Appendix E-2: Determination of Biologically Equivalent or Superior Preservation (DBESP) Analysis

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Determination of Biologically Equivalent or Superior Preservation (DBESP) Analysis

For Impacts to MSHCP Riparian/Riverine Areas

Green River Ranch Business Park Industrial Project

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1.0 EXECUTIVE SUMMARY

This document provides an analysis in support of a Determination of Biologically Equivalent or Superior Preservation (DBESP) for the Green River Ranch Business Park Industrial Project (the Project) located in the City of Corona, Riverside County, California, in regard to the Multiple Species Habitat Conservation Plan (MSHCP) requirements for *Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools (MSHCP Volume I, Section 6.1.2)*.

This document has been prepared following the MSHCP DBESP Report Template created by the Regional Conservation Authority (RCA), to demonstrate that with the appropriate mitigation, the Project will represent a "biologically equivalent or superior" alternative to avoidance. This document summarizes the findings of general biological surveys, habitat assessments, and vegetation mapping, as they relate to riparian and vernal pool resources, and species with MSHCP survey requirements.

2.0 INTRODUCTION

2.1 Project Site

The Project site (inclusive of onsite area and offsite disturbances) comprises approximately 165.90 acres in the City of Corona, Riverside County, California [Exhibit 1 – Regional Map] and is located within the U.S. Geological Survey (USGS) Prado Dam and Black Star Canyon, California 7.5′ topographic quadrangle maps [Exhibit 2 – Vicinity Map]. The Project site is generally bordered by Green River Road and State Route 91 (SR-91) to the north, SR-91 to the west, residential development to the east, and undeveloped open space to the east and to the south. Accessor's Parcel Numbers (APNs) within the Project site include: 101-180-015, 101-180-014, 101-180-037, 101-180-038, 101-190-034, 101-440-020, 102-360-043, and 102-360-060.

Development of the Project will result in 78.87 acres of impacts associated with the Business Park Industrial Project, including 67.25 acres of onsite improvements and 11.62 acres of offsite improvements. All of the impacts will be permanent, except for 2.57 acres of onsite temporary impacts proposed for oak woodland mitigation and 0.26 acre of offsite temporary impacts associated with Green River Road improvements. The 2.57-acre area will be temporarily graded to facilitate the construction of the adjacent Industrial Facility and then will be restored with riparian oak woodland. The 0.26 acre of offsite temporary impacts consists of improvements along the northern side of Green River Road that will be graded to transition the roadway to the existing natural grade. These areas are within the Caltrans easement for SR-91 and have been previously graded/modified in support of prior SR-91/Green River Road interchange improvements, including a slope that transitions down to the natural grade beyond the limits of the Project's impacts. Following the completion of Project's construction activities with Green River Road, the temporary disturbance areas will be restored with native vegetation.

Of the 64.68 acres of onsite permament improvements, approximately 50.53 acres is associated with the proposed Business Industrial Project and 14.15 acres is associated with a parcel that is zoned for Estate Residential but that must be graded in order to construct the Business Park Industrial Project. The Project will conserve 80.77 acres of land that will contribute to Reserve Assembly, and which will be donated into MSHCP conservation as Additional Reserve Lands (ARL) prior to any Project-related ground disturbance. Additionally, approximately 2.57 acres of the Project site will be temporarily graded to accommodate the construction of the Business Park Industrial Project, but these lands will be restored with oak woodlands to mitigate the loss of oak woodland habitat due to the Project. The Oak Woodland Mitigation area currently contains 0.18 acre of riverine features that will be impacted by the Project; however, as described below in Section 5.0, the Project will re-establish a flow area within the mitigation area and direct flows into the mitigation area such that there will be a minimum of hydrological re-establishment to support the oak woodland mitigation.

An additional 6.26 acres of land is also zoned for Estate Residential but because residential development is not currently proposed in this area, the 6.26-acre area will not be graded to implement the Business Park Industrial Project and for planning purposes is designated as Residentially Zoned Open Space. Although the reference to "Residentially Zoned Open Space" is a term associated with the portion of the Specific Plan's Estate Residential planning area that will not be graded to implement the Business Park Industrial Project, for purposes of the MSHCP Consistency Analysis and this DBESP, the 6.26-acre is referred to as "Avoidance Area (Deed Restriction)" to reflect that the area will be at least temporarily avoided and protected with a deed restriction. Furthermore, it is acknowledged that the JPR for the Business Park Industrial Project is not evaluating a residential development component for 6.26-acre parcel or the 14.15-acre parcel. Because the 6.26-acre parcel cannot, at this time, be designated as part of the MSHCP Reserve, and because the 6.26-acre parcel contains MSHCP riparian/riverine areas, a deed restriction is proposed to be placed over the 6.26-acre parcel to provide at least temporary protection to these lands until or unless future residential development is proposed. If a residential development project is later proposed, and which would require the development of all or part of the 6.26-acre parcel, then either the Business Park Industrial Project JPR would be amended or a new JPR would be processed to evaluate the residential project and allow the deed restriction to be removed. Any subsequent impacts to MSHCP resources within the 6.26-acre area, including riparian/riverine areas would also require a revised or new DBESP.

The proposed Green River Ranch Specific Plan Amendment establishes zoning and designates areas within the Specific Plan boundary where development has the potential to occur. In order to implement any development, an applicant is required to submit a Precise Plan application to the City of Corona, which is discretionary and subject to CEQA. Based on the proposed Specific Plan Amendment, there is potential for three development projects to occur in the Specific Plan area, including 1) the Business Park Industrial Project; 2) a Commercial Development project; and 3) an Estate Residential Project.

The Business Park Industrial Project is the project addressed in this DBESP because a Precise Plan application has been filed and is under consideration by the City of Corona. There has been no Precise Plan application made to the City for a potential Commercial Development project or a potential Estate Residential Project. A future Commercial Development Project would be submitted to the RCA for review as a separate JPR application. The area where a future Commercial Development project could be proposed under a Precise Plan application is located north of Green River Road but would be a separate project from the Business Park Industrial Project.

A future Estate Residential project that could be proposed under a future Precise Plan application would be separate from the Business Park Industrial Project if an Estate Residential project were to ever move forward. A hypothetical general description of the Estate Residential Project is provided below in Section 2.2. The overall parcel designated Estate Residential by the Specific Plan (20.41 acres) has overlap with the Business Park Industrial Project's grading footprint (14.15 acres). If a residential project were to proceed under a future Precise Plan application, it could occur on the 14.15 acres in the northern portion of the Estate Residential parcel previously disturbed by the Business Park Industrial Project, and potentially extend into the 6.26 acres zoned Estate Residential that would not be disturbed by the Business Park Industrial Project. The 14.15 acres must be impacted as part of the remedial grading to support the Business Park Industrial Project and will contain manufactured slopes. However, the remaining 6.26 acres of the Estate Residential parcel will not be impacted by the Business Park Industrial Project and would consist of open space zoned Estate Residential, and so is referred to as the "Residentially Zoned Open Space". Until a decision is made on the status of potential residential development, the entire 20.41-acre Estate Residential parcel will be owned by the Business Park Industrial Project's property owners' association, and the deed restriction will be placed over the 6.26-acre Residentially Zoned Open Space to at least temporarily restrict the disturbance of the 6.26 acres. If a future residential development project were to proceed on any of the 20.41 acres, the Business Park Industrial Project's property owners' association would convey all or a part of the 20.41 acres to a residential developer. The developer would then need to submit a Precise Plan application and tract map application to the City of Corona, which will require City review of a grading plan, utilities plan, vehicular access plan, lotting, architecture, landscaping plan, and fire protection plan at minimum. A Precise Plan is a discretionary action requiring review and approval by the City of Corona Planning Commission, inclusive of a CEQA compliance process that would tier from the Green River Ranch Specific Plan Amendment EIR (currently under preparation). Furthermore, the residential developer would amend the JPR for the Business Park Industrial Project to address at a minimum MSHCP requirements pertaining to the Urban/Wildland Interface Guidelines (UWIG) and finalize the status of the Residentially Zoned Open Space. If any of the 6.26 acres is proposed in the future to be disturbed by a residential project, then the deed restriction would need to be removed or modified as a part of the JPR amendment. Table 2-1 below summarizes the different Project components, which are also depicted on Exhibit 3 [Site Plan Map].

Table 2-1. Summary of Project Components.

Project Component	Permanent Impact (Acres)	Temporary Impact (Acres)	Avoidance (Acres)	Total (Acres)
Onsite				
Business Park Industrial	50.53	0	0	**50.53**
Estate Residential Zoning – Industrial Project Grading	14.15	0	0	**14.15**
Oak Woodland Mitigation	0	2.57	0	**2.57**
Avoidance Area (Deed Restriction)	0	0	6.26	**6.26**
Proposed Conservation	0	0	80.77	**80.77**
Onsite Subtotal	**64.68**	**2.57**	**87.03**	**154.28**
Offsite				
Business Park Industrial	1.66	0	0	**1.66**
Green River Road Improvements	4.22	0.26	0	**4.48**
Sewer Improvements (Green River Road and Palisades Drive)	4.83	0	0	**4.83**
Fresno Road Repaving	0.65	0	0	**0.65**
Offsite Subtotal	**11.36**	**0.26**	**0**	**11.62**
Total	**76.04**	**2.83**	**87.03**	**165.90**

2.2 MSHCP Application to the Project

The Project occurs within the MSHCP Temescal Area Plan, specifically in Subunit 1 (Santa Ana River to Santa Ana Mountains), Criteria Cells 1702, 1704, 1811, and 1812 [Exhibit 4 – MSHCP Overlay Map]. Lands described for conservation within these Criteria Cells are intended support the assembly of Proposed Constrained Linkage 1 ("PCL-1") and Proposed Constrained Linkage 2 ("PCL-2") further to the east. Both PCL-1 and PCL-2 are intended to connect Existing Core A (Prado Basin/Santa Ana River) with Existing Core B (Cleveland National Forest) to the south and is expected to provide for movement of mountain lion (*Puma concolor*), bobcat (*Lynx rufus*), and other wildlife. Lands within the Project site are associated with PCL-1. PCL-2 is located to the east and is not applicable to the Project.

The City of Corona is currently processing a Criteria Refinement to formally relocate PCL-1 from the route that is currently described by the MSHCP Cell Criteria (through the Project site) to an alternate location through the "B Canyon area" to the west/southwest of the Project. The proposed relocation of PCL-1 coincides with the RCA's recent acquisition of approximately 740 acres of lands located south and west of

the Project that contain B Canyon. The RCA issued Criteria Refinement Review Findings (CR# 24-01-10-01, dated February 20, 2024) in support of the Criteria Refinement and the Wildlife Agencies provided concurrence via electronic mail on March 25, 2024. The formal relocation of PCL-1 eliminates the need for the Project site, specifically the lands within the proposed development footprint, and additional lands north of Green River Road to facilitate wildlife movement between Core A and Core B. Regardless of the Criteria Refinement, the Project will conserve 80.77 acres of land in the southern portion of the site associated with Cells 1702, 1704, 1811 and 1812 to support the Reserve, and those lands are contiguous with the 740 acres recently acquired by the RCA for the assembly of PCL-1.

The Project site does not occur within the MSHCP Criteria Area Plant Species Survey Area (CAPSSA), Mammal Survey Area, and/or Amphibian Survey Area. However, the Project site is located within the MSHCP Burrowing Owl (*Athene cunicularia*) Survey Area and Narrow Endemic Plant Species Survey Area (NEPSSA). Specifically, the site occurs in NEPSSA Survey Area 7. Pursuant to the MSHCP, the following target species must be evaluated through habitat assessments and focused surveys (if suitable habitat is present): San Diego ambrosia (*Ambrosia pumila*), Brand's phacelia (*Phacelia stellaris*), and San Miguel savory (*Clinopodium chandleri*).

2.3 Project Description

The overall Project includes approximately 78.87 acres of grading or other improvements, including 50.53 acres onsite associated with the Business Park Industrial Project, 2.57 acres onsite associated with temporary grading to establish an oak woodland mitigation area, and 11.62 acres of offsite improvements (Business Park Industrial Project, Green River Road, Dominquez Ranch Road, sewer improvements at Green River Road/Palisades Drive, and re-paving the existing Fresno Road alignment). Approximately 14.15 acres of grading would be associated with the creation of manufactured slopes for stabilization purposes and is zoned as Estate Residential with a potential future use for residential development. Approximately 2.57 acres of Oak Woodland Mitigation will be temporarily graded to accommodate the construction of the Business Park Industrial Project, but these lands will be restored with oak woodland to mitigate the loss of oak woodland habitat due to the Project, including the plan to maintain flows into the mitigation area such that there will be a minimum of hydrological re-establishment to support the mitigation area.

2.3.1 Business Park Industrial

The “Business Park Industrial” land use designation applied by the proposed Green River Ranch Specific Plan Amendment is associated with approximately 52.19 acres of the Project evaluated herein, including 50.53 acres onsite and 1.66 acres offsite that the applicant is intending to acquire from the City. The 50.53-acre onsite portion is designed to include five proposed buildings, parking, landscaping and other components. The offsite portions include proposed landscaping areas between the development parcels/Specific Plan boundary and Green River Road, as well along a

portion of Dominguez Ranch Road proposed for landscaped slope and utility improvements.

Building 1 is located within proposed Planning Area 1. Truck trailer loading docks are proposed along the southern side of the building, with passenger vehicle parking areas occurring to the west, north, and east of the building, as well as to the south side of the truck trailer docking area. Access to Building 1 would be provided from a driveway along Street A.

Buildings 2 and 3 are located within proposed Planning Area 2. Truck trailer loading docks are proposed along the east side of Building 2 and along the west side of Building 3. Passenger vehicle parking areas are proposed to the west, north, and east of the proposed buildings, with additional passenger vehicle parking proposed along the south side of Building 3. Access to Buildings 2 and 3 would be accommodated by driveways extending from Street A.

Buildings 4 and 5 are located within proposed Planning Area 3. Truck trailer loading docks are proposed along the east side of Building 4 and along the west side of Building 5. Passenger vehicle parking areas are proposed to the west, south, and east of the proposed buildings, with additional passenger vehicle parking proposed along the north side of Building 5. Access to Buildings 4 and 5 would be accommodated by two driveways extending from Street A, and a single emergency-only driveway extending from Dominguez Ranch Road.

The proposed manufactured slopes are designed around the development pads, with the manufactured slopes transitioning into the natural condition on the southern side of the development. Landscaping is proposed for the manufactured slopes for stabilization and aesthetic purposes. The slopes would be hydroseeded and landscaped with tree species including 24-inch box California laurel (*Umbellularia californica*), 24-inch box coast live oak (*Quercus agrifolia*), and 24-inch box Catalina cherry (*Prunus lyonia*).

Wildlife fencing will be constructed along the western and southern edges of the business park industrial facility development to direct wildlife to the west along the re-designated PCL-1 Route in B Canyon. The location of the proposed fencing is depicted on Exhibit 3. The fence will start at the eastern property boundary, extending west along the limits of the proposed MSHCP Conservation until the fence reaches the western boundary shared with the existing ARL. Then the fence will turn north along the property boundary to the terminus of Fresno Road, then northwest where the fence will terminate at the limits of Caltrans' easement for SR-91. The fence is proposed to be chain link (at least 8 feet tall) and will include one-way swing gates to allow for wildlife escape access to the open space to the south and west.

2.3.2 Green River Road

The Project will improve an approximately 2,000-foot section of Green River Road, from the SR-91 ramps on the west to Dominguez Ranch Road on the east. The Project

includes approximately 4.22 acres of improvements (permanent impacts) associated with Green River Road, including the existing roadway and proposed widening areas, and 0.26 acre of temporary impacts adjacent to the northern edge of the permanent improvements. The existing Green River Road includes approximately 100 to 110 feet of pavement, curb and gutter, and sidewalk (southern edge), as well as re-constructed slopes on either side of the paved roadway. Proposed improvements to Green River Ranch Road will occur between Fresno Road and Dominguez Ranch Road and will consist of widening on both sides of the road to accommodate new turn lanes, resurfacing the pavement and replacing the curb and gutter, and replacing sidewalks only along the southern edge of the roadway, as well as the construction of new curb, gutter and sidewalks. Medians will be improved modified within the existing footprint and the road surface will be re-striped, as needed. The permanent Green River Road improvements will not exceed the 118-foot maximum allowable width.

Northern Side of Green River Road

The northern side of Green River Road is being widened by Caltrans 13 feet between the SR-91 Ramps and Fresno Road irrespective of the proposed Project to provide a dedicated right turn lane to SR-91. This widening is currently being constructed by Caltrans but is identified here for reference. East of the Caltrans improvements, the Project will match the Caltrans widening width and widen the northern side of Green River Road by 13 feet to lengthen the turn lane installed by Caltrans. The existing curb and gutter would thus be moved 13 feet to the north to accommodate the additional lane width. The widening would stop at the approximate location of proposed Street A (the entry to the proposed Business Park Industrial Project). No widening on the northern side of Green River Road would occur between proposed Street A and Dominguez Ranch Road. North of the widening area, approximately 0.26 acre will be graded to transition the roadway to the existing natural grade, resulting in a 2:1 slope that will be restored with native vegetation following the completion of construction activities. The City of Corona has confirmed that they consider the impacts along the northern side of the road to be temporary.

Medians

Within the existing Green River Road alignment at Fresno Road and just east of Fresno Road, the City of Corona will require the Project Applicant to install a raised center, hardscaped median with 8-inch curb for the purpose of prohibiting left turn movements from westbound Green River Road to Fresno Road. The median will be approximately 12 feet wide by 200 feet long including tapers. Also, on Green River Road just west of Dominguez Ranch Road, the City of Corona will require the Project Applicant to close a gap in the existing center median, to match the existing raised center, hardscaped median design at 12 feet wide with an 8-inch curb.

Southern Side of Green River Road

East of Fresno Road for a distance of approximately 125 feet, Green River Road will be widened by 2 feet. East of the 2 feet widening section, Green River Road will be widened by 14 feet to add a right turn lane for proposed Street A. The existing curb, gutter, and sidewalk would thus be moved 14 feet to the south to accommodate the additional lane. At the Green River Road/proposed Street A intersection, a traffic signal is proposed. East of this new intersection, the southern side of Green River Road will be widened by 5 feet for a distance of approximately 150 feet, including tapers.

2.3.3 Sewer Improvements (Green River Road/Palisades Drive)

In anticipation of the increased sewer flows associated with future developments throughout the City of Corona, the Department of Water and Power has proposed several Capital Improvement Projects to address current and future deficiencies in the existing sewer system. The proposed Project (per the City's plans) will construct a new lift station at the intersection of Green River Road and Palisades Drive (in APN 102-360-060) to replace and upgrade the existing SDO LS (Sierra Del Oro Lift Station). The proposed lift station will accommodate flows from existing and future developments, which include the proposed sewer flows from the Business Park Industrial Project. The sewer improvements also include 2,600 linear feet of 12-inch gravity sewer and 1,500 linear feet of 12-inch force main.

The lift station will be constructed in an existing developed area northeast of the intersection of Green River Road and Palisades Drive. The proposed sewer lines will be installed within the existing roadways and will not increase the width of either roadway.

2.3.4 Fresno Road Repaving

The Project Applicant will repave the existing Fresno Road, occurring in a 24-foot width, on top of the existing pavement in the Fresno Road public right-of-way. There will be no widening or any other improvements other than repaving. Maintenance will be typical city maintenance for a public road, which includes sweeping and as-needed pavement repair if there is any damage.

2.3.5 Estate Residential

As discussed above in Section 2.1, the Green River Ranch Specific Plan establishes zoning for a potential Estate Residential development project. The overall "Estate Residential" area includes the 14.15 acres that would be graded (manufactured slopes) in support of the Business Park Industrial Project (Estate Residential Zoning – Business Park Industrial Project Grading) and the 6.26 acres of Avoided Area (Deed Restriction). If developed in the future, the Estate Residential area is planned to accommodate a maximum of 32 residential estate lots, which might impact a portion of the Avoided Area (Deed Restriction). The minimum residential lot size would be 25,000 square feet per

lot, and it is anticipated that each lot would include a development pad and perimeter sloping areas that would be landscaped or left natural. Maximum structure height would be limited to 30 feet or two stories. It is expected that all development pads would be set back from natural drainages. The design and locations of these lots would be determined at a future time through a City of Corona Precise Plan approval process. In the meantime, a temporary deed restriction is proposed over the Avoided Area (Deed Restriction) that would not otherwise be disturbed for construction of the Business Park Industrial uses to the north. Any future removal or modification of the deed restriction would require a new JPR or an amendment to the JPR 22-04-02-01.

2.2.6 Oak Woodland Mitigation

The Project includes a 2.57-acre area that will be temporarily graded to accommodate the construction of the Business Park Industrial Project, but these lands will be restored with oak woodlands to mitigate the loss of oak woodland habitat due to the Project. The Oak Woodland Mitigation area currently contains 0.18 acre of riverine features that will be impacted by the Project; however, as described below in Section 5.0, the Project will direct flows into the mitigation area such that there will be a minimum of hydrological re-establishment to support the mitigation area.

2.3.7 Proposed Conservation

The Project includes 80.77 acres of proposed conservation to be dedicated to the RCA in support of MSHCP Reserve Assembly, all of which is in the southern portion of the overall Study Area and would not be disturbed. These lands will be donated into MSHCP conservation as ARL prior to any project-related ground disturbance.

2.4 Existing Conditions

Topography within the Project site consists of a relatively flat semi-developed area in the north that was once an active horse ranch. In the southern portion of the Project site, gently sloping hills transition quickly to steep slopes which lead into the Santa Ana Mountains along the southern property boundary. Elevations within the Project site range from approximately 525 feet above mean sea level (MSL) at Green River Road to over 2,500 feet above MSL in the southcentral portion of the site. As depicted on Exhibit 5 [Soils Map], the National Cooperative Soil Survey (NCSS) has identified the following soil types as occurring (currently or historically) within the Project site: Altamont clay, 25 to 50 percent slopes; Arbuckle loam, 8 to 15 percent slopes; Cortina cobbly loamy sand, 2 to 8 percent slopes; Garretson very fine sandy loam, 2 to 15 percent slopes; Gaviota rocky fine sandy loam, 25 to 75 percent slopes; Perkins gravelly loam, 5 to 15 percent slopes; Rough broken land; Terrace escarpments; and Vallecitos loam, thick solum variant, 15 to 50 percent slopes, eroded.

The Project site supports the following vegetation/land-use types: Coast Live Oak Woodland, Elderberry Savannah, Coastal Sage Scrub, Riversidean Sage Scrub/Mixed Chaparral, Disturbed Mixed Chaparral, Lower Montane Mixed Chaparral, Mixed

Chaparral, Southern Mixed Chaparral, Saltbush Scrub, Ruderal/Non-Native Grassland, Disturbed/Developed, and Residential/Urban/Exotic. Tables 2-2 (onsite) and 2-3 (offsite) provides a summary of the vegetation types and their corresponding acreages. Descriptions of each vegetation type follow the table. A Vegetation Map is attached as Exhibit 6.

Table 2-2. Vegetation/Land Use Types for the Project Site (Onsite)

Vegetation/ Land Use Type	Business Park Industrial – Permanent Impact (Acres)	Estate Residential (Industrial Grading) – Permanent Impact (Acres)	Oak Woodland Mitigation – Temporary Impact (Acres)	Avoidance Area/Deed Restriction (Acres)	Conservation – Avoided (Acres)	Total (Acres)
Coast Live Oak Woodland	0.72	0.41	0	0.11	3.50	**4.74**
Elderberry Savannah	0.03	0	0	0	0	**0.03**
Coastal Sage Scrub	0.01	0.11	0.07	0	0.87	**1.06**
Riversidean Sage Scrub/Mixed Chaparral	0	0	0	0	1.90	**1.90**
Disturbed Mixed Chaparral	0.21	0.95	0.19	0.44	13.80	**15.59**
Lower Montane Mixed Chaparral	0.11	0.30	0.19	0.13	0.21	**0.94**
Mixed Chaparral	3.44	4.64	0.18	2.70	30.73	**41.69**
Southern Mixed Chaparral	0	0	0	0	3.45	**3.45**
Saltbush Scrub	0.04	0	0	0	0	**0.04**
Disturbed/ Developed	16.07	0.81	0.96	0.10	0.31	**18.25**
Residential/ Urban/Exotic	1.62	0	0	0	0	**1.62**
Ruderal/Non-native grassland	28.28	6.93	0.98	2.78	26.00	**64.97**
Total	**50.53**	**14.15**	**2.57**	**6.26**	**80.77**	**154.28**

Table 2-3. Vegetation/Land Use Types for the Project Site (Offsite)

Vegetation/ Land Use Type	Business Park Industrial – Permanent Impact (Acres)	Green River Road – Permanent Impact (Acres)	Green River Road – Temporary Impact (Acres)	Green River Road/ Palisades Drive Sewer Improvements – Permanent Impact (Acres)	Fresno Road Repaving – Permanent Impact (Acres)	Total (Acres)
Coast Live Oak Woodland	0	0	0	0	0	**0**
Elderberry Savannah	0	0	0.02	0	0	**0.02**
Coastal Sage Scrub	0	0.02	0.02	0	0	**0.04**
Riversidean Sage Scrub/Mixed Chaparral	0	0	0	0	0	**0**
Disturbed Mixed Chaparral	0.03	0	0	0	0	**0.03**
Lower Montane Mixed Chaparral	0	0	0	0	0	**0**
Mixed Chaparral	0	0	0	0	0	**0**
Southern Mixed Chaparral	0	0	0	0	0	**0**
Saltbush Scrub	0.18	0.22	0.05	0	0	**0.45**
Disturbed/Developed	0.64	3.92	0	4.83	0.65	**10.04**
Residential/Urban/Exotic	0.12	0	0	0	0	**0.12**
Ruderal/Non-native grassland	0.69	0.06	0.17	0	0	**0.92**
Total	**1.66**	**4.22**	**0.26**	**4.83**	**0.65**	**11.62**

Coast Live Oak Woodland

The Project site supports approximately 4.74 acres of coast live oak woodland, all of which is onsite, of which 4.31 acres are associated with drainage features and are therefore identified as riparian vegetation for this analysis. This plant community is dominated with coast live oak (*Quercus agrifolia*) with non-native grasses in the understory. Of the 4.31 acres of riparian oak woodlands, 1.10 acres would be permanently impacted, 3.10 acres would be avoided as conservation, and 0.11 acre would be avoided as part of the Deed Restriction area.

Coastal Sage Scrub

The Project site supports approximately 1.10 acres of coastal sage scrub, of which 1.06 acres is located onsite and 0.04 acre offsite. Approximately 0.14 acre of coastal sage scrub (0.12 acre onsite and 0.02 acre offsite) will be permanently impacted, and approximately 0.09 acre will be temporarily impacted (0.07 acre onsite and 0.02 acre offsite). This plant community is dominated with California sagebrush (*Artemisia californica*), California brittlebush (*Encelia californica*), California buckwheat (*Eriogonum fasciculatum)*, occasional individuals or small patches of deerweed (*Acmispon glaber*), and non-native grasses in the understory.

Disturbed Mixed Chaparral
The Project site supports approximately 15.62 acres of Disturbed Mixed Chaparral, of which 15.59 acres is located onsite and 0.03 acre is offsite. Approximately 1.38 acres (1.35 acres onsite and 0.03 acre offsite) will be permanently impacted. This plant community occurs primarily within the southwestern Project boundary. This plant community is dominated by laurel sumac (*Malosma laurina*), lemonade berry (*Rhus integrifolia*), California sagebrush, California buckwheat, and chaparral yucca (*Hesperoyucca whipplei*).

Disturbed/Developed
The Project site supports approximately 28.29 acres of disturbed/developed lands, of which 18.25 acres is onsite and 10.04 acres is offsite. This land-cover type occurs primarily within the northern portions of the Study Area. Developed areas are areas where human disturbance has resulted in permanent modification of the existing landscape. These include paved areas, equestrian uses, Green River Road, and buildings. As such, this land cover type does not represent a natural plant community.

Elderberry Savannah
The Project site supports approximately 0.05 acre of Elderberry Savannah, of which 0.03 acre is located onsite and will be permanently impacted, and 0.02 acre is offsite, which will be temporarily impacted. This plant community occurs within the northern portions of the Study Area just north of Green River Road in the offsite Commercial Development. This plant community is dominated with blue elderberry (*Sambucus nigra* ssp*. caerulea)* with non-native grasses in the understory.

Lower Montane Mixed Chaparral
The Project site supports approximately 0.94 acre of Lower Montane Mixed Chaparral, all of which is onsite. The Project will permanently impact 0.60 acre of Lower Montane Mixed Chaparral. This plant community occur primarily within the western portion of the Study Area south of Fresno Road. This plant community is dominated by toyon (*Heteromeles arbutifolia)* in the shrub layer along with black sage (*Salvia mellifera*), and California sagebrush. The understory is sparsely vegetated.

Mixed Chaparral
The Project site supports approximately 41.69 acres of Mixed Chaparral, all of which is onsite. Approximately 8.08 acres will be permanently impacted and 0.18 acre will be temporarily impacted. This plant community occurs primarily on the southern portion of the Study Area. This plant community is dominated by laurel sumac, California sagebrush, California buckwheat, and chaparral yucca.

Residential/Urban/Exotic
The Project site contains 1.74 acres of Residential/Urban/Exotic vegetation, of which 1.62 acres is onsite and 0.12 acre of offsite, and all of which will be permanently impacted. Approximately 37.11 acres will be permanently impacted (36.19 acres onsite and 0.92 acre offsite). Residential/Urban/Exotic vegetation includes areas where the vegetation predominately consists of introduced or escaped non-native horticultural

plants, including trees, shrubs, flowers, and turf grass. This plant community occurs primarily along Green River Road, the eastbound SR-91 onramp, and along Dominguez Ranch Road. This plant community include eucalyptus (*Eucalyptus* sp.), Peruvian pepper tree (*Schinus molle*), and fountain grass (*Pennisetum setaceum*).

Riversidean Sage Scrub/Mixed Chaparral
The Project site contains 1.90 acres of Riversidean Sage Scrub/Mixed Chaparral, all of which is onsite and will be avoided. This plant community occurs primarily within the southern portions of the Study Area. This plant community is dominated primarily with deerweed (*Acmispon glaber)*, black sage (*Salvia mellifera*), and California sagebrush.

Ruderal/Non-Native Grassland
The Project site supports approximately 65.89 acres of Ruderal/Non-Native Grassland, of which 64.97 acres is onsite and 0.12 acre is onsite. Approximately 36.13 acres will be permanently impacted (35.21 acres onsite and 0.92 acre offsite) and 1.15 acres will be temporarily impacted (0.98 acre onsite and 0.17 acre offsite). This plant community is present throughout the Study Area. As such, this plant community is dominated by non-native ruderal species including red brome (*Bromus madritensis* ssp*. rubens*), Russian thistle (*Salsola tragus*), foxtail barley (*Hordeum murinum*), Mediterranean grass (*Schismus barbatus*), black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*), and coastal heron's bill (*Erodium cicutarium*).

Saltbush Scrub
The Project site supports approximately 0.49 acre of southern Saltbush Scrub, of which 0.04 acre is onsite and will be permanently impacted, and 0.45 acre is offsite, of which 0.30 acre will be permanently impacted and 0.05 acre will be temporarily impacted. This plant community occurs primarily on along the shoulders of Green River Road. This plant community is dominated by big saltbush (*Atriplex lentiformis*), with laurel sumac, California buckwheat, California sagebrush, California brittlebush, and coyote bush (*Baccharis pilularis*).

Southern Mixed Chaparral
The Project site supports approximately 3.45 acres of southern mixed chaparral, all of which is located onsite and will be avoided by the Project. This plant community occurs primarily on the southern portion of the Study Area. This plant community is dominated by lemonade berry, chamise (*Adenostoma fasciculatum*), California sagebrush, California buckwheat, laurel sumac, California buckwheat, and chaparral yucca.

2.5 Infeasibility of Avoidance

Volume I, Section 6.1.2 of the MSHCP requires that projects develop avoidance alternatives, if feasible, that would allow for full avoidance of riparian/riverine areas. Under the proposed Project's Purpose and Need, the complete avoidance of MSHCP riparian/riverine areas within the Project site is not feasible. As discussed below, the Project will avoid approximately 3.79 acres of MSHCP riparian/riverine areas within the proposed conservation area. However, the Project will result in unavoidable permanent

impacts to approximately 3.66 acres of MSCHP riparian/riverine resources. Therefore, this document has been prepared to demonstrate that the Project will comply with the MSHCP guidelines and provide a "biologically equivalent or superior" alternative to full avoidance.

3.0 RIPARIAN/RIVERINE AREAS AND VERNAL POOLS (SECTION 6.1.2)

3.1 Methods

The MSHCP defines riparian areas as *lands which contain habitat dominated by trees, shrubs, persistent emergent mosses and lichens, which occur close to or which depend upon soils moisture from a nearby fresh water source*. In the absence of riparian habitat, the MSHCP defines riverine areas as *areas with fresh water flow during all or a portion of the year.*

The MSHCP defines vernal pools as *seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetland indictors of hydrology and/or vegetation during the drier portion of the growing season.*

With the exception of wetlands created for the purpose of providing wetlands habitat or resulting from human actions to create open waters or from the alteration of natural stream courses, areas demonstrating characteristics as described above which are artificially created are not included in these definitions.

Furthermore, the MSHCP requires habitat assessments/focused surveys for certain species identified under Section 6.1.2, including riparian birds and fairy shrimp. Birds requiring assessments include the least Bell's vireo (*Vireo bellii pusillus*, LBV), southwestern willow flycatcher (*Empidonax traillii extimus*), and western yellow-billed cuckoo (*Coccyzus americanus occidentalis*). Fairy shrimp requiring assessments include listed species such as the vernal pool fairy shrimp (*Branchinecta lynchi*) and Riverside fairy shrimp (*Streptocephalus woottoni*), as well as the Santa Rosa Plataeu fairy shrimp (*Linderiella santarosae*). Although not directly referenced by Section 6.1.2, assessments also should consider the San Diego fairy shrimp (*Branchinecta sandiegonensis*) where appropriate. For fairy shrimp, habitat assessments should consider all non-vernal pool features that could sufficiently hold water, including stock ponds, ephemeral pools, road ruts, and other human made depressions.

GLA biologists initially reviewed the Project site in March 2020 to document MSHCP riparian/riverine resources. Prior to beginning the field assessment, a color aerial photograph, a topographic base map of the property, and the previously cited USGS topographic map were examined to determine the locations of potential riparian/riverine areas. Suspected resources were field checked for the presence of definable channels and/or riparian vegetation. While in the field, the potential limits of jurisdiction were

recorded with a sub-meter GPS enabled device in conjunction with a color aerial photograph using visible landmarks.

While studying the impact footprint and proposed conservation lands for the Business Park Industrial Project, GLA biologists also studied the property north of Green River Road (future proposed commercial development) as part of the overall review for the Green River Ranch Specific Plan. GLA biologists incidentally detected a single least Bell's vireo in April 2020 in elderberry scrub habitat north of Green River Road on lands that are outside of the Business Park Industrial Project footprint, but within the future commercial development footprint. Upon detecting the vireo individual, GLA biologists proceeded to complete protocol surveys for the vireo within the commercial property, while also checking woodland/scrub areas within the Business Park Industrial Project footprint, although the vireo was not expected to occur in the Business Park Industrial Project footprint due to a lack of suitable habitat. The Industrial Project site contains the oak woodland habitat that does not exhibit an understory and vegetation structure to support vireo, and the 0.03-acre area of elderberry scrub consisting of a couple of elderberry shrubs with no supporting understory/structure for vireos. Conversely, the commercial development property contains relatively larger, contiguous stands of elderberry scrub vegetation with a density and vegetation structure capable of supporting vireos.

Focused surveys were conducted on May 5, 15 and 25, June 4, 15 and 29, and July 10 and 23, 2020. Pursuant to the survey guidelines, the surveys were conducted between sunrise and 11:00 a.m. Weather conditions during the surveys were conducive to a high level of bird activity. Table 3-1 summarizes the vireo survey visits.

Table 3-1. Summary of Least Bell's Vireo Surveys

Survey Date	Biologist	Start/End Time	Start/End Temperature (degree F)	Wind Speed Range (mph)	Cloud Cover (%)
5/5/20	JF	0645/0951	60/71	0-4	0
5/15/20	JF	0710/1100	61/74	2-3	50
5/25/20	JF	0524/0915	58/66	0-2	25
6/4/20	JF	0736/1100	64/78	0-4	0
6/15/20	SC	0615/0930	62/70	0-2	0
6/29/20	JF	0644/1058	62/73	3-4	50
7/10/20	JF	0545/1012	65/84	0-2	0
7/23/20	JF	0546/1100	63/78	2-6	25

JF = Jason Fitzgibbon; SC = Stephanie Cashin

GLA surveyed the Project site for vernal pool/seasonal pool habitat, including features with the potential to support listed fairy shrimp. To assess for vernal/seasonal pools (including fairy shrimp habitat), GLA biologists evaluated the topography of the site, including whether the site contained depressional features/topography with the potential

to become inundated; whether the site contained soils associated with vernal/seasonal pools; and whether the site supported plants that suggested areas of localized ponding. As part of the jurisdictional waters delineation, GLA biologists/regulatory specialists evaluated the Project site for vernal pools between March 7 and June 5, 2020. The biologists inspected the site for any ponding or evidence of ponding (e.g., cracked soils, hydrophytic vegetation) or depression features that could become inundated, including natural depressions and artificial depressions such as tire ruts. GLA's inspection specifically included an old concrete basin located in the eastern portion of the property.

3.2 Results/Impacts

3.2.1 Riparian/Riverine Areas

The Project site contains three major MSHCP riparian/riverine systems, referred to herein as Drainage Systems A, B, and C. Each of these systems includes several small tributaries that feed into larger drainages and are sometimes connected to the system by non-jurisdictional swale-like features that do not possess an obvious bed, bank, or channel [Exhibit 7 – MSHCP Riparian/Riverine Map].

Drainage System A

Drainage System A originates within the Project site and meanders in a northerly direction before ultimately discharging offsite via a series of culverts and pipes at Green River Road. This drainage system is comprised of a main drainage feature (Drainage A) and several other streams and erosional gullies that traverse across the Project site (Tributaries A1 – A4). Drainage System A and its associated tributaries comprise an ephemeral drainage complex that consists of a sandy substrate supporting a bed, bank, and channel ranging from one to fifty-three feet in width. There are also areas associated with Drainage System A that clearly do not support a defined bed, bank, or channel and are considered non-jurisdictional. Vegetation associated with Drainage System A includes California sagebrush, black sage (*Salvia mellifera*), laurel sumac (*Malosma laurina*), black mustard (*Brassica nigra*), red brome (*Bromus madritensis* spp. *rubens*) and rip-gut brome (*Bromus diandrus*).

Drainage System B

Drainage system B is comprised of a main drainage feature (Drainage B) and several other streams and erosional gullies that traverse across the Project site (Tributaries B1 and B2). Drainage System B is an ephemeral drainage complex that originates at the southern boundary of the Project site and meanders in a northerly direction for before discharging offsite via a series of culverts and pipes at Green River Road. The upstream portion of Drainage System B is part of a steep canyon supporting a bed, bank, and channel ranging from one to fifteen feet in width. The downstream portion of Drainage System B flattens out as it traverses the Project site and consists of a sandy substrate supporting a bed, bank, and channel ranging from one to thirty feet in width.

Vegetation associated with Drainage System B includes red brome, rip-gut brome, mulefat (*Baccharis salicifolia*), elderberry (*Sambucus nigra*), and ceanothus.

Drainage System C

Drainage System C is the most significant drainage system within the Project site in terms of area, potential streamflow during rain events, and riparian vegetation. This drainage system is comprised of a main drainage feature (Drainage C) and several other streams and erosional gullies that traverse across the Project site (Tributaries C1 – C4). Drainage System C is an ephemeral drainage complex that originates within the Project site and meanders in a northerly direction before flowing offsite at Green River Road through a series of culverts and pipes. The majority of Drainage System C is part of a steep canyon supporting a bed, bank, and channel width ranging from one to twenty feet in width. The downstream portion of Drainage System C flattens out as it traverses the Project site and consists of a sandy substrate and supports a bed, bank, and channel ranging from two to one hundred feet in width. Vegetation associated with Drainage System C includes toyon, ceanothus, coast live oak, California sagebrush, black sage, and laurel sumac.

The overall Project site, including the proposed Conservation Area, contains approximately 7.77 acres of MSHCP riparian/riverine areas (7.73 acre onsite and 0.04 acre offsite), including 4.34 acres supporting riparian vegetation communities (Riparian Oak Woodland and Riparian Elderberry Scrub), and 3.43 acres of upland non-riparian vegetation. The Project will impact approximately 3.65 acres of MSHCP Riparian/Riverine Areas, including 3.61 acres onsite and 0.04 acre offsite [Exhibit 7A – MSHCP Riparian/Riverine Areas Impact Map], of which 1.13 acres consists of riparian habitats (1.10 acres of oak woodlands and 0.03 acre consist of elderberry stands) and 2.52 acres consist of upland non-riparian vegetation. Approximately 0.18 acre of the impacts will be temporary, associated with the Oak Woodland Mitigation area, with all remaining impacts (3.47 acres) being permanent.

Table 3-2. MSHCP Riparian/Riverine Areas (Onsite)

Vegetation Strata	Business Park Industrial – Permanent Impact (Acres)	Estate Residential (Industrial Grading) – Permanent Impact (Acres)	Oak Woodland Mitigation – Temporary Impact (Acres)	Deed Restriction – Avoided (Acres)	Conservation – Avoided (Acres)	Total (Acres)
Riparian Woodland (Oak Woodand)						
Drainage B	0	0	0	0	0.38	**0.38**
Drainage B1	0	0	0	0	0.25	**0.25**
Drainage C	0.09	0.29	0	0.11	2.21	**2.70**
Drainage C1	0	0	0	0	0.20	**0.20**
Drainage C2	0	0	0	0	0	**0**
Drainage C3	0	0	0	0	0	**0**
Drainage C4	0.60	0.12	0	0	0.06	**0.78**
Subtotal	**0.69**	**0.41**	**0**	**0.11**	**3.10**	**4.31**
Riparian Scrub (Elderberry)	**0.03**	**0**	**0**	**0**	**0**	**0.03**
Upland Non-Riparian						
Drainage A	0.07	0.07	0.09	0.02	0.03	**0.28**
Drainage A1	0	0	0.09	0	0.05	**0.14**
Drainage A2	0.03	0	0	0	0	**0.03**
Drainage A3	0.01	0	0	0	0	**0.01**
Drainage A4	0.05	0.01	0	0	0	**0.06**
Drainage B	0.18	0.45	0	0.18	0.23	**1.04**
Drainage B1	0	0	0	0	0.02	**0.02**
Drainage B2	0.07	0.04	0	0.01	0	**0.12**
Drainage C	0.86	0.21	0	0	0.16	**1.23**
Drainage C1	0	0	0	0	0.05	**0.05**
Drainage C2	0	0	0	0	0.03	**0.03**
Drainage C3	0	0.01	0	0	0.04	**0.05**
Drainage C4	0.22	0.02	0	0	0.09	**0.33**
Subtotal	**1.49**	**0.81**	**0.18**	**0.21**	**0.70**	**3.39**
TOTAL	**2.21**	**1.22**	**0.18**	**0.32**	**3.80**	**7.73**

Table 3-3. MSHCP Riparian/Riverine Areas (Offsite)

Vegetation Strata	Business Park Industrial (Acres)
Upland Non-Riparian	
Drainage A	0.02
Drainage B	0.02
TOTAL	**0.04**

Exhibit 7B displays riparian/riverine areas based on the corresponding vegetation communities. The 3.65 acres of total impacts to riparian/riverine areas includes 1.13 acres of riparian vegetation, of which 1.10 acres consists of coast live oak woodland and 0.03 acre of elderberry scrub. The 2.52 acres of upland non-riparian vegetation consists of disturbed/developed areas, ruderal/non-native grassland, residential/urban/exotic, saltbush scrub, and chaparral communities.

3.2.2 Least Bell's Vireo

The single vireo was detected within elderberry scrub habitat north of Green River Road (depicted on Exhibit 7A and 7B); however, due to the traffic noise from the adjacent freeway and from Green River Road, it was very difficult to hear and was therefore could not be confirmed during most of the survey visits. As such, it could not be determined whether the vireo was associated with a pair, and whether it attempted to nest or successfully nested. Furthermore, vireos were not detected within the Project site, and as noted above, the Project site does not contain habitat with the potential to support breeding vireos.

The Green River Ranch Specific Plan includes the development of both the Business Park Industrial Project and the future commercial development and having received Findings from the RCA and Wildlife Agencies for the Criteria Refinement to move PCL-1, the Specific Plan does not consider that the commercial property would be part of the MSHCP Reserve or that the resources at the site would otherwise be avoided. As such, the Business Park Industrial Project does not consider edge effects post-construction to resources that might occur on lands north of Green River Road. For example, future lighting along Green River Road and in the adjacent Business Park Industrial Project is not designed to prevent light spillage into lands north of Green River Road. That said, because the Business Park Industrial Project (currently proposed through a Precise Plan application with the City of Corona) and the future commercial development (not currently proposed and that would be subject to a future Precise Plan review process by the City of Corona) are proceeding as separate projects on different schedules for MSHCP approval, the Business Park Industrial Project must consider a scenario of the least Bell's vireo being seasonally present during construction and for some period once the Business Park Industrial Project is

completed.

Because the elderberry scrub where the vireo was detected in 2020 is immediately adjacent to the disturbance limits associated with the Green River Road improvements, the Business Park Industrial Project will consider the potential for edge effects during construction, including from factors such as noise, light, dust emissions, and human presence (trespassing). The Project will implement measures to avoid or minimize edge effects, where applicable.

If construction will occur within 300 feet of potential vireo habitat between March 15 and August 31, a biologist shall determine whether vireo individuals are present within the adjacent habitat. If work will start prior to March 15 and continue into the vireo season, or will start between March 15 and April 30, the biologist shall survey the adjacent habitat weekly for eight weeks[1] starting on or around March 15 until vireo are detected, or until eight visits are completed and the vireo is confirmed absent. If construction work will start after April 30, then surveys will start on or around April 10 (the formal start of the vireo survey period), and surveys will follow the survey intervals as stated above.

If vireo individuals are detected, the Project proponent will notify the RCA and Wildlife Agencies and the following measures will be implemented, as applicable, to address edge effects for construction activities occurring within 300 feet of occupied vireo habitat:

1) Noise – Given the proximity of the vireo habitat to the existing Green River Road and the adjacent SR-91, there is already an existing noise baseline from heavy traffic use, and it possible that construction noise would not exceed that baseline. The Project proponent will retain a qualified consultant to determine ambient noise levels adjacent to potential vireo habitat at the northern edge of Green River Road prior to the start of any construction activities within 300 feet of the habitat area. Once construction has started, the consultant will perform noise monitoring at the habitat edge. If it is determined that with construction, the noise levels exceed the ambient levels to a point that might be detrimental to any vireo present, then noise attenuation measures may be implemented, including the construction of a temporary noise attenuation barrier (sound wall) along the disturbance limits north of Green River Road. If it is determined that noise levels cannot be attenuated, then the specific construction activities resulting in the noise may be temporarily ceased until August 31, or prior if it is determined through surveys that the vireo are no longer present.
2) Lighting – Any night lighting needed during construction within 300 feet of occupied vireo habitat will be down shielded and/or directed away from the vireo habitat to prevent the illumination of the adjacent habitat.

[1] The least Bell's vireo survey guidelines require a minimum of eight visits with at least 10 days between each survey visit to determine absence. However, as this measure would be implemented relative to adjacent construction, the measure proposes more frequent (weekly) survey visits as opposed to a longer duration between visits.

3) Dust Emissions – The Project, as a part of standard best management practices (BMPs), pursuant to South Coast Air Quality Management District Rule 403, will introduce dust control measures for the duration of construction activities to minimize any effect on adjacent vireos.
4) Trespassing – prior to the start of construction activities along the northern side of Green River Road, the edge of the disturbance limits adjacent to the vireo habitat will be demarcated with construction fencing to prevent trespassing into the adjacent habitat. In addition, the Project proponent will implement an Environmental Awareness Training program prior to the start of construction to advise workers of sensitive biological areas adjacent to the development footprint, including the habitat areas north of Green River Ranch Road.

3.2.2 Vernal Pools

The Project site does not support any depression wetlands, i.e., MSHCP vernal pools. The majority of the site consists of steep topography that is not conducive to prolonged inundation. The flatter portions of the site south of Green River Road are actively disturbed/maintained and do not support depressions capable of prolonged inundation. The concrete basin is not a wetland, and therefore not a vernal pool, as it does not contain hydric soils or hydrophytic vegetation. Regarding hydrology, the basin being lined with concrete was designed to hold water; however, the bottom of the basin is cracked/broken in multiple places and sunken, such that water drains through the bottom and does not accumulate as the basin was designed.

3.2.3 Fairy Shrimp

GLA did not observe potential habitat for fairy shrimp, including natural ponding depressions or artificial/disturbed features such as stock ponds and tire ruts. GLA specifically evaluated the concrete basin for the potential to support fairy shrimp, but as noted above the bottom of the basin is broken and sunken, and the basin does not hold water as the basin was designed for. As such, the basin does inundate in most years to an extent that would provide the minimum hydrology to support fairy shrimp life cycles. Aerial imagery from January 2023 shows what appears to be some inundation, which likely persisted intermittently due to above-average rainfall. However, inundation is not observed in aerial imagery preceding January 2023. Furthermore, aside from some accumulation of organic material and wind-blown soil particles, the concrete-lined basin does not contain an earthen substrate that would support fairy shrimp.

3.3 Mitigation and Equivalency

3.3.1 Direct Effects

Effects on Conserved Habitats

The Project as designed avoids impacts to riparian/riverine areas to the maximum extent feasible. The areas to be avoided by the Project includes the 80.77 acres in the

southern part of the site (MSHCP Conservation) and the 6.26 acres to be protected with a deed restriction (the Avoided Area [Deed Restriction]). The Conservation area contains 3.80 acres of riparian/riverine areas, including 3.10 acres of coast live oak woodland and 0.70 acre of non-riparian habitats. The Deed Restriction area contains another 0.32 acre of riparian/riverine areas (0.11 acre of oak woodland and 0.21 acre of non-riparian); however, the Project is not including this acreage for preservation credit. In comparison to the 3.80 acres of conserved habitats (3.10 acres of oak woodland), of the 3.65 acres of impacts to riparian/riverine areas, more than half of the impacts (2.07 acres) include drainage features in the northern portion of the Project site that have been disturbed through past land uses, with 1.01 acres mapped as disturbed or developed; 0.96 acre as supporting vegetation associated with ruderal areas, including non-native grasses and forbs; and 0.10 acre in areas mapped as residential/urban/exotic. These drainage features do not contain habitats described for conservation, nor do they contain habitat that support *Section 6.1.2* species. However, the Project will impact 1.59 acres of riverine areas supporting native vegetation communities, including 1.10 acres of coast like oak woodland, 0.03 acre of elderberry stands, and 0.44 acre of native upland scrub. The coast live oak woodland and elderberry stands are classified as riparian communities.

Effects on Covered Species

Section 3.2.3 of the MSHCP identifies the following Planning Species for PCL-1: Cooper's hawk, coastal California gnatcatcher, bobcat, and mountain lion. The Cooper's hawk, mountain lion and bobcat all are known to utilize the Project site and adjacent lands for one or more purposes, including live-in habitat, foraging and dispersal. Although the gnatcatcher has not been observed at the Project site, there is some potential for the gnatcatcher to occur within Riversidean sage scrub patches intermixed with the chaparral communities. The Project will conserve 80.77 acres of lands, nearly all of which supports either native vegetation communities (coast live oak woodland and chaparral/sage scrub communities) or grasslands. These vegetation communities comprise all of the riverine features to be avoided by the Project. The protection of these lands will therefore provide habitat in perpetuity via the MSHCP Reserve to support the Covered Species. In contrast, the Project will permanently impact approximately 65 acres of lands onsite[2], of which nearly 57 acres consist of disturbed/developed or non-native vegetation areas. The balance of impacts consists of native vegetation communities, including the 1.10 acres of coast live oak woodland, 0.03 acre of elderberry and 0.44 acre associated with the riverine features to be impacted. In summary, the Project design favors the Covered Species through the protection of native vegetation communities and the proposed offsite purchase of mitigation credits, which is discussed below, such that the Project with the onsite avoidance and offsite mitigation is at least biologically equivalent as it applies to the Covered Species.

[2] The majority of the offsite improvement areas include existing developed roadways, and so these are not factored into this discussion.

Effects on Linkages and Functions of the MSHCP Conservation Area that Support Section 6.1.2 Resources

The MSHCP identifies that the Project site is associated with PCL-1, which is intended to connect the Existing Core A (Prado Basin/Santa Ana River) on the north with Existing Core B (Cleveland National Forest) to the south. However, as noted above, the City of Corona is processing a Criteria Refinement to formally relocate PCL-1 from the route that is currently described by the MSHCP Cell Criteria (through the Project site) to an alternate location through the "B Canyon area" to the west/southwest of the Project. The relocation of PCL-1 generally removes the Project site from the Linkage; however, the 80.77 acres of lands proposed for conservation in the southern portion of the site will support the wildlife movement function along the relocated route to the west and north. As discussed above, the Project will protect 3.80 acres of drainage features in the higher-elevation southern portion of the Project site, while impacting 3.65 acres of drainage features in the northern portion of the site.

Functional Analysis

The drainage features to be impacted are ultimately tributaries to the Santa Ana River, which is located just north of SR-91. The portion of the Project site to be conserved (the southern half) represents the upper watershed and origin of the drainage features, which extend northward through the lower portion of the site (the proposed development footprint) where flows then extend under Green River Road through existing drainage pipes and then continue northward towards the San Ana River. The Project will preserve the upper watershed supporting native habitats and will develop the lower part of the watershed while hydrologically allowing flows to enter a storm drain system that will ultimately outlet on the north side of Green River Road. As such, the Project will maintain the hydrologic connectivity of the upper watershed to the Santa Ana River.

Since the upper watershed connecting to the proposed impact footprint is undeveloped and does support land uses that would generate chemicals, the drainage features proposed for impact do not function to treat water and provide toxicant trapping or pollutant loading. In fact, the prior land uses provided a potential source of pollutants that will be eliminated in favor of the proposed Project that will be treating onsite runoff.

As described above, more than half of the impacts will occur to disturbed/developed areas or drainage features supporting non-native herbaceous plant species. However, the Project will impact 1.10 acres of drainage features supporting a riparian community of coast live oak woodland, 0.03 acre of elderberry stands and 0.44 acre of native upland scrub. These vegetation communities provide live-in and foraging habitat for a range of wildlife, although not for the species identified under the Purpose portion of *Section 6.1.2*, including least Bell's vireo, southwestern willow flycatcher and western yellow-billed cuckoo. However, the woodland and scrub communities have the potential to support a few of the bird species identified as "additional species" benefitting from the riparian/riverine policies, including Cooper's hawk (*Accipiter cooperi*) and white-tailed kite (*Elanus leucurus*). In addition, the coast live oak woodland areas have the potential

to support other birds such as woodpeckers, titmice, Pacific slope flycatcher (*Empidonax difficilis*) and other woodland/forest species.

As described below, the Project site does not support any Narrow Endemic Plants or Criteria Area Plants. Furthermore, the Project site lacks wetland (i.e., hydrophytic) vegetation communities. Woody riparian vegetation is limited to coast live-oak trees and elderberry shrubs.

Mitigation

The Project will mitigate permanent impacts to 3.47 acres of MSHCP riparian/riverine through a combination of onsite restoration and preservation, and offsite mitigation (the purchase of available mitigation credits at the Riverpark Mitigation Bank), altogether totaling 11.06 acres of mitigation. The onsite mitigation will consist of restoring 2.57 acres of riparian oak woodland in the western portion of the Project site. This area was previously intended as a wildlife movement path to support the goals of PCL-1; however, with the re-designation of PCL-1 to the west, the 2.57-acre area is now proposed to be planted with coast live-oak trees and associated species to create a contiguous area of oak woodland habitat. The western portion of the site currently contains a riverine complex (Drainage A), the lower portion of which is in the proposed mitigation area. The Project will eliminate the lower portion of the existing drainage complex to construct the Business Park Industrial Project and the manufactured slopes to south. However, the upper watershed will be avoided in the MSHCP Conservation area and the Deed Restriction area and flows/runoff from Drainage A will be intercepted and routed to the proposed Oak Woodland Mitigation area. A meandering stream area will be created within the mitigation area to collect the flows/runoff and provide hydrology at a minimum 1:1 ratio over the 1.10 acres of impacts to Riparian Oak Woodland.

The 1.10 acres of Riparian Oak Woodland habitat to be impacted consists of 15 oak trees spread out over eight patches of vegetation between two drainage features. Each patch of mapped oak woodland habitat to be impacted consists of one or two oak trees and associated understory. The proposed mitigation will consist of 2.57 acres of contiguous habitat in one area, providing biological function for MSHCP species resulting in a biologically superior condition compared with the existing conditions. Furthermore, oak seedlings will be planted within the mitigation area to replace the impacted riparian oak trees at a minimum 10:1 ratio, resulting in a minimum of 150 oak seedlings. An Oak Tree Mitigation Plan will be prepared for the Oak Woodland Mitigation area and submitted to the RCA and Wildlife Agencies for review and approval. The Oak Tree Mitigation Plan will address items discussed with the Wildlife Agencies during a meeting held on October 10, 2023.

In addition, the Project will preserve 3.80 acres of riparian/riverine areas within the proposed MSHCP Conservation Area, which includes 3.10 acres of riparian oak woodlands and 0.70 acre of upland non-riparian riverine areas. The balance of mitigation will consist of the purchase of 4.69 acres of mitigation bank credits intended

to be obtained from the Riverpark Mitigation Bank. The following table summarizes the proposed mitigation ratios and types of mitigation credits organized by vegetation strata. The DBESP analysis includes an equivalency analysis to address the loss of functions at the Project site to be offset by the proposed mitigation.

Table 3-4. Proposed Mitigation for Riparian/Riverine Permanent Impacts

Vegetation Strata	Impact Acreage	Mitigation Types and Ratios	Total Mitigation Acreage
Riparian Oak Woodland	1.10	• 2.57 acres of onsite restoration (2:1 re-establishment) • 3.10 acres of onsite preservation	5.67
Riparian Elderberry Scrub	0.03	• 0.09 acre of offsite re-establishment at Riverpark (3:1 ratio)	0.09
Upland Non-Riparian	2.30	• 4.60 acres of offsite re-establishment (2:1) at Riverpark • 0.70 acre of onsite preservation	5.30
Total	**3.43**		**11.06**

Since the Riverpark Mitigation Bank involves the restoration of areas adjacent to the San Jacinto River, the mitigation bank lands provide hydrologic functions to the San Jacinto River floodplain similar to the functions provided by drainage features to be impacted at the Project site that are tributary to the Santa Ana River. The Project will purchase a total of 4.69 acres of re-establishment credits from Riverpark, including 0.09 acres to mitigate 0.03 acre of riparian elderberry scrub (3:1 ratio) and 4.60 acre of re-establishment credits to mitigate 2.30 acres of upland non-riparian vegetation (2:1 ratio). As a matter of habitat replacement, the Project will impact 2.07 acres of the drainage features that are disturbed or developed, or that support non-native vegetation. The scrub and grassland vegetation are not riparian in nature and offers minimal habitat function to the Section 6.1.2 species. As such, the purchase of mitigation credits at a 2:1 ratio to replace the onsite upland riverine features will be biologically superior compared with the impacts. Similarly, the purchase of 0.09 acre of re-establishment credits to offset impacts to 0.03 acre of riparian elderberry scrub will be biologically superior. Lastly, in addition to the protection of 3.10 acres of coast live oak woodland at the Project site, the Project will mitigate impacts to 1.10 acres of coast live-oak woodland through the onsite restoration of 2.57 acres of oak woodland within the Oak Woodland Mitigation area, with includes the re-establishment of at least 0.18 acre of streambed to replace the existing non-riparian riverine features that are in the Oak Woodland Mitigation area [Exhibit 3].

3.3.2 Indirect Effects

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 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 resulting from construction-related activities.

The Project is not expected to result in adverse indirect impacts to sensitive biological resources, including avoided riparian/riverine areas located south of (upstream of) the proposed Project. The operational footprint of the business park industrial development will be separated from adjacent conservation area by the manufactured slopes that will be landscaped as well as the additional Avoided Area (Deed Restriction). These areas will function to buffer the business park industrial development from the MSHCP Conservation Area. In addition, the Project will implement measures pursuant to the MSHCP Urban/Wildlands Interface Guidelines (*Volume I, Section 6.1.4* of the MSHCP), including to address lighting, noise, invasives, and the use of fencing and other appropriate barriers to support MSHCP goals for wildlife movement.

Based on GLA's detection of least Bell's vireo north of the Project's disturbance limits associated with Green River Road improvements, the Project will implement measures to avoid or minimize indirect effects if vireos were to be present during construction activities. Although the lands north of Green River Road are not part of the MSHCP Conservation Area and are planned for a future commercial development project, if the habitat north of Green River Road is present at the time of construction, then it is possible for vireo to present seasonally. As such, the measures, described above in Section 3.2.2, addressing noise, lighting, dust emissions and trespass, acknowledge the potential presence of vireo while the proposed work on Green River Road and the northern portion of the Business Park Industrial Project is ongoing. If the future commercial development project is approved and were to proceed prior to the Business Park Industrial Project directly or indirectly affecting habitat north of Green River Road, then these measures would no longer apply.

4.0 NARROW ENDEMIC PLANT SPECIES (SECTION 6.1.3)

4.1 Methods

Volume I, Section 6.1.3 of the MSHCP requires that within identified Narrow Endemic Plant Species Survey Areas (NEPSSA), site-specific focused surveys for Narrow Endemic Plants Species will be required for all public and private projects where appropriate soils and habitat are present. The Study area occurs within the MSHCP NEPSSA Survey Area 7, which identifies the following target species:

- San Diego ambrosia
- Brand's phacelia
- San Miguel savory

Pursuant to the MSHCP, the target species were evaluated through habitat assessments and focused surveys. Focused surveys were conducted by GLA Biologists on March 2 and April 24, 2020. Surveys were performed by GLA botanist Jillian Stephens and GLA biologist Jason Fitzgibbon. Surveys were conducted in accordance with accepted botanical survey guidelines (CDFG 2009, CNPS 2001, USFWS 2000). As applicable, survey(s) were conducted at appropriate times based on precipitation and/or 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.

4.2 Results/Impacts

GLA biologists detected a total of 116 plant species at the Project site, the majority of which consisted of annual vegetation including native and non-native forbs and grasses. A floral compendium is included as Appendix A. Annual precipitation for 2019-2020 rainfall season totaled approximately 13 inches, with the majority of the rainfall occurring in November (2.70 inches) and December (2.90 inches) 2019, and March (3.90 inches) and April (3.50 inches) 2020. Minimal rainfall occurred in January and February 2020, with approximately 0.10 inch in each of those months. Although there was minimal rainfall in January and February 2020, the nearly six inches of rainfall in November and December 2019 coupled to mild temperatures in January (63ºF average and 52ºF to 79ºF range) and February (69ºF average and 57ºF to 84ºF) 2020 allowed for ample germination and flowering yielding to good initial plant detections on March 2. Then an additional four inches of rainfall in March 2020 and another 3.50 inches in early April 2020 allowed for continued good detections during the April 24 survey visit.

GLA did not detect any of the Narrow Endemic Plant species within or adjacent to the Project site during focused plant surveys performed in 2020. Of the three target species, none of the species were expected to occur within the Project's development footprint due to a lack of suitable habitat. The following is a discussion of each of the species.

4.2.1 San Diego Ambrosia

San Diego ambrosia is a member of the sunflower family known to occur from Riverside and San Diego Counties as well as Baja California and is known to bloom from April through October. San Diego ambrosia occurs in open floodplain terraces or on in the watershed margins of vernal pools. This species occurs in a variety of associations that are dominated by sparse non-native grasslands or ruderal habitat in association with river terraces, vernal pools, and alkali playas (Munz 1974; Reiser 2001). The closest known locales of San Diego ambrosia to the Project site are in the Alberhill area of Lake

Elsinore, including a locale near Nichols Road that GLA biologists confirmed in April 2020, including on April 23, 2020, which was the day before the second plant survey that was conducted for the Project site. GLA biologists determined that the Project site does not contain suitable habitat for San Diego ambrosia, including a lack of floodplain terrace and alkali habitats that are associated with the Lake Elsinore locales. Furthermore, the San Diego was not detected at the Project site during focused surveys.

4.2.2 Brand's Phacelia

Brand's phacelia is a small plant in the borage family. Suitable habitat for Brand's phacelia includes coastal dunes and/or coastal scrub in sandy openings, sandy benches, dunes, sandy washes, or flood plains of rivers and is restricted to clay soils at elevations between 0 and 400 meters. The known locales in Riverside County are near the Santa Ana River in the Santa Ana Wilderness Area and is generally regarded with being restricted to benches along the Santa Ana River. GLA biologists determined that the Project site does not contain suitable habitat for Brand's phacelia, as the site is removed from the Santa Ana River and slopes up into quickly into grasslands and scrub habitats that transition into chaparral and woodland habitats. Furthermore, Brand's phacelia was not detected at the Project site during focused surveys.

4.2.3 San Miguel Savory

San Miguel savory is a small plant in the mint family associated with rocky, gabbroic and metavolcanic substrates in coastal sage scrub, chaparral, cismontane woodland, riparian woodland, and valley and foothill grasslands. Riverside County locales are known from the Santa Ana Mountains and foothills, including locales from the Santa Rosa Plateau. GLA biologists determined that the lands within the Project's proposed MSHCP Conservation area and the Avoided Area (Deed Restriction) contain potential habitat for San Miguel savory, but the species is not expected to occur within the Project's development footprint due to a lack of suitable habitat. However, San Miguel savory was not detected at the Project site during focused surveys, including in the proposed MSHCP Conservation.

5.0 ADDITIONAL SURVEY NEEDS (SECTION 6.3.2)

5.1 Criteria Area Plants

The Project site is not located within the Criteria Area Plant Species Survey Area (CAPSSA). As such, there are no MSHCP requirements pertaining to CAPSSA species applicable to the Project, including focused plant surveys and avoidance/mitigation.

5.2 Burrowing Owl

5.2.1 Methods

GLA biologist Jason Fitzgibbon evaluated the Project site for burrowing owls in accordance with the MSHCP Burrowing Owl Survey Instructions (RCA 2006), which stipulate that four focused survey visits be conducted between March 1 and August 31. The survey instructions are divided into three components, including Step I (habitat assessment, Step II-A (focused burrow survey), and Step II-B (focused burrowing owl survey).

The initial habitat assessment (Step I) and focused burrow survey (Step II-A) was conducted March 2, 2020. Suitable habitat was determined based on the presence of burrows, while considering vegetation densities and topography. Areas of dense vegetation preventing access were excluded from burrow mapping and focused surveys. Exhibit 8 (Burrowing Owl Survey Results Map) depicts the location of burrow complexes mapped within the Project footprint.

Step II-B focused burrowing owl surveys were conducted on March 3, April 16, April 24, and May 4, 2020, which included portions of the site both inside and outside of the MSHCP survey area. Focused surveys were performed for burrowing owls for most of the proposed impact footprint based on general habitat suitability. Focused surveys were concentrated in the northern portion of the footprint and additional areas where burrows were mapped. Uniform transects were utilized for the topographically flatter (northern) portion of the footprint where such transects were able to be maintained. Exhibit 8 identifies the transects for the flatter portion of the site that represents the relatively better-quality habitat and suitable burrows that were mapped during the surveys. Transects were spaced between 22 feet and 65 feet 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 320 feet 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. For the rest of the Project footprint (southern portion) with more complex topography, surveys were performed on foot following meandering routes, focusing on areas where burrows were mapped, specifically within the canyon in the center portion of the property. Exhibit 8 also depicts a 500-foot visual survey area around the Project site. The 500-foot visual survey area was at least inspected with binoculars but was also accessed on foot where feasible.

The 2006 MSHCP Burrowing Owl Survey Instructions identify that surveys are to be conducted within a timeframe from one hour before sunrise to two hours after sunrise, or from two hours before sunset to one hour after sunset. The first three focused survey visits were conducted in the morning, with the fourth visit conducted during the afternoon survey window. Both the burrow and owl surveys were conducted during weather that was conducive to observing owls outside their burrows and detecting

burrowing owl sign and not during rain, high winds (> 20 mph), dense fog, or temperatures over 90 °F. Additionally, all work was performed more than 5 days after a rain event. Refer to Table 5-1 below for survey condition details.

Table 5-1. Summary of Burrowing Owl Surveys

Survey Date	Biologist	Sunrise or Sunset	Survey Window	Start/End Temperature (degree F)	Wind Speed Range (mph)	Cloud Cover (%)
3/3/20	JF	0618	0518 - 0818	53/69	0-2	0
4/16/20	JF	0619	0519 - 0819	51/58	5-7	100
4/24/20	JF	0610	0510 - 0810	63/79	5-7	0
5/4/20	JF	1939	1739 - 2139	73/69	5-2	0

JF = Jason Fitzgibbon

5.2.2 Results

No burrowing owls were detected within the Project site. However, because of the presence of suitable habitat and pursuant to MSHCP requirements for the burrowing owl (objective 6 of the MSHCP objectives for the burrowing owl), a qualified biologist will perform a pre-construction burrowing owl survey for the Project site prior to initial ground-disturbing activities. The following measure will apply to the pre-construction survey:

- A 30-day pre-construction survey for burrowing owls is required prior to initial ground-disturbing activities (e.g., vegetation clearing, clearing and grubbing, grading, tree removal, site watering, equipment staging) to ensure that no owls have colonized the site in the days or weeks preceding the ground-disturbing activities. If burrowing owls have colonized the project site prior to the initiation of ground-disturbing activities, the project proponent will immediately inform the Regional Conservation Authority (RCA) and the Wildlife Agencies and will need to coordinate further with RCA and the Wildlife Agencies, including the possibility of preparing a Burrowing Owl Protection and Relocation Plan, prior to initiating ground disturbance. If ground-disturbing activities occur, but the site is left undisturbed for more than 30 days, a pre-construction survey will again be necessary to ensure that burrowing owl have not colonized the site since it was last disturbed. If burrowing owl is found, the same coordination described above will be necessary.

5.3 Mammals

The Project site is not located within a MSHCP Mammal Survey Area. As such, there are no MSHCP requirements pertaining to mammals applicable to the Project, including focused surveys and avoidance/mitigation.

5.4 Amphibians

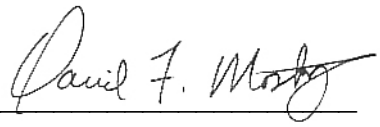
The Project site is not located within a MSHCP Amphibian Survey Area. As such, there are no MSHCP requirements pertaining to amphibians applicable to the Project, including focused surveys and avoidance/mitigation.

6.0 DELHI SANDS FLOWER-LOVING FLY

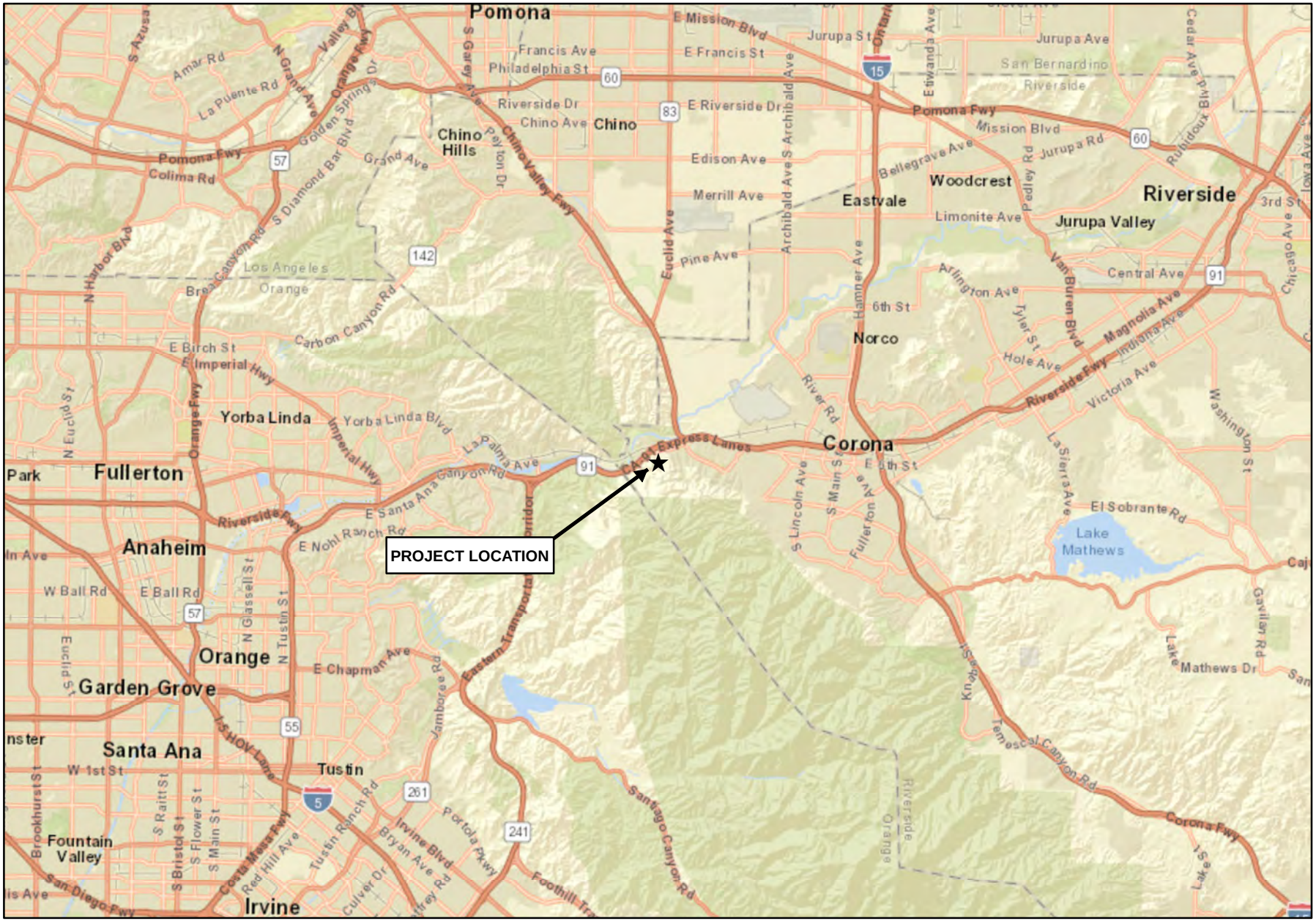
The Project site is not located within Delhi soils mapped within the MSHCP baseline data, and therefore habitat assessments/focused surveys are not required for the Delhi Sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*).

7.0 CERTIFICATION

*"**CERTIFICATION**: I hereby certify that the statements furnished above and in the attached exhibits present the 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: 08/29/24

p:0544-4e.DBESP analysis

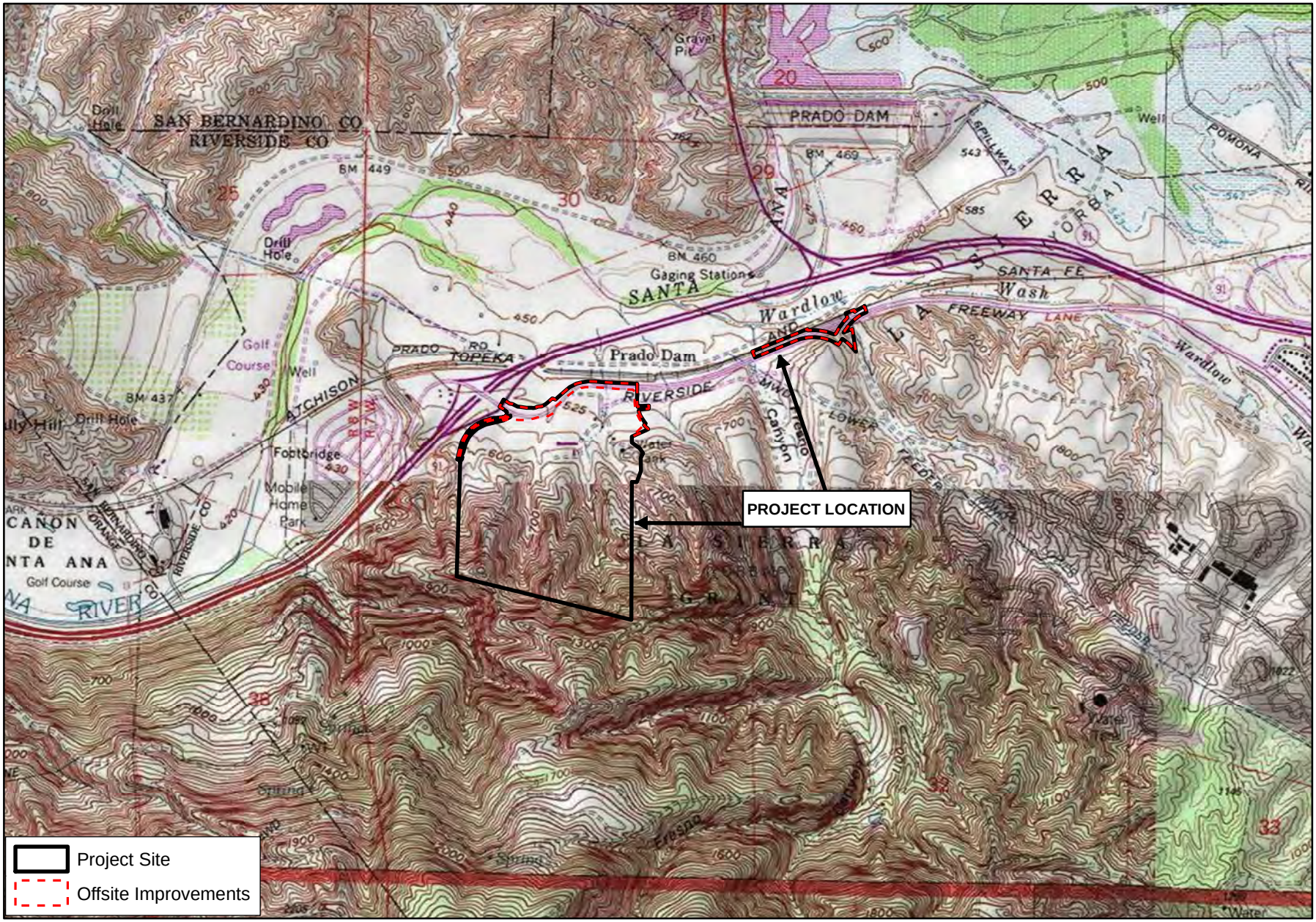


GREEN RIVER RANCH INDUSTRIAL PROJECT

Regional Map

GLENN LUKOS ASSOCIATES

Exhibit 1



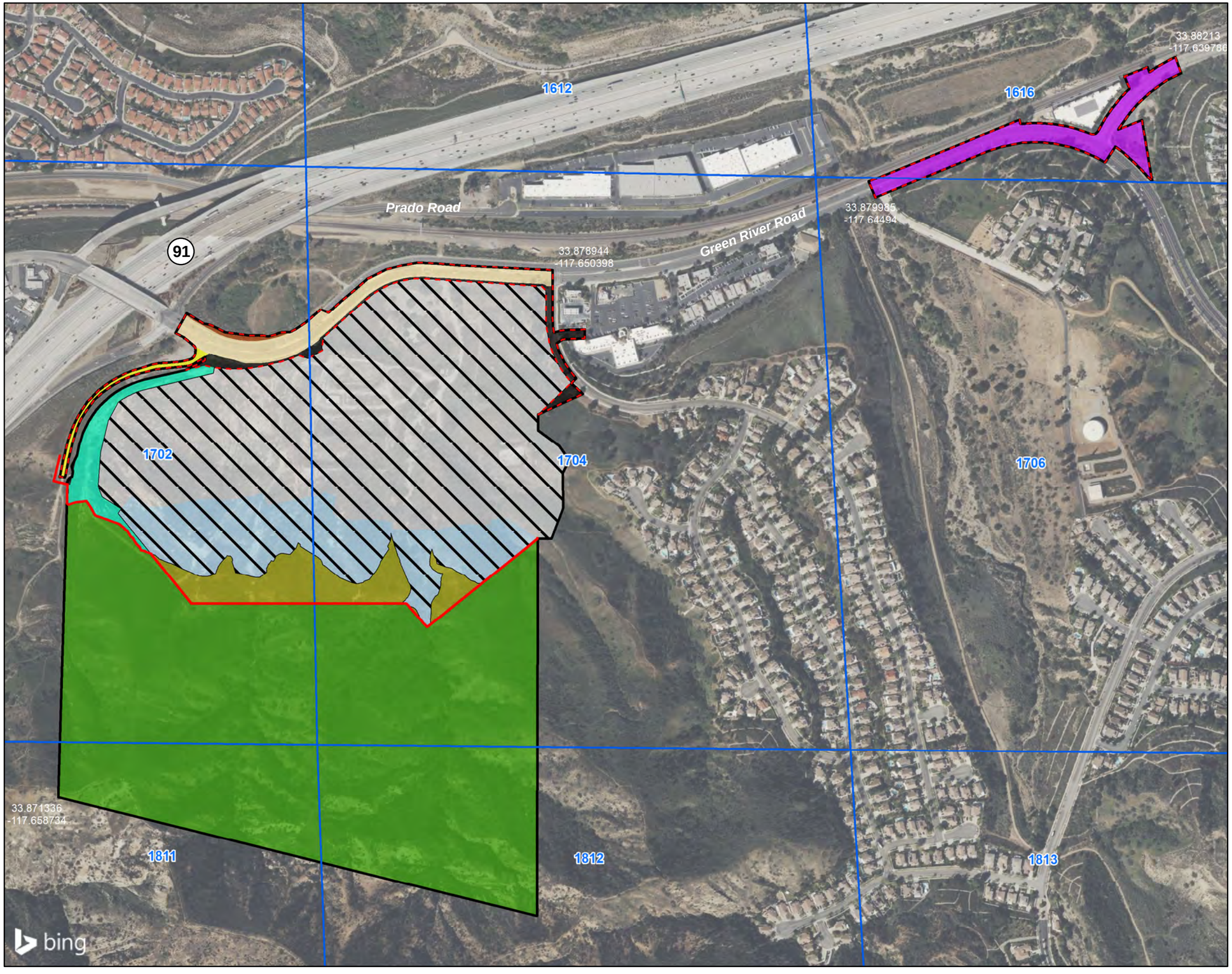
Adapted from USGS Prado Dam & Black Star Canyon, CA quadrangles

GREEN RIVER RANCH INDUSTRIAL PROJECT

Vicinity Map

GLENN LUKOS ASSOCIATES

Exhibit 2



- Project Site
- Offsite Improvements
- Fuel Modification Limits
- Criteria Cells
- Proposed Wildlife Fencing
- Business Park Industrial (Onsite, Permanent)
- Estate Residential Zoning – Industrial Project Grading (Onsite, Permanent)
- Avoidance Area (Deed Restriction)
- Proposed MSHCP Conservation
- Oak Woodland Mitigation (Onsite, Temporary)
- Business Park Industrial (Offsite, Permanent)
- Fresno Road (Offsite, Permanent)
- Green River Road (Offsite, Permanent)
- Green River Road (Offsite, Temporary)
- Utility Improvement (Offsite, Permanent)

N

0 250 500 1,000
Feet

1 inch = 500 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD 1983 2011
Map Prepared by: K. Kartunen, GLA
Date Prepared: August 6, 2024

GREEN RIVER RANCH INDUSTRIAL PROJECT

Site Plan Map

GLENN LUKOS ASSOCIATES

Exhibit 3

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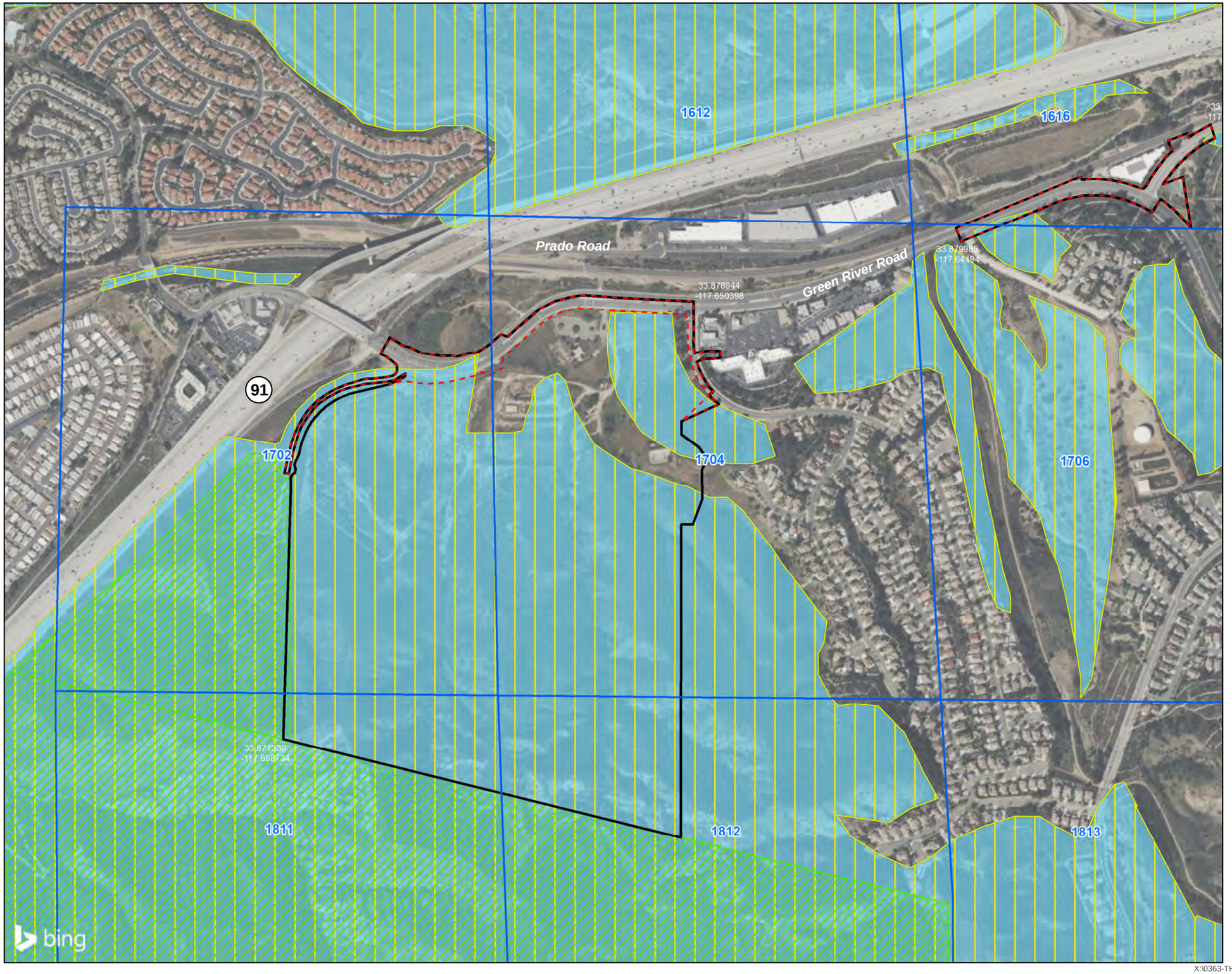

- Project Site
- Offsite Improvements
- Criteria Cells
- Existing Conserved Lands
- Narrow Endemic Plant Species Survey Areas
- Species Survey Areas Burrowing Owls

N

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Feet

1 inch = 600 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD 1983 2011
Map Prepared by: K. Kartunen, GLA
Date Prepared: April 8, 2024

GREEN RIVER RANCH INDUSTRIAL PROJECT

MSHCP Overlay Map

GLENN LUKOS ASSOCIATES

Exhibit 4

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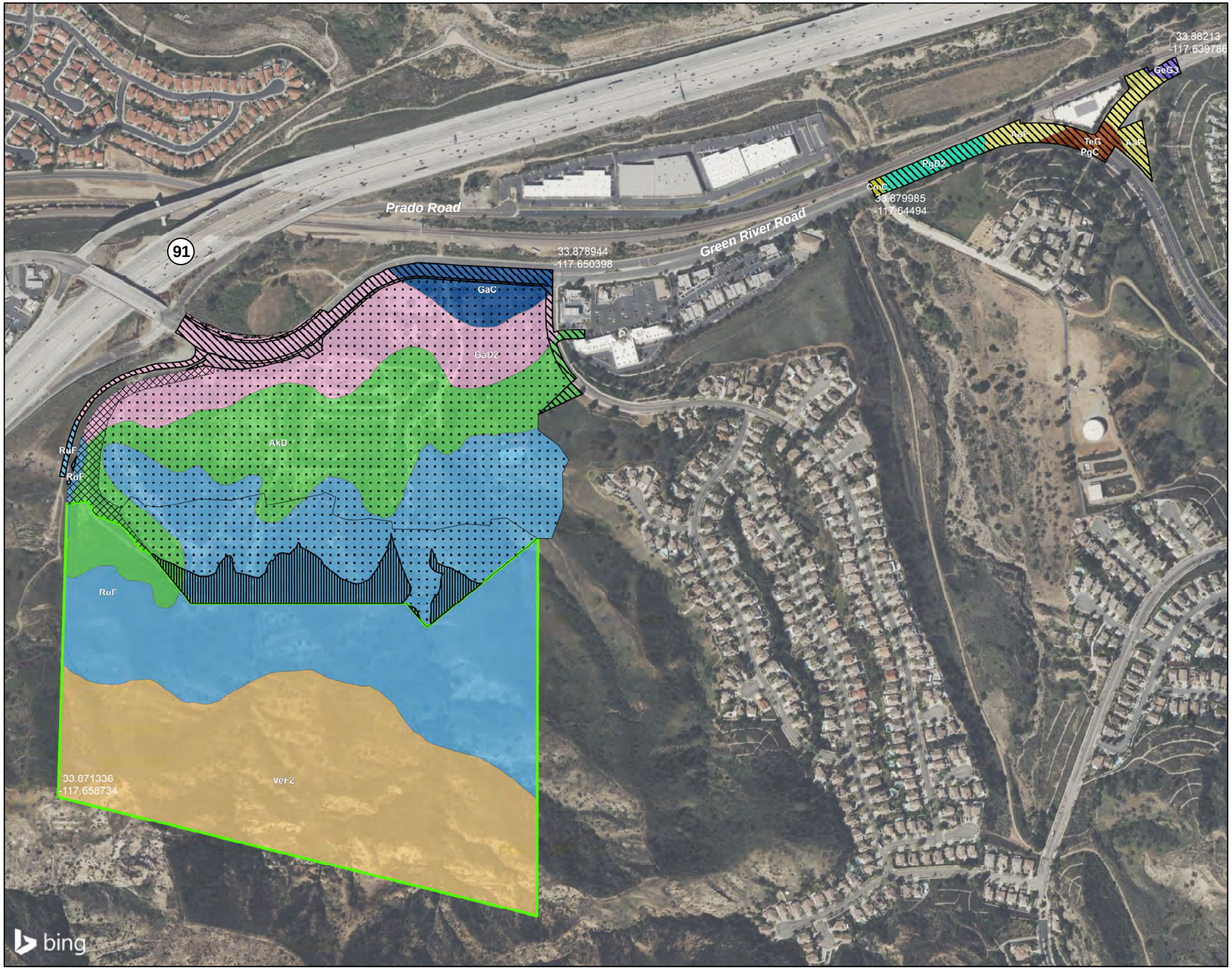

- Project Footprint (Onsite, Permanent)
- Offsite Improvement (Offsite, Permanent)
- Offsite Improvement (Offsite, Temporary)
- Oak Woodland Mitigation (Onsite, Temporary)
- Proposed MSHCP Conservation
- Avoidance Area (Deed Restriction)
- AaF - Altamont clay, 5 to 50 percent slopes
- AkD - Arbuckle loam, 8 to 15 percent slopes
- CmC - Cortina cobbly loamy sand, 2 to 8 percent slopes
- GaC - Garretson very fine sandy loam, 2 to 8 percent slopes
- GaD2 - Garretson very fine sandy loam, 8 to 15 percent slopes, eroded
- GeG3 - Gaviota rocky fine sandy loam, 25 to 75 percent slopes, severely eroded
- PgC - Perkins gravelly loam, 5 to 8 percent slopes
- PgD2 - Perkins gravelly loam, 8 to 15 percent slopes, eroded
- RuF - Rough broken land
- TeG - Terrace escarpments
- VeF2 - Vallecitos loam, thick solum variant, 15 to 50 percent slopes, eroded

N

0 250 500 1,000

Feet

1 inch = 500 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD 1983 2011
Map Prepared by: K. Kartunen, GLA
Date Prepared: August 6, 2024

GREEN RIVER RANCH INDUSTRIAL PROJECT

Soils Map

GLENN LUKOS ASSOCIATES

Exhibit 5

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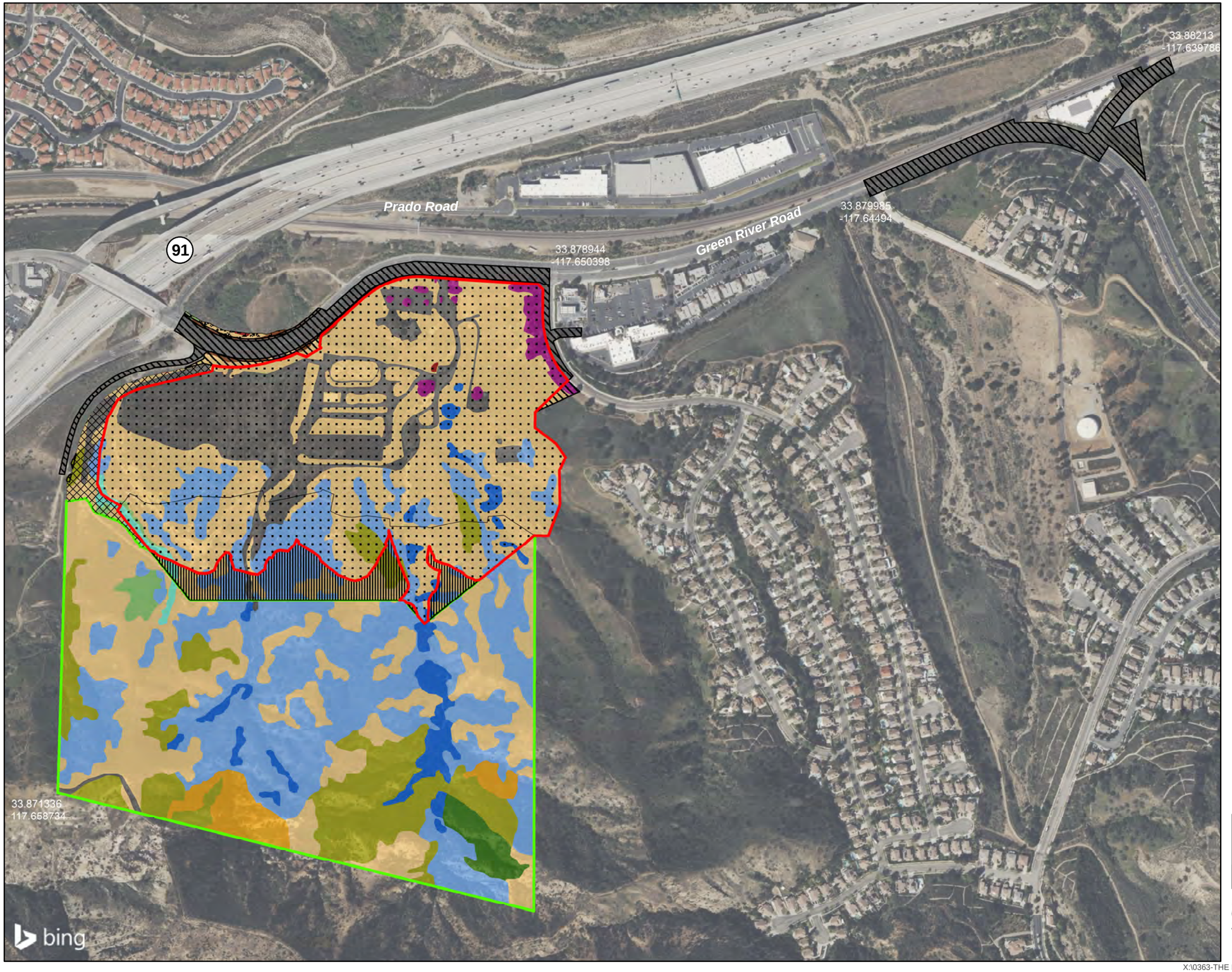

- Project Footprint (Onsite, Permanent)
- Offsite Improvement (Offsite, Permanent)
- Offsite Improvement (Offsite, Temporary)
- Oak Woodland Mitigation (Onsite, Temporary)
- Proposed MSHCP Conservation
- Avoidance Area (Deed Restriction)
- Fuel Modification Limits
- Coast Live Oak Woodland
- Coastal Sage Scrub
- Disturbed Mixed Chaparral
- Disturbed/Developed
- Elderberry Savannah
- Lower Montane Mixed Chaparral
- Mixed Chaparral
- Residential/Urban/Exotic
- Riversidean Sage Scrub/Mixed Chaparral
- Ruderal/Non-native grassland
- Saltbush Scrub
- Southern Mixed Chaparral

N

0 250 500 1,000
Feet

1 inch = 500 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD 1983 2011
Map Prepared by: K. Kartunen, GLA
Date Prepared: August 6, 2024

GREEN RIVER RANCH INDUSTRIAL PROJECT

Vegetation Map

GLENN LUKOS ASSOCIATES

Exhibit 6

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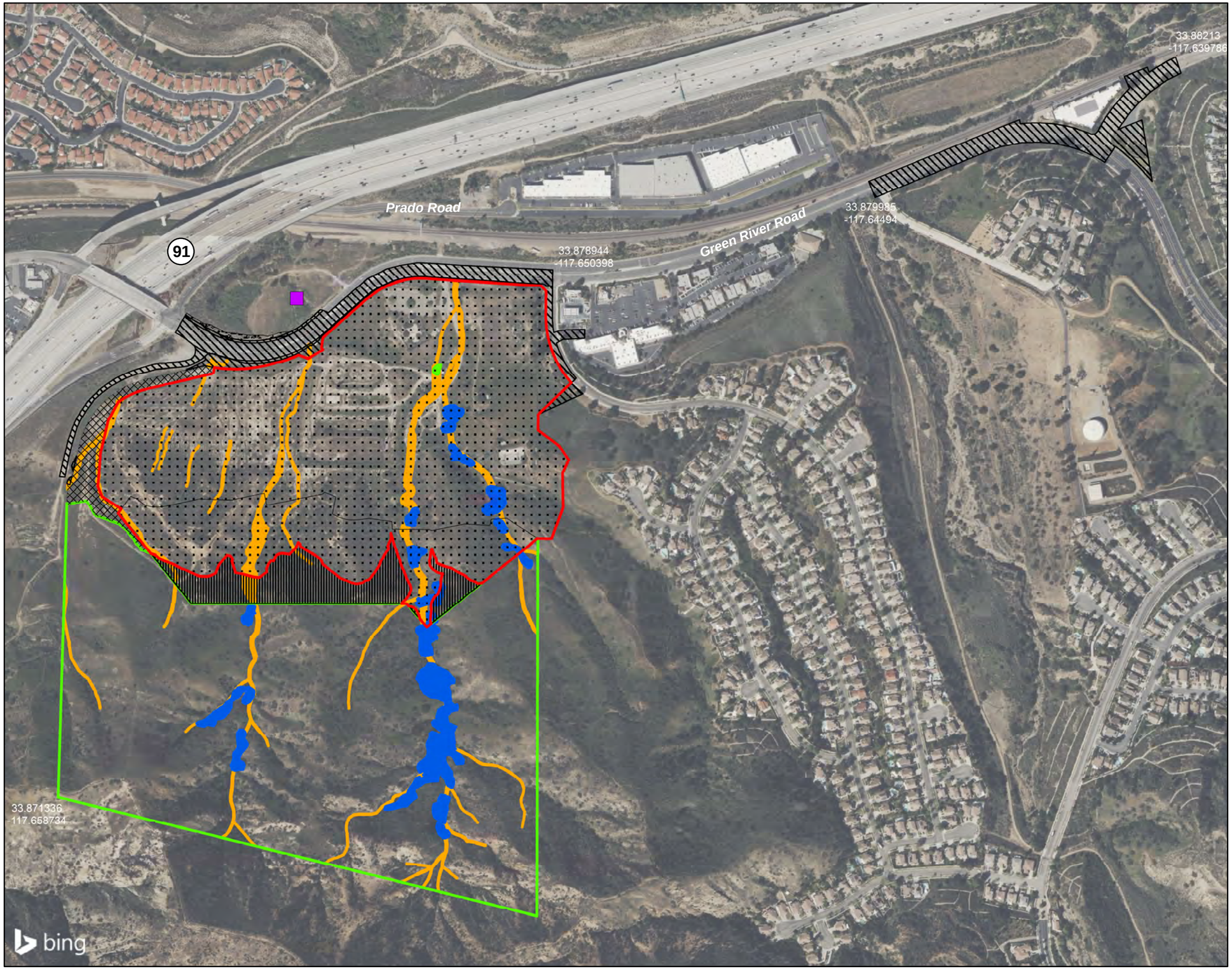

- Project Footprint (Onsite, Permanent)
- Offsite Improvement (Offsite, Permanent)
- Offsite Improvement (Offsite, Temporary)
- Oak Woodland Mitigation (Onsite, Temporary)
- Proposed MSHCP Conservation
- Avoidance Area (Deed Restriction)
- Fuel Modification Limits
- Non-Riparian Riverine
- Riparian Oak Woodland
- Riparian Elderberry Scrub
- Least Bell's Vireo - GLA 2020

N

0 250 500 1,000

Feet

1 inch = 500 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD 1983 2011
Map Prepared by: K. Kartunen, GLA
Date Prepared: August 6, 2024

GREEN RIVER RANCH INDUSTRIAL PROJECT

MSHCP Riparian/Riverine Areas Map

GLENN LUKOS ASSOCIATES

Exhibit 7A

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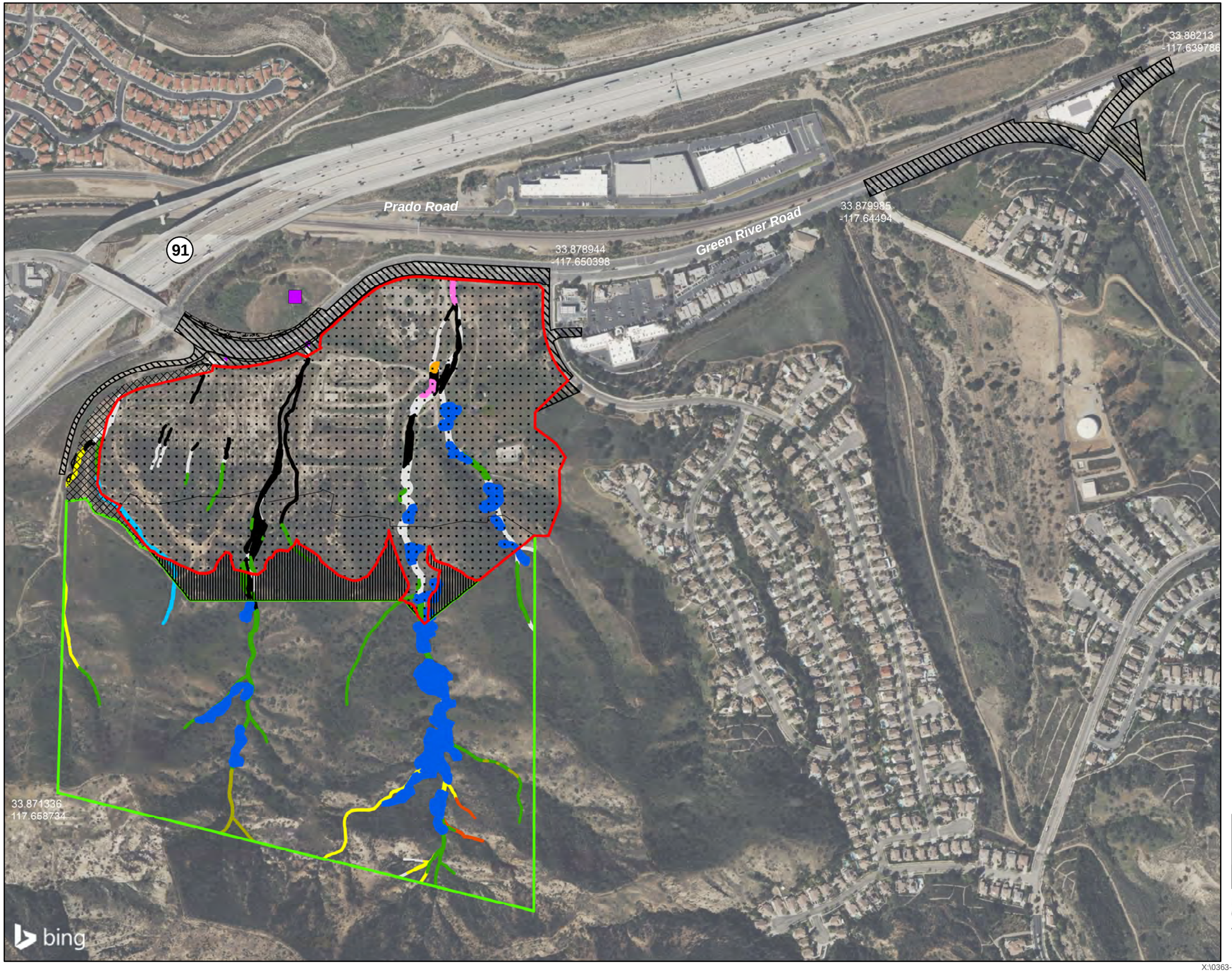

Project Footprint (Onsite, Permanent)
Offsite Improvement (Offsite, Permanent)
Offsite Improvement (Offsite, Temporary)
Oak Woodland Mitigation (Onsite, Temporary)
Proposed MSHCP Conservation
Avoidance Area (Deed Restriction)
Least Bell's Vireo - GLA 2020

MSHCP Riverine

Disturbed Mixed Chaparral
Disturbed/Developed
Elderberry Savannah
Lower Montane Mixed Chaparral
Mixed Chaparral
Residential/Urban/Exotic
Riversidean Sage Scrub/Mixed Chaparral
Ruderal/Non-native grassland
Southern Mixed Chaparral

MSHCP Riparian

Coast Live Oak Woodland
Saltbush Scrub

N

0 250 500 1,000
Feet

1 inch = 500 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD 1983 2011
Map Prepared by: K. Kartunen, GLA
Date Prepared: August 6, 2024

GREEN RIVER RANCH INDUSTRIAL PROJECT

MSHCP Riparian/Riverine - Vegetation Map

GLENN LUKOS ASSOCIATES

Exhibit 7B

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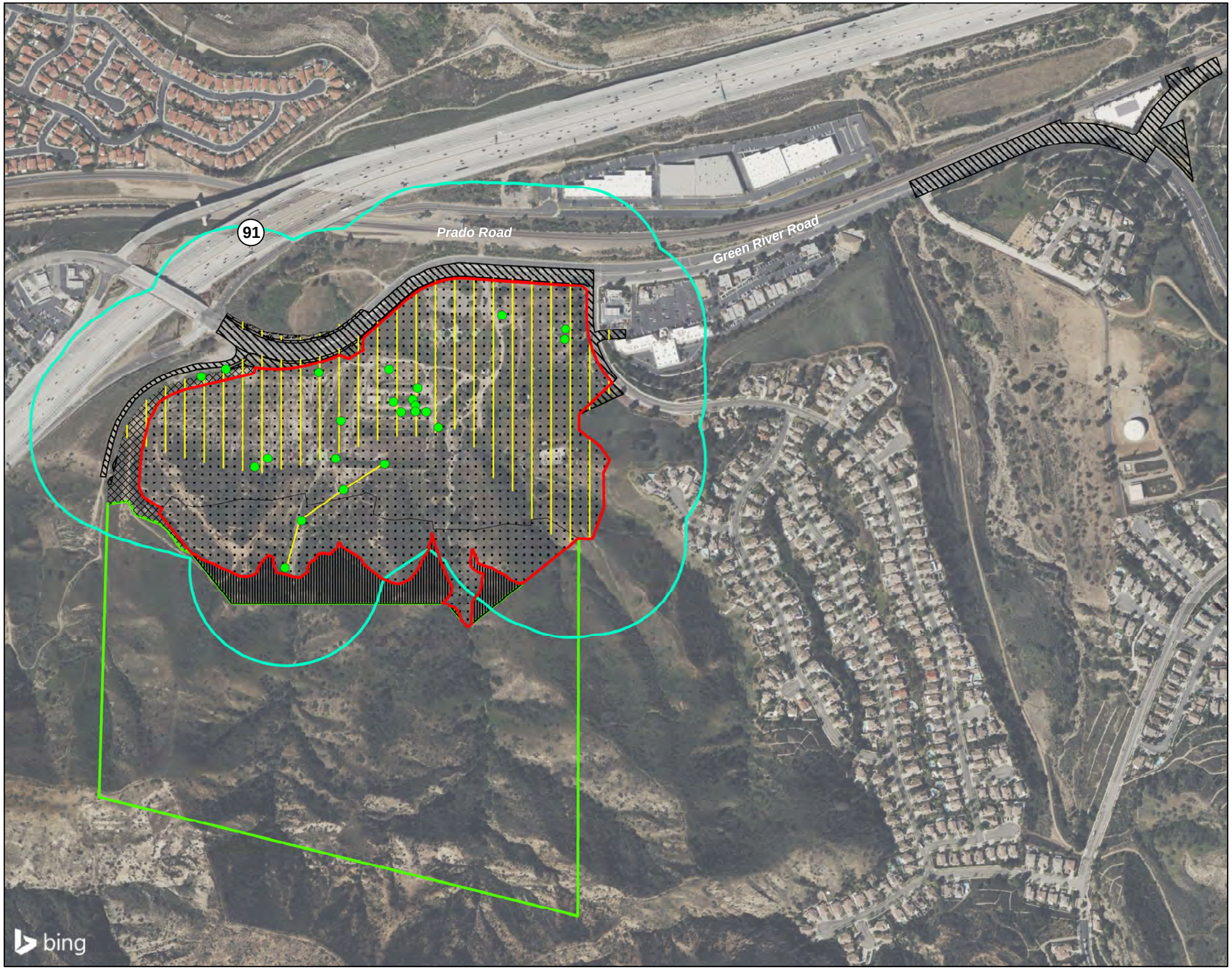

Project Footprint (Onsite, Permanent)
Offsite Improvement (Offsite, Permanent)
Offsite Improvement (Offsite, Temporary)
Oak Woodland Mitigation (Onsite, Temporary)
Proposed MSHCP Conservation
Avoidance Area (Deed Restriction)
Fuel Modification Limits
500' Visual Survey Area
Transect Location
Burrow Complex

N

0 250 500 1,000
Feet

1 inch = 500 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD 1983 2011
Map Prepared by: K. Kartunen, GLA
Date Prepared: August 6, 2024

GREEN RIVER RANCH INDUSTRIAL PROJECT

Burrowing Owl Survey Results Map

GLENN LUKOS ASSOCIATES

Exhibit 8

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FLORAL COMPENDIUM

The floral compendium lists all species identified during floristic level/focused plant surveys conducted for the Project site. Taxonomy typically follows the Angiosperm Phylogeny Group (APG), which in some cases differs from The Jepson Manual (2012). Common plant names are taken from Baldwin et al (2012), Munz (1974), and Roberts et al (2004) and Roberts (2008). An asterisk (*) denotes a non-native species.

SCIENTIFIC NAME	COMMON NAME
MAGNOLIOPHYTA	**FLOWERING PLANTS**
MONOCOTYLEDONS	**MONOCOTS**
AGAVACEAE	**Agave Family**
Hesperoyucca whipplei	Chaparral yucca
ARECACEAE	**Palm Family**
* *Phoenix canariensis*	Canary Island date palm
POACEAE	**Grass Family**
* *Avena barbata*	slender wild oat
* *Avena fatua*	common wild oat
* *Avena sativa*	cultivated oat
* *Bromus hordeaceus*	soft chess
* *Bromus madritensis* subsp. *rubens*	foxtail chess
* *Cynodon dactylon*	Bermuda grass
Elymus condensatus	giant wildrye
Festuca perennis	*Italian* rye grass
Hordeum murinum	foxtail barley
Lamarckia aurea	goldentop
Pennisetum setaceum	fountaingrass
Schismus barbatus	common mediterranean grass
EUDICOTYLEDONS	**EUDICOTS**
ADOXACEAE	**Elderberry Family**
Sambucus nigra subsp. *caerulea*	Mexican elderberry
AIZOACEAE	**Carpet-Weed Family**
* *Mesembryanthemum nodiflorum*	small-flowered ice plant

AMARANTHACEAE		**Amaranth Family**
	Amaranthus blitoides	prostrate pigweed
ANACARDIACEAE		**Sumac Family**
	Malosma laurina	laurel sumac
	Rhus integrifolia	lemonade berry
*	*Schinus molle*	Peruvian pepper tree
APIACEAE		**Carrot Family**
*	*Conium maculatum*	poison hemlock
*	*Foeniculum vulgare*	sweet fennel
	Sanicula arguta	sharp-toothed sanicle
	Sanicula bipinnatifida	purple sanicle
	Tauschia arguta	southern tauschia
ASTERACEAE		**Sunflower Family**
*	*Anthemis cotula*	dog mayweed
	Artemisia californica	California sagebrush
	Artemisia dracunculus	tarragon
	Baccharis pilularis	coyote bush
	Baccharis salicifolia	mulefat
*	*Carduus pycnocephalus*	Italian thistle
*	*Centaurea melitensis*	tocalote
	Corethrogyne filaginifolia	common sand aster
*	*Cotula australis*	Australian brass-buttons
	Deinandra fasciculata	fascicled tarweed
	Encelia californica	California encelia
	Ericameria pinifolia	pine-bush
	Erigeron canadensis	Canada horseweed
	Hazardia squarrosa	saw-toothed goldenbush
*	*Helminthotheca echioides*	bristly ox-tongue
	Heterotheca grandiflora	telegraph weed
*	*Hypochaeris glabra*	smooth cat’s-ear
	Isocoma menziesii var. *menziesii*	Menzies’ goldenbush
	Lasthenia glabrata ssp. coulteri	Coulter's goldfields
	Layia platyglossa	tidy tips
	Malacothrix saxatilis var. tenuifolia	short leaved cliff aster
	Matricaria discoidea	pineapple weed
	Oncosiphon piluliferum	stinknet
	Pseudognaphalium beneolens	cudweed
	Pseudognaphalium canescens	Wright's cudweed
	Pseudognaphalium microcephalum	Wright's cudweed
	Senecio vulgaris	common groundsel
	Sonchus oleraceus	sow thistle
	Stephanomeria virgata	twiggy wreath plant
	Verbesina encelioides	golden crownbeard

BORAGINACEAE		**Borage Family**
	Amsinckia intermedia	common fiddleneck
	Cryptantha intermedia	common cryptanth
	Eucrypta chrysanthemifolia	spotted eucrypta
	Phacelia distans	common phacelia
	Phacelia minor	wild canterbury bells
	Plagiobothrys nothofulvus	rusty haired popcorn flower
BRASSICACEAE		**Mustard Family**
*	*Brassica nigra*	black mustard
*	*Capsella bursa-pastoris*	shepherd's purse
*	*Hirschfeldia incana*	summer mustard
	Lepidium nitidum	shining pepper grass
*	*Raphanus sativus*	wild radish
	Sisymbrium irio	London rocket
CARYOPHYLLACEAE		**Pink Family**
	Silene laciniata subsp. *major*	Mexican pink
	Silene gallica	common catchfly
	Spergularia bocconi	Boccone's sand spurry
	Stellaria media	chickweed
CHENOPODIACEAE		**Goosefoot Family**
	Chenopodium album	lambs quarters
	Chenopodium californicum	California goosefoot
	Salsola tragus	Russian thistle
CONVOLVULACEAE		**Morning-Glory Family**
	Calystegia macrostegia	morning-glory
CUCURBITACEAE		**Gourd Family**
	Marah macrocarpus	wild cucumber
EUPHORBIACEAE		**Spurge Family**
	Euphorbia albomarginata	rattlesnake spurge
*	*Ricinis communis*	castor bean
FABACEAE		**Legume Family**
	Acmispon glaber	deerweed
	Lupinus bicolor	lupine
	Lupinus excubitus	Grape lupine
	Medicago polymorpha	California burclover
	Trifolium willdenovii	tomcat clover

FAGACEAE		**Beech Family**
	Quercus agrifolia var. *agrifolia*	coast live oak
	Quercus berberidifolia	California scrub oak
GERANIACEAE		**Geranium Family**
*	*Erodium botrys*	long-beaked filaree
*	*Erodium cicutarium*	red-stemmed filaree
HIPPOCASTANACEAE		**Buckeye Family**
	Aesculus californica	California buckeye
LAMIACEAE		**Mint Family**
*	*Lamium amplexicaule*	common henbit
*	*Marrubium vulgare*	horehound
	Salvia apiana	white sage
	Salvia mellifera	black sage
MALVACEAE		**Mallow Family**
	Malacothamnus fasciculatus	chaparral bush mallow
*	*Malva parviflora*	cheeseweed
MYRSINACEAE		**Myrsine Family**
*	*Lysimachia arvensis*	scarlet pimpernel
NYCTAGINACEAE		**Four O'Clock Family**
	Mirabilis laevis	California wishbone bush
PAPAVERACEAE		**Poppy Family**
	Romneya coulteri	Coulter's matilija poppy
PHRYMACEAE		**Monkeyflower Family**
	Diplacus aurantiacus	sticky monkeyflower
PLANTAGINACEAE		**Plantain Family**
	Antirrhinum nuttallianum	Nuttall's snapdragon
	Keckiella antirrhinoides	yellow bush-penstemon
	Plantago erecta	California plantain
POLEMONIACEAE		**Phlox Family**
	Gilia achilleifolia	California gilia
POLYGONACEAE		**Buckwheat Family**
	Eriogonum fasciculatum	California buckwheat
	Eriogonum gracile	slender eriogonum
	Rumex hymenosepalus	wild rhubarb

RHAMNACEAE		**Buckthorn Family**
	Ceanothus megacarpus var. *megacarpus*	bigpod lilac
ROSACEAE		**Rose Family**
	Adenostoma fasciculatum	chamise
	Heteromeles arbutifolia	toyon
RUBIACEAE		**Madder Family**
	Galium angustifolium	narrow-leaved bedstraw
	Galium aparine	common bedstraw
SOLANACEAE		**Nightshade Family**
*	*Nicotiana glauca*	tree tobacco
	Solanum douglasii	Douglas' nightshade
	Solanum xanti	chaparral nightshade
TAMARICACEAE		**Tamarisk Family**
*	*Tamarix ramosissima*	Mediterranean tamarisk
URTICACEAE		**Nettle Family**
*	*Urtica urens*	dwarf nettle
VIOLACEAE		**Violet Family**
	Viola pedunculata	johnny jump-ups