: ***An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.***

The following wetlands are waters of the State:

[5] Therefore, wetlands that meet the current definition, or any historic definition, of waters of the U.S. are waters of the state. In 2000, the State Water Resources Control Board determined that all waters of the U.S. are also waters of the state by regulation, prior to any regulatory or judicial limitations on the federal definition of waters of the U.S. (California Code or Regulations title 23, section 3831(w)). This regulation has remained in effect despite subsequent changes to the federal definition. Therefore, waters of the state includes features that have been determined by the U.S. Environmental Protection Agency (U.S. EPA) or the U.S. Army Corps of Engineers (Corps) to be "waters of the U.S." in an approved jurisdictional determination; "waters of the U.S." identified in an aquatic resource report verified by the Corps upon which a permitting decision was based; and features that are consistent with any current or historic final judicial interpretation of "waters of the U.S." or any current or historic federal regulation defining "waters of the U.S." under the federal Clean Water Act.

1. *Natural wetlands;*
2. *Wetlands created by modification of a surface water of the state;*[6] *and*
3. *Artificial wetlands*[7] *that meet any of the following criteria:*

a. Approved by an agency as compensatory mitigation for impacts to other waters of the state, except where the approving agency explicitly identifies the mitigation as being of limited duration;
b. Specifically identified in a water quality control plan as a wetland or other water of the state;
c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape; or
d. Greater than or equal to one acre in size, unless the artificial wetland was constructed, and is currently used and maintained, primarily for one or more of the following purposes (i.e., the following artificial wetlands are not waters of the state unless they also satisfy the criteria set forth in 2, 3a, or 3b):

i. Industrial or municipal wastewater treatment or disposal,
ii. Settling of sediment,
iii. Detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program,
iv. Treatment of surface waters,
v. Agricultural crop irrigation or stock watering,
vi. Fire suppression,
vii. Industrial processing or cooling,
viii. Active surface mining – even if the site is managed for interim wetlands functions and values,
ix. Log storage,
x. Treatment, storage, or distribution of recycled water, or
xi. Maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or
xii. Fields flooded for rice growing.[8]

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[6] "Created by modification of a surface water of the state" means that the wetland that is being evaluated was created by modifying an area that was a surface water of the state at the time of such modification. It does not include a wetland that is created in a location where a water of the state had existed historically, but had already been completely eliminated at some time prior to the creation of the wetland. The wetland being evaluated does not become a water of the state due solely to a diversion of water from a different water of the state.

[7] Artificial wetlands are wetlands that result from human activity.

[8] Fields used for the cultivation of rice (including wild rice) that have not been abandoned due to five consecutive years of non-use for the cultivation of rice (including wild rice) that are determined to be a water of the state in accordance with these Procedures shall not have beneficial use designations applied to them through the Water Quality Control Plan for the Sacramento and San Joaquin River Basins, except as otherwise required by federal law for fields that are considered to be waters of the United States. Further, agricultural inputs legally applied to fields used for the cultivation of rice (including wild rice) shall not constitute a discharge of waste to a water of the state. Agricultural inputs that migrate to a surface water or groundwater may be considered a discharge of waste and are

All artificial wetlands that are less than an acre in size and do not satisfy the criteria set forth in 2, 3.a, 3.b, or 3.c are not waters of the state. If an aquatic feature meets the wetland definition, the burden is on the applicant to demonstrate that the wetland is not a water of the state.

3.3.3 California Department of Fish and Wildlife

Pursuant to Division 2, Chapter 6, Sections 1600-1603 of the California Fish and Game Code, the CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake, which supports fish or wildlife.

CDFW defines a stream (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." CDFW's definition of "lake" includes "natural lakes or man-made reservoirs." CDFW also defines a stream as "a body of water that flows, or has flowed, over a given course during the historic hydrologic regime, and where the width of its course can reasonably be identified by physical or biological indicators."

It is important to note that the Fish and Game Code defines fish and wildlife to include: all wild animals, birds, plants, fish, amphibians, invertebrates, reptiles, and related ecological communities including the habitat upon which they depend for continued viability (FGC Division 5, Chapter 1, section 45 and Division 2, Chapter 1 section 711.2(a) respectively). Furthermore, Division 2, Chapter 5, Article 6, Section 1600 et seq. of the California Fish and Game Code does not limit jurisdiction to areas defined by specific flow events, seasonal changes in water flow, or presence/absence of vegetation types or communities.

3.4 Local Ordinances and Policies

3.4.1 City of Victorville Municipal Code Title 13 Chapter 13.33 – Preservation and Removal of Joshua Trees

Title 13 Chapter 13.33 of the City of Victorville's municipal code states the following:

> *"It is determined by the city council that proper and necessary steps be taken in order to protect and preserve, to the greatest extent possible, Joshua trees in all areas of the city so as to preserve the unique natural desert environment throughout the city and for the health, safety and welfare of the community.*
>
> *It is unlawful for any person to cut, damage, destroy, dig up, or harvest any Joshua tree without the prior written consent of the director of parks and recreation or his designee. A violation of this section is a misdemeanor punishable by up to six months in jail and/or a five-hundred-dollar fine."*

subject to waste discharge requirements or waivers of such requirements pursuant to the Water Board's authority to issue or waive waste discharge requirements or take other actions as applicable.

4.0 RESULTS

This section provides the results of general biological surveys, vegetation mapping, habitat assessments and focused surveys for special-status plants and animals, and a jurisdictional delineation for Waters of the United States (including wetlands) subject to the jurisdiction of the Corps and Regional Board, and streams (including riparian vegetation) and lakes subject to the jurisdiction of CDFW.

4.1 Existing Conditions

The Project site is relatively flat, ranging in elevation from approximately 2,850 to 2.900 feet above mean sea level (amsl). The majority of the site supports relatively undisturbed desert scrub habitats, with the primary exception of the northwestern and northeastern corners of the property. Until about 10 to 15 years ago the northeastern corner of the property was developed with multiple structures and was used to store various materials similar to the offsite property to the north. In recent years the structures and materials have been removed and vegetation has begun to re-establish in the previously disturbed areas. The northwestern corner of the property is heavily disturbed, having been previously used for vehicle storage, and presently for stockpiling soils and debris. Portions of the site also contain various dirt access roads.

The site is mapped as containing three soil types, including Bryman Loamy Fine Sand, Cajon Sand, and Haplargids-Calciorthids Complex. A Soils Map is included as Exhibit 6.

The Project site contains to sandy washes that generally flow from southwest to northeast. The washes are mostly unvegetated. As discussed below in Section 4.9, the washes are regulated as jurisdictional waters.

4.2 Vegetation

The Project site contains four distinct vegetation types dominated by native species, including the *Atriplex lentiformis* Shrubland Alliance (Quailbush Scrub), *Ephedra nevadensis-Lycium andersonii-Grayia spinosa* Shrubland Alliance (Nevada Joint Fir Scrub), *Ericameria nauseosa* Shrubland Alliance (Rubber Rabbitbrush Scrub), and the *Larrea tridentata* Shrubland Alliance (Creosote Bush Scrub). In addition, GLA mapped two other land use categories (unvegetated wash and disturbed/developed) that are generally unvegetated. Table 4-1 provides a summary of vegetation alliances/land uses and the corresponding acreage. Detailed descriptions of each vegetation type follow the table. A Vegetation Map is attached as Exhibit 4. Photographs depicting the various vegetation types and land uses are attached as Exhibit 5.

As discussed below, the Project site contains 35 individual Joshua trees (*Yucca brevifolia*). As identified in MCVII, the membership rules for the *Yucca brevifolia* Woodland Alliance (Joshua tree woodland) are for *Yucca brevifolia* to be evenly distributed at greater than or equal to a one-percent cover. Based on the measured canopy size of each individual Joshua tree, the total cover of all Joshua trees at the site is approximately 950 square feet, which relative to the approximately 52-acre site (2,265,000 square feet) equates to a cover of 0.04 percent (substantially less than one percent). However, the individual Joshua trees are not evenly

distributed across the site, but even when measuring just the general areas where Joshua trees are present at the site, the total coverage is still less than one percent. The Survey of California Vegetation Classification and Mapping Standards notes that the minimum mapping unit (MMU) for vegetation community mapping is usually 1 or 2 acres, but for wetlands and other sensitive communities the MMU can be as small as one-quarter acre. Using the one-quarter standard for the MMU, there is no portion of the site where the cover of Joshua trees exceeds one percent. As such, none of the areas supporting Joshua trees qualify as Joshua tree woodland.

Table 4-1. Summary of Vegetation Alliances/Land Use Types (Onsite)

VEGETATION ALLIANCES/ LAND USE TYPE	RANK	CODE	ACREAGE
SHRUBLAND AND GRASSLAND ALLIANCES			
Atriplex lentiformis Shrubland Alliance (Quailbush Scrub)	G4 S4	36.340.00	5.46
Ephedra nevadensis-Lycium andersonii-Grayia spinosa Shrubland Alliance (Nevada Joint Fir Scrub)	G5 S3S4	33.185.00	16.56
Ericameria nauseosa Shrubland Alliance (Rubber Rabbitbrush Scrub)	G5 S5	35.310.00	6.55
Larrea tridentata Shrubland Alliance (Creosote Bush Scrub)	G5 S5	33.010.00	15.27
OTHER			
Unvegetated Wash	---	---	1.64
Disturbed/Developed	---	---	6.44
Total			**51.92**

Table 4-2. Summary of Vegetation Alliances/Land Use Types (Offsite)

VEGETATION ALLIANCES/ LAND USE TYPE	RANK	CODE	ACREAGE
SHRUBLAND AND GRASSLAND ALLIANCES			
Atriplex lentiformis Shrubland Alliance (Quailbush Scrub)	G4 S4	36.340.00	0.02
Ephedra nevadensis-Lycium andersonii-Grayia spinosa Shrubland Alliance (Nevada Joint Fir Scrub)	G5 S3S4	33.185.00	0.13
Ericameria nauseosa Shrubland Alliance (Rubber Rabbitbrush Scrub)	G5 S5	35.310.00	0.48
Larrea tridentata Shrubland Alliance (Creosote Bush Scrub)	G5 S5	33.010.00	0.26
OTHER			
Unvegetated Wash	---	---	0
Disturbed/Developed	---	---	1.15
Total			**2.04**

4.2.1 *Atriplex Lentiformis* Shrubland Alliance (Quailbush Scrub)

Approximately 5.48 acres of the Study area are vegetated with the *Atriplex lentiformis* Shrubland Alliance (5.46 acres onsite and 0.02 acre offsite) and are located throughout. The *Atriplex lentiformis* Shrubland Alliance has a G4 S4 rarity ranking, meaning that this vegetation type is apparently secure in both its global and California range.

The membership rules for the *Atriplex lentiformis* Shrubland Alliance include the following: (1) *Atriplex lentiformis* comprises greater than 50% relative cover in the shrub layer; (2) *Atriplex lentiformis* or *Atriplex torreyi* comprises greater than 50% relative cover in the shrub layer.

4.2.2 *Ephedra Nevadensis-Lycium Andersonii-Grayia Spinosa* Shrubland Alliance (Nevada Joint Fir Scrub)

Approximately 16.69 acres of the Study Area are vegetated with the *Ephedra nevadensis-Lycium andersonii-Grayia spinosa* Shrubland Alliance (16.56 acres onsite and 0.13 acre offsite) and are located throughout. The *Ephedra nevadensis-Lycium andersonii-Grayia spinosa* Shrubland Alliance has a G5 S3S4 rarity ranking, meaning that this vegetation type is demonstrably secure in its global range, and apparently secure in its California range.

The membership rules for the *Ephedra nevadensis-Lycium andersonii-Grayia spinosa* Shrubland Alliance include the following: (1) *Ephedra nevadensis* comprises greater than 2% absolute cover in the shrub layer with more than two times the cover of other species, with the exception

of *Acamptopappus sphaerocephalus* and *Chrysothamnus viscidiflorus*; (2) *Lycium andersonii* comprises greater than 50% relative cover in the shrub layer; (3) *Grayia spinosa* comprises greater than 2% absolute cover in the shrub layer with no other species representing greater cover in the shrub layer, with the exception of *Ericameria cooperi* or *Lycium andersonii*; (4) *Ephedra nevadensis, Lycium andersonii, or Grayia spinosa* comprises greater than 30% relative cover in the shrub layer; and sometimes with *Ericameria cooperi* is > 50% relative cover and *Ephedra nevadensis* is sub-dominant; and (5) *Lycium cooperi* comprises greater than 50% relative cover in the shrub layer or is co-dominant in the shrub layer with *Ambrosia salsola*.

4.2.3 *Ericameria Nauseosa* Shrubland Alliance (Rubber Rabbitbrush Scrub)

Approximately 7.03 acres of the Study Area are vegetated with the *Ericameria nauseosa* Shrubland Alliance (6.55 acres onsite and 0.48 acre offsite) and are located throughout. The *Ericameria nauseosa* Shrubland Alliance has a G5 S5 rarity ranking, meaning that this vegetation type is demonstrably secure in both its global and California range.

The membership rules for the *Ericameria nauseosa* Shrubland Alliance include the following: (1) *Ericameria nauseosa* comprises greater than 50% relative cover in the shrub layer; (2) *Ericameria nauseosa* comprises greater than 25% relative cover or greater than or equal to 2% absolute cover in the shrub layer.

4.2.4 *Larrea Tridentata* (Creosote Bush Scrub) Shrubland Alliance

Approximately 15.53 acres of the Study Area are vegetated with the *Larrea tridentata* Shrubland Alliance (15.27 acres onsite and 0.26 acre offsite) and are located throughout. The *Larrea tridentata* Shrubland Alliance has a G5 S5 rarity ranking, meaning that this vegetation type is demonstrably secure in both its global and California range.

The membership rules for the *Larrea tridentata* Shrubland Alliance include the following: (1) *Ambrosia dumosa* or *Encelia farinosa* is absent or comprises less than 1% cover, if present; (2) No shrub with cover greater than *Larrea tridentata* with the following exceptions: *Acamptopappus sphaerocephalus*, *Bebbia juncea*, *Ericameria teretifolia*, or *Krameria* spp. *Ephedra nevadensis* or *Cylindropuntia acanthocarpa* may have higher cover, but no more than two times the cover of *Larrea tridentata*; (3) *Larrea tridentata* exceeds other shrubs in cover, and if *Ambrosia dumosa* or *Encelia farinosa* are present, their cover is less than three times the cover of *Larrea tridentata*, or if *Ambrosia dumosa* is present, it is less than two times the cover of *Larrea tridentata*.

4.2.5 Unvegetated Wash

Approximately 1.64 acres of the Study Area (all onsite) consists of unvegetated washes that flow through the Project site toward the Mojave River. Within the Project site, bare ground consists of areas of recently deposited sediment or eroded surfaces that do not support vegetation in quantities sufficient to support a specific vegetation community.

4.2.6 Disturbed/Developed

Approximately 7.59 acres of the Study Area consist of disturbed/developed areas, including 6.44 acres onsite and 1.15 acres offsite). Within the Study Area, disturbed developed areas consist of a former residence, concrete stockpiling, and unauthorized vehicular trails. These areas do not support vegetation in quantities sufficient to support a specific vegetation community due to on-going human disturbance.

4.3 Wildlife

A total of 27 wildlife species, including reptiles, birds, and mammals were recorded for the site.

Three species of reptiles were observed, including the common side-blotched lizard (*Uta stansburiana elegans*), Great Basin fence lizard (*Sceloporus occidentalis longipes*), and Great Basin whiptail (*Aspidoscilis tigris tigris*).

The following birds were observed during general biological surveys conducted within the Project site: northern mockingbird (*Mimus polyglottos*), greater roadrunner (*Geococcyx occidentalis*), common raven (*Corvus corvax*), white-crowned sparrow (*Zonotrichia leucophrys*), black-throated sparrow (*Amphispiza bilineata*), black-tailed gnatcatcher (*Polioptila melanura*), Gambel's quail (*Callipepla gambelii)*, white-crowned sparrow (*Zonotrichia leucophrys*), Say's phoebe (*Sayornis saya*), mourning dove (*Zenaida macroura*), red-tailed hawk (*Buteo jamaicensis*), Cooper's hawk (*Accipiter cooperii*), house finch (*Haemorhous mexicanus*), Anna's hummingbird (*Calypte anna*), verdin (*Auriparus flaviceps*), rock wren (*Salpinctes obsoletus*), Bewick's wren (*Thryomanes bewickii*), cactus wren (*Campylorhynchus bruneicapillus*), and rock dove (*Columba livia*).

A total of six species of mammals were detected via observation or by evidence of sign (scat, tracks, burrows, etc.) during general and focused biological surveys conducted within the Project site. Species detected included black-tailed jackrabbit (*Lepus californicus*), desert cottontail (*Sylvilagus audubonii*), coyote (*Canis latrans*), white-tailed antelope squirrel (*Ammospermophilus luecurus*), and California ground squirrel (*Otospermophilus beecheyi*).

4.4 Special-Status Vegetation Communities (Habitats)

The CNDDB does not identify any special-status vegetation communities on or in the vicinity of the Study Area, based on a review of the Hesperia quadrangle map and surrounding quadrangles. Furthermore, the Study Area does not contain any special-status communities as determined through the biological studies.

4.5 Special-Status Plants

One special-status plant (Joshua tree) was detected at the Project site. Table 4-3 provides a list of special-status plants evaluated for the Project site through general biological surveys, habitat assessments, and focused surveys. Species were evaluated based on the following factors: 1) species identified by the CNDDB and CNPS as occurring (either currently or historically) on or

in the vicinity of the Project site, and 2) any other special-status plants that are known to occur within the vicinity of the Project site, or for which potentially suitable habitat occurs within the site.

Table 4-3. Special-Status Plants Evaluated for the Project Site

Species Name	Status	Habitat Requirements	Potential for Occurrence
Beaver Dam breadroot *Pediomelum castoreum*	Federal: None State: None CNPS: Rank 1B.2	Sandy soils in washes and roadcuts, in Joshua tree woodland and Mojavean desert scrub.	Absent
Booth's evening-primrose *Eremothera boothii* ssp. *boothii*	Federal: None State: None CNPS: Rank 2B.3	Joshua tree woodland and pinyon and juniper woodland.	Absent
Desert cymopterus *Cymopterus deserticola*	Federal: None State: None CNPS: Rank 1B.2	Sandy soils in Joshua tree woodland and Mojavean desert scrub.	Absent
Greata's aster *Symphyotrichum greatae*	Federal: None State: None CNPS: Rank 1B.3	Mesic soils in broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, and riparian woodland.	Absent
Joshua tree *Yucca brevifolia*	Federal: None State: CE CNPS: None	Great basin scrub, creosote scrub, desert playa, pinyon and juniper woodland.	Present
Mojave milkweed *Asclepias nyctaginifolia*	Federal: None State: None CNPS: Rank 2B.1	Mojavean desert scrub and pinyon and juniper woodland.	Absent
Mojave monkeyflower *Mimulus mohavensis*	Federal: None State: None CNPS: Rank 1B.2	Sandy or gravelly, often in washes. Joshua tree woodland, Mojavean desert scrub.	Absent
Mojave tarplant *Deinandra mohavensis*	Federal: None State: SE CNPS: Rank 1B.3	Chaparral (mesic soils) and riparian scrub.	Absent
Palmer's mariposa lily *Calochortus palmeri* var. *palmeri*	Federal: None State: None CNPS: Rank 1B.2	Mesic soils in chaparral, lower montane coniferous forest, and meadows and seeps.	Absent
Parish's alumroot *Heuchera parishii*	Federal: None State: None CNPS: Rank 1B.3	Rocky, sometimes carbonate soils in alpine boulder and rock field, lower and upper montane coniferous forest, and subalpine coniferous forest.	Absent
Parish's daisy *Erigeron parishii*	Federal: FT State: None CNPS: Rank 1B.1	Usually carbonate, sometimes granitic soils in Mojavean desert scrub, and Pinyon and juniper woodland.	Absent
Parish's desert-thorn *Lycium parishii*	Federal: None State: None CNPS: Rank 2B.3	Coastal sage scrub, Sonoran desert scrub	Absent

Species Name	Status	Habitat Requirements	Potential for Occurrence
Parish's yampah *Perideridia parishii* ssp. *parishii*	Federal: None State: None CNPS: Rank 2B.2	Lower montane coniferous forest, meadows and seeps, upper montane coniferous forest.	Absent
Pinyon rockcress *Boechera dispar*	Federal: None State: None CNPS: Rank 2B.3	Granitic, gravelly soils in Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland.	Absent
Sagebrush loeflingia *Loeflingia squarrosa* var. *artemisiarum*	Federal: None State: None CNPS: Rank 2B.2	Sandy soils in desert dunes, Great Basin scrub, and Sonoran desert scrub.	Absent
San Bernardino aster *Symphyotrichum defoliatum*	Federal: None State: None CNPS: Rank 1B.2	Cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, valley and foothill grassland (vernally mesic).	Absent
San Bernardino Mountains dudleya *Dudleya abramsii* ssp. *affinis*	Federal: None State: None CNPS: Rank 1B.2	Granitic, quartzite, or carbonate soils in pebble (pavement) plain, Pinyon and juniper woodland, and upper montane coniferous forest.	Absent
San Bernardino Mountains owl's-clover *Castilleja lasiorhyncha*	Federal: None State: None CNPS: Rank 1B.2	Mesic soils in chaparral, meadows and seeps, pebble (pavement) plain, riparian woodland, and upper montane coniferous forest.	Absent
Short-joint beavertail *Opuntia basilaris* var. *brachyclada*	Federal: None State: None CNPS: Rank 1B.2	Chaparral, Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland.	Absent
Southern mountains skullcap *Scutellaria bolanderi* ssp. *austromontana*	Federal: None State: None CNPS: Rank 1B.2	Mesic soils in chaparral, cismontane woodland, lower montane coniferous forest.	Absent
White bear poppy *Arctomecon merriamii*	Federal: None State: None CNPS: Rank 2B.2	Rocky soils in chenopod scrub and Mojavean desert scrub.	Absent

Status

Federal
FE – Federally Endangered
FT – Federally Threatened
FC – Federal Candidate

State
SE – State Endangered
ST – State Threatened
SC – State Candidate

CNPS
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 (a review list).
Rank 4 – Plants of limited distribution (a watch list).

CNPS Threat Code extension
.1 – Seriously endangered in California (over 80% occurrences threatened)
.2 – Fairly endangered in California (20-80% occurrences threatened)
.3 – Not very endangered in California (<20% of occurrences threatened or no current threats known)

Occurrence

- Does not occur – The site does not contain habitat for the species and/or the site does not occur within the geographic range of the species.
- Absent – The site contains suitable habitat for the species, but the species has been confirmed absent through focused surveys.
- Not expected to occur – The species is not expected to occur onsite due to low habitat quality, however absence cannot be ruled out.
- Potential to occur – The species has a potential to occur onsite based on suitable habitat, however its presence/absence could not be confirmed.
- Present – The species was detected onsite incidentally or through focused surveys.

4.5.1 Joshua Tree Inventory

GLA mapped 35 Joshua trees at the Project site [Exhibit 9 - Joshua Tree Survey Map], including 33 live trees and two dead trees. The data collected for each inventoried tree are provided below in Table 4-4. Nearly all of the trees were already tagged as part of what was presumably a prior inventory. Of the 33 live trees, nine were assigned a Very Good health rating, 16 an Average rating, five a Poor rating, and three a Very Poor rating.

Table 4-4. Results of Joshua Tree Inventory

Tree #	Height (Feet)	Canopy Diameter (Feet)	Health Rating	Notes
1	7	5	Average (60-75%)	Tag 19
2	7	4	Average (60-75%)	Tag 12
3	8	2	Average (60-75%)	Tag 27
4	11	6	Poor (45-60%)	Tag 28, limb loss
5	10	7	Very Good (greater than 75%)	Tag 29
6	2	4	Very Good (greater than 75%)	No tag, young recruit
7	9	8	Very Good (greater than 75%)	Tag 25
8	7	5	Average (60-75%)	Tag 20
9	11	3	Poor (45-60%)	Tag 26, young recruits at base
10	11	11	Average (60-75%)	Tag 6, recruits at base
11	8	3	Very Poor (below 45%)	Tag 20, recruits at base
12	12	3	Average (60-75%)	Tag 8, recruit at base
13	9	6	Average (60-75%)	Tag 39, recruit at base
14	7	8	Average (60-75%)	Tag 38, recruits at base
15	7	4	Poor (45-60%)	Tag 36, recruit at base

Tree #	Height (Feet)	Canopy Diameter (Feet)	Health Rating	Notes
16	6	4	Poor (45-60%)	Tag 35, recruit at base
17	10	4	Very Poor (below 45%)	Tag 37, recruits at base
18	7	4	Very Good (greater than 75%)	No tag, recruits at base
19	8	4	Average (60-75%)	No tag, recruit at base
20	8	3	Average (60-75%)	Tag 32, recruits at base
21	13	4	Average (60-75%)	Tag 30
22	11	7	Very Good (greater than 75%)	Tag 43
23	7	2	Very Poor (below 45%)	Tag 47, recruit at base
24	8	5	Poor (45-60%)	Tag 50, recruits at base
25	3	1	Very Good (75-85%)	No tag, young recruit
26	8	1	Dead (0%)	Tag 45, dead but with several recruits at base
27	2	1	Dead (0%)	Tag 44, dead but with several recruits at base
28	13	6	Average (60-75%)	Tag 58, recruit at base
29	11	5	Average (60-75%)	Tag 56
30	9	8	Average (60-75%)	Tag 55, recruit at base
31	7	2	Very Good (greater than 75%)	No tag
32	20	20	Very Good (greater than 75%)	Tag 60, very large, healthy tree
33	8	2	Average (60-75%)	Tag 4
34	3	1	Very Good (greater than 75%)	No tag, recruit
35	9	2	Average (60-75%)	No tag, recruits at base

4.6 Special-Status Animals

No special-status animals were detected within the Study Area during the biological surveys. Table 4-5 provides a list of special-status animals evaluated for the Project site through general biological surveys, habitat assessments, and focused surveys. Species were evaluated based on the following factors, including: 1) species identified by the CNDDB as occurring (either currently or historically) on or in the vicinity of the Project site, and 2) any other special-status animals that are known to occur within the vicinity of the Project site, for which potentially suitable habitat occurs on the site.

Table 4-5. Special Status Animals Evaluated for the Project Site

Species Name	Status	Habitat Requirements	Potential for Occurrence
Invertebrates			
Crotch bumble bee *Bombus crotchii*	Federal: None State: SSC	Relatively warm and dry sites, including the inner Coast Range of California and margins of the Mojave Desert.	Moderate potential to occur on site.
Fish			
Mohave tui chub *Siphateles bicolor mohavensis*	Federal: FE State: SE, FP	Associated with deep pools and slough-like areas of the Mojave River, in areas with aquatic ditchgrass (*Riparia maritima*).	Absent.
Amphibians			
Arroyo toad *Anaxyrus californicus*	Federal: FE State: SSC	Breed, forage, and/or aestivate in aquatic habitats, riparian, coastal sage scrub, oak, and chaparral habitats. Breeding pools must be open and shallow with minimal current, and with a sand or pea gravel substrate overlain with sand or flocculent silt. Adjacent banks with sandy or gravely terraces and very little herbaceous cover for adult and juvenile foraging areas, within a moderate riparian canopy of cottonwood, willow, or oak.	Absent.
California red-legged frog *Rana draytonii*	Federal: FT State: SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby, or emergent riparian vegetation.	Absent.
Southern mountain yellow-legged frog *Rana muscosa*	Federal: FE State: SE	Streams and small pools in ponderosa pine, montane hardwood-conifer, and montane riparian habitat types.	Absent.
Reptiles			
Coast horned lizard *Phrynosoma blainvillii*	Federal: None State: SSC	Occurs in a variety of vegetation types including coastal sage scrub, chaparral, annual grassland, oak woodland, and riparian woodlands.	Absent.

Species Name	Status	Habitat Requirements	Potential for Occurrence
Coastal whiptail *Aspidoscelis tigris stejnegeri*	Federal: None State: SSC	Occurs in hot, dry, flat open spaces in deserts or semi-arid areas.	Absent.
Desert tortoise *Gopherus agassizii*	Federal: FT State: ST	Requires firm ground to dig burrows, or rocks to shelter among. Found in arid sandy or gravelly locations along riverbanks, washes, sandy dunes, alluvial fans, canyon bottoms, desert oases, rocky hillsides, creosote flats and hillsides.	Absent.
Two-striped garter snake *Thamnophis hammondii*	Federal: None State: SSC	Aquatic snake typically associated with wetland habitats such as streams, creeks, and pools.	Absent.
Western pond turtle *Emys marmorata*	Federal: None State: SSC	Slow-moving permanent or intermittent streams, small ponds and lakes, reservoirs, abandoned gravel pits, permanent and ephemeral shallow wetlands, stock ponds, and treatment lagoons. Abundant basking sites and cover necessary, including logs, rocks, submerged vegetation, and undercut banks.	Absent.
Birds			
Bald eagle (nesting & wintering) *Haliaeetus leucocephalus*	Federal: Delisted State: SE, CFP	Primarily in or near seacoasts, rivers, swamps, and large lakes. Perching sites consist of large trees or snags with heavy limbs or broken tops.	Absent.
Burrowing owl (burrow sites & some wintering sites) *Athene cunicularia*	Federal: None State: SSC	Shortgrass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), coastal dunes, desert floors, and some artificial, open areas as a year-long resident. Occupies abandoned ground squirrel burrows as well as artificial structures such as culverts and underpasses.	Absent.
Golden eagle (nesting & wintering) *Aquila chrysaetos*	Federal: None State: CFP	In southern California, occupies grasslands, brushlands, deserts, oak savannas, open coniferous forests, and montane valleys.	Absent.

Species Name	Status	Habitat Requirements	Potential for Occurrence
		Nests on rock outcrops and ledges.	
Gray vireo (nesting) *Vireo vicinior*	Federal: None State: SSC	Desert scrub, mixed juniper or pinyon pine and oak scrub associations, and chaparral, in hot, arid mountains and high plains scrubland.	Absent.
Le Conte's thrasher *Toxostoma lecontei*	Federal: None State: SSC	Desert scrub with tall thorny shrubs such as mesquite, tall riparian brush and, locally, chaparral.	Absent.
Loggerhead shrike (nesting) *Lanius ludovicianus*	Federal: None State: SSC	Forages over open ground within areas of short vegetation, pastures with fence rows, old orchards, mowed roadsides, cemeteries, golf courses, riparian areas, open woodland, agricultural fields, desert washes, desert scrub, grassland, broken chaparral and beach with scattered shrubs.	Moderate potential to occur.
Long-eared owl (nesting) *Asio otus*	Federal: None State: SSC	Riparian habitats are required by the long-eared owl, but it also uses live-oak thickets and other dense stands of trees.	Absent.
Olive-sided flycatcher (nesting) *Contopus cooperi*	Federal: None State: SSC	Breeds in montane and northern coniferous forests, at forest edges and openings, such as meadows and ponds. Winters at forest edges and clearings where tall trees or snags are present.	Has potential to forage on site during migration.
Osprey (nesting) *Pandion haliaetus*	Federal: None State: WL	Ocean shore, bays, fresh-water lakes, and larger streams. Builds large nests in tree-tops within 15 miles of good fish-producing body of water.	Absent.
Southwestern willow flycatcher (nesting) *Empidonax traillii extimus*	Federal: FE State: SE	Riparian woodlands along streams and rivers with mature dense thickets of trees and shrubs.	Absent.
Summer tanager (nesting) *Piranga rubra*	Federal: None State: SSC	Low-elevation willow and cottonwood woodlands, and in higher-elevation mesquite and saltcedar stands.	Absent.

Species Name	Status	Habitat Requirements	Potential for Occurrence
Swainson's hawk (nesting) *Buteo swainsoni*	Federal: BCC State: ST	Summer in wide open spaces of the American West. Nest in grasslands, but can use sage flats and agricultural lands. Nests are placed in lone trees.	Foraging only.
Tricolored blackbird (nesting colony) *Agelaius tricolor*	Federal: BCC State: CE, SSC	Breeding colonies require nearby water, a suitable nesting substrate, and open-range foraging habitat of natural grassland, woodland, or agricultural cropland.	Absent.
Yellow warbler (nesting) *Setophaga petechia*	Federal: None State: SSC	Breed in lowland and foothill riparian woodlands dominated by cottonwoods, alders, or willows and other small trees and shrubs typical of low, open-canopy riparian woodland. During migration, forages in woodland, forest, and shrub habitats.	Has potential to forage on site during migration.
Yellow-breasted chat (nesting) *Icteria virens*	Federal: None State: SSC	Dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush with well-developed understories.	Absent.
Mammals			
American badger *Taxidea taxus*	Federal: None State: SSC	Most abundant in drier open stages of most scrub, forest, and herbaceous habitats, with friable soils.	Absent.
Mohave ground squirrel *Xerospermophilus mohavensis*	Federal: None State: ST	Relatively flat locations with sandy soils and presence of shrubs who's root structures support burrow complexes.	Absent.
Mohave river vole *Microtus californicus mohavensis*	Federal: None State: SSC	Moist habitats including meadows, freshwater marshes and irrigated pastures in the vicinity of the Mojave River.	Absent.
Pallid bat *Antrozous pallidus*	Federal: None State: SSC WBWG: H	Deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting.	Foraging only.
Pallid San Diego pocket mouse *Chaetodipus fallax pallidus*	Federal: None State: SSC	In desert wash, desert scrub, desert succulent scrub, pinyon-juniper woodland. Sandy herbaceous areas, usually in association with rocks or coarse gravel.	Absent.

Species Name	Status	Habitat Requirements	Potential for Occurrence
Townsend's big-eared bat *Corynorhinus townsendii*	Federal: None State: SSC WBWG: H	Coniferous forests and woodlands, deciduous riparian woodland, semi-desert and montane shrublands.	Absent.

Status

Federal
FE – Federally Endangered
FT – Federally Threatened
FPT – Federally Proposed Threatened
FC – Federal Candidate
BGEPA– Bald and Golden Eagle Protection Act

State
SE – State Endangered
ST – State Threatened
SC– State Candidate
CFP – California Fully-Protected Species
SSC – Species of Special Concern

Western Bat Working Group (WBWG)
H – High Priority
LM – Low-Medium Priority
M – Medium Priority
MH – Medium-High Priority

Occurrence

- Absent – The species is absent from the site, either because the site lacks suitable habitat for the species, the site is located outside of the known range of the species, or focused surveys has confirmed the absence of the species.
- Not expected to occur – The species is not expected to occur onsite due to low habitat quality, however absence cannot be ruled out.
- Potential to occur – The species has a potential to occur onsite based on suitable habitat, however its presence/absence could not be confirmed.
- Present – The species was detected onsite incidentally or through focused surveys.

4.6.1 Special-Status Wildlife Species not Observed but with a Potential to Occur at the Project Site

Two special-status species, including Crotch bumblebee (*Bombus crotchii*; SSC) and loggerhead shrike (*Lanius ludovicianus,* SSC), have a moderate potential to utilize the Project site as live-in/breeding habitat, with the exception of disturbed developed areas. Therefore, the Project site represents 46.43 acres of moderately potential habitat for these species.

Three special-status bird species, including Swainson's hawk (*Buteo swainsonii*; ST), Olive-sided flycatcher (*Contopus cooperi*; SSC), and yellow warbler (*Setophaga petechia*; SSC) have the potential to forage at the site, but would not breed due to a lack of suitable habitat.

One special-status bat species: pallid bat (*Antrozous pallidus*), an SSC, has the potential to forage within the Project site. Bat species are not expected to roost within the Project site, due to the lack of tree cavities, unoccupied buildings, and rock crevices.

4.6.2 Critical Habitat

No proposed or designated Critical Habitat occurs within or adjacent to the Project site. The nearest mapped Critical Habitat is located within the Mojave River approximately 1.5 miles to the east of the Project site.

4.7 Raptor Use

The Project site provides suitable foraging and breeding habitat for a number of raptor species, including special-status raptors.

Southern California holds a diversity of birds of prey (raptors), and many of these species are in decline. For most of the declining species, foraging requirements include extensive open, undisturbed, or lightly disturbed areas, especially grasslands. This type of habitat has declined severely in the region, affecting many species, but especially raptors. A few species, such as Red-tailed Hawk (*Buteo jamaicensis*) and American Kestrel (*Falco sparverius*), are somewhat adaptable to low-level human disturbance and can be readily observed adjacent to neighborhoods and other types of development. These species still require appropriate foraging habitat and low levels of disturbance in vicinity of nesting sites.

Much of the Project site is comprised of suitable raptor foraging habitat and supports a suite of mammal, reptile, and insect species that represent suitable prey for various raptor species.

4.8 Nesting Birds

The Project site contains trees, shrubs, and ground cover that provide suitable habitat for nesting migratory birds. Impacts to nesting birds are prohibited under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code.[9]

4.9 Wildlife Linkages/Corridors and Nursery Sites

Habitat linkages are areas which provide a communication between two or more other habitat areas which are often larger or superior in quality to the linkage. Such linkage sites can be quite small or constricted, but may can be vital to the long-term health of connected habitats. Linkage values are often addressed in terms of "gene flow" between populations, with movement taking potentially many generations.

Corridors are similar to linkages but provide specific opportunities for individual animals to disperse or migrate between areas, generally extensive but otherwise partially or wholly separated regions. Adequate cover and tolerably low levels of disturbance are common

[9] The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 C.F.R. Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 C.F.R.21). In addition, sections 3505, 3503.5, and 3800 of the California Department of Fish and Game Code prohibit the take, possession, or destruction of birds, their nests or eggs.

requirements for corridors. Habitat in corridors may be quite different than that in the connected areas, but if used by the wildlife species of interest, the corridor will still function as desired.

As the Project site is surrounded by development associated with the City of Victorville, the Project site does not function as a habitat linkage or corridor.

Wildlife nurseries are sites where wildlife concentrate for hatching and/or raising young, such as rookeries, spawning areas, and bat colonies. Nurseries can be important to both special-status species as well as commonly occurring species.

The Project site does not represent a wildlife nursery.

4.10 Jurisdictional Delineation

The Project site contains three distinct drainage features, designated as Drainages A, B, and C [Exhibit 10A – Corps/Regional Board Jurisdictional Delineation Map and Exhibit 10B – CDFW Jurisdictional Delineation Map]. The drainage features all flow in a northeast direction prior to exiting the site at the northern and eastern boundaries. Flows ultimately discharge into the Mojave River, a RPW, located less than two miles from the Project site.

4.10.1 Corps Jurisdiction

Potential Corps jurisdiction within the Project site totals approximately 0.96 acre (4,081 linear feet), none of which consists of federal wetlands. For a breakdown of acreage and linear feet of potential Corps non-wetland waters by drainage feature, see Table 4-6 below.

Table 4-6. Summary of Potential Corps Jurisdiction

Drainage Name	Potential Corps Non-Wetland Waters (acres)	Potential Corps Jurisdictional Wetlands (acres)	Total Potential Corps Jurisdiction (acres)	Length (linear feet)
Drainage A	0.39	0	0.39	1,319
Tributary A1	0.01	0	0.01	541
Tributary A2	0.01	0	0.01	174
Drainage B	0.54	0	0.54	1,799
Drainage C	0.01	0	0.01	248
Total	**0.96**	**0**	**0.96**	**4,081**

4.10.2 Regional Water Quality Control Board Jurisdiction

Regional Board jurisdiction within the Project site totals approximately 0.96 acre (4,081 linear feet), none of which consists of State wetlands. For a breakdown of acreage and linear feet of Regional Board jurisdiction by drainage feature, see Table 4-7 below.

Table 4-7. Summary of Potential Regional Board Jurisdiction

Drainage Name	Regional Board Non-Wetland Waters (acres)	Regional Board Jurisdictional Wetlands (acres)	Total Regional Board Jurisdiction (acres)	Length (linear feet)
Drainage A	0.39	0	0.39	1,319
Tributary A1	0.01	0	0.01	541
Tributary A2	0.01	0	0.01	174
Drainage B	0.54	0	0.54	1,799
Drainage C	0.01	0	0.01	248
Total	**0.96**	**0**	**0.96**	**4,081**

4.10.3 CDFW Jurisdiction

CDFW jurisdiction within the Project site totals approximately 1.67 acres (4,085 linear feet), of which approximately 0.02 acre consists of vegetated riparian habitat. The riparian vegetation occurs within an off-site segment of Drainage A evaluated for the Project and consists of a small stand of Fremont cottonwood (*Populus fremontii*) trees. For a breakdown of acreage and linear feet of CDFW jurisdiction by drainage feature, see Table 4-8 below.

Table 4-8. Summary of Potential CDFW Jurisdiction

Drainage Name	CDFW Non-riparian Stream (acres)	CDFW Riparian Habitat (acres)	Total CDFW Jurisdiction (acres)	Length (linear feet)
Drainage A	0.66	0.02	0.68	1,323
Tributary A1	0.01	0	0.01	541
Tributary A2	0.01	0	0.01	174
Drainage B	0.95	0	0.95	1,799
Drainage C	0.02	0	0.02	248
Total	**1.65**	**0.02**	**1.67**	**4,085**

4.11 Local Policies and Ordinances

Title 13 Chapter 13.33 of the City of Victorville's municipal code states the following:

> *"It is determined by the city council that proper and necessary steps be taken in order to protect and preserve, to the greatest extent possible, Joshua trees in all areas of the*

city so as to preserve the unique natural desert environment throughout the city and for the health, safety and welfare of the community.

It is unlawful for any person to cut, damage, destroy, dig up, or harvest any Joshua tree without the prior written consent of the director of parks and recreation or his designee. A violation of this section is a misdemeanor punishable by up to six months in jail and/or a five-hundred-dollar fine."

For the purposes of quantifying the number of Joshua trees on site, GLA biologist Jason Fitzgibbon conducted an inventory of Joshua trees in all areas within the impact limits of the Project. Written approval must be obtained from the City of Victorville prior to conducting any project-related activities that may result in impacts to Joshua trees.

5.0 IMPACT ANALYSIS

The following discussion examines the potential impacts to plant and wildlife resources that would occur as a result of the proposed project. Impacts (or effects) can occur in two forms, direct and indirect. Direct impacts are considered to be those that involve the loss, modification or disturbance of plant communities, which in turn, directly affect the flora and fauna of those habitats. Direct impacts also include the destruction of individual plants or animals, which may also directly affect regional population numbers of a species or result in the physical isolation of populations thereby reducing genetic diversity and population stability.

Indirect impacts pertain to those impacts that result in a change to the physical environment, but which is not immediately related to a project. Indirect (or secondary) impacts are those that are reasonably foreseeable and caused by a project but occur at a different time or place. Indirect impacts can occur at the urban/wildland interface of projects, to biological resources located downstream from projects, and other offsite areas where the effects of the project may be experienced by plants and wildlife. Examples of indirect impacts include the effects of increases in ambient levels of noise or light; predation by domestic pets; competition with exotic plants and animals; introduction of toxics, including pesticides; and other human disturbances such as hiking, off-road vehicle use, unauthorized dumping, etc. Indirect impacts are often attributed to the subsequent day-to-day activities associated with project build-out, such as increased noise, the use of artificial light sources, and invasive ornamental plantings that may encroach into native areas. Indirect effects may be both short-term and long-term in their duration. These impacts are commonly referred to as "edge effects" and may result in a slow replacement of native plants by non-native invasives, as well as changes in the behavioral patterns of wildlife and reduced wildlife diversity and abundance in habitats adjacent to project sites.

Cumulative impacts refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. A cumulative impact can occur from multiple individual effects from the same project, or from several projects. The cumulative impact from several projects is the change in the environment resulting from the incremental impact of the project when added to other closely related past, present, and

reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

5.1 California Environmental Quality Act (CEQA)

5.1.1 Thresholds of Significance

Environmental impacts to biological resources are assessed using impact significance threshold criteria, which reflect the policy statement contained in CEQA, Section 21001(c) of the California Public Resources Code. Accordingly, the State Legislature has established it to be the policy of the State of California:

> *"Prevent the elimination of fish or wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities..."*

Determining whether a project may have a significant effect, or impact, plays a critical role in the CEQA process. According to CEQA, Section 15064.7 (Thresholds of Significance), each public agency is encouraged to develop and adopt (by ordinance, resolution, rule, or regulation) thresholds of significance that the agency uses in the determination of the significance of environmental effects. A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant. In the development of thresholds of significance for impacts to biological resources CEQA provides guidance primarily in Section 15065, Mandatory Findings of Significance, and the CEQA Guidelines, Appendix G, Environmental Checklist Form. Section 15065(a) states that a project may have a significant effect where:

> *"The project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or wildlife community, reduce the number or restrict the range of an endangered, rare, or threatened species, ..."*

Therefore, for the purpose of this analysis, impacts to biological resources are considered potentially significant (before considering offsetting mitigation measures) if one or more of the following criteria discussed below would result from implementation of the proposed project.

5.1.2 Criteria for Determining Significance Pursuant to CEQA

Appendix G of the 2017 State CEQA guidelines indicate that a project may be deemed to have a significant effect on the environment if the project is likely to:

> *a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status*

species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

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

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

5.2 Special-Status Species

Appendix G(a) of the CEQA guidelines asks if a project is likely to "have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service."

5.2.1 Special-Status Plants

The proposed Project will eliminate habitat for the Joshua tree and remove 35 individual trees, including 33 living trees and two dead trees with recruits at the base. The loss of these individuals would a potential substantial adverse effect to the species as a whole, and the impacts would be considered potentially significant prior to mitigation. In addition, pursuant to CESA, the loss of individual trees would require an Incidental Take Permit (ITP) from CDFW.

5.2.2 Special-Status Animals

The proposed Project will remove habitat with the potential to support special-status animals, including potential live-in and foraging habitat for Crotch bumblebee and loggerhead shrike, and potential foraging habitat for Swainson's hawk, olive-sided flycatcher and yellow warbler. However, based on the broader distribution of these species and the extent of potential impact,

the loss of habitat would not be considered as a substantial adverse effect on the species as a whole, and the potential impact would be less than significant without mitigation required.

5.3 Sensitive Vegetation Communities

Appendix G(a) of the CEQA guidelines asks if a project is likely to "have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service."

The proposed Project will not directly impact through grading any sensitive natural vegetation community. As a result of the proposed re-direction of flows associated with Drainage A into the Project's storm drain system, the Project has a limited potential to indirectly impact approximately 0.02 acre of riparian habitat (a cottonwood tree) associated with an offsite portion of Drainage A as a result of the elimination of a hydrology source. However, given that the cottonwood tree is established and presumably deeply rooted, the diversion of the infrequent storm flows would not likely harm the tree. Regardless, this report assumes that the tree would be indirectly impacted, but this minimal impact would not be considered a substantial adverse effect to riparian habitat and would be less than significant.

The Project will impact through grading approximately 43.64 acres of native vegetation communities (Quailbush Scrub, Nevada Joint Fir Scrub, Rubber Rabbitbush Scrub and Creosote Bush Scrub), including 42.75 acres onsite and 0.89 acre offsite [Exhibit 11 – Vegetation Impact Map]. The impacts are summarized below in Table 5-1. None of the four vegetation alliances are considered as sensitive vegetation communities, and therefore the impacts would be less than significant.

Table 5-1. Summary of Native Vegetation Impacts

VEGETATION ALLIANCES/ LAND USE TYPE	ONSITE	OFFSITE	TOTAL
Atriplex lentiformis Shrubland Alliance (Quailbush Scrub)	5.46	0.02	5.48
Ephedra nevadensis-Lycium andersonii-Grayia spinosa Shrubland Alliance (Nevada Joint Fir Scrub)	16.51	0.13	16.64
Ericameria nauseosa Shrubland Alliance (Rubber Rabbitbrush Scrub)	5.55	0.48	6.03
Larrea tridentata Shrubland Alliance (Creosote Bush Scrub)	15.23	0.26	15.49
Total	42.75	0.89	43.64

5.4 Wetlands

Appendix G(c) of the State CEQA guidelines asks if a project is likely to "have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means."

The Project site does not contain any state or federally protected wetlands, and therefore will not impact wetlands.

5.5 Wildlife Movement and Native Wildlife Nursery Sites

Appendix G(d) of the State CEQA guidelines asks if a project is likely to "interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites."

The Project will not impact a migratory wildlife corridor.

The project has the potential to impact active bird nests if vegetation is removed during the nesting season. Impacts to nesting birds are prohibited by the MBTA and California Fish and Game Code. However, although impacts to native birds are prohibited by MBTA and similar provisions of California Fish and Game Code, impacts to native birds by the proposed Project would not be a significant impact under CEQA. The native birds with potential to nest on the Project site would be those that are extremely common to the region and highly adapted to human landscapes (e.g., house finch, killdeer). The number of individuals potentially affected by the Project would not significantly affect regional, let alone local populations of such species. A measure is identified in Section 6.0 of this report to avoid impacts to nesting birds. Furthermore, the extent of avian breeding at the Project site does not constitute a "nursery site", which as described above in Section 4.8 are sites where wildlife concentrate for hatching and/or raising young, such as rookeries, spawning areas, and bat colonies. This degree of breeding does not apply to the Project site.

5.6 Local Policies and Ordinances

Appendix G(e) of the State CEQA guidelines asks if a project is likely to "conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance."

As referenced above in Section 3.4 and 4.10, Tile 13 Chapter 13.33 of the Victorville municipal code (Preservation and Removal of Joshua Trees) prohibits the removal of (or other damage to) Joshua trees without prior written consent of the Director of Parks and Recreation. The Project applicant will obtain all necessary authorizations from the City of Victorville related to the proposed removal of Joshua trees, and in doing so will not conflict with the City's local policy pertaining to Joshua trees.

5.7 Habitat Conservation Plans

Appendix G(f) of the State CEQA guidelines asks if a project is likely to "conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan."

There are no HCPs that apply to the Project.

5.8 Jurisdictional Waters

5.8.1 Corps and Regional Board Jurisdiction

The proposed Project will impact approximately 0.94 acre of potential Corps and Regional Board non-wetland waters, including 0.87 acre onsite and 0.07 acre offsite [Exhibit 12A – Corps/RWQCB Jurisdictional Delineation Impact Map]. Impacts to Corps jurisdiction will require a permit pursuant to Section 404 of the Clean Waters Act. Impacts to Regional Board jurisdiction will require water quality certification pursuant to Section 401 of the Clean Water Act.

Of the 0.87 acre of onsite impacts, approximately 0.03 acre consist of temporary impacts where the streambed will be restored to pre-construction contours following the completion of construction. Of the 0.07 acre of offsite impacts, 0.01 acre will be the result of permanent grading impacts, while 0.06 acre will consist of the offsite portion of Drainage A and Tributary A2 where flows will be diverted away from the drainage features into the Project's storm drain system. Table 5-2 summarizes impacts to potential Corps and Regional Board jurisdiction.

Table 5-2. Summary of Impacts to Potential Corps and Regional Board Jurisdiction

Drainage Feature	Onsite Impacts (acres)	Offsite Impacts (acres)	Total Impacts (acres)	Linear Feet
A	0.33	0.06	0.39	1,316
A1	0.01	0	0.01	541
A2	0	0.01	0.01	174
B	0.52	0	0.52	1,744
C	0.01	0	0.01	122
Total	**0.87**	**0.07**	**0.94**	**3,897**

5.8.2 Impacts to CDFW Jurisdiction

The proposed Project will impact approximately 1.63 acres of potential CDFW jurisdiction (of which 0.02 acre consists of riparian vegetation), including 1.51 acres onsite and 0.12 acre offsite [Exhibit 12B – CDFW Jurisdictional Delineation Impact Map]. Impacts to CDFW jurisdiction will require a Lake and Streambed Alteration Agreement pursuant to Section 1602 of the California Fish and Game Code.

Of the 1.51 acres of onsite impacts, approximately 0.04 acre consist of temporary impacts where the streambed will be restored to pre-construction contours following the completion of construction. Of the 0.12 acre of offsite impacts, 0.02 acre will be the result of permanent grading impacts, while 0.10 acre will consist of the offsite portion of Drainage A and Tributary A2 where flows will be diverted away from the drainage features into the Project's storm drain system. The 0.10 acre of diversion impacts includes the 0.02 acre of riparian impacts. Table 5-3 summarizes impacts to potential Corps and Regional Board jurisdiction.

Table 5-3. Summary of Impacts to CDFW Jurisdiction

Drainage Feature	Onsite Impacts (acres)	Offsite Impacts (acres)	Total Impacts (acres)	Linear Feet
A	0.57	0.11	0.68	1,316
A1	0.01	0	0.01	541
A2	0	0.01	0.01	174
B	0.92	0	0.92	1,744
C	0.01	0	0.01	122
Total	**1.51**	**0.12**	**1.63**	**3,897**

5.9 Indirect Impacts to Biological Resources

In the context of biological resources, indirect effects are those effects associated with developing areas adjacent to adjacent native open space. Potential indirect effects associated with development include water quality impacts from associated with drainage into adjacent open space/downstream aquatic resources; lighting effects; noise effects; invasive plant species from landscaping; and effects from human access into adjacent open space, such as recreational activities (including off-road vehicles and hiking), pets, dumping, etc. Temporary, indirect effects may also occur as a result of construction-related activities.

The Project is surrounded by disturbed or developed properties and therefore does not have the potential to indirectly affect sensitive biological resources.

5.10 Cumulative Impacts to Biological Resources

Cumulative impacts are defined as the direct and indirect effects of a proposed project which, when considered alone, would not be deemed a substantial impact, but when considered in addition to the impacts of related projects in the area, would be considered potentially significant. "Related projects" refers to past, present, and reasonably foreseeable probable future projects, which would have similar impacts to the proposed project.

As discussed above in Section 5.2, the Project will result in the loss of potential habitat for two animal species (Crotch bumblebee and loggerhead shrike); however, the impacts would be less than significant at the Project-specific level. Additionally, these impacts would be less than

significant cumulatively for the same reason that the impacts would not be individually significant (broad species distribution and limited extent of potential impact).

6.0 MITIGATION/AVOIDANCE MEASURES

The following discussion provides project-specific mitigation/avoidance measures for actual or potential impacts to special-status resources. The Project will impact resources (Joshua trees and jurisdictional waters) that will require mitigation pursuant to CEQA. The mitigation measures described below are meant to satisfy CEQA requirements by mitigating impacts to a level that would be less than significant. Avoidance measures are recommended for those resources (burrowing owls and general nesting birds) where the potential exists for occurrence but that direct impacts to individual owls and active bird nests must be avoided by the Project.

6.1 Burrowing Owl

As noted above, no burrowing owls were detected at the Project site during focused breeding season surveys. However, the Project site does provide suitable wintering habitat for burrowing owl and there is a potential for breeding owls to be present in the future. In order to avoid direct impacts to individual burrowing owls, the Project will implement the following measures:

- Pre-disturbance surveys will be conducted prior to the initiation of ground-disturbing activities at the Project site, including vegetation removal. At least one survey shall be performed between 14 and 30 days to prior to disturbance of the site. An additional survey will take place within 24 hours prior to disturbance to account for burrowing owls that may colonize suitable habitat in the time elapsed since the previous survey visit. If burrowing owls are not detected during the pre-disturbance surveys, then no additional action is required. If burrowing owls are detected within or adjacent to the proposed disturbance area, then the owls will be passively relocated from the site to adjacent areas of suitable habitat. A qualified biologist will prepare a Burrowing Owl Relocation and Protection Plan that will document the relocation procedures. The Plan will be submitted to CDFW for review and approval prior to relocating burrowing owls. Passive relocation will be performed outside of the breeding season (October 1 to January 31), unless a qualified biologist verifies through non-invasive methods that either: 1) the birds have not begun egg-laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival. Prior to performing the relocation, the biologist will ensure that the adjacent relocation area contains suitable burrows at a 2:1 ratio over the number of occupied burrows to be impacted. If the relocation site does not contain enough natural burrows, then artificial burrows can be created. Until burrowing owls can be excluded from the impact area, the occupied burrows must be avoided with adequate buffers as recommended by the biologist. During the breeding season, the avoidance buffer may be as high as 500 meters depending on the type of disturbance occurring adjacent to the occupied habitat.

6.2 Nesting Birds

As discussed above, the Project site has the potential to support nesting birds and impacts to active nests are prohibited by the MBTA and the California Fish and Game Code. In order to avoid impacts to nesting birds, the Project will implement the following measure, prior to site disturbance:

- If feasible, vegetation clearing should be conducted outside of the nesting season (February 1 through September 15). If avoidance of the nesting season is not feasible, then a qualified biologist shall conduct a nesting bird survey within three days prior to any disturbance of the site, including disking, grubbing, and grading. If active nests are identified, a qualified biologist shall establish suitable buffers around the nests, and the buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds have fledged or can survive independently from the nests.

6.3 Joshua Trees

As noted above, 35 Joshua trees were mapped during the Joshua tree survey and inventory effort conducted within the impact limits of the Project.

As a State Candidate Endangered species, requiring an ITP from CDFW, impacts to Joshua trees are expected to require compensatory mitigation. Mitigation is likely to consist of one of the following (or a combination of the two): a) translocation of the Joshua trees to land supporting suitable habitat to be placed under a conservation easement, restrictive covenant, or similar protective mechanism at a minimum 1:1 ratio, with replacement of trees that do not survive translocation at a minimum ratio of 2:1; and b) acquisition and preservation in perpetuity of land supporting an existing healthy population of Joshua trees at a minimum 1:1 ratio to be placed under a conservation easement, restrictive covenant, or similar protective mechanism.

In addition, pursuant to Title 13 Chapter 13.33 of the City of Victorville's municipal code, the Project proponent will first consult with the City of Victorville to receive authorization for impacts to the Joshua trees prior to conducting any project-related activities that may result in disturbance to Joshua trees.

6.4 Jurisdictional Waters

As noted above, the proposed project will permanently impact 0.91 acre and temporarily impact 0.03 acre of potential Corps and Regional Board jurisdiction, none of which consists of jurisdictional wetlands. The proposed project will permanently impact 1.59 acres and temporarily impact 0.04 acre of CDFW jurisdiction, including 0.02 acre of riparian vegetation. A total of 3,897 linear feet of potential Corps, Regional Board, and CDFW jurisdiction will be impacted. Prior to impacting the jurisdictional areas, the Project proponent will obtain a Clean Water Act Section 404 permit from the Corps and a Section 401 Water Quality Certification from the Regional Board, and a Fish and Game Code Section 1602 Lake and Streambed Alteration Agreement from CDFW, as applicable.

Additionally, the following is recommended to compensate for Project impacts to jurisdictional waters:

- The Project Applicant will purchase either rehabilitation and/or re-establishment mitigation credits at a minimum 1:1 ratio at an approved mitigation bank or in-lieu fee program within the Mojave River Watershed and/or the Santa Ana River Watershed, resulting in a minimum replacement of 0.91 acre of Corps and Regional Board jurisdiction, and 1.59 acres of CDFW jurisdiction.

7.0 REFERENCES

American Ornithologists' Union (AOU). 2009. Checklist of North American Birds, (7th Edition; 1998-2009).

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken. 2012. The Jepson Manual: Vascular Plants of California. University of California Press. 1,568 pp.

[CDFG] California Department of Fish and Game. 2021. Complete List of Amphibian, Reptile, Bird and Mammal Species in California. Dated September 2008.

[CDFG] California Department of Fish and Game. 2009. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities. State of California, California Natural Resources Agency, Department of Fish and Game. Dated November 24, 2009.

[CDFW] California Department of Fish and Wildlife. 2021. Special Animals. State of California Resources Agency, Sacramento, California.

[CDFW] California Department of Fish and Wildlife. 2021. State and Federally Listed Endangered and Threatened Animals of California. State of California Resources Agency. Sacramento, California.

[CDFW] California Department of Fish and Wildlife. 2021. California Natural Diversity Database: RareFind 5. Records of occurrence for U.S.G.S. 7.5- minute Quadrangle maps: Hesperia and surrounding quadrangles. California Department of Fish and Wildlife, State of California Resources Agency. Sacramento, California.

[Cal-IPC] California Invasive Plant Council. California Invasive Plant Inventory Database. Website: http://cal-ipc.org/paf/.

[CNPS] California Native Plant Society. 2001. Inventory of Rare and Endangered Plants of California (sixth edition). Rare Plant Scientific Advisory Committee, David P. Tibor, Convening Editor. California Native Plant Society. Sacramento, CA. x + 388pp.

[CNPS] California Native Plant Society. 2021. Inventory of Rare and Endangered Plants (online edition, v8-02). Rare Plant Program. California Native Plant Society, Sacramento, CA. Website http://www.rareplants.cnps.org

Collins, Joseph T. and Travis W. Taggart. 2009. Standard Common and Current Scientific Names for North American Amphibians, Turtles, Reptiles, and Crocodilians. Sixth Edition. Publication of The Center For North American Herpetology, Lawrence. iv+44p.

Garrett, K. and J. Dunn. 1981. Birds of Southern California: Status and Distribution. Los Angeles Audubon Society. 407 pp.

Holland, R. F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Nongame-Heritage Program, California Department of Fish and Wildlife.

Munz, P.A. 1974. A Flora of Southern California. University of California Press. 1,086 pp.

Nelson, J. 1984. Rare plant survey guidelines. In: Inventory of rare and endangered vascular plants of California. J. Smith and R. York (eds.). Special Publication No. 1. California Native Plant Society.

[RCHCA] Riverside County Habitat Conservation Agency. 1996. Habitat Conservation Plan for the Stephens' Kangaroo Rat in Western Riverside County, California. Riverside, CA: Riverside County Habitat Conservation Agency.

Sawyer, J.O, T. Keeler-Wolf, and J.M. Evens. A Manual of California Vegetation. Second Edition. California Native Plant Society Press. Sacramento, California. 1,300 pp.

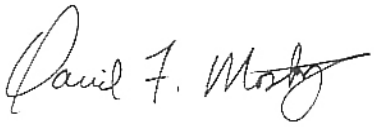
Stebbins, R. C. 1954. Amphibians and reptiles of western North America. McGraw-Hill, New York. 536pp.

Stebbins, R.C. 1985. A field guide to western reptiles and amphibians, 2nd ed. Houghton Mifflin Co., Boston, Massachusetts.

[USFWS] U.S. Fish and Wildlife Service. 2000. Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants. Sacramento, CA: U.S. Fish and Wildlife Service. Unpublished memorandum, dated January 2000.

8.0 CERTIFICATION

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



Signed:_____ Date: 02/07/2022

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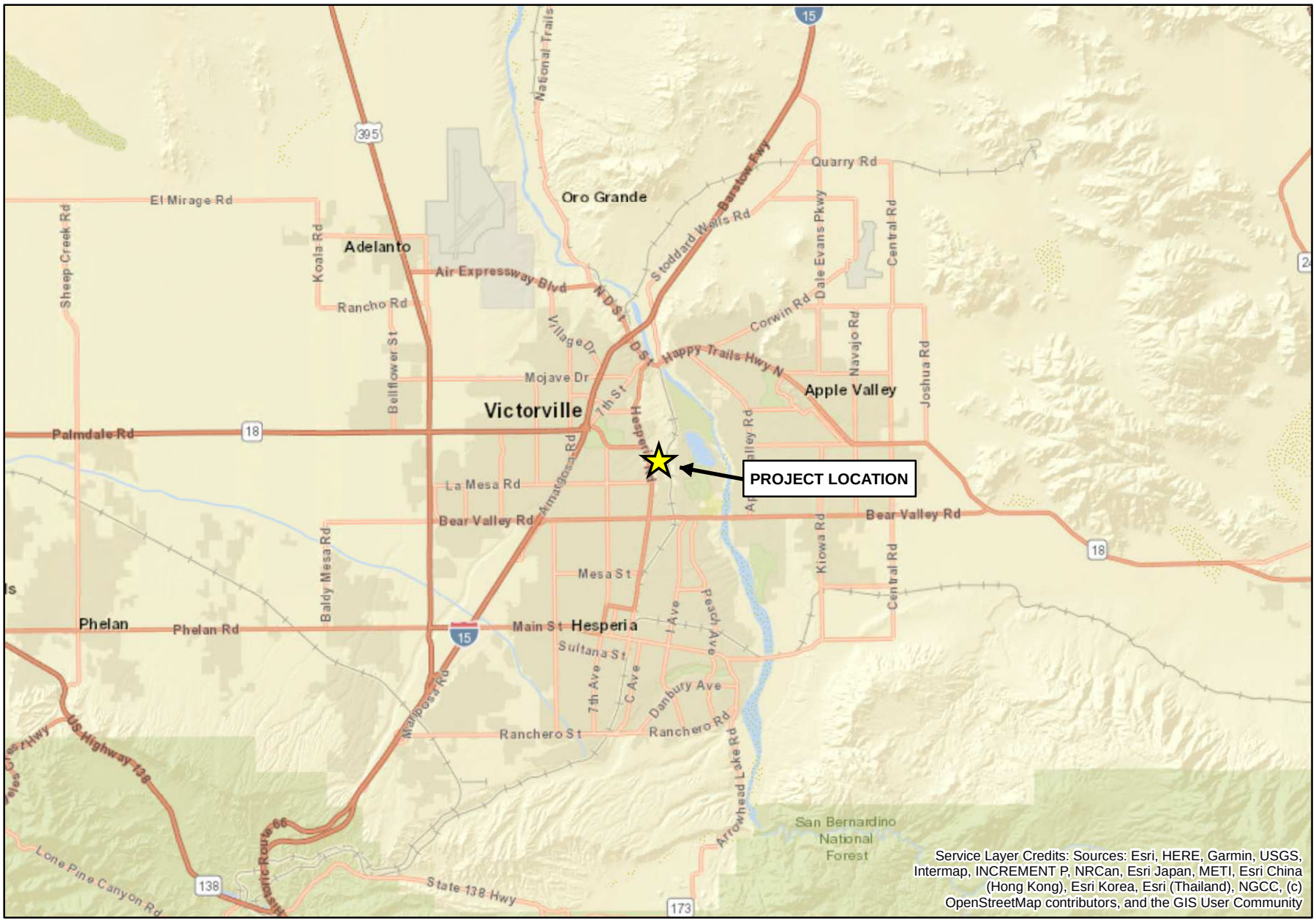

Source: ESRI World Street Map

N

0 2 4 8 Miles

OTTAWA
BUSINESS CENTER PROJECT

Regional Map

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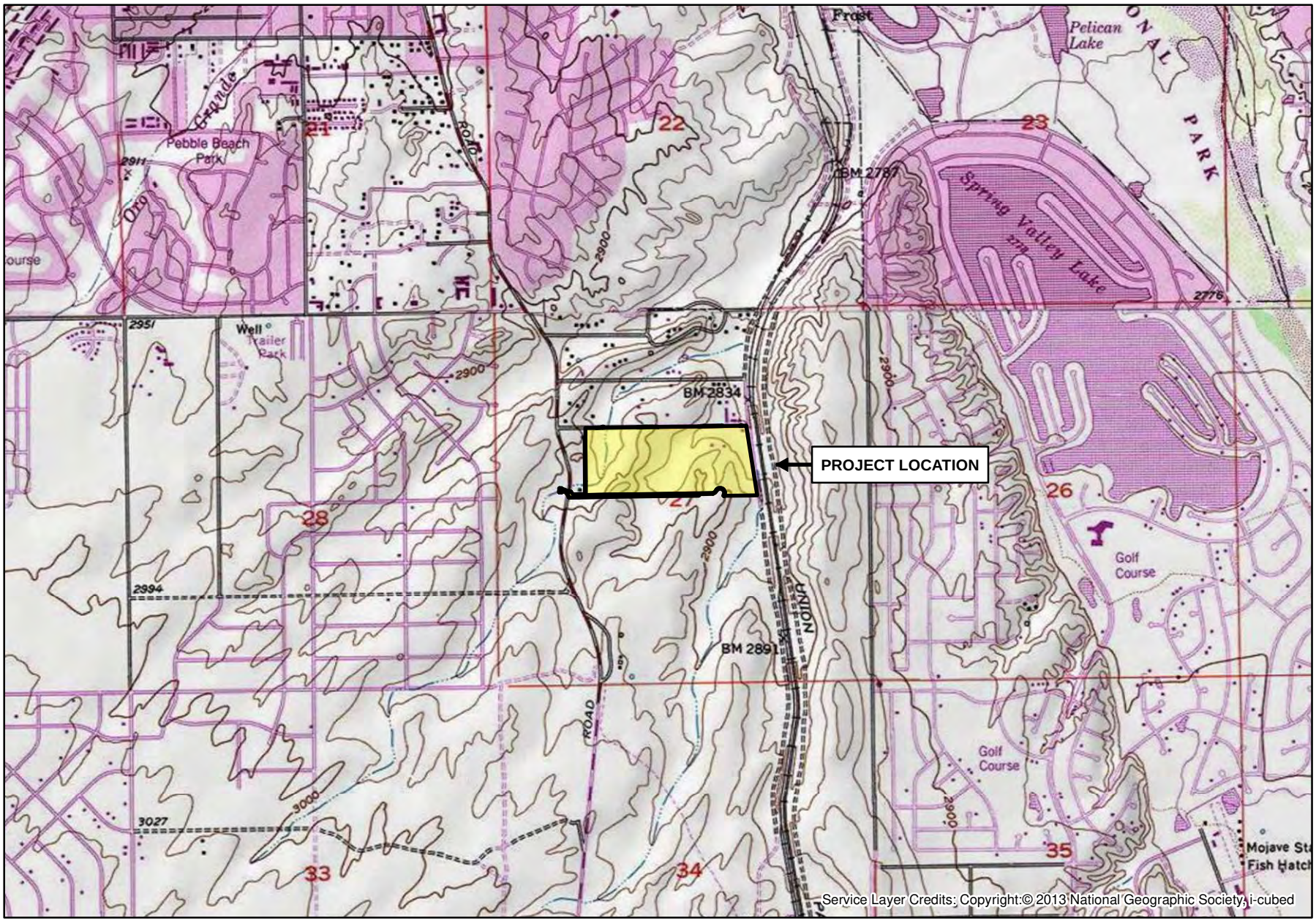
Exhibit 1



Adapted from USGS Hesperia, CA quadrangle

N

0 1,000 2,000 4,000 Feet

OTTAWA
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Vicinity Map

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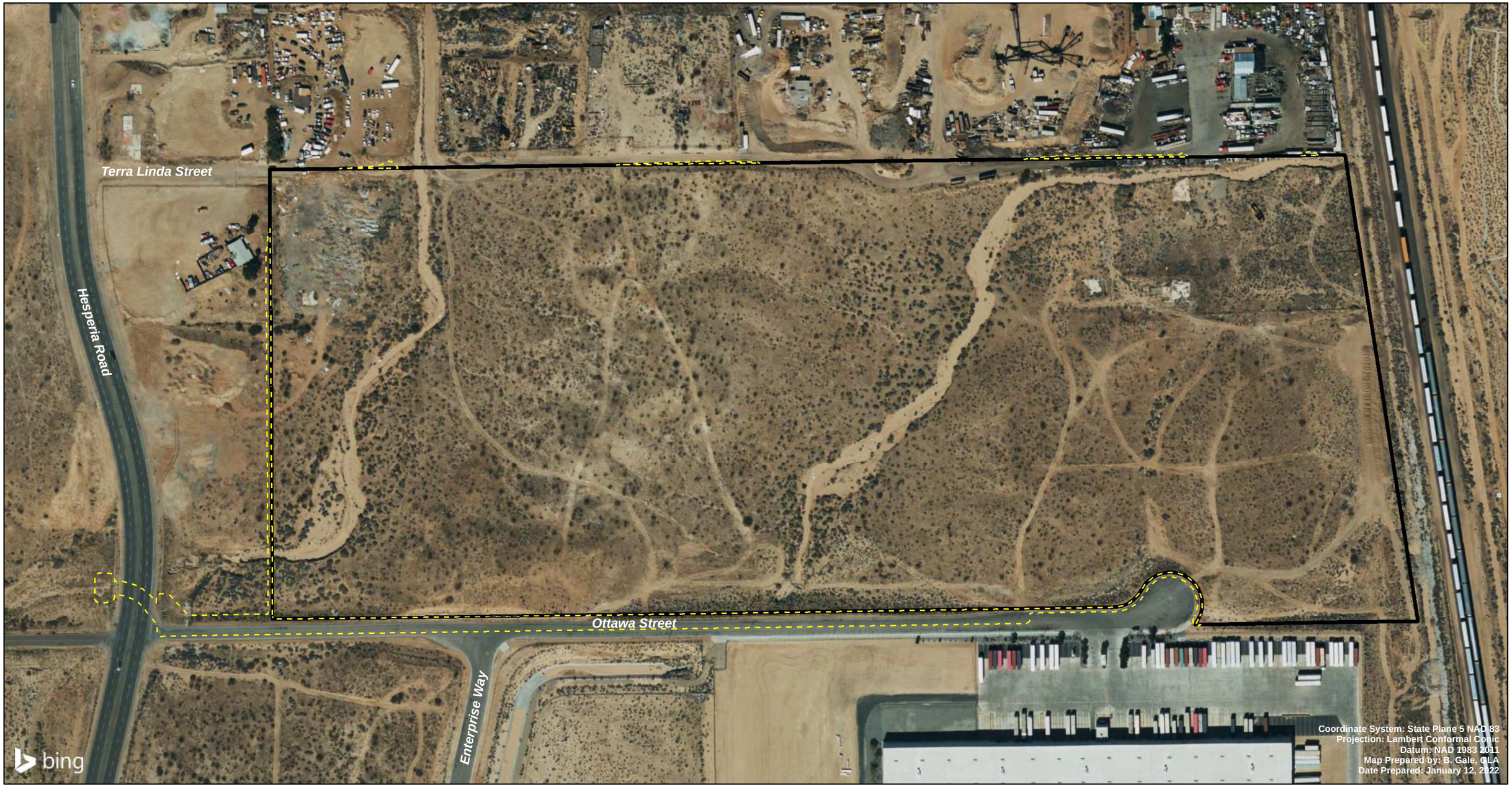
Exhibit 2



Onsite Project Site

Offsite Project Site

N

0 100 200 400

Feet

1 inch = 200 feet

OTTAWA BUSINESS CENTER PROJECT

Aerial Map

GLENN LUKOS ASSOCIATES

Exhibit 3

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Onsite Project Site
Offsite Project Site
Creosote bush Scrub
Fremont Cottonwood
Nevada joint fir Scrub
Quailbush Scrub
Rubber rabbitbrush Scrub
Ornamental
Bare
Disturbed/Developed
Joshua Tree

N

0 100 200 400
Feet

1 inch = 200 feet

OTTAWA BUSINESS CENTER PROJECT

Vegetation Map

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Exhibit 4

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Photograph 1: View of the project site depicting an area of quailbush scrub and a single Joshua tree.

Photograph 2: View of the project site depicting an area of creosote bush scrub and a single Joshua tree.

GLENN LUKOS ASSOCIATES

Exhibit 5

Photograph 3: View of the project site looking west along the northern boundary and depicting a portion of Drainage B.

Photograph 4: View of the northeastern portion of the project site depicting an area of rubber rabbitbrush scrub.

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Site Photographs

Onsite Project Site

Offsite Project Site

107 Bryman Loamy Fine Sand, 5 to 9 Percent Slopes

113 Cajon Sand, 2 to 9 Percent Slopes

130 Haplargids-Calciorthids Complex, 15 to 50 Percent Slopes

N

0 100 200 400

Feet

1 inch = 200 feet

OTTAWA BUSINESS CENTER PROJECT

Soils Map

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Exhibit 6

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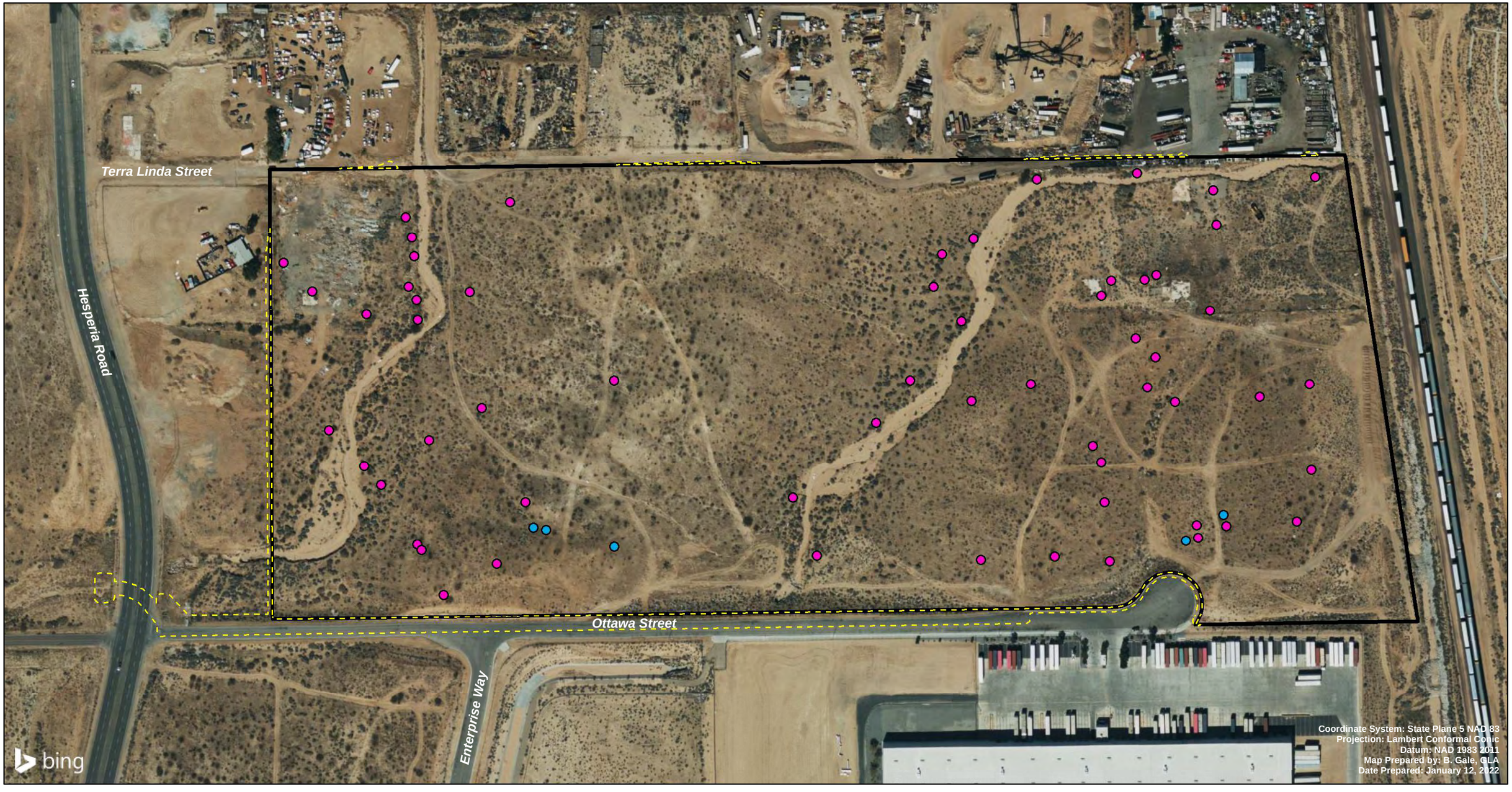

Onsite Project Site

Offsite Project Site

Burrow

Burrow Complex

N

0 100 200 400

Feet

1 inch = 200 feet

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Burrowing Owl Survey Map

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Exhibit 7

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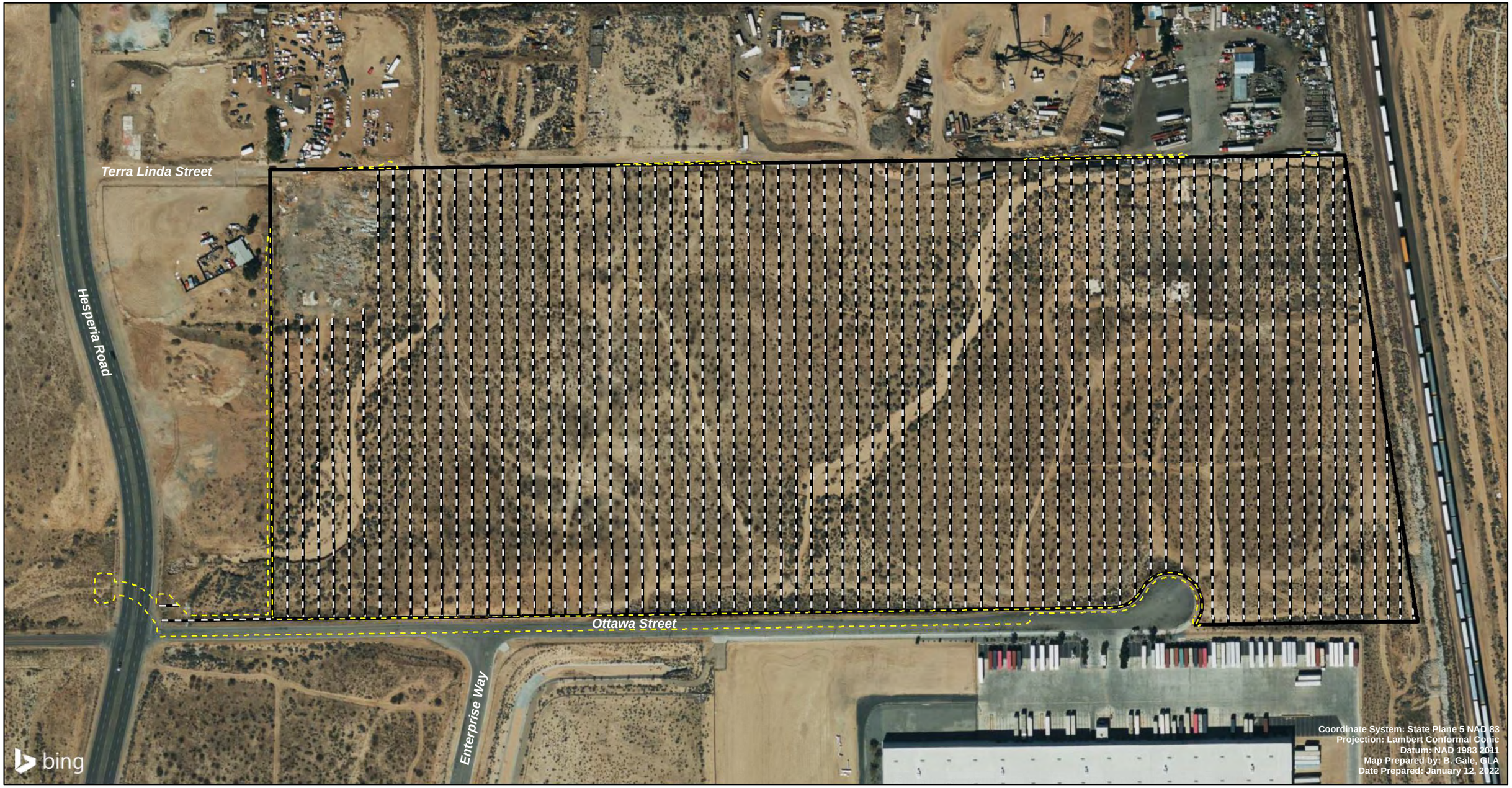

Onsite Project Site

Offsite Project Site

Desert Tortoise Survey Transect

N

0 100 200 400

Feet

1 inch = 200 feet

OTTAWA BUSINESS CENTER PROJECT

Desert Tortoise Survey Map

GLENN LUKOS ASSOCIATES

Exhibit 8

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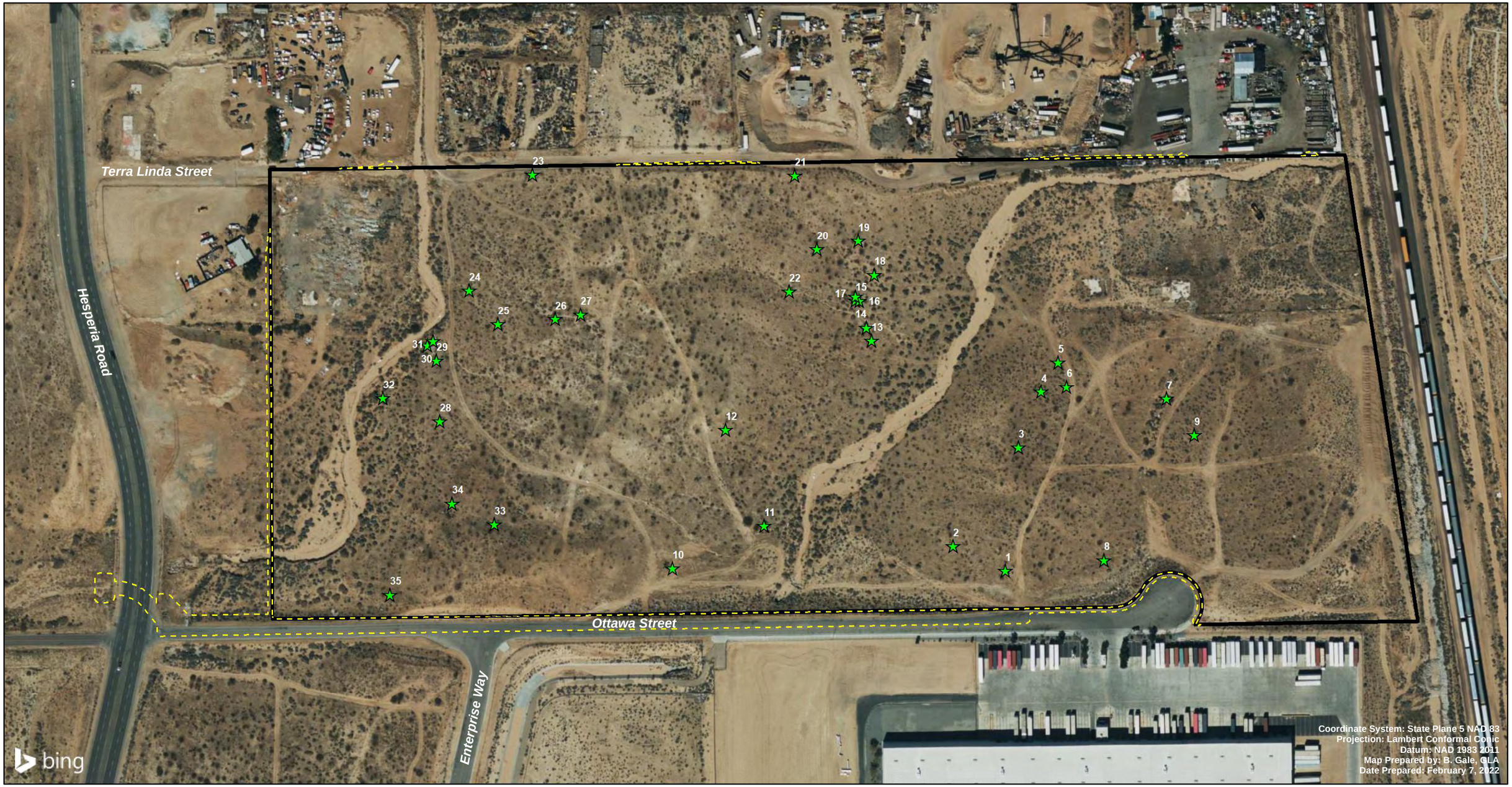

Onsite Project Site

Offsite Project Site

Joshua Tree

N

0 100 200 400

Feet

1 inch = 200 feet

OTTAWA BUSINESS CENTER PROJECT

Joshua Tree Suvery Map

GLENN LUKOS ASSOCIATES

Exhibit 9

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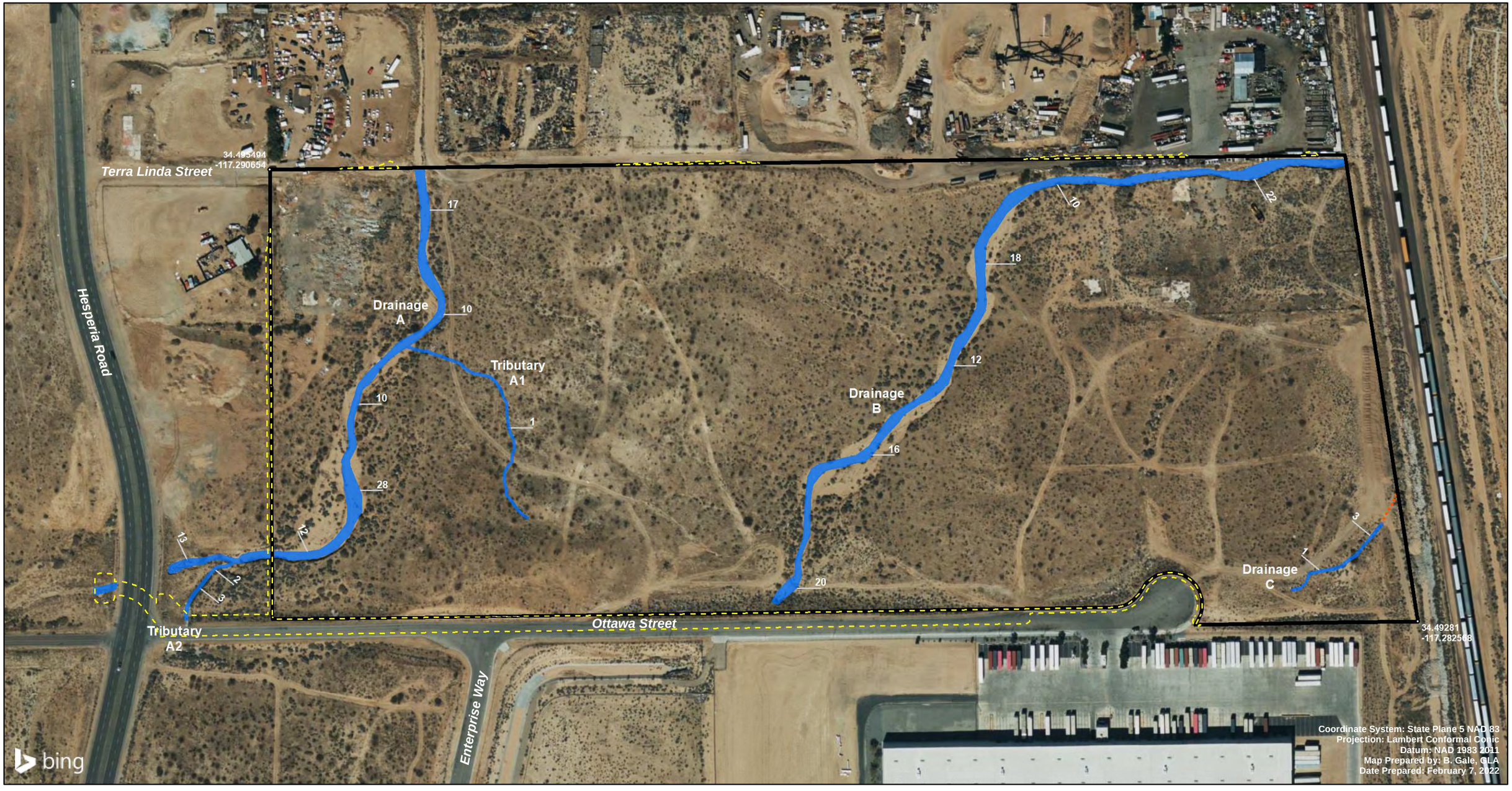

Onsite Project Site

Offsite Project Site

Non-Wetland Waters of the State and U.S.

No OHWM

Width of Drainage in Feet

N

0 100 200 400

Feet

1 inch = 200 feet

OTTAWA BUSINESS CENTER PROJECT

Corps/RWQCB Jurisdictional Delineation Map

GLENN LUKOS ASSOCIATES

Exhibit 10A

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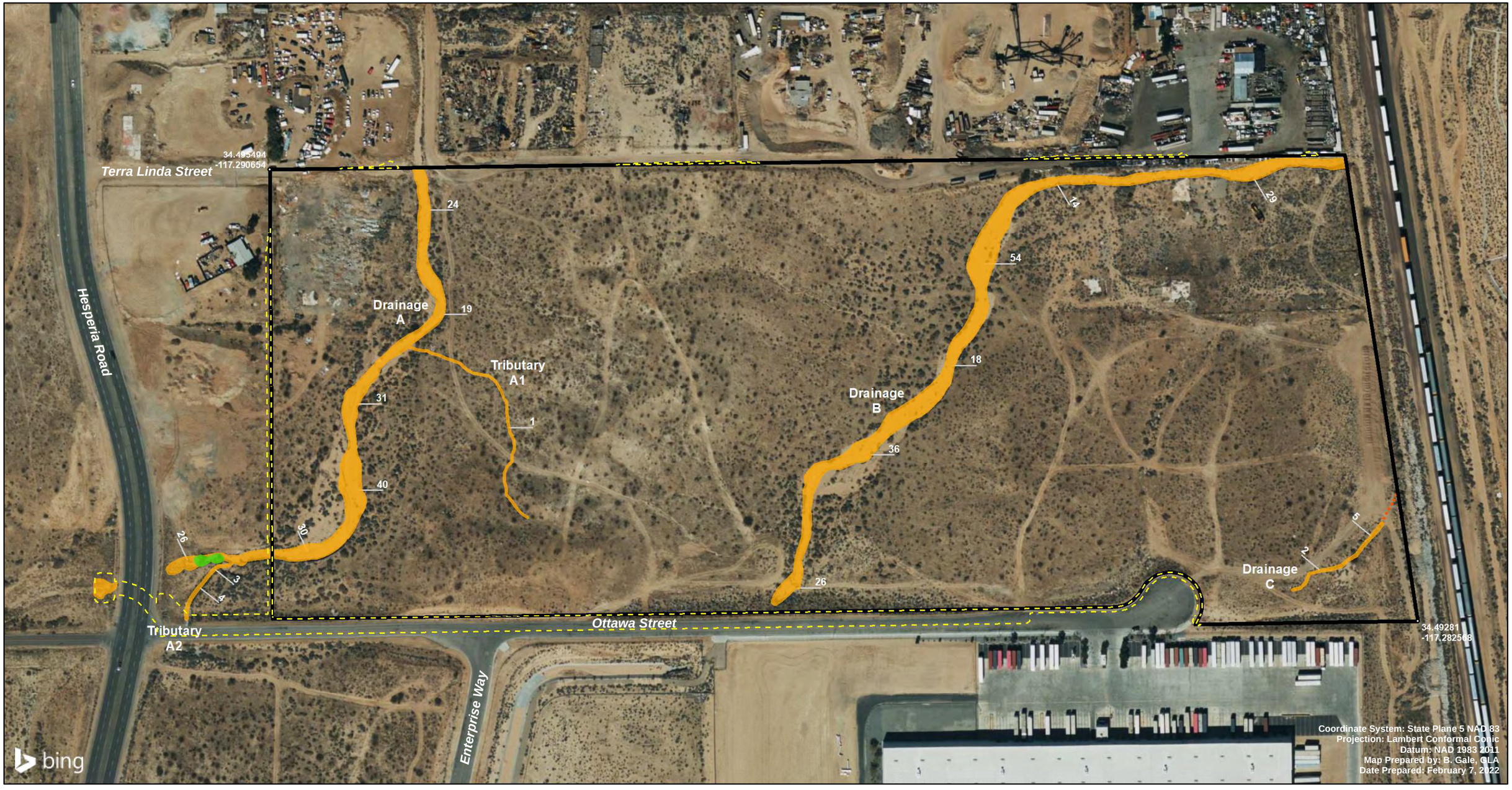


Onsite Project Site

Offsite Project Site

Riparian

Non-Riparian Stream

No OHWM

Width of Drainage in Feet

N

0 100 200 400

Feet

1 inch = 200 feet

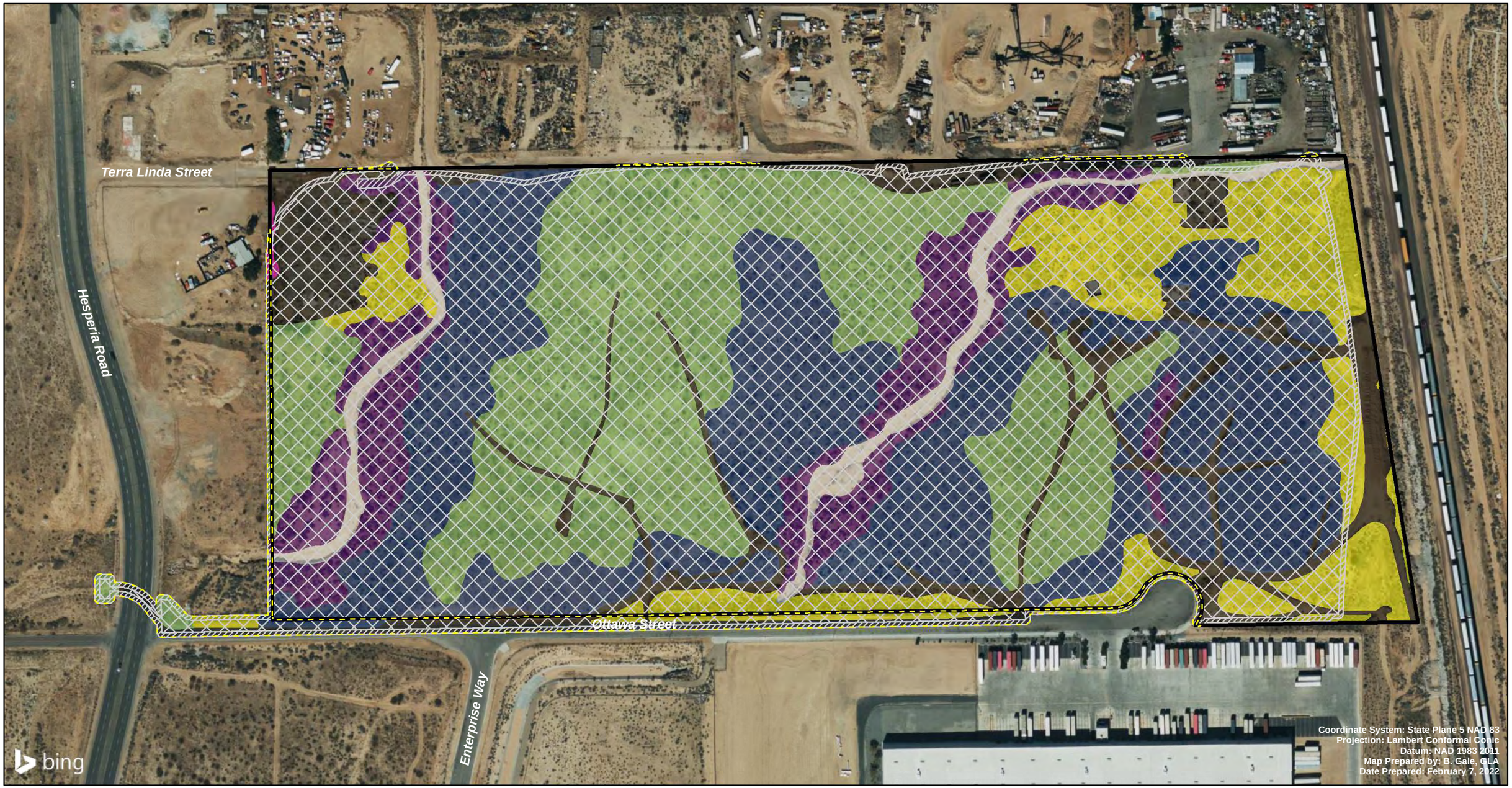
OTTAWA BUSINESS CENTER PROJECT

CDFW Jurisdictional Delineation Map

GLENN LUKOS ASSOCIATES

Exhibit 10B

X:\0363-THE REST\0878-08OTTA\878-08GIS\DelineationGIS\878-8_JD_CDFW.mxd



Coordinate System: State Plane 5 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD 1983 2011
Map Prepared by: B. Gale, GLA
Date Prepared: February 7, 2022

- Onsite Project Site
- Offsite Project Site
- Permanent Impact
- Temporary Impact
- Creosote bush Scrub
- Fremont Cottonwood
- Nevada joint fir Scrub
- Quailbush Scrub
- Rubber rabbitbrush Scrub
- Ornamental
- Bare
- Disturbed/Developed

N

0 100 200 400
Feet

1 inch = 200 feet

OTTAWA BUSINESS CENTER PROJECT

Vegetation Impact Map

GLENN LUKOS ASSOCIATES

Exhibit 11

X:\0363-THE REST\0878-08OTTA\878-08GIS\ImpactsGIS\878-8_VegetationImpacts.mxd

Onsite Project Site

Offsite Project Site

Permanent Impact

Temporary Impact

Diversion Impact

Avoided

No OHWM

Width of Drainage in Feet

N

0 100 200 400

Feet

1 inch = 200 feet

OTTAWA BUSINESS CENTER PROJECT

Corps/RWQCB Jurisdictional Delineation Impact Map

GLENN LUKOS ASSOCIATES

Exhibit 12A

X:\0363-THE REST\0878-08OTTA\878-08GIS\ImpactsGIS\878-8_JD_CorpsRWQCB_Impacts.mxd

- Onsite Project Site
- Offsite Project Site
- Permanent Impact of Non-Riparian Stream
- Temporary Impact of Non-Riparian Stream
- Diversion Impact of Riparian Habitat
- Diversion Impact of Non-Riparian Stream
- Avoided Non-Riparian Stream
- No OHWM
- # Width of Drainage in Feet

N

0 100 200 400
Feet

1 inch = 200 feet

OTTAWA BUSINESS CENTER PROJECT

CDFW Jurisdictional Delineation Impact Map

GLENN LUKOS ASSOCIATES

Exhibit 12B

X:\0363-THE REST\0878-08OTTA\878-08GIS\ImpactsGIS\878-8_JD_CDFW_Impacts.mxd

GLENN LUKOS ASSOCIATES
Regulatory Services

December 20, 2021

Tom Cruikshank
Space Center Mira Loma, Inc.
3401 Etiwanda Avenue, Leasing Office
Jurupa Valley, California 91752

SUBJECT: Jurisdictional Delineation of the Ottawa Business Center Project Site Located in Victorville, San Bernardino County, California

Dear Mr. Cruikshank:

This letter report summarizes our preliminary findings of U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board (Regional Board), and California Department of Fish and Wildlife (CDFW) jurisdiction for the above-referenced property.[1]

The Ottawa Business Center Project Site (Project site) in Victorville, San Bernardino County [Exhibit 1] comprises approximately 53.96 acres and contains one unnamed blue-line streams as depicted on the U.S. Geological Survey (USGS) topographic map Hesperia, California [Exhibit 2]. The Project site consists of 51.92 acres onsite and 2.04 acres of adjacent offsite areas.

On September 9, 2021, regulatory specialists of Glenn Lukos Associates, Inc. (GLA) examined the Project site to determine the presence and limits of (1) Corps jurisdiction pursuant to Section 404 of the Clean Water Act, (2) Regional Board jurisdiction pursuant to Section 401 of the CWA and Section 13260 of the California Water Code (CWC), and (3) CDFW jurisdiction pursuant to Division 2, Chapter 6, Section 1600 of the Fish and Game Code. Enclosed is a 200-scale map [Exhibit 3] that depicts the areas of Corps, Regional Board and CDFW jurisdiction. Photographs to document the topography, vegetative communities, and general widths of each of the waters are provided as Exhibit 4. A soils map is included as Exhibit 5.

Potential Corps jurisdiction within the Project site totals approximately 0.96 acre, none of which consists of federal wetlands.

[1] This report presents our best effort at estimating the subject jurisdictional boundaries using the most up-to-date regulations and written policy and guidance from the regulatory agencies. Only the regulatory agencies can make a final determination of jurisdictional boundaries.

Regional Board jurisdiction within the Project site totals approximately 0.96 acre, none of which consists of State wetlands. Of the total 0.96 acre, all comprises Corps jurisdiction.

CDFW jurisdiction within the Project site totals approximately 1.67 acres, of which approximately 0.02 acre consists of riparian vegetated habitat.

I. METHODOLOGY

Prior to beginning the field delineation, a color aerial photograph, a topographic base map of the property, the previously cited USGS topographic map, and a soils map were examined to determine the locations of potential areas of Corps, Regional Board, and CDFW jurisdiction. Suspected jurisdictional areas were field checked for evidence of stream activity and/or wetland vegetation, soils and hydrology. Where applicable, reference was made to the 2008 Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (OWHM Manual)[2] to identify the width of Corps jurisdiction, and suspected federal wetland habitats on the site were evaluated using the methodology set forth in the U.S. Army Corps of Engineers 1987 Wetland Delineation Manual[3] (Wetland Manual) and the 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Supplement (Arid West Supplement).[4] Reference was also made to the 2019 State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (State Board Wetland Definition and Procedures) to identify suspected State wetland habitats.[5] While in the field, the potential limits of jurisdiction were recorded with a sub-meter Trimble GPS device in conjunction with a color aerial photograph using visible landmarks.

The National Cooperative Soil Survey (NCSS) has mapped the following soil types as occurring within the Project site:

Bryman Loamy Fine Sand

Bryman series consists of deep, well drained soils that formed in alluvium from dominantly granitic sources. Bryman soils are on terraces and older alluvial fans and have slopes of 0 to 15

[2] U.S. Army Corps of Engineers. 2008. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States
[3] Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experimental Station, Vicksburg, Mississippi.
[4] U.S. Army Corps of Engineers. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
[5] State Water Resources Control Board. 2019. State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State.

percent. The mean annual precipitation is about 4 inches and the mean annual temperature is about 63 degrees F.

Cajon Sand

The Cajon series consists of very deep, somewhat excessively drained soils that formed in sandy alluvium from dominantly granitic rocks. Cajon soils are on alluvial fans, fan aprons, fan skirts, inset fans and river terraces. Slopes are 0 to 15 percent. The average annual precipitation is about 6 inches and the mean annual temperature is about 65 degrees F.

Haplargids-Calciorthids Complex

The Haplargids soils do not have evidence of current ground water within a depth of 1 m, do not have appreciable cementation by silica, have little organic matter or available moisture, and have little evidence of soil movement. The typic Haplargids are extensive soils in the western states. Their slopes are mainly gentle. Most of them are used for grazing. Calciorthids are extensive in the arid regions of the United States. Their slopes range from gentle to strong, and the soils either are irrigated or are used for grazing.

II. JURISDICTION

A. <u>Army Corps of Engineers</u>

Pursuant to Section 404 of the Clean Water Act, the Corps regulates the discharge of dredged and/or fill material into waters of the United States. The term "waters of the United States" is defined in Corps regulations at 33 CFR Part 328.3(a) as:

> *(1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;*
> *(2) All interstate waters including interstate wetlands;*
> *(3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect foreign commerce including any such waters:*
> > *(i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or*

(ii) From which fish or shell fish are or could be taken and sold in interstate or foreign commerce; or

(iii) Which are used or could be used for industrial purpose by industries in interstate commerce...

(4) All impoundments of waters otherwise defined as waters of the United States under the definition;

(5) Tributaries of waters identified in paragraphs (a) (1)-(4) of this section;

(6) The territorial seas;

(7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1)-(6) of this section.

(8) Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 123.11(m) which also meet the criteria of this definition) are not waters of the United States.

In the absence of wetlands, the limits of Corps jurisdiction in non-tidal waters, such as intermittent streams, extend to the OHWM which is defined at 33 CFR 328.3(e) as:

...that line on the shore established by the fluctuation of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

1. Wetland Definition Pursuant to Section 404 of the Clean Water Act

The term “wetlands” (a subset of “waters of the United States”) is defined at 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support...a prevalence of vegetation typically adapted for life in saturated soil conditions." In 1987 the Corps published the Wetland Manual to guide its field personnel in determining jurisdictional wetland boundaries. The methodology set forth in the Wetland Manual and the Arid West Supplement generally require that, in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibit at least minimal hydric characteristics. While the Wetland Manual and Arid West Supplement provide great detail in methodology and allow for varying special conditions, a wetland should normally meet each of the following three criteria:

- More than 50 percent of the dominant plant species at the site must be hydrophytic in nature as published in the most current national wetland plant list;

- Soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., a gleyed color, or mottles with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions); and

- Whereas the Wetland Manual requires that hydrologic characteristics indicate that the ground is saturated to within 12 inches of the surface for at least five percent of the growing season during a normal rainfall year, the Arid West Supplement does not include a quantitative criteria with the exception for areas with "problematic hydrophytic vegetation", which require a minimum of 14 days of ponding to be considered a wetland.

2. Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al.

Pursuant to Article I, Section 8 of the U.S. Constitution, federal regulatory authority extends only to activities that affect interstate commerce. In the early 1980s the Corps interpreted the interstate commerce requirement in a manner that restricted Corps jurisdiction on isolated (intrastate) waters. On September 12, 1985, the U.S. Environmental Protection Agency (EPA) asserted that Corps jurisdiction extended to isolated waters that are used or could be used by migratory birds or endangered species, and the definition of "waters of the United States" in Corps regulations was modified as quoted above from 33 CFR 328.3(a).

On January 9, 2001, the Supreme Court of the United States issued a ruling on ***Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al.*** (SWANCC). In this case the Court was asked whether use of an isolated, intrastate pond by migratory birds is a sufficient interstate commerce connection to bring the pond into federal jurisdiction of Section 404 of the Clean Water Act.

The written opinion notes that the court's previous support of the Corps' expansion of jurisdiction beyond navigable waters (***United States v. Riverside Bayview Homes, Inc***.) was for a wetland that <u>abutted</u> a navigable water and that the court did not express any opinion on the question of the authority of the Corps to regulate wetlands that are not adjacent to bodies of open water. The current opinion goes on to state:

> ***In order to rule for the respondents here, we would have to hold that the jurisdiction of the Corps extends to ponds that are not adjacent to open water. We conclude that the text of the statute will not allow this.***

Therefore, we believe that the court's opinion goes beyond the migratory bird issue and says that no isolated, intrastate water is subject to the provisions of Section 404(a) of the Clean Water Act (regardless of any interstate commerce connection). However, the Corps and EPA have issued a joint memorandum which states that they are interpreting the ruling to address only the migratory bird issue and leaving the other interstate commerce clause nexuses intact.

3. Rapanos v. United States and Carabell v. United States

On June 5, 2007, the EPA and Corps issued joint guidance that addresses the scope of jurisdiction pursuant to the Clean Water Act in light of the Supreme Court's decision in the consolidated cases ***Rapanos v. United States*** and ***Carabell v. United States*** ("Rapanos"). The chart below was provided in the joint EPA/Corps guidance.

For sites that include waters other than Traditional Navigable Waters (TNWs) and/or their adjacent wetlands or Relatively Permanent Waters (RPWs) tributary to TNWs and/or their adjacent wetlands, as set forth in the chart below, the Corps must apply the "significant nexus" standard.

For "isolated" waters or wetlands, the joint guidance also requires an evaluation by the Corps and EPA to determine whether other interstate commerce clause nexuses, not addressed in the SWANCC decision are associated with isolated features on project sites for which a jurisdictional determination is being sought from the Corps.

The Corps and EPA will assert jurisdiction over the following waters:

- Traditional navigable waters.
- Wetlands adjacent to traditional navigable waters.
- Non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months).
- Wetlands that directly abut such tributaries.

The Corps and EPA will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a TNW:

- Non-navigable tributaries that are not relatively permanent.
- Wetlands adjacent to non-navigable tributaries that are not relatively permanent.
- Wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary.

The agencies generally will not assert jurisdiction over the following features:

- Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent or short duration flow).
- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

The agencies will apply the significant nexus standard as follows:

- A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters.
- Significant nexus includes consideration of hydrologic and ecologic factors.

B. Regional Water Quality Control Board

The State Water Resource Control Board and each of its nine Regional Boards regulate the discharge of waste (dredged or fill material) into waters of the United States[6] and waters of the State. Waters of the United States are defined above in Section II.A and waters of the State are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code 13050[e]).

Section 401 of the CWA requires certification for any federal permit or license authorizing impacts to waters of the U.S. (i.e., waters that are within federal jurisdiction), such as Section 404 of the CWA and Section 10 of the Safe Rivers and Harbors Act, to ensure that the impacts do not violate state water quality standards. When a project could impact waters outside of federal jurisdiction, the Regional Board has the authority under the Porter-Cologne Water Quality Control Act to issue Waste Discharge Requirements (WDRs) to ensure that impacts do not violate state water quality standards. Clean Water Act Section 401 Water Quality Certifications, WDRs, and waivers of WDRs are also referred to as orders or permits.

[6] Therefore, wetlands that meet the current definition, or any historic definition, of waters of the U.S. are waters of the state. In 2000, the State Water Resources Control Board determined that all waters of the U.S. are also waters of the state by regulation, prior to any regulatory or judicial limitations on the federal definition of waters of the U.S. (California Code or Regulations title 23, section 3831(w)). This regulation has remained in effect despite subsequent changes to the federal definition. Therefore, waters of the state includes features that have been determined by the U.S. Environmental Protection Agency (U.S. EPA) or the U.S. Army Corps of Engineers (Corps) to be "waters of the U.S." in an approved jurisdictional determination; "waters of the U.S." identified in an aquatic resource report verified by the Corps upon which a permitting decision was based; and features that are consistent with any current or historic final judicial interpretation of "waters of the U.S." or any current or historic federal regulation defining "waters of the U.S." under the federal Clean Water Act.

1. State Wetland Definition

The State Board Wetland Definition and Procedures define an area as wetland as follows: *An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.*

The following wetlands are waters of the State:

1. *Natural wetlands;*
2. *Wetlands created by modification of a surface water of the state;*[7] *and*
3. *Artificial wetlands*[8] *that meet any of the following criteria:*

a. Approved by an agency as compensatory mitigation for impacts to other waters of the state, except where the approving agency explicitly identifies the mitigation as being of limited duration;
b. Specifically identified in a water quality control plan as a wetland or other water of the state;
c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape; or
d. Greater than or equal to one acre in size, unless the artificial wetland was constructed, and is currently used and maintained, primarily for one or more of the following purposes (i.e., the following artificial wetlands are not waters of the state unless they also satisfy the criteria set forth in 2, 3a, or 3b):

i. Industrial or municipal wastewater treatment or disposal,
ii. Settling of sediment,
iii. Detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program,
iv. Treatment of surface waters,
v. Agricultural crop irrigation or stock watering,
vi. Fire suppression,
vii. Industrial processing or cooling,

[7] "Created by modification of a surface water of the state" means that the wetland that is being evaluated was created by modifying an area that was a surface water of the state at the time of such modification. It does not include a wetland that is created in a location where a water of the state had existed historically, but had already been completely eliminated at some time prior to the creation of the wetland. The wetland being evaluated does not become a water of the state due solely to a diversion of water from a different water of the state.
[8] Artificial wetlands are wetlands that result from human activity.

viii. Active surface mining – even if the site is managed for interim wetlands functions and values,
ix. Log storage,
x. Treatment, storage, or distribution of recycled water, or
xi. Maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or
xii. Fields flooded for rice growing.[9]

All artificial wetlands that are less than an acre in size and do not satisfy the criteria set forth in 2, 3.a, 3.b, or 3.c are not waters of the state. If an aquatic feature meets the wetland definition, the burden is on the applicant to demonstrate that the wetland is not a water of the state.

C. California Department of Fish and Wildlife

Pursuant to Division 2, Chapter 6, Sections 1600-1603 of the California Fish and Game Code, the CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake, which supports fish or wildlife.

CDFW defines a stream (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." CDFW's definition of "lake" includes "natural lakes or man-made reservoirs." CDFW also defines a stream as “a body of water that flows, or has flowed, over a given course during the historic hydrologic regime, and where the width of its course can reasonably be identified by physical or biological indicators.”

It is important to note that the Fish and Game Code defines fish and wildlife to include: all wild animals, birds, plants, fish, amphibians, invertebrates, reptiles, and related ecological communities including the habitat upon which they depend for continued viability (FGC Division 5, Chapter 1, section 45 and Division 2, Chapter 1 section 711.2(a) respectively). Furthermore, Division 2, Chapter 5, Article 6, Section 1600 et seq. of the California Fish and

[9] Fields used for the cultivation of rice (including wild rice) that have not been abandoned due to five consecutive years of non-use for the cultivation of rice (including wild rice) that are determined to be a water of the state in accordance with these Procedures shall not have beneficial use designations applied to them through the Water Quality Control Plan for the Sacramento and San Joaquin River Basins, except as otherwise required by federal law for fields that are considered to be waters of the United States. Further, agricultural inputs legally applied to fields used for the cultivation of rice (including wild rice) shall not constitute a discharge of waste to a water of the state. Agricultural inputs that migrate to a surface water or groundwater may be considered a discharge of waste and are subject to waste discharge requirements or waivers of such requirements pursuant to the Water Board’s authority to issue or waive waste discharge requirements or take other actions as applicable.

Game Code does not limit jurisdiction to areas defined by specific flow events, seasonal changes in water flow, or presence/absence of vegetation types or communities.

III. RESULTS

A. Jurisdictional Summary

All drainage features present within the Project site support an ephemeral flow regime with a drainage type of Confined Desert Wash. These features are present within areas that contain a moderate gradient, which causes associated flows to be contained within topographic low points and flow at relatively higher velocities, preventing braiding from occurring within the confined channel banks. OHWM indicators/evidence of flow associated with confined desert washes within the Project site consist of a break in bank slope, destruction of terrestrial vegetation, sediment sorting, presence of bed and bank, and sediment deposition. These confined desert washes occur within Drainages A, B, and C, and the associated tributaries. The active channels of the drainages features are mainly unvegetated with a sandy subtrate, supporting upland vegetation along the margin and upper terraces consisting primarily of Mojave cottonthorn (*Tetradymia stenolepis*), creosote (*Larrea tridentata*), California buckwheat (*Eriogonum fasciculatum*), big saltbush (*Atriplex lentiformis*), rubber rabbitbrush (*Ericameria nauseosa*), pencil cholla (*Cylindropuntia ramosissima*), Great Basin sagebrush (*Artemisia tridentata*), Joshua tree (*Yucca brevifolia*), Cooper's boxthorn (*Lycium cooperi*), annual bursage (*Ambrosia acanthicarpa*), cheesebrush (*Ambrosia salsola*), spotted spurge (*Euphorbia maculata*), salt heliotrope (*Heliotropum curassavicum*), Sahara mustard (*Brassica tournefortii*), yellow sweetclover (*Melilotus officinalis*), Fremont cottonwood (*Populus fremontii*), blue palo verde (*Parkinsonia florida*), and tree of heaven (*Ailanthus altissima*). Photos of the drainage features are depicted on Exhibit 4 – Site Photographs.

1. Drainage Features

Three main drainages occur within the Project site, designated herein as Drainages A, B, and C [Exhibit 3A – Corps/Regional Board Jurisdictional Delineation Map and Exhibit 3B – CDFW Jurisdictional Delineation Map]. Drainages A, B, and C all flow in a northeast direction prior to existing the site at the northern and eastern Project site boundaries. Flows ultimately discharge into the Mojave River, a RPW, located less than two miles from the Project site.

Drainage A

Drainage A originates off site to the west of Hesperia Road and generally conveys flows in a northeast direction with an OWHM ranging from 10 to 28 feet and a stream course width of 19

to 40 feet. Drainage A exits the Project site at the northern boundary where it continues offsite. Tributary A1 originates onsite, conveys flows in a northwest direction, and supports an OHWM and stream course of one foot in width. Tributary A2 originates offsite and conveys flows in a northeast direction. It converges with Drainage A just west of the Project site boundary and supports an OHWM ranging from two to three feet and stream course width of three to four feet.

Drainage B

Drainage B originates off site to the south of the Project site boundary and is conveyed by box culvert beneath Ottawa Street. Drainage B flows in a northeast direction and supports an OWHM ranging from 12 to 22 feet and stream course width of 14 to 54 feet. Drainage B exits the Project site at the northeastern boundary where it continues offsite.

Drainage C

Drainage C originates onsite in the southeastern portion of the Project site and flows in a northeast direction. It supports with an OWHM ranging from one to three feet and stream course width of two to five feet. Drainage C exits the Project site along the eastern boundary where it continues offsite.

B. Summary of Jurisdiction

1. Corps Jurisdiction

Potential Corps jurisdiction within the Project site totals approximately 0.96 acre (4,081 linear feet), none of which consists of federal wetlands. For a breakdown of acreage and linear feet of potential Corps non-wetland waters by drainage feature, see Table 1 below.

Table 1: Summary of Potential Corps Jurisdiction

Drainage Name	Potential Corps Non-Wetland Waters (acres)	Potential Corps Jurisdictional Wetlands (acres)	Total Potential Corps Jurisdiction (acres)	Length (linear feet)
Drainage A	0.39	--	0.39	1,319
Tributary A1	0.01	--	0.01	541
Tributary A2	0.01	--	0.01	174
Drainage B	0.54	--	0.54	1,799
Drainage C	0.01	--	0.01	248
Total	**0.96**	**0.00**	**0.96**	**4,081**

2. Regional Water Quality Control Board Jurisdiction

Regional Board jurisdiction within the Project site totals approximately 0.96 acre (4,081 linear feet), none of which consists of State wetlands. For a breakdown of acreage and linear feet of Regional Board jurisdiction by drainage feature, see Table 2 below.

Table 2: Summary of Regional Board Jurisdiction

Drainage Name	Regional Board Non-Wetland Waters (acres)	Regional Board Jurisdictional Wetlands (acres)	Total Regional Board Jurisdiction (acres)	Length (linear feet)
Drainage A	0.39	--	0.39	1,319
Tributary A1	0.01	--	0.01	541
Tributary A2	0.01	--	0.01	174
Drainage B	0.54	--	0.54	1,799
Drainage C	0.01	--	0.01	248
Total	**0.96**	**0.00**	**0.96**	**4,081**

3. CDFW Jurisdiction

CDFW jurisdiction within the Project site totals approximately 1.67 acres (4,085 linear feet), of which approximately 0.02 acre consists of vegetated riparian habitat. The riparian vegetation occurs within the offsite segment of Drainage A and consists of a small stand of Fremont cottonwood (*Populus fremontii*) trees. For a breakdown of acreage and linear feet of CDFW jurisdiction by drainage feature, see Table 3 below.

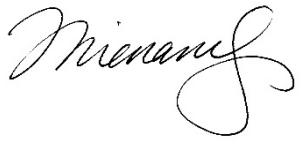
Table 3: Summary of CDFW Jurisdiction

Drainage Name	CDFW Non-riparian Stream (acres)	CDFW Riparian Habitat (acres)	Total CDFW Jurisdiction (acres)	Length (linear feet)
Drainage A	0.66	0.02	0.68	1,323
Tributary A1	0.01	--	0.01	541
Tributary A2	0.01	--	0.01	174
Drainage B	0.95	--	0.95	1,799
Drainage C	0.02	--	0.02	248
Total	**1.65**	**0.02**	**1.67**	**4,085**

If you have any questions about this letter report, please contact Thienan Pfeiffer at (949) 340-9088.

Sincerely,

GLENN LUKOS ASSOCIATES, INC.



Thienan Pfeiffer
President

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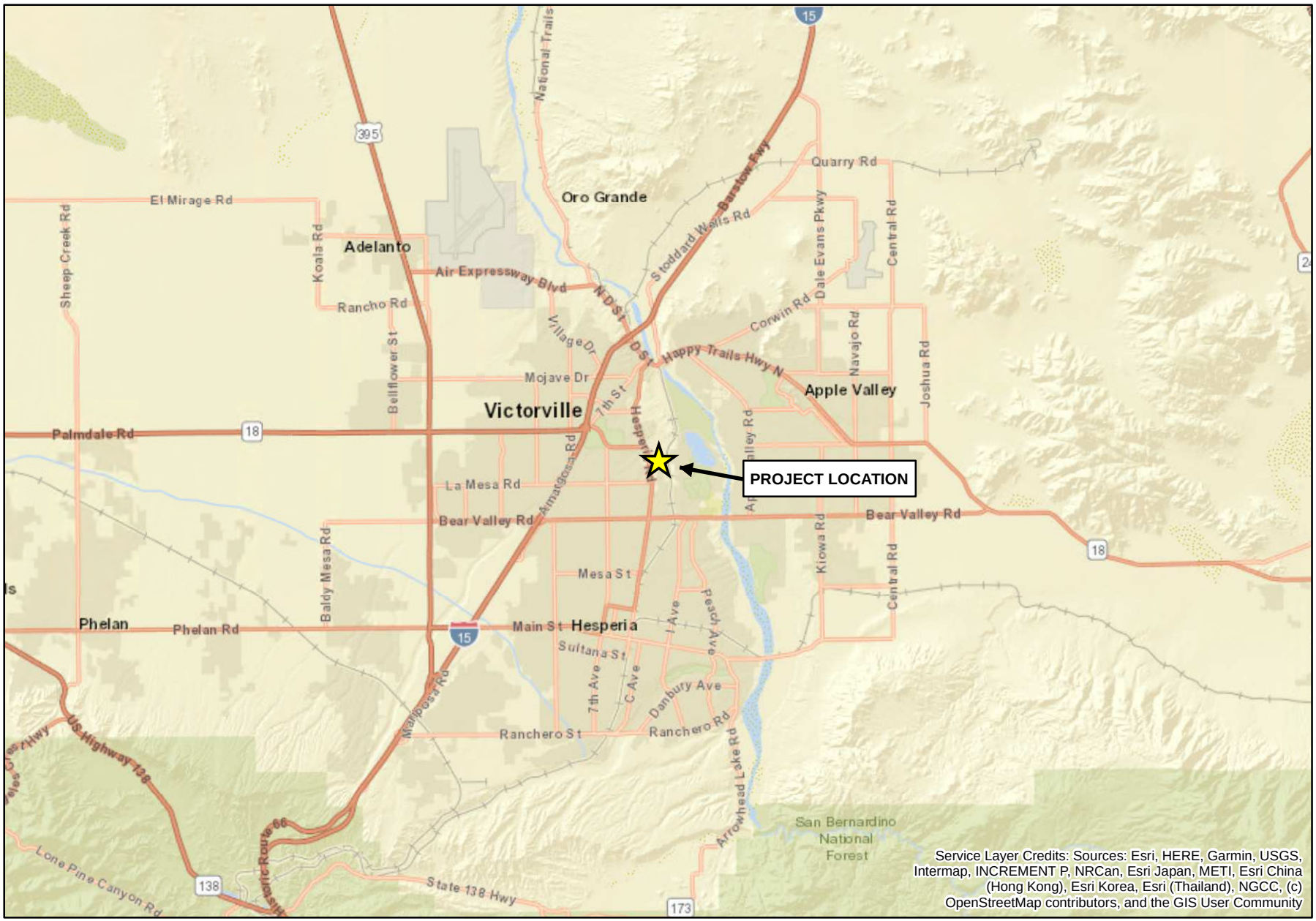


Source: ESRI World Street Map

N

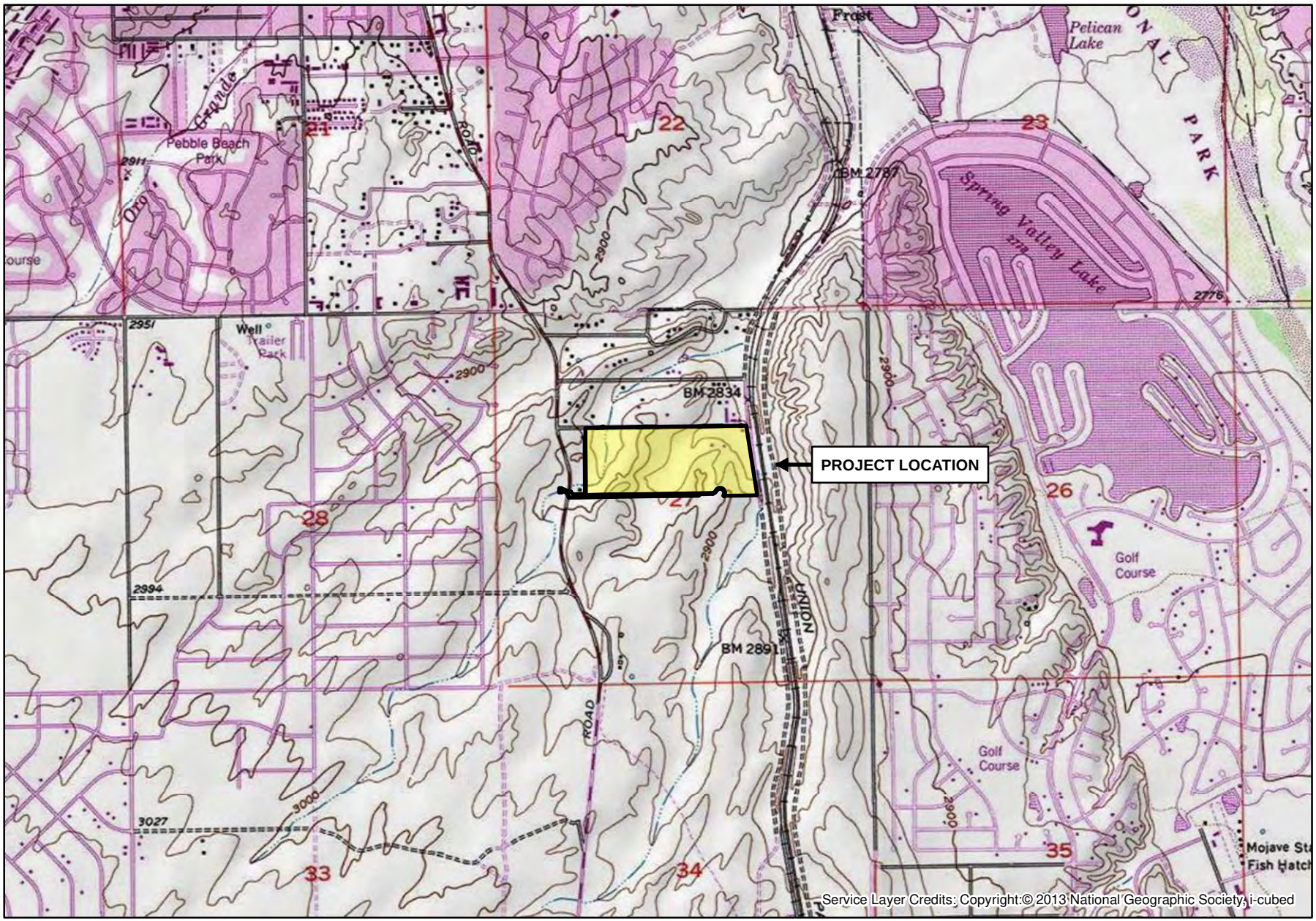
0 2 4 8 Miles

OTTAWA
BUSINESS CENTER PROJECT

Regional Map

GLENN LUKOS ASSOCIATES

Exhibit 1



Adapted from USGS Hesperia, CA quadrangle

N

0 1,000 2,000 4,000 Feet

OTTAWA
BUSINESS CENTER PROJECT

Vicinity Map

GLENN LUKOS ASSOCIATES

Exhibit 2

Onsite Project Site

Offsite Project Site

Non-Wetland Waters of the State and U.S.

No OHWM

Width of Drainage in Feet

N

0 100 200 400

Feet

1 inch = 200 feet

OTTAWA BUSINESS CENTER PROJECT

Corps/RWQCB Jurisdictional Delineation Map

GLENN LUKOS ASSOCIATES

Exhibit 3A

X:\0363-THE REST\0878-08OTTA\878-08GIS\DelineationGIS\878-8_JD_CorpsRWQCB.mxd

Onsite Project Site

Offsite Project Site

Riparian

Non-Riparian Stream

No OHWM

Width of Drainage in Feet

N

0 100 200 400

Feet

1 inch = 200 feet

OTTAWA BUSINESS CENTER PROJECT

CDFW Jurisdictional Delineation Map

GLENN LUKOS ASSOCIATES

Exhibit 3B

X:\0363-THE REST\0878-08OTTA\878-08GIS\DelineationGIS\878-8_JD_CDFW.mxd

Photograph 1: Photo looking southwest (offsite) from western boundary of the Project site. Photo depicts piped culvert that conveys Drainage A beneath Hesperia Road.

Photograph 2: Photo looking north/downstream within Drainage A near the middle of the Project site. Photo depicts sandy bottom and confined nature of the feature.

Photograph 3: Photo looking northwest, depicting the confluence of Tributary A1 with Drainage A. Photo depicts incised northern bank of Tributary A1 and adjacent upland vegetation.

Photograph 4: Photo looking southwest within Drainage B near southern perimeter of the Project site. Photo depicts box culvert that conveys Drainage B beneath Ottawa Street.

Photograph 5: Photo looking south and upstream within Drainage B near the middle of the Project site. Photo depicts shelving, sandy bottom and confined nature of Drainage B.

Photograph 6: Photo looking west within Drainage B along the northern perimeter of the Project site. Photo depicts shelving, sandy bottom and adjacent upland vegetation.

Photograph 7: Photo looking southwest and upstream at origination of Drainage C from just east of the terminus of Ottawa Street. Photo depicts adjacent rubber rabbitbrush scrub.

Photograph 8: Photo looking southwest and upstream at Drainage C from the eastern perimeter of the Project site. Photo depicts incised nature of Drainage C.

Onsite Project Site

Offsite Project Site

107 Bryman Loamy Fine Sand, 5 to 9 Percent Slopes

113 Cajon Sand, 2 to 9 Percent Slopes

130 Haplargids-Calciorthids Complex, 15 to 50 Percent Slopes

N

0 100 200 400

Feet

1 inch = 200 feet

OTTAWA BUSINESS CENTER PROJECT

Soils Map

GLENN LUKOS ASSOCIATES

Exhibit 5

X:\0363-THE REST\0878-08OTTA\878-08GIS\SoilsGIS\878-8_Soils.mxd

MOHAVE GROUND SQUIRREL SURVEY REPORT FOR OTTAWA STREET PROJECT, CITY OF VICTORVILLE, SAN BERNARDINO COUNTY, CALIFORNIA

Site Acreage 50

Prepared by:

ENVIRA
P. O. Box 2612
Ramona, CA 92065
Phone 619-885-0236
E-mail phvergne@aol.com

Phase One Survey Conducted On
March 20 of 2020

Trapping Surveys Conducted On:
April 22-26; May21-25;July 1-5

Report Date:
August 23, 2021

Prepared For :
Glenn Lukos Associates
1940 East Deere Avenue
Santa Ana, Ca 92705
Phone 949-837-0404

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Section

1.0 EXECUTIVE SUMMARY

Philippe Vergne of ENVIRA was contracted by Glenn Lukos and Associates to conduct a phase one Mohave ground squirrel (***Xerospermophilus mohavensis***)-MGS survey, and if needed, focused trapping survey on the proposed Ottawa Street project (Figure 1).

The proposed project is located in Victorville, California. Since the site was found to contain low quality suitable habitat for the Mohave ground squirrel focused trapping surveys were conducted.

This report documents the findings of phase one and focused Mohave ground squirrel trapping surveys for the Project Site shown on Figure 1- Project Vicinity and boundaries. The intended use of this document is to disclose the presence or absence of MGS within the Project limits. For the purposes of this document, the Project's study area is the area outlined in Figure 2-Project Boundaries and trapping grid represented in red.

The dominant vegetation community is disturbed salt bush and creosote bush scrub.

MGS were not captured on the current project site during the 2021 protocol survey described in this report. The Ottawa Street Project Site does not currently support MGS.

Therefore, project implementation will not result in the loss of individual MGS, nor will it adversely affect local or regional MGS populations.

Figure One Site Regional Vicinity

8/29/2021 Google Maps

Imagery ©2021 County of San Bernardino, Data CSUMB SFML, CA OPC, Landsat / Copernicus, Maxar Technologies, USDA Farm Service 2000 ft Agency, Map data ©2021

https://www.google.com/maps/@34.4946474,-117.2788696,5671m/data=!3m1!1e3 1/1

Figure 2 MGS Grid Location.

2.0 PROJECT AND PROPERTY DESCRIPTION

The project site is within the historical range of the Mohave ground squirrel (MGS, ***Xerospermophilus mohavensis***), a state-Threatened species and contains marginal habitat considered suitable for the species.

The project site is currently undeveloped, with rolling hills and bisected by two unnamed washes. An old concrete pads and fencing remains indicate that a portion of the property was inhabited in the past. A phase one site assessment was conducted on April 12 of 2021. The focused Mohave Ground Squirrel trapping survey consisting of three five-day trapping sessions were conducted from April to July of 2021.

Old foundations in NE corner of Property

2.1 SITE VEGETATION

The dominant vegetation communities are sparse and disturbed creosote bush scrub and salt bush scrub. Plant species found on site include: creosote (***Larrea tridendata***), saltbrush (***Atriplex polycarpa***), California buckwheat (***Eriogonum fasciculatum*** ssp. ***polifolium***), with lone Joshua trees (***Yucca brevifolia***). Additional shrubs that occur there are burro bush (***Ambrosia dumosa***), rubber rabbit brush (***Chrysothamnus nauseosus***), Nevada ephedra (***Ephedra nevadensis***), sticky snakeweed (***Gutierrezia microcephala***), Great basin sagebrush (***Artemisia tridentata***), flat-topped buckwheat (***Eriogonum plumatella***), hop sage (***Grayia spinosa***), Cooper's box thorn (***Lycium cooperi***).

The grasses and other annuals found on the site include red brome (***Bromus madritensis*** ssp. ***rubens***), cheat grass (***Bromus tectorum***), perennial bluegrass (***Poa secunda***), schismus (***Schismus barbatus***), red-

stemmed filaree (***Erodium cicutarium***).

A list of plant species observed is provided in Appendix D.

Looking south across site note sparse vegetation and sandy soils

2.2 SITE TOPOGRAPHY AND SOILS

The project site consists of a series of small hills separated by gently sloping flatter areas. The property is bisected my un-named drainages that flow to the southeast. The soils on the site are alluvial Cajon sands and river sands.

The site occurs on the Hesperia 7.5" quadrangle USGS Quadrangle Map (Township 5N, Range 4W. Surrounding land uses include suburban residential housing, small industrial, and a wrecking yard.

2.3 WILDLIFE

Observations of wildlife included scat, trails, tracks, burrows, skeletal remains, calls and visual sightings. Most common species observed included side-blotched lizard (***Uta stansburiana***), Great Basin whiptail (***Aspidoscelis tigris tigris***), antelope ground squirrel ***(Ammospermophilus leucurus)***, California ground squirrel (*Spermophilus beecheyi),* and common raven (***Corvus corax***).

A list of wildlife species observed is provided in Appendix C.

3.0 BACKGROUND ON MOHAVE GROUND SQUIRREL

The MGS was listed as a rare species in 1971 under the authority of the California State Endangered Species Act of 1970 (CESA) and was re-designated as a state threatened species in 1985 (Gustafson 1993). The MGS is small, grayish, diurnal squirrel. The California Department of Fish and Wildlife (CDFW) is the responsible agency that provides for its protection and management.

MGS are dormant in the fall and winter months, but emerge from hibernation in February and begin pair bonding and mating during March (Gustafson 1993). If rainfall is adequate, MGS will reproduce. If rainfall levels are not sufficient to support substantial annual plant growth, then MGS will merely forage on herbaceous perennials and shrubs until they gain ample body mass for another prolonged period of dormancy (Gustafson 1993). The adult males can enter dormancy as early as late May. Juveniles will remain above-ground until August in order to acquire generous fat reserves prior to entering dormancy.

The site is within the historic range of the Mohave ground squirrel. MGS occur in the western half of the Mojave Desert. Its historical range encompasses an area between Antelope Valley and Lucerne Valley, in the south (Gustafson 1993). However, MGS occurrences in the southern portion of its range are very unusual. The northern limits of the range are near Owens Dry Lake bed, in the north, and through China Lake Naval Weapons Station and Fort Irwin Military Base in the east (Gustafson 1993). The eastern limit of the species range extends to Barstow and south along the Mojave River. The western limits loosely follow State Highway 14 and the foothills of the southern Sierra Nevada escarpment (Gustafson 1993). Several other common squirrels occur within their range; antelope ground squirrel (AGS; ***Ammospermophilus leucurus***), round-tailed ground squirrel (RTGS; ***Xerospermophilus tereticaudus***) and the California ground squirrel (CGS; ***Spermophilus beecheyi***).

4.0 FOCUSED STUDY/SPECIES OF CONCERN

Prior to beginning field surveys, resource specialists were consulted and available information from resource management plans and relevant documents were reviewed to determine the locations and types of biological resources1 that have the potential to exist within and adjacent to the study area; resources within several miles of the Project Site were evaluated .

The materials reviewed included, but were not limited to, the following:

1. U.S. Fish and Wildlife Service (USFWS) Critical Habitat Mapper and File Data (USFWS 2013a);
2. USFWS Ventura Field Office Species List for San Bernardino County (2013b);
3. California Natural Diversity Database maintained by the California Department of Fish and Wildlife (CDFW 2013);
4. California Native Plant Society (CNPS) Electronic Inventory (CNPS 2013);
5. Aerial Photographs (Microsoft Corporation 2013); and
6. Previous biological reports prepared for immediately adjacent sites (Brylski 2012; Vergne 2017)
7. Leitner Current Status of MGS (Figure 3).

1 For the purposes of this analysis, “biological resources” refers to the plants, wildlife, and habitats that occur, or have the potential to occur, within the study area.

5.0 METHODS

Survey methods were derived from generally accepted professional standards including the 2010 California Department of Fish and Game Mohave Ground Squirrel Survey Guidelines (CDFG 2010); and performed under the auspices of a Memorandum of Understanding (MOU) with the CDFW (Appendix A). Accordingly, a methodical pedestrian-survey of the study area was conducted to visually evaluate the limits of suitable habitat on April 12, 2021.

Since no MGS were detected during the visual survey, but antelope ground squirrel were observed, and potential burrows and scat were observed on site, MGS focused trapping surveys were initiated. Census occurred within one live-trapping grid, situated in the Project Site's highest quality habitat (Figure 2).

Squirrel burrow observed on site. Species UNK.

Per protocol since no MGS were captured during trapping surveys one and two, a third five-day trapping session was conducted.

Within the grid, 100 traps were deployed at roughly 35-meter (m) spacing. The grid consisted of a ten by ten array covering approximately 19 acres . Standard small-mammal aluminum, foldable, ventilated 12–inch Sherman Traps were used within the Project Site for sampling purposes. The bait used consisted of crushed four-way grains with horse supplement. Folding cardboard boxes held down by dirt were deployed as shade covers for each trap as appropriate. Traps and shade covers were configured to provide the greatest shade cover possible.

Temperature readings were taken and recorded every hour, at 1 foot above the ground and at ground level in the shade. Traps were checked every 1-2 hours depending on temperature and other environmental influential factors (i.e., pregnant or lactating females in traps, feral dogs on grid, cold weather, presence of juveniles, etc.). Traps were open within 1 hour after sunrise and closed within 1 hour before sunset. Traps were closed when air temperature reached 90 °F. Traps were not opened until AM temperatures reached

near 50 °F. No rain occurred during the surveys. Weather data for each trapping session is provided within Appendix B.

During live trapping surveys, plants were identified to the lowest taxonomic level sufficient to determine whether the plant species observed were non-native, native, or special-status. Plants of uncertain identity were subsequently identified from taxonomic keys (Baldwin et al. 2012). Scientific and common species names were recorded. The presence of a wildlife species was based on direct observation and/or wildlife sign (e.g., tracks, burrows, nests, scat, or vocalization). Field data compiled for wildlife species included scientific name, common name, and evidence of sign when no direct observations were made. Wildlife of uncertain identity was documented and subsequently identified from specialized field guides and related literature. A reference list is attached to the document in Section 9.0.

6.0 SURVEY RESULTS

Project Site in Relation to MGS Historical Range

The project site is located at the southern margin of the historical range for the Mohave ground squirrel. There are several MGS records in the California Natural Diversity Database (CNDDB) in the project vicinity. These are as follows:

- W Hesperia, near Mountain View. One male captured on July 1, 1977. This site is 8 miles S of the project site.
- SSW Duncan Corners, Sunset Ridge. One juvenile captured on July 13, 2005. This site is 7 miles SW of the project site.
- Hesperia (exact location uncertain). One individual was collected on March 9, 1921. This site is approximately 6 miles SE of the project site.
- Victorville. One individual collected on March 2, 1919. This site is NW of the project site.
- SW Adelanto Post Office. One juvenile captured on June 24, 2011. This site is 11.3miles SW of the project site.
- Victorville, near Adelanto Road, west of Mojave Heights and NW of project. Two individuals detected on June 3, 1980

Leitner (2008), in a review of the status of the MGS, examined the results of MGS trapping surveys throughout the species' range for the period 1998-2007. There have been a number of MGS surveys in the vicinity of Victorville (Figure 3). Two of these surveys, one carried out in 1977 and the other in 2005, yielded MGS captures in the project vicinity. These are listed as the first two bullet points above.

Figure Three MGS Distribution from Lightner 2012

Western Wildlife 2:9–22 • 2015

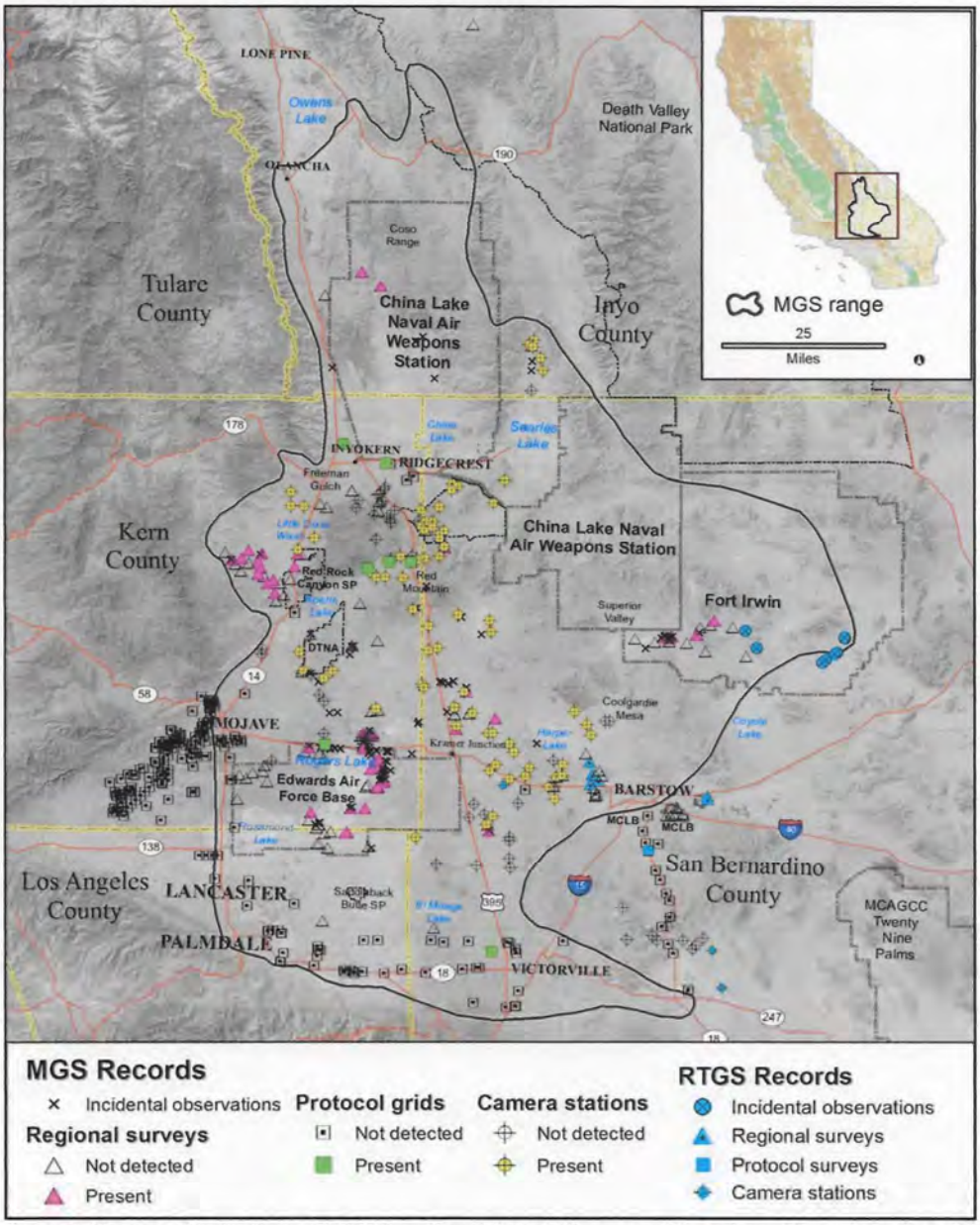

FIGURE 1. The geographic distribution of all Mohave Ground Squirrel (*Xerospermophilus mohavensis*) records for the period 2008–2012. Occurrences of the Round-tailed Ground Squirrel (*Xerospermophilus tereticaudus*) in the contact zone between the two species are also shown.

Weather data for each trapping session is provided within Appendices B. All plant species observed during the surveys and wildlife species observed are detailed in Appendix C. Additionally, survey dates, grid location, and trapping data are summarized in Tables 1, 2, and 3.

The visual survey was conducted on April 12, 2021.

Table 1. Live Trapping Dates

Grid No.	First Session	Second Session	Third Session
1	**04-22 to 26 of 2021**	**05-21 to 25 of 2021**	**07- 01 to 05 of 2021**

Table 2. Grid Census Locations

Grid No. and Trapping Sessions 1-3	Grid Corners
Grid 1 – Three Sessions	SW 34 29 35.71 N 117 17 18.27 W NW 34 29 42.73 N 117 17 18.57 W NE 34 29 42.85 N 117 17 2.28 W SE 34 29 36.07 N 117 17 18.27 W

Center of grid 34 29 39.47 N 117 17 10.25 W

Table 3. Live Tapping Data Summary

Category	Grid A Individuals (recaptures)	Total for Project Individuals
Trap Hours, Per Trap	169	169
Captures Totals All Species	100	13
MGS Captures	0	0
MGS Adult Male Captures	0	0
MGS Adult Female Captures	0	0
MGS Juvenile Male Captures	0	0
MGS Juvenile Female Captures	0	0
MGS Unknown Sex	0	0
AGS Captures	38 (47)	9
AGS Adult Male Captures	22 (25)	3
AGS Adult Female Captures	14(18)	4
AGS Juvenile Male Captures	2 (3)	1
AGS Juvenile Female Captures	2(1)	1
AGS Unknown Sex	0	0
CGS	11(7)	4
Number Of Species Captured	2	2

MGS were not detected in the Project Site or within any census grids during any of the three live trapping sessions. Only the AGS and California ground squirrel were trapped within the grid.

Total trap hours were in excess of 169 hours, averaging approximately 11.2 hours per day or 56 hours per live trapping event. There were no MGS captures. AGS capture totals were 47 representing 9 individuals.

7.0 IMPACTS AND RECOMMENDATIONS

The majority of the Project Site, estimated at 50 acres with an estimated 21.8 acres within the grid, consists of disturbed sparse density scrub and open ground. A drainage and dirt roads are also within the grid.

Historical MGS occurrence records show that the species was historically detected in the general project vicinity albeit none within a couple of miles to the project site.

Therefore, project implementation will not result in the loss of individual MGS, nor will it adversely affect local or regional MGS populations.

8.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached figures present the data and information required for this resource assessment, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this investigation was performed by me. I certify that I have not signed a nondisclosure or consultant confidentiality agreement nor do I have any financial interest in the Project.

DATE: August 27, 2021 SIGNED: Philippe Jean Vergne

Report Author Philippe Vergne

9.0 REFERENCES

Baldwin, J., D. Goldman, D. Keil, R. Patterson, and T. Rosatti. 2012. The Jepson Manual: Higher Plants of California. Berkeley: University of California Press.

Burt, W. H. 1986. ***A Field Guide to the Mammals in North America North of Mexico***. Houghton Mifflin Company, Boston, Massachusetts.

Brylski, P. 2012 Mohave Ground Squirrel Live trapping Survey for Amethyst Basin, For Bio-Resource Consultants , Inc.

CDFG (California Department of Fish and Game). 2010. Mohave Ground Squirrel Survey Guidelines. July

CDFW (California Department of Fish and Wildlife). 2013. RareFind California Department of Fish and Game Natural Diversity Database (CNDDB). Sacramento, CA: California Department of Fish and Game, Biogeographic Data Branch.

California Natural Diversity Data Base. 2009. Data Base report on threatened, endangered, rare or otherwise sensitive species and communities in the vicinity of the project site.

CNPS (California Native Plant Society). 2013. CNPS Electronic Inventory of Rare and Endangered Plants: CNPS.

Garrett, K. and J. Dunn. 1981. Birds of Southern California. Los Angeles Audubon Society. The Artisan Press, Los Angeles, California.

Grinnell, J. 1933. Review of the Recent Mammal Fauna of California. University of California Publications in Zoology, 40:71-234.

Gustafson, John. 1993. A Status Review of the Mojave Ground Squirrel (***Spermophilus mohavensis***). Department of Fish and Game. Wildlife Management Division. March 1993.

Hall, E.R. 1981. The Mammals of North America, Volumes I and II, John Wiley and Sons, New York, New York.

Hanes, T.L., R.D. Friesen, and K. Keane. 1989. Alluvial Scrub Vegetation in Coastal Southern California. U.S. Department of Agriculture, Forest Service Gen. Tech. Rep. PSW-110.

Hickman, J.C., ed. 1993. The Jepson Manual: Higher Plants of California. University of California Press.

Ingles, L.G. 1965. Mammals of the Pacific States. Stanford University Press, Stanford, California.

Laudenslayer, Jr., W.F., W.E. Grenfell, Jr. and D.C. Zeiner. 1991. A Check-list of the Amphibians, Reptiles, Birds and Mammals of California. California Fish and Game, 77:109-141.

Lietner Current Status of Mohave Ground Squirrel, 2009 Wildlife Society 44_2008

Microsoft Corporation. 2013. Bing Maps Aerial Imagery. Redmond, WA

Munz, P.A. 1974. A Flora of Southern California. University of California Press, Berkeley, California.

USGS (United States Geological Service). 1970. 7.5-Minute Quadrangle, California.

USFWS (United States Fish and Wildlife Service). 2013a. Critical Habitat Portal. USFWS

USFWS (United States Fish and Wildlife Service). 2013b. Ventura Fish and Wildlife Office Endangered and Threatened Species List. In: U.S. Department of the Interior, editor. Carlsbad, CA: USFWS.

Vergne P. Focused Survey for Mohave Ground Squirrel Amethyst Basin 2017 for Kidd Biological Consulting

APPENDIX A
CDFW MGS MOU

State of California - Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Wildlife Branch
1812 9th Street
Sacramento, CA 95811
http://www.wildlife.ca.gov

EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director

Expiration Date: December 31, 2021

MEMORANDUM OF UNDERSTANDING

Philippe J. Vergne (SC-002835)
Principal Investigator
ENVIRA

Research on Mohave Ground Squirrel in California

May 7, 2018
(This supersedes the MOU issued on September 26, 2012)

This Memorandum of Understanding (MOU) is issued pursuant to California Code of Regulations Title 14 Section 783.1(a), and Fish and Game Code (FGC) Section 2081(a) of the California Endangered Species Act (CESA) whereby through permits or memorandums of understanding, the Department of Fish and Wildlife (Department) may authorize individuals, public agencies, universities, zoological gardens, and scientific or educational institutions, to import, export, take, or possess any endangered species, threatened species, or candidate species for scientific, educational, or management purposes.

This MOU is a legal instrument connected to your Scientific Collecting Permit (**SCP; SC-002835**) pursuant to Fish and Game Code Section 1002 and CCR Title 14 Section 650, referenced herein for the purpose of linking the two regulatory documents and all authorized research activities.

MOUs issued pursuant to Fish and Game Code 2081(a) generally do not cover "movement out of harm's way" during project activities (as defined in Public Resources Code 21065) unless part of the project's purpose is to contribute to recovery of the species. Incidental take, as well as movement out of harm's way to avoid lethal take, of CESA-listed or fully protected species associated with project activities is typically authorized by the Department Regional Office with jurisdiction over the project site through separate permits issued pursuant to other Fish and Game Code sections such as 2081(b) or 2835.

Authorized Species and Research Activities

The Department authorizes you to conduct the following scientific research methods and activities on the CESA-listed threatened Mohave ground squirrel (*Xerospermophilus mohavensis;* squirrel):

a) search (survey) for, including the capture using live-traps;

APPENDIX B
WEATHER DATA

WEATHER CONDITIONS	Temp. Air Min F.	Temp. Air Max F.	Temp. Soil Min F.	Temp. Soil Max F.	Cloud Cover % AM	Cloud Cover % PM	Wind Min Mph	Wind Max Mph
Session 1								
April 22	**45**	**70**	**44**	**72**	**20**	**30**	**0**	**4**
April 23	**46**	**72**	**45**	**74**	**30**	**20**	**0**	**4**
April 24	**46**	**76**	**47**	**75**	**10**	**10**	**2**	**6**
April 25	**49**	**61**	**50**	**62**	**10**	**10**	**3**	**7**
April 26	**44**	**58**	**43**	**60**	**0**	**0**	**5**	**9**
Session 2								
May 21	**46**	**63**	**48**	**65**	**10**	**30**	**2**	**5**
May 22	**43**	**64**	**45**	**65**	**15**	**40**	**0**	**6**
May 23	**44**	**74**	**45**	**76**	**10**	**30**	**0**	**6**
May 24	**52**	**83**	**52**	**87**	**10**	**20**	**3**	**6**
May 25	**59**	**84**	**57**	**86**	**20**	**0**	**4**	**8**
Session 3								
July 1	**75**	**96**	**74**	**97**	**0**	**0**	**2**	**8**
July 2	**72**	**95**	**73**	**98**	**10**	**20**	**4**	**10**
July 3	**72**	**97**	**73**	**98**	**0**	**0**	**3**	**9**
July 4	**71**	**96**	**69**	**97**	**0**	**0**	**4**	**11**
July 5	**71**	**92**	**70**	**95**	**0**	**0**	**2**	**8**

AM and Min. Readings at 06:00
PM and Max Readings at 15:00

APPENDIX C
PLANT AND ANIMAL SPECIES OBSERVED WITHIN THE STUDY AREA

Common name	Scientific name
Desert sunflower	***Geraea canescens***
Fremont pincushion	***Chaenactis fremontii***
Cheese bush	***Hymenoclea salsola***
Flat-topped buckwheat	***Eriogonum plumatella***
California Buckwheat	***Eriogonum fasciculatum***
Great Basin sagebrush	***Artemisia tritendata***
Coopers Box-thorn	***Lycium cooperi***
Desert sage	***Salvia dorii***
Creosote bush	***Larrea tridentata***
Hop sage	***Grayia sinosa***
Rabbit Brush	***Chrysothamnus nauseosus***
Joshua tree	***Yucca brevifolia***
Red brome	***Bromus madritensis***
Cheat Grass	***Bromus tectorum***
Meditarrean grass	***Schismus barbatus***
Red stemmed filaree	***Erodium cicutarium***

Common name	Scientific Name
Reptiles	
Side-blotched Lizard	***Uta stansburiana***
Basin whiptail	***Aspidoscelis tigris tigris***
Birds	
Cactus Wren	***Campylorhynchus brunneicapillus***
Common Raven	***Corvus corax***
Mammals	
Black-tailed jack rabbit	***Lepus californicus***
Coyote	***Canis latrans***
White-tailed Antelope Squirrel	***Ammospermophilus leucurus***
Kangaroo rat	***Dipodomys sp.***

Appendix D Mohave Ground Squirrel (MGS) Survey and Trapping Form

Mohave Ground Squirrel (MGS) Survey and Trapping Form (photocopy as needed)

Part I – PROJECT INFORMATION (use a separate form for each sampling grid)

Project name: Ottawa Street_____` Property Owner:_UNK

Location: Township 5N___; Range _4W_____; Section____2____; ¼ Section _SE_____

Quad map/series: Hesperia _ UTM coordinates

GPS coordinates of trapping grid corners:

Table 2. Grid Census Locations

Grid No. and Trapping Sessions 1-3	Grid Corners
Grid 1 – Three Sessions	SW 34 29 35.71 N 117 17 18.27 W NW 34 29 42.73 N 117 17 18.57 W NE 34 29 42.85 N 117 17 2.28 W SE 34 29 36.07 N 117 17 18.27 W

Center of grid 34 29 39.47 N 117 17 10.25 W

Acreage of Project Site:____50 acres __ Acreage of potential MGS habitat on site_____50 acres_

Total acreage visually surveyed on project site: 50 acres estimated

Date(s)

Grid No.	First Session	Second Session	Third Session
1	**04-22 to 26 of 2021**	**05-21 to 25 of 2021**	**07- 01 to 05 of 2021**

Visual surveys conducted by: Philippe Vergne of ENVIRA

Total acres trapped: 19 acres estimated due to sloping terrain

Number of sampling grids:_____1_____

Trapping conducted by:_____Philippe Vergne of ENVIRA___

Dates of sampling term(s): (all 2020)

WEATHER DATA

WEATHER CONDITIONS	Temp. Air Min F.	Temp. Air Max F.	Temp. Soil Min F.	Temp. Soil Max F.	Cloud Cover % AM	Cloud Cover % PM	Wind Min Mph	Wind Max Mph
Session 1								
April 22	**45**	**70**	**44**	**72**	**20**	**30**	**0**	**4**
April 23	**46**	**72**	**45**	**74**	**30**	**20**	**0**	**4**
April 24	**46**	**76**	**47**	**75**	**10**	**10**	**2**	**6**
April 25	**49**	**61**	**50**	**62**	**10**	**10**	**3**	**7**
April 26	**44**	**58**	**43**	**60**	**0**	**0**	**5**	**9**
Session 2								
May 21	**46**	**63**	**48**	**65**	**10**	**30**	**2**	**5**
May 22	**43**	**64**	**45**	**65**	**15**	**40**	**0**	**6**
May 23	**44**	**74**	**45**	**76**	**10**	**30**	**0**	**6**
May 24	**52**	**83**	**52**	**87**	**10**	**20**	**3**	**6**
May 25	**59**	**84**	**57**	**86**	**20**	**0**	**4**	**8**
Session 3								
July 1	**75**	**96**	**74**	**97**	**0**	**0**	**2**	**8**
July 2	**72**	**95**	**73**	**98**	**10**	**20**	**4**	**10**
July 3	**72**	**97**	**73**	**98**	**0**	**0**	**3**	**9**
July 4	**71**	**96**	**69**	**97**	**0**	**0**	**4**	**11**
July 5	**71**	**92**	**70**	**95**	**0**	**0**	**2**	**8**

AM and Min. Readings at 06:00
PM and Max Readings at 15:00

Part II – GENERAL HABITAT DESCRIPTION

The dominant vegetation communities are sparse and disturbed creosote bush scrub and salt bush scrub. Plant species found on site include: creosote (***Larrea tridendata***), saltbrush (***Atriplex polycarpa***), California buckwheat (***Eriogonum fasciculatum*** ssp. ***polifolium***), with lone Joshua trees (***Yucca brevifolia***). Additional shrubs that occur there are burro bush (***Ambrosia dumosa***), rubber rabbit brush (***Chrysothamnus nauseosus***), Nevada ephedra (***Ephedra nevadensis***), sticky snakeweed (***Gutierrezia microcephala***), Great basin sagebrush (***Artemisia tridentata***), flat-topped buckwheat (***Eriogonum plumatella***), hop sage (***Grayia spinosa***), Cooper's box thorn (***Lycium cooperi***).

The grasses and other annuals found on the site include red brome (***Bromus madritensis*** ssp. ***rubens***), cheat grass (***Bromus tectorum***), perennial bluegrass (***Poa secunda***), schismus (***Schismus barbatus***), red-stemmed filaree (***Erodium cicutarium***).

Land form (mesa, bajada, wash): mesa, hills and wash,

Soils description: The soils on the site are alluvial Cajon sands and sandy wash.

Elevation: 3,280 to 3,200 feet

Slope: estimated 2.25% slope to the southeast

MEMORANDUM

GLENN LUKOS ASSOCIATES
Regulatory Services

PROJECT NUMBER: 0878-8-OTTA

TO: Tom Cruikshank

FROM: David Moskovitz

DATE: January 3, 2022

SUBJECT: Ottawa Business Center Project – Summary of Joshua Tree Survey Results

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Glenn Lukos Associates, Inc. (GLA) performed a survey of the Ottawa Business Center Project site on April 14 and May 28, 2021 to map and assess individual Joshua trees (Yucca brevifolia). The Project site is located in the City of Victorville, San Bernardino County, bordered by Ottawa Street to the south, Hesperia Road to the west, Terra Linda Street to the north and the Burlington North Santa Fe Railroad to the east.

Methodology

Each Joshua tree at the site was mapped and given a specific identifying number. Data was collected for each tree, including height and canopy measurements (in feet), and a health rating assessment. Based on the estimated canopy width for each tree, the approximate area covered by each tree was estimated by calculating the area of a circle using the canopy width as the diameter of the circle. The health rating assessment consisted of assigning each tree into one of five percentage-range categories based on the ratio of living to non-living branches, including Very Good (greater than 75%), Average (60% to 75%), Poor (45% to 60%), Very Poor (less than 45%) and Dead (0%). Living branches were determined based on the presence of photosynthesizing leaves, and branches without leaves or with non-photosynthesizing leaves were counted as non-living. Additionally, recently shed branches were counted as non-living branches. Percentages are skewed somewhat for younger individuals with single or few branches, since they were far more likely to have a "very good" health rating. The presence of clones or "recruits" was also noted for each tree.

Vegetation communities within the Project site were mapped according to the List of Vegetation Alliances and Associations (or Natural Communities List). The list is based on A Manual of California Vegetation, Second Edition or MCVII, which is the California expression of the National Vegetation Classification. The vegetation communities were categorized based on the dominant plant species present and following membership rules identified for MCVII.

Results

GLA mapped 35 Joshua trees at the Project site, including 33 live trees and two dead trees [See attached Joshua tree location map]. The data collected for each inventoried tree are provided below in Table 1. Nearly all of the trees were already tagged as part of what was presumably a prior inventory. Of the 33 live trees, nine were assigned a Very Good health rating, 16 an Average rating, five a Poor rating, and three a Very Poor rating.

Table 1. Results of Joshua Tree Inventory

Tree #	Height (Feet)	Canopy Diameter (Feet)	Approximate Area (Square Feet)	Health Rating	Notes
1	7	5	19.63	Average (60-75%)	Tag 19
2	7	4	12.56	Average (60-75%)	Tag 12
3	8	2	3.14	Average (60-75%)	Tag 27
4	11	6	28.26	Poor (45-60%)	Tag 28, limb loss
5	10	7	38.47	Very Good (greater than 75%)	Tag 29
6	2	4	12.56	Very Good (greater than 75%)	No tag, young recruit
7	9	8	50.24	Very Good (greater than 75%)	Tag 25
8	7	5	19.63	Average (60-75%)	Tag 20
9	11	3	7.07	Poor (45-60%)	Tag 26, young recruits at base
10	11	11	94.99	Average (60-75%)	Tag 6, recruits at base
11	8	3	7.07	Very Poor (below 45%)	Tag 20, recruits at base
12	12	3	7.07	Average (60-75%)	Tag 8, recruit at base
13	9	6	28.26	Average (60-75%)	Tag 39, recruit at base
14	7	8	50.24	Average (60-75%)	Tag 38, recruits at base
15	7	4	12.56	Poor (45-60%)	Tag 36, recruit at base
16	6	4	12.56	Poor (45-60%)	Tag 35, recruit at base
17	10	4	12.56	Very Poor (below 45%)	Tag 37, recruits at base
18	7	4	12.56	Very Good (greater than 75%)	No tag, recruits at base

Tree #	Height (Feet)	Canopy Diameter (Feet)	Approximate Area (Square Feet)	Health Rating	Notes
19	8	4	12.56	Average (60-75%)	No tag, recruit at base
20	8	3	7.07	Average (60-75%)	Tag 32, recruits at base
21	13	4	12.56	Average (60-75%)	Tag 30
22	11	7	38.47	Very Good (greater than 75%)	Tag 43
23	7	2	3.14	Very Poor (below 45%)	Tag 47, recruit at base
24	8	5	19.63	Poor (45-60%)	Tag 50, recruits at base
25	3	1	0.79	Very Good (75-85%)	No tag, young recruit
26	8	1	0.79	Dead (0%)	Tag 45, dead but with several recruits at base
27	2	1	0.79	Dead (0%)	Tag 44, dead but with several recruits at base
28	13	6	28.26	Average (60-75%)	Tag 58, recruit at base
29	11	5	19.63	Average (60-75%)	Tag 56
30	9	8	50.24	Average (60-75%)	Tag 55, recruit at base
31	7	2	3.14	Very Good (greater than 75%)	No tag
32	20	20	314.00	Very Good (greater than 75%)	Tag 60, very large, healthy tree
33	8	2	3.14	Average (60-75%)	Tag 4
34	3	1	0.79	Very Good (greater than 75%)	No tag, recruit
35	9	2	3.14	Average (60-75%)	No tag, recruits at base

GLA mapped four distinct vegetation types dominated by native species, including the *Atriplex lentiformis* Shrubland Alliance (Quailbush Scrub), *Ephedra nevadensis-Lycium andersonii-Grayia spinosa* Shrubland Alliance (Nevada Joint Fir Scrub), *Ericameria nauseosa* Shrubland Alliance (Rubber Rabbitbrush Scrub), and the *Larrea tridentata* Shrubland Alliance (Creosote Bush Scrub) [See attached vegetation map]. In addition, GLA mapped two other land use categories (unvegetated wash and disturbed/developed) that are generally unvegetated. Detailed descriptions of each vegetation type follow the table.

The Joshua trees mapped at the site generally coincide with three of the four mapped native communities (Nevada Joint Fir Scrub, Rubber Rabbitbrush Scrub and Creosote Bush Scrub). Because of the presence of the Joshua trees at the site, GLA carefully evaluated whether any portions of the areas that were otherwise mapped as one of the other vegetation alliances should be considered as the *Yucca brevifolia* Woodland Alliance (Joshua Tree Woodland) based on the presence of individual Joshua trees. As identified in MCVII, the membership rules for the *Yucca brevifolia* Woodland Alliance (Joshua tree woodland) are for *Yucca brevifolia* to be evenly distributed at greater than or equal to a one-percent cover. Based on the measured canopy size of each individual Joshua tree the total cover of all Joshua trees is approximately 950 square feet, which taken across the approximately 52-acre site (2,265,000 square feet) equates to a cover of 0.04 percent (substantially less than one percent). However, the individual Joshua trees are not evenly distributed across the site, but even when measuring just the general areas where Joshua trees are present at the site, the total coverage is still less than one percent. In a few locations there are two or three clusters of Joshua trees. The Survey of California Vegetation Classification and Mapping Standards notes that the minimum mapping unit (MMU) for vegetation community mapping is usually 1 or 2 acres, but for wetlands and other sensitive communities the MMU can be as small as one-quarter acre. Using the one-quarter standard for the MMU there is no portion of the site where the cover of Joshua trees exceeds one percent. As such, GLA did not map any portions of the site distinctly as Joshua tree woodland.

If there are any questions about the results of the Joshua tree survey, please contact me at (949) 340-2562 or at dmoskovitz@wetlandpermitting.com.

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