ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

March 21, 2022

Mr. Phil Krause
County of San Bernardino
Department of Public Works, Special Districts
222 W. Hospitality Lane
San Bernardino, California 92415
Via email: phil.krause@sdd.sbcounty.gov

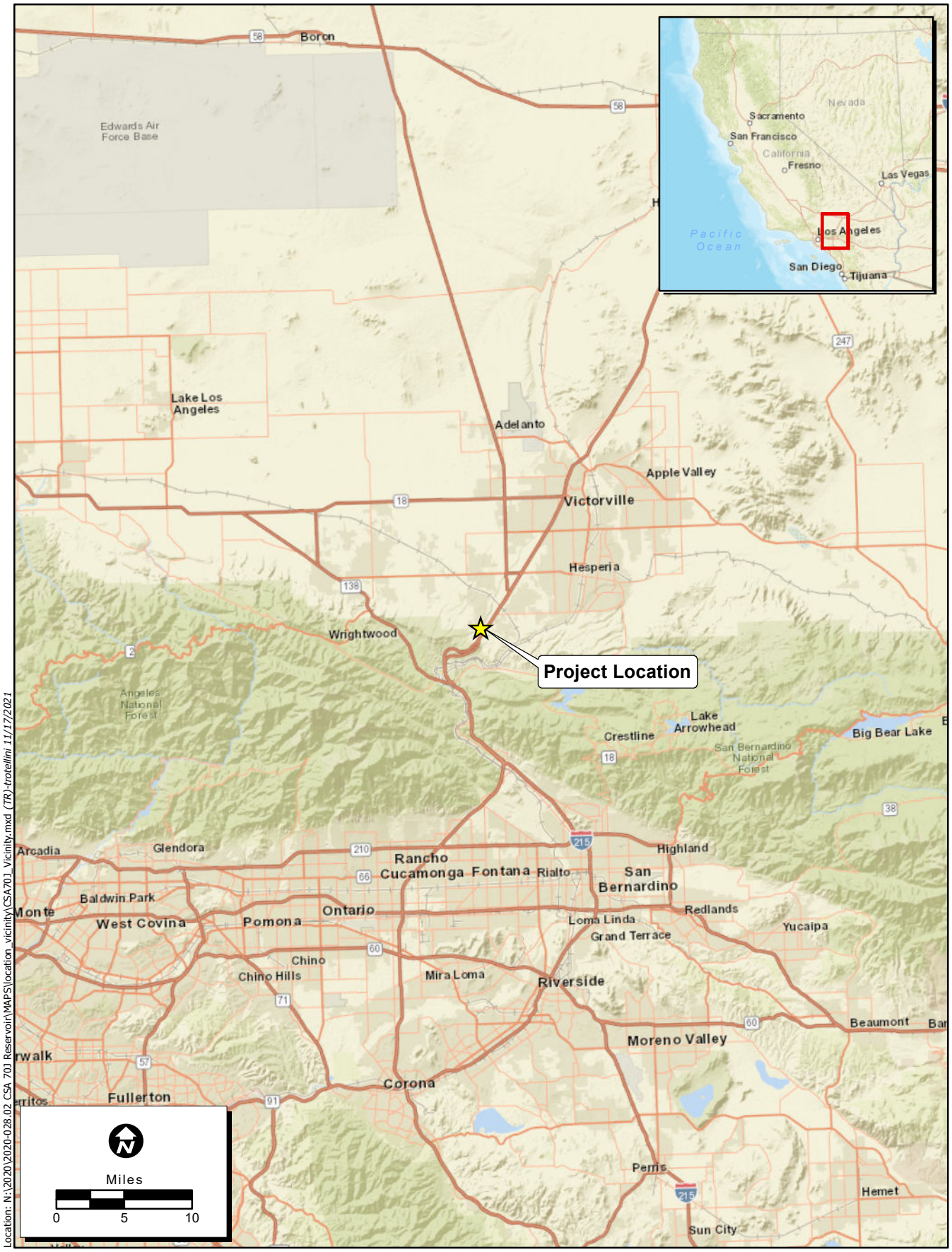
RE: UPDATED Biological Resources Assessment in Support of the CSA 70J Reservoir 3A 2-Million-Gallon Water Tank Expansion Project in Unincorporated San Bernardino County, California

Dear Mr. Krause:

This letter report provides the results of an updated biological reconnaissance survey of the CSA 70J Reservoir 3A 2-million-gallon (MG) Water Tank Expansion Project (Project) located in the unincorporated Oak Hills area of San Bernardino County, California. The current survey was conducted by ECORP Consulting, Inc. (ECORP) as an update to a previous biological reconnaissance survey conducted in August 2018 by Dudek, as requested by the San Bernardino County (County) Special Districts Department. In general, the conditions of the site observed during the 2021 survey were consistent with what was reported in the Dudek 2018 report. This letter report is a supplement to the 2018 biological resources letter report prepared by Dudek, which is included as Attachment A for reference. The property that which this proposed Project is located consists of approximately 1.62 acres of undeveloped land off an unnamed dirt road (property) in the unincorporated Oak Hills area San Bernardino County, California. The property was surveyed to identify any biological resources that could be affected by the proposed Project, pursuant to the terms of the California Environmental Quality Act (CEQA) and for the purposes of identifying any biological constraints that would affect the site plan for the Project. The Project will be subject to county, state, and federal regulations regarding compliance with the federal Endangered Species Act (ESA), California ESA, Migratory Bird Treaty Act (MBTA; USFWS 1918), and California Fish and Game Code.

PROJECT LOCATION AND DESCRIPTION

The property consists of approximately 1.62 acres of vacant land within a rural residential community west of Oak Hill Road, east of Columbine Road, and south of Jenny Street in unincorporated land adjacent to the Hesperia city limits in San Bernardino County (Figure 1). The property is bounded by residential development to the north, open land to the east, an existing San Bernardino County water tank facility and residential development to the south, and residential development to the west. Surrounding land use consists mainly of residential. The property, as depicted on the U.S. Geological Survey Cajon 7.5-minute topographic quadrangle, lies within Section 6 of Township 3 North, Range 5 West, San Bernardino Baseline and Meridian (Figure 2). Elevation on the property ranges from approximately 4,020 feet to 4,060



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Map Date: 11/17/2021

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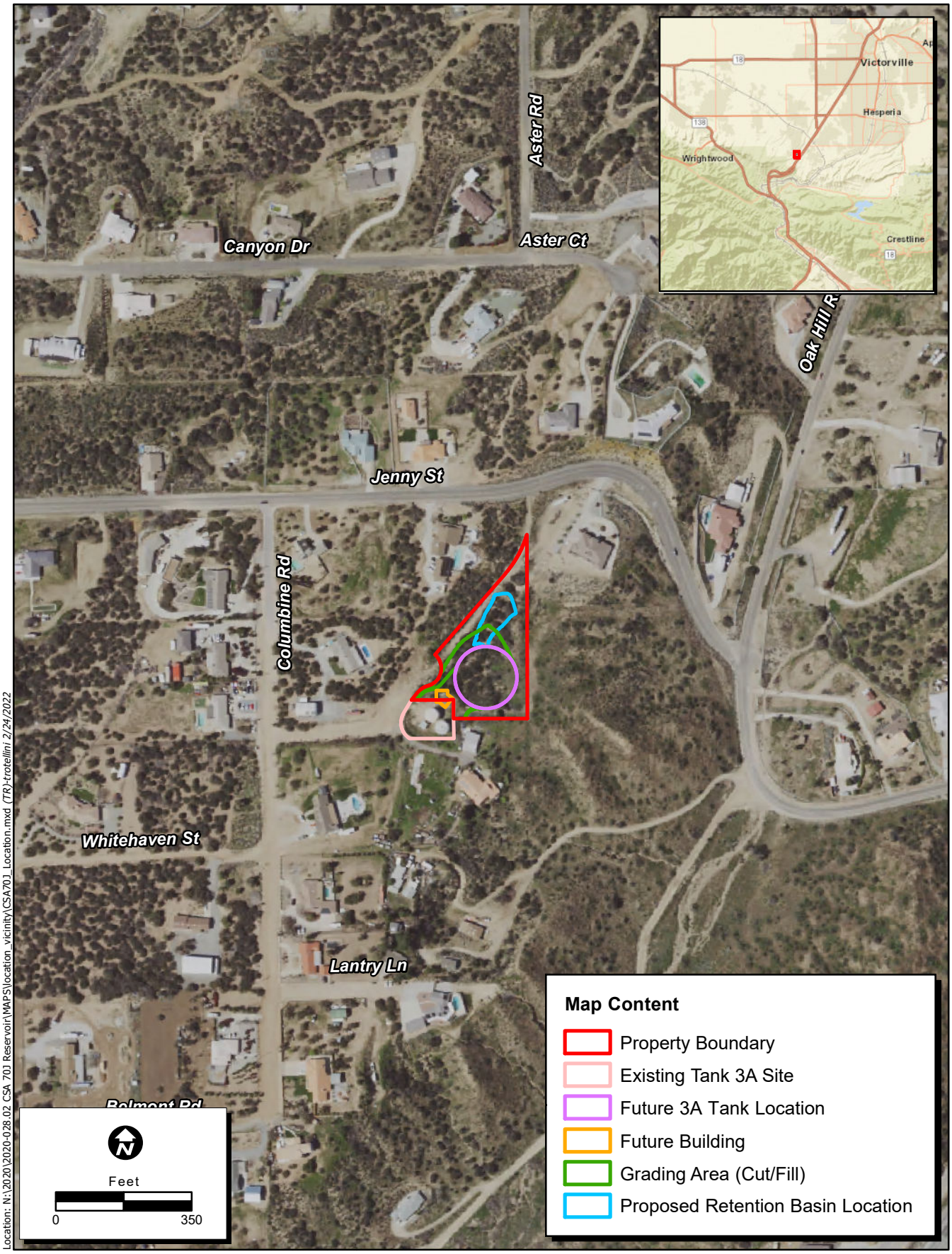
Figure 1. Project Vicinity

2020-028.02 CSA 70J Reservoir



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Map Date: 2/24/2022

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Figure 2. Project Location

2020-028.02 CSA 70J Reservoir

feet above mean sea level. As stated in the Dudek report, a topographic low point is present in the middle of the property with the property sloping downward to the west along the eastern boundary and downward to the east along the western boundary.

The proposed Project consists of the construction of a 2-million-gallon water tank, new 16-foot access roads, a retaining wall, a future building, and a stormwater/overflow retention basin. The footprint of these Project features are hereafter collectively referred to as the "Project impact area". The proposed Project impact area is shown on Figure 2.

METHODS

Prior to conducting the survey, the biological report previously prepared by Dudek for this property was reviewed (Attachment A). Additionally, an updated literature review and database search was performed using California Department of Fish and Wildlife's (CDFW's) California Natural Diversity Database (CNDDB; CDFW 2021) and the California Native Plant Society (CNPS) Electronic Inventory (CNPS 2021a) before the survey to determine if any new special-status plant or wildlife species had been recorded on the property or surrounding area since the previous survey conducted by Dudek.

Following the literature review, a biological reconnaissance survey was conducted by walking throughout the property to document and verify the vegetation communities and wildlife habitats on the property with those documented in the Dudek report. Inaccessible areas were surveyed using binoculars. The biologists documented the plant and wildlife species present on and adjacent to the property, and the location and condition of the property was assessed for the potential to provide habitat for special-status plant and wildlife species. Data were recorded on a Global Positioning System (GPS) unit, field notebooks, and/or maps. Photographs were taken during the survey to provide a visual representation of the various vegetation communities on the property. The property was also examined to assess its potential to facilitate wildlife movement or function as a movement corridor for wildlife moving through the region.

In instances where a special-status species was observed, the date, species, location and habitat, and GPS coordinates were recorded. The locations of special-status species observations were recorded using a handheld GPS unit in North American Datum (NAD 83).

RESULTS

The updated CNDDB and CNPS Electronic Inventory searches were conducted on November 4, 2021. The database searches identified 46 special-status plant species and 39 special-status wildlife species that could occur on and/or near the property (Attachments B and C). A list of special-status species with potential to occur was generated from the results of the literature review and the property was evaluated for suitable habitat that could support any of the special-status plant or wildlife species on the list. These findings were compared against the Dudek report prior to conducting the field survey.

ECORP biologists Chelsie Brown and Alexandra Dorough conducted the survey on November 10, 2021. A second site visit was performed on February 11, 2022, by Chelsie Brown to collect submeter coordinates for the Joshua trees (*Yucca brevifolia*) identified during the first survey. Survey times and weather conditions are provided in Table 1.

Table 1. Weather Conditions During Field Survey									
Date	**Surveyors**	**Time**		**Temperature (°F)**		**Cloud Cover (%)**		**Wind Speed (mph)**	
		Start	**End**	**Start**	**End**	**Start**	**End**	**Start**	**End**
11/10/2020	Chelsie Brown & Alexandra Dorough	0900	1100	57	66	0	0	2-5	2-7
2/11/2022	Chelsie Brown	0955	1205	66	68	0	0	3-5	3-5

The results of the updated biological reconnaissance survey were generally consistent with results of the 2018 survey performed by Dudek. The property remains mostly undisturbed except for a few disturbances that include minor amounts of trash, an area of unauthorized trash dumping, and remnants of old asphalt on what appears to be an access road along the western boundary. There is evidence of a previous fire on the eastern portion of the property and surrounding area to the east. Heavy equipment tracks are present along the southern and eastern boundaries and are not associated with an established roadway; however, the tracks could have been associated with an emergency access route when the area burned previously. Although fire is a naturally occurring phenomenon in chaparral vegetation communities, it is considered a disturbance to wildlife because it limits foraging, degrades the quality of burrows, and limits shrub cover that wildlife use for protection sites. The boundary at the southwest corner of the property is made up of a fence line for an existing water tank facility. A water pipe was observed originating from the northeast corner of the adjacent water tank facility and crosses onto the southwest corner of the property. The previous fire and the water pipe are the only two of these disturbances included in the 2018 Dudek report.

The vegetation communities present on and adjacent to the property are consistent with the 2018 Dudek biological report. Tucker oak-chaparral shrubland alliance-chamise association was observed as the primary vegetation community on the property with a small portion of the property's eastern edge consisting of disturbed Tucker oak chaparral-chamise (Figure 3 in the Dudek report, Attachment A). The areas surrounding the property consist of chamise chaparral alliance and land cover types include developed and disturbed land. These findings are consistent with the 2018 Dudek report.

Twenty-one plant species were observed during the 2021 biological survey, many of which were also seen during the 2018 Dudek survey including deerweed (*Acmispon glaber*), chamise (*Adenostoma fasciculatum*), annual bursage (*Ambrosia acanthicarpa),* and Tucker oak (*Quercus john-tuckeri*). Attachment D includes a complete list of plant species observed during the biological survey.

Similar to the 2018 Dudek survey, the wildlife observed during the 2021 biological survey are typical of the habitat observed on the property. Wildlife species observed during the 2021 biological survey include grasshopper (*Acrididae* sp.), common raven (*Corvus corax),* California scrub-jay (*Aphelocoma californica*), white-crowned sparrow (*Zonotrichia leucophrys*), coyote (*Canis latrans*), and domestic dog (*Canis lupus familiaris*).

The 2018 Dudek report identified two drainages on the property. These two drainages were also identified on the property during the 2021 survey. Two additional drainages not discussed in the Dudek report were observed within the property boundaries during the 2021 survey.

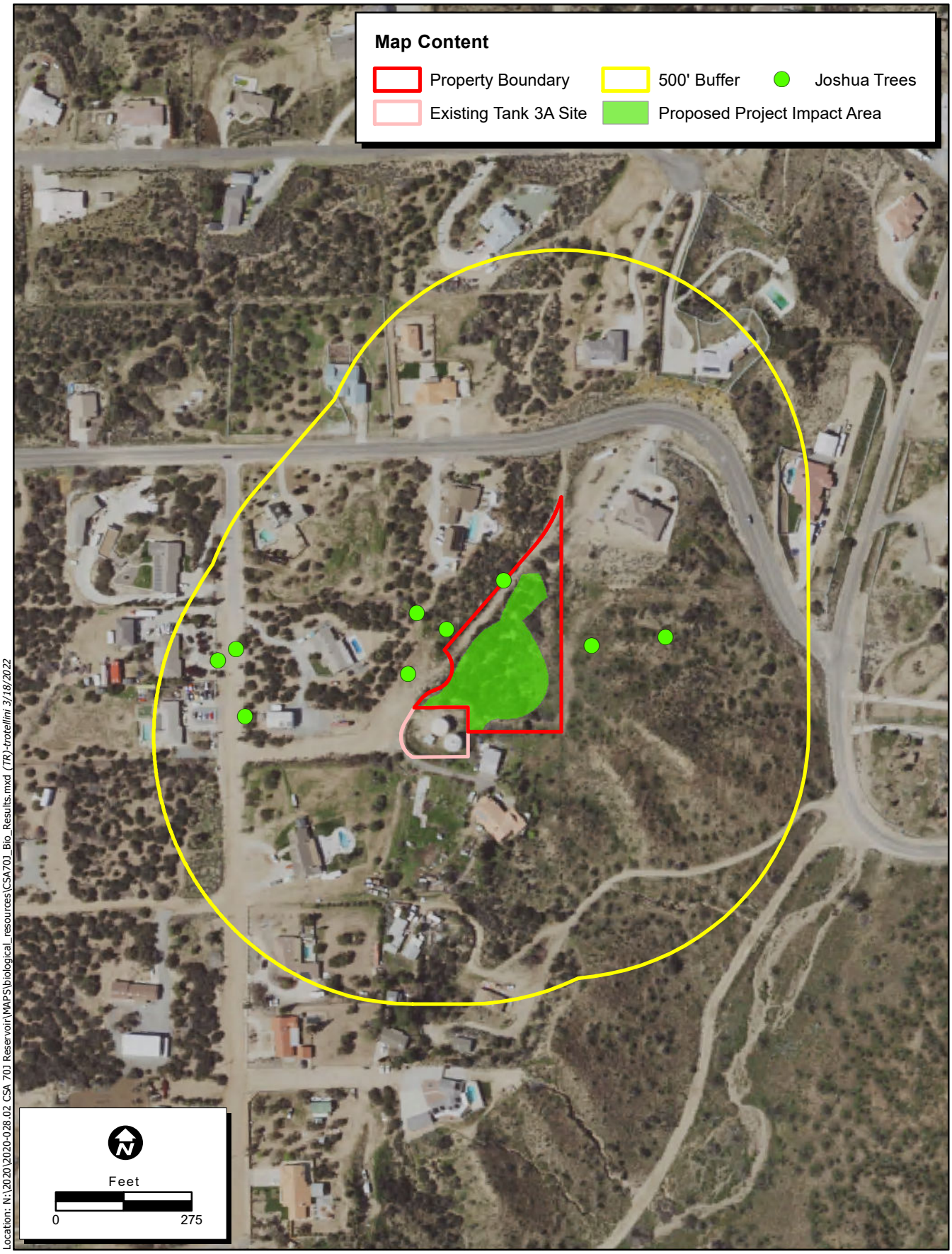
One special-status plant species was observed during the biological survey, western Joshua tree. Three Joshua tree sprouts are present in one location along the western property boundary but outside of the proposed Project impact area. One dead and several live Joshua trees are present in the surrounding areas outside of the property (Figure 3). It should be noted that a formal Joshua tree inventory was not conducted and there is potential for other small emerging individuals to be present that were not identified during the 2021 survey or 2022 site visit. Photographs of the Joshua tree sprouts present along the property boundary are included in Attachment D. Although Dudek did not observe any special-status species during their 2018 survey, the western Joshua tree had not yet been listed as a candidate for listing under the California ESA at the time the Dudek report was prepared; the candidate listing status for Joshua tree was made official in late 2020.

The property contains marginally suitable burrowing owl (*Athene cunicularia*) habitat. Although loose, friable soils suitable for burrowing are present on the property, the vegetation present within the proposed Project impact area is fairly dense, which reduces the suitability of the habitat for burrowing owl. Some openings in the dense vegetation could be suitable for the species, as documented in the Dudek report, and some small mammal burrows are present on the property; however, none were of appropriate size and shape for burrowing owl use at the time of the 2021 survey. Two concrete aggregate piles are present on the western portion of the property; however, their location was on slopes too steep to provide quality burrowing owl habitat and these piles likely do not provide suitable burrow habitat. The vegetative cover on the property could be used by migratory individuals as temporary shelter or refuge from predators or poor weather; however, it is likely that migrating burrowing owls would be attracted to nearby areas that contain less dense vegetation with more suitable burrow structures present, such as the nearby lower elevation areas. Overall, it appears that the suitability and quality of burrowing owl habitat on the property has reduced since the 2018 Dudek report was prepared.

The 2018 report prepared by Dudek identified several burrows that provided marginally suitable burrow habitat for desert tortoise (*Gopherus agassizii*). During the 2021 biological survey, no burrows were observed on or immediately adjacent to the property that were suitable for desert tortoise use. Although several cactuses are present on the property and within the proposed impact area, as documented during the 2021 survey, the property generally lacks sufficient available foraging habitat for desert tortoise due to the lack of annual vegetation growth, including evidence of annual vegetation growth leftover from the previous spring and summer. Although one historic record of the species was observed approximately 2 miles northeast of the property in 2000 (Occurrence # 66; CDFW 2021), the property lacks suitable Mojave desert scrub or creosote bush habitat that which the desert tortoise is typically associated. The habitat present on the property was found to no longer provide suitable desert tortoise habitat during the 2021 survey.

Although the property is undeveloped, it is surrounded by residential development and paved roads and also is isolated from large, contiguous blocks of native habitat. Interstate 15 is less than 1 mile southeast from the property and provides a general barrier to wildlife movement. The property is not considered a linkage or corridor between conserved natural habitat areas.

Representative site photos from the biological survey are provided in Attachment E.



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Map Date: 2/24/2022

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Figure 3. Biological Resources Survey Results

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DISCUSSION

The 2021 survey results were generally consistent with the findings presented in the 2018 Dudek report. One special-status plant species, western Joshua tree, was observed along the western property boundary outside the proposed Project impact area during the 2021 biological survey. Western Joshua tree was not identified as a special-status species in the 2018 Dudek report because the species had not yet been officially listed as a candidate for listing under the California ESA. Additionally, a total of four drainage features were recorded during the 2021 survey, two of which were previously recorded in the 2018 Dudek report.

The property consists mainly of undisturbed vacant land and the vegetation communities present consist primarily of Tucker oak-chaparral shrubland alliance-chamise association vegetation community with a small portion of the property containing disturbed Tucker oak chaparral-chamise. Minor amounts of trash were found scattered throughout the property. These findings are consistent with those reported in the 2018 Dudek report.

The literature review and database searches identified 46 special-status plant species that occur near the property. Based on the results of the 2018 Dudek report and 2021 survey, most of the special-status species are presumed absent from the property due to the lack of suitable habitat and disturbances present on the property, including those from the residential development surrounding the property. As previously mentioned, one special-status plant species, western Joshua tree, was present during the biological survey. Three Joshua tree sprouts were observed growing along the property's western boundary in one location; however, this location is outside of the proposed Project impact area. Numerous additional Joshua trees were present in the areas adjacent to the property, well outside the proposed Project impact area. As a state candidate for listing, the Joshua tree is afforded all of the protections under the California ESA that a fully listed species would receive. If the Project will result in impacts to any Joshua tree, living or dead, then an Incidental Take Permit (ITP) will need to be acquired. There is currently a lack of formal guidance from the California Department of Fish and Wildlife (CDFW) pertaining to the required survey methods, protection, and mitigation requirements for Joshua tree. It is recommended that Joshua trees and potential impacts to seed bank be avoided with a non-disturbance buffer extended around the canopy of any Joshua trees present adjacent to the proposed Project impact area to ensure no impacts occur. It is recommended that the size of the non-disturbance buffer be determined be an arborist or qualified biologist experienced with Joshua trees; however, depending on the listing status of the Joshua tree by the time the Project is constructed, coordination with CDFW may also need to occur to determine an appropriate non-disturbance buffer size. If unavoidable Project-related impacts to Joshua tree will occur from the Project, an ITP from CDFW under Section 2081 of the California ESA would be recommended if Joshua tree remains a candidate or a fully listed species. Additionally, it may become necessary to adjust or remove non-disturbance buffers around Joshua trees adjacent to the proposed impact area if the species' listing status changes prior to the initiation of Project construction activities.

Dudek determined that two special-status plant species have a potential to occur on the property, short-joint beavertail (*Opuntia basilaris* var. *brachyclada*; CNPS California Rare Plant Rank (CRPR) 1B.2) and

Palmer's mariposa lily (*Calochortus palmeri* var. *palmeri*; CNPS CRPR 1B.2). The results of the 2021 survey conducted on the property resulted in the same determination. Short-joint beavertail has potential to occur on the property due to the recent records within 5 miles of the property, suitable sandy loam and gravelly loam soils, and suitable chaparral habitat present on the property. There are 34 records of short-joint beavertail documented within 5 miles of the property with the closest one recorded in 2017 and located approximately 1 mile south of the property (Occurrence #64; CDFW 2021). Two new records of short-joint beavertail have been recorded within 5 miles of the property since the 2018 Dudek report: both were recorded in 2019 and located approximately 4 miles south of the property (Occurrence # 73 and 77; CDFW 2021). Beavertail cactus (*Opuntia basilaris*) was identified within the proposed impact area during the 2021 biological survey and Dudek also observed *Opuntia* species during their 2018 biological survey. Similar to Dudek's finding, the variety of beavertail cactus could not be properly identified in the field during the survey because none of the cactuses were in bloom during the 2018, 2021, or 2022 surveys. Palmer's mariposa lily can occur in chaparral habitat and commonly occurs in mesic soils, often in meadows and vernally moist places. The property does not contain mesic soils or vernally moist habitat but does contain chaparral habitat. Two records from 2017 of Palmer's mariposa lily have been documented less than 4 miles south of the property (Occurrence # 50 and 108; CDFW 2021). This species was not observed during the 2021 survey and Dudek also did not observe Palmer's mariposa lily during their 2018 biological survey; however, both surveys were conducted outside the typical blooming period for the species. If present, direct impacts to the short-joint beavertail and the Palmer's mariposa lily could occur in the form of mortality by vegetation removal and ground-disturbing activities. Indirect impacts to these species could occur in the form of increased dust and habitat degradation, which could limit reproduction and seed dispersal. Due to the species' CRPR listing status of 1B.2 (plants rare, threatened, or endangered in California and elsewhere; moderately threatened in California), impacts to these species may be considered significant under CEQA. In order to reduce the impacts to special-status plant species resulting from Project activities to a less than significant level, implementation of Mitigation Measures BIO-1 and BIO-2 is recommended.

All species of the family *Agavaceae* are considered regulated desert native plants under the San Bernardino County Development Code – Plant Protection and Management (Chapter 88.01; San Bernardino County 2009). The code states that a Tree or Plant Removal Permit is required on public or private land to remove regulated desert native plants or any part of them except the fruit. Three species observed during the 2021 survey are considered members of the *Agavaceae* family: chaparral yucca (*Hesperoyucca whipplei*), Joshua tree, and Mojave yucca (*Yucca schidigera*). Note that protection of the western Joshua tree under its candidate for state listing status takes precedence over this County ordinance; however, if Joshua tree does not become formally listed under the California ESA, the protections required by the County ordinance would still be in effect for Joshua tree. Although neither of these species were included in Dudek's plant species observed list, several live chaparral yucca and Mojave yucca were observed during the 2021 survey in the surrounding areas outside of the proposed Project impact area. However, a focused plant survey was not conducted during this survey and there is potential for other small emerging individuals to be present that were not identified during the survey. Although chaparral yucca and Mojave yucca do not have a CNPS designation or listing status, if the Project will result in the removal of either of these two species, approval must be obtained from the

County via a Tree or Plant Removal Permit prior to the start of ground-disturbing activities. During the permit review process, the County may require certification from an appropriate arborist, registered professional forester, or a Desert Native Plant Expert that any proposed plant removal activities are appropriate, supportive of a healthy environment, and in compliance with Chapter 88.01 of the Development Code, which may require a health assessment of the affected plant(s). There should be a detailed plan that includes protecting, preserving, or relocating the plants that may be affected by the Proposed Project. If members of the *Agavaceae* family, protected under San Bernardino County Development Code – Plant Protection and Management (Chapter 88.01), are present within the proposed impact area, direct impacts to these species may occur in the form of vegetation removal. In order to determine whether a Tree or Plant Removal Permit may be required, it is recommended that a plant survey be performed. Implementation of Mitigation Measure BIO-1 will reduce the impacts to a less than significant level.

As described in the Dudek report, a Tree or Plant Removal Permit may also be required per the Development Code for the removal of oak woodlands if they have a significant effect on the environment and are composed of oak trees greater or equal to 5 inches in diameter at breast height (DBH) above natural grade. Tucker oak, which is the species present on the property, typically grows as a shrub, reaching between approximately 7 and 17 feet in height, but sometimes becomes treelike, exceeding 20 feet in height (CNPS 2021b). A focused plant survey was not conducted as part of the 2021 survey; however, the Tucker oaks observed during the 2021 survey were representative of typical Tucker oaks, ranging from approximately 7 feet to 17 feet in height and both growing as a shrub and treelike. ECORP's findings were consistent with those of Dudek and a Tree or Plant Removal Permit may be required. In order to determine whether a Tree or Plant Removal Permit will be required, a preconstruction plant survey is recommended to determine the DBH of the Tucker oaks within the property boundaries so that a decision on obtaining a Tree or Plant Removal Permit may be made. Implementation of Mitigation Measure BIO-1 will reduce impacts to a less than significant level.

The updated literature review and database searches conducted in 2021 identified 39 special-status wildlife species that occur near the property; however, with the San Gabriel Mountains to the south and the San Bernardino Mountains to the east, many of the species that appeared in the literature review are presumed absent because they only occur in forest or montane habitats and at higher elevations. Three special-status wildlife species were found to have a potential to occur on the property: coast horned lizard (previously called Blainville's horned lizard; *Phrynosoma blainvillii*), CDFW Species of Special Concern (SSC); burrowing owl, CDFW SSC; and loggerhead shrike (*Lanius ludovicianus*), CDFW SSC. The Dudek report identified four special-status wildlife species that have potential to occur on the property: Mojave desert tortoise, federally and state-listed threatened; coast horned lizard; loggerhead shrike; and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), CDFW SSC. Mojave desert tortoise is presumed absent based on the results of the 2021 survey due to the lack of suitable vegetative cover on the property, the absence of suitable burrows or desert tortoise sign on the property, and because the property is surrounded by rural residential development and associated disturbances. San Diego black-tailed jackrabbit was determined to not have a potential to occur based on the results of the 2021 survey because the property is located outside of the species' current known geographic range, which is limited to the coastal areas of southern California.

Coast horned lizard has potential to occur on the property based on suitable chaparral habitat present in the Tucker-oak chamise communities, available shrubs to provide cover, the property being within the range of the species, and the presence of loose soils to facilitate burial behavior exhibited by the horned lizard. Loggerhead shrike has potential to occur because the property is within the range of the species and suitable chaparral habitat with the presence of fairly dense and large shrubs on the property for nesting. The property provides only marginally suitable habitat for migratory burrowing owls; the dense vegetation present throughout most of the property reduces the overall suitability of the habitat for the species but may be used as cover or refuge for migratory individuals. Small mammal burrows were observed on the property during the 2021 biological survey; however, none were of suitable size and shape for burrowing owl. Although the property only provides marginal quality habitat for the burrowing owl, it is important to note that this species is mobile and can fly over or migrate through the property at any time and could be using the property prior to the start of Project construction activities. Impacts to the coast horned lizard, loggerhead shrike, and burrowing owl may occur in the form of injury or mortality during ground-disturbing or vegetation removal activities, and indirect impacts may occur in the form of increased human and vehicular activity, noise, dust, and degradation of habitat in adjacent areas. These impacts may be considered significant under CEQA. In order to reduce these impacts to a less-than-significant level, it is recommended that Mitigation Measures BIO-2, BIO-3, and BIO-4 be implemented.

The shrubs on and immediately adjacent to the property as well as the utility poles and trees adjacent to the property could provide nesting habitat for nesting birds and raptors protected by the MBTA and California Fish and Game Code, including special-status bird species with potential to occur on the property (i.e., burrowing owl and loggerhead shrike). If construction of the proposed Project occurs during the bird breeding season (typically February 1 through August 31), ground-disturbing construction activities could directly affect birds protected by the MBTA and their nests through the removal of vegetation on the property and indirectly through increased noise, vibrations, and increased human activity. The proposed mitigation measure in Dudek's report for a preconstruction nesting bird survey is sufficient to reduce these potential impacts to nesting birds to a less than significant level; this Mitigation Measure is included below as BIO-4. Implementation of Mitigation Measure Bio-2 will also reduce impacts to a less than significant level.

A formal aquatic resources delineation was performed by ECORP in February 2022 to determine the jurisdictional status of the four drainages that were observed within the property boundaries during the biological survey (two of these drainages were documented in the Dudek report). The results of the survey, including detailed figures showing the locations of these drainages, will be provided under a separate cover in the Aquatic Resources Delineation Report (ECORP 2022). If Project-related impacts will occur to areas under the jurisdiction of the CDFW, U.S. Army Corps of Engineers (USACE), and/or State Water Resources Control Board (SWRCB), regulatory permit(s) with the appropriate agencies will be required prior to the impact occurring. A detailed discussion of the jurisdiction of each of these resources as well as any necessary permits is included in the Aquatic Resources Delineation Report (ECORP 2022).

The following mitigation measures are recommended to reduce potential Project-related impacts to a level that is less than significant under CEQA:

BIO-1: **Preconstruction Plant Surveys:** Preconstruction surveys for special-status plants, including western Joshua tree, and plant species protected under the San Bernardino County Development Code – Plant Protection and Management (Chapter 88.01), including members of the *Agavaceae* family, shall be completed within the property boundaries prior to the start of ground-disturbing Project activities. One preconstruction survey shall be conducted during the blooming period for short-joint beavertail and Palmer's mariposa lily (April through June) prior to ground disturbance and vegetation removal activities by a qualified botanist or biologist specializing in special-status plant identification. The survey shall be performed according to the CNPS Botanical Survey Guidelines (CNPS 2001). If special-status plants are found within the proposed Project impact area and Project-related impacts to the individuals are unavoidable, then coordination with CDFW may need to occur to identify additional protection or mitigation measures. Additional protection or mitigation measures may include additional biological monitoring, transplanting, seed salvage, and non-disturbance buffers established around plant locations.

Another preconstruction plant survey shall be conducted between 60 days and eight months prior to the start of ground disturbing activities to inventory individuals of the Agavaceae family present on the property, including western Joshua tree, chaparral yucca, and Mojave yucca. The survey shall be performed by a botanist or qualified biologist with experience identifying and inventorying plants in the Agavaceae family. The locations of the yuccas, including Joshua tree, shall be recorded with a submeter GPS unit. During the survey, the biologist will also determine whether any of the Tucker oaks present within the proposed Project impact area have a DBH of 5 inches or greater above natural grade. If Joshua tree is found within the proposed Project impact area and unavoidable Project-related impacts to Joshua tree will occur, then an ITP from CDFW under Section 2081 of the California ESA will be required as long as Joshua tree remains a candidate or listed species under the California ESA. Additional measures to reduce Project-related impacts to Joshua trees will likely be included within the approved ITP and these may include additional biological monitoring, transplanting, acquisition of mitigation land, or payment to an in-lieu mitigation fee program. If any members of the Agavaceae family or Tucker oaks with a DBH of 5 or more inches are found within the proposed Project impact area, a San Bernardino County Tree or Plant Removal Permit will be required in accordance with Chapter 88.01 of the San Bernardino County Development Code. The requirements for the Tree or Plant Removal Permit are explained in detail in Chapter 88.01 of the Plant Protection and Management section of the San Bernardino County Development Code. During the Tree or Plant Removal Permit review process, the County may require certification from an appropriate arborist, registered professional forester, or a Desert Native Plant Expert; a detailed plan showing the protection, preservation or relocation of the plants affected by the Project; and a health assessment of the affected plant(s).

BIO-2 **Biological Monitoring:** A biologist experienced with identification of the sensitive and common biological resources in the region shall be present to monitor all initial ground disturbing and vegetation clearing activities regardless of the time of year such activities are scheduled to begin (biological monitor). The biological monitor shall perform biological clearance sweeps at the start of each workday that ground disturbing activities take place. The biological monitor shall be present on a full-time basis during the initial ground-disturbing and vegetation-clearing activities to ensure the activities do not affect sensitive biological resources and to move or redirect wildlife out of harm's way as necessary. The monitor will be responsible for communicating regularly with the Project Proponent and onsite contractor on non-compliance issues and ways to ensure that impacts to sensitive biological resources will be avoided to the fullest extent possible in accordance with the appropriate Project agreements and permits, as applicable. Biological monitoring shall take place until the proposed Project impact area has been completely cleared of any vegetation. The biological monitor shall keep a record of monitoring activities in a log that contains representative photographs of the work activities monitored and any sensitive biological resources incidentally encountered during Project activities.

BIO-3: **Preconstruction Burrowing Owl and Special-Status Wildlife Surveys:** Preconstruction surveys for burrowing owl and coast horned lizard (Blainville's horned lizard) shall be completed within the property boundaries prior to the start of initial ground-disturbing activities. The surveys shall be performed on the property and within a 500-foot buffer, where accessible, in accordance with the take avoidance survey methods identified in the California Department of Fish and Game (CDFG) *Staff Report on Burrowing Owl Mitigation* (CDFG 2012). The first survey shall be conducted between 14 and 30 days prior to the start of initial ground-disturbing activities and a second survey shall be conducted no more than 24 hours prior to the start of initial ground-disturbing activities (including vegetation removal). If survey results are negative for both species, Project activities may occur and no additional protection measures are required. If coast horned lizard is found to be present in the work area during the 24-hour preconstruction survey, biologists will redirect the individuals outside of the work area. If burrowing owl or occupied burrowing owl burrow(s) (e.g., whitewash, feathers, pellets, bones of prey items) is/are observed on or immediately adjacent to the proposed Project impact area, additional mitigation measures will need to be implemented to offset impacts to burrowing owl. These measures shall be developed in accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012) and may include additional biological monitoring, seasonal work restrictions, establishing a non-disturbance buffer around each burrow location, or passive relocation. Coordination with CDFW may need to occur to perform passive relocation of burrowing owls and/or to devise a specific mitigation methodology for the Project site if one is found to be necessary.

BIO-4: **Preconstruction Survey for Nesting Birds:** Wherever feasible, any ground-disturbing activities shall be conducted during the nonbreeding season for birds (approximately September 1 through January 31) in order to avoid violations of the MBTA and California Fish and Game Code §§ 3503, 3503.5 and 3513. If activities with the potential to disrupt

nesting birds, including special-status bird species (e.g., burrowing owl and loggerhead shrike), are scheduled to occur during the bird breeding season (February 1 through August 31), a preconstruction nesting bird survey shall be conducted by a qualified biologist who is experienced in the identification of avian species and conducting nesting bird surveys no more than 3 days prior to the start of construction activities. The nesting bird survey shall include the proposed Project impact area and adjacent areas where Project activities have the potential to cause nest failure. If no nesting birds are observed during the survey, site preparation and construction activities may begin. If nesting birds (including nesting raptors) are found to be present, avoidance or minimization measures shall be proposed by the Project biologist and implemented to avoid potential Project-related impacts to active nests. Measures may include additional biological monitoring, seasonal work restrictions, or establishment of a non-disturbance buffer until nesting has been completed as determined through periodic nest monitoring by the biologist. The size of the non-disturbance buffer will be determined by the Project biologist. Typically, this is 300 feet from the nest site in all directions (500 feet is typically recommended by CDFW for raptors) until the juveniles have fledged and there has been no evidence of a second attempt at nesting, as determined by the Project biologist.

The following recommendations are not mitigation measures pursuant to CEQA but are recommended to further reduce impacts to sensitive biological resources:

- Confine all Project work activities to a predetermined work area.
- To prevent inadvertent entrapment of wildlife during the construction phase of the Project, all excavated, steep-walled holes or trenches more than 2 feet deep should be covered with plywood or similar materials at the close of each work day. If the trenches cannot be closed, one or more escape ramps constructed of earthen fill or wooden planks shall be installed. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals. Similarly, wildlife are often attracted to burrow- or den-like structures, such as pipes, and may enter pipes or conduit stored on the Project site and become trapped or injured. To prevent wildlife use of these structures, all construction pipes, culverts, or similar structures with a diameter of 4 inches or greater should be capped while being stored on the site.
- All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed, wildlife-proof containers and removed at least once a week from the Project site

If you have any questions regarding the content of this letter report, please contact me at (909) 307-0046. *I hereby certify that the statements furnished above present the data and information required for this biological survey results report, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.*

SIGNED: Chelsie Brown March 21, 2022

Chelsie Brown
Associate Biologist/Assistant Project Manager
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Date

Attachments

Attachment A: 2018 Biological Resources Letter Report for the Reservoir 3A and 2MG Tank Expansion Project, San Bernardino County, California

Attachment B: CNPS Search Results

Attachment C: CNDDB Summary Table

Attachment D: Plant Species Observed

Attachment E: Representative Site Photos

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ATTACHMENT A

2018 Biological Resources Letter Report for the Reservoir 3A and 2MG Tank Expansion Project, San Bernardino County, California

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November 5, 2018 8394-12

Erin Opliger, District Services Coordinator
San Bernardino County Special Districts
157 W. 5th Street, 2nd Floor
San Bernardino, California 92415

Subject: Biological Resources Letter Report for the Reservoir 3A and 2MG Tank Expansion Project, San Bernardino County, California

Dear Ms. Opliger:

This biological resources letter report describes the existing biological conditions of the proposed Reservoir 3A and 2MG Tank Expansion Project (project). The proposed project and potential impacts to special-status biological resources are analyzed in the context of the California Environmental Quality Act (CEQA).

This biological resources letter report is intended to describe the existing conditions of special-status biological resources on the project site and within a 100-foot buffer where access was granted (study area); quantify impacts to special-status biological resources that would result from implementation of the project and describe those impacts in terms of biological significance under CEQA; and recommend avoidance, minimization, and mitigation measures to avoid and reduce impacts to special-status biological resources, if necessary.

Project Description and Location

The proposed project consists of the grading, installation, and operation of a 2 million gallon (MG) water tank (120 feet in diameter) within a 1.62 acre parcel. The tank would be located adjacent to an existing County tank yard and parking area containing two water tanks (35 feet in diameter) and a booster station. In order to construct the new tank pad, the project site will be over excavated to a depth of approximately 3 feet below ground surface (bgs) to avoid settlement. The pad will then be constructed using fill material to a maximum depth of approximately 20 feet. The grading on the project site is expected to include 10,500 cubic yards of over excavation, 140 cubic yards of cut and 9,200 cubic yards of fill. Construction of the proposed project is anticipated to commence in June 2019 and would last approximately 6 months, ending in December 2019. Construction equipment and parking for construction workers would be staged in the existing County parking lot located adjacent to the tank site. No nighttime lighting of the site would be required because all construction activities would occur during the day.

The 1.62-acre project site is located south of Robin Hills Road and approximately 600 feet southeast of the intersection between Jenny Street and Columbine Road within a community in unincorporated San Bernardino County, just west of the City of Hesperia (Figure 1, Project Location; figures are provided in Attachment A). The project site occurs within the U.S. Geological Survey 7.5-minute Cajon quadrangle map, with the approximate center of the property at longitude 117°26'02.10" W and latitude 34°22'13.04" N. The project site consists of undeveloped land immediately north and northeast of two existing water tanks surrounded by a fence. The project includes the expansion of the water tank system to include the creation of a new 120-foot-diameter water tank.

Methods

Literature Review

For this biological resources letter report, "special-status" species are those that are (1) listed, proposed for listing, or candidates for listing as threatened or endangered under the federal Endangered Species Act; (2) listed or candidates for listing as threatened or endangered under the California Endangered Species Act; (3) a state fully protected species; (4) a California Department of Fish and Wildlife (CDFW) Species of Special Concern; or (5) a species listed on the California Native Plant Society's Inventory of Rare and Endangered Plants with a California Rare Plant Rank of 1B or 2B.

Special-status vegetation communities are those communities identified as high priority for inventory in the List of Vegetation Alliances and Associations (CDFG 2010) by a state rarity ranking of S1, S2, or S3, or are considered sensitive by the County Development Code.

Special-status biological resources present or potentially present on the project site were identified through a literature search using the following sources: U.S. Fish and Wildlife Service's Critical Habitat and Occurrence Data (USFWS 2018); CDFW's California Natural Diversity Database (CDFW 2018); and the California Native Plant Society's online Inventory of Rare, Threatened, and Endangered Plants (CNPS 2018). Searches were completed for the following U.S. Geological Survey quadrangles (which include the quadrangle within which the study area is located and the eight surrounding quadrangles): Phelan, Baldy Mesa, Hesperia, Telegraph Peak, Cajon, Silverwood Lake, Cucamonga Peak, Devore, and San Bernardino North.

Field Reconnaissance

Dudek Biologist Anna Cassady conducted a general biological survey of the study area on August 22, 2018, from 9:07 a.m. to 11:45 a.m. The 500-foot buffer was surveyed on foot within the property boundary (bringing the study area acreage to 41.84 acres), but private property within the study area was surveyed visually from the property boundary. The project site was surveyed with 100% visual coverage. The survey was conducted when weather conditions were favorable, with no cloud cover, wind speeds from 2 to 8 miles per hour, and temperatures ranging from 75°F to 86°F. All native and naturalized plant species encountered within the study area were identified and recorded. The potential for special-status plant and wildlife species to occur within the study area was evaluated based on the vegetation communities, soils present, and surrounding features. Vegetation communities and land covers on site were mapped directly in the field. In addition, an investigation was conducted of the extent and distribution of jurisdictional waters of the United States regulated by the U.S. Army Corps of Engineers, jurisdictional waters of the state regulated by the Regional Water Quality Control Board, and jurisdictional streambed and associated riparian vegetation regulated by CDFW.

Latin and common names for plant species with a California Rare Plant Rank follow the California Native Plant Society's Inventory of Rare and Endangered Plants (2018). For plant species without a California Rare Plant Rank, Latin names follow the Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California (Jepson Flora Project 2018), and common names follow the U.S. Department

of Agriculture's Natural Resources Conservation Service PLANTS Database (USDA 2018a). Natural vegetation communities were mapped in the field using the *Manual of California Vegetation, 2nd Edition* (Sawyer et al. 2009) and List of Vegetation Alliances and Associations (CDFG 2010). Land cover types were described in accordance with *Draft Vegetation Communities of San Diego County* (Oberbauer et al. 2008). Latin and common names of animals follow Crother (2012) for reptiles and amphibians, the American Ornithologists' Union (AOU 2015) for birds, Wilson and Reeder (2005) for mammals, the North American Butterfly Association (NABA 2001) for butterflies, and Moyle (2002) for fish.

Dudek used geographic information system software to map biological resources and provide figures.

Survey Limitations

Access was not available within the 500-foot buffer due to private property in all directions. Therefore, vegetation mapping and habitat assessments were conducted from the project site or other public roads, in addition to being complimented with the use of aerial signatures of vegetation communities occurring within the proposed project footprint.

Results

Site Description

The project site is characterized as hilly with a southwesterly slope. Elevations range from approximately 4,022 feet to 4,060 feet above mean sea level. A topographic low point lies in the middle of the project site and extends from southwest to northeast. The project site is surrounded by rural development to the north, south, and west. To the east is undeveloped land that appears to have burned within a previous fire season. Representative photographs of the project site are included in Attachment B.

Soils

Three soil types are mapped within the study area: Wrightwood-Bull Trail association, Bull Trail-Typic xerorthents association, and Avawatz-Oak Glen association (Figure 2, Soils).

- **Wrightwood Series** consists of deep, well-drained soils formed in old alluvium primarily from granitic sources. These soils typically occur on terraces and slopes of 2% to 9%. The Bull Trail association of this series includes a thin, dark colored A1 horizon and a sandy clay loam B2t horizon (USDA 2018b). This soils series occurs within the majority of the project site and the western side of the study area.
- **Bull Trail Series** consists of deep, well-drained soils formed from old alluvial fans and terraces. These soils are typically gently sloping to moderately steep on alluvial fans and terraces found on hills and mountains (USDA 2018b). This soil series makes up the eastern side of the study area.
- **Avawatz Series** consists of deep, somewhat excessively drained soils formed in mixed, but primarily granitic alluvium. This soil series occurs on the lower margin of alluvial fans and narrow drainages. The Oak Glen association of this soil series includes a mollic epipedon that is greater than 20 inches thick (USDA 2018b).

These soils are typically found on floodplains, alluvial fans, and terraces. This soil series occurs within the eastern half of the project site, which has been converted to ornamental and urban/developed land covers.

Vegetation Communities and Land Covers

Three vegetation community and two land cover types are classified for the project site: Tucker oak-chamise association, chamise chaparral, disturbed Tucker oak-chamise association, disturbed habitat, and urban/developed. Figure 3, Biological Resources, illustrates the distribution of land covers, and Table 1 provides a summary of each land cover's extent within the study area.

Table 1 Vegetation Communities and Land Covers within the Study Area

Vegetation Community/Land Cover	Acreage
Vegetation Communities	
Tucker oak-chamise association	6.88
Chamise chaparral	0.99
disturbed Tucker oak-chamise association	10.02
Non-natural Land Covers	
Disturbed land	6.23
Developed land	17.72
Total	**41.84**

Tucker Oak Chaparral-Chamise Association

The Tucker oak chaparral shrubland alliance-chamise association is dominated or co-dominated by Tucker oak (*Quercus john-tuckeri*) and chamise (*Adenostoma fasciculatum*) with an open to continuous canopy. The herbaceous layer is typically intermittent to sparse (Sawyer et al. 2009).

Within the study area, this vegetation community is dominated by Tucker oak, but also has a high cover of chamise. Other species present within this vegetation community include rubber rabbitbrush (*Ericameria nauseosa*) and California buckwheat (*Eriogonum fasciculatum*). The shrub layer composes approximately 70% absolute cover, with Tucker oak occupying approximately 50% absolute cover and chamise occupying approximately 30% absolute cover. This vegetation community is located within the majority of the project site and within the 500-foot buffer to the north and to the west.

A disturbed form of this vegetation community is located within the eastern portion of the 500-foot buffer. This portion of land appears to have burned within the last couple of years.

Chamise Chaparral Alliance

The chamise chaparral alliance is dominated by chamise and has an intermittent to continuous shrub canopy less than 4 meters (13 feet) in height and a sparse to intermittent herbaceous layer (Sawyer et al. 2009).

Within the study area, this vegetation community is dominated by chamise with a low cover of Tucker oak. Other species present include rubber rabbitbrush and Eucalyptus trees (*Eucalyptus* sp.) The shrub layer comprises approximately 50% absolute cover, with chamise occupying approximately 40% absolute cover and Tucker oak occupying approximately 10% absolute cover. This vegetation community is located within the western side of the study area within the 500-foot buffer.

Developed Land

Although not recognized by the *Manual of California Vegetation, 2nd Edition* (Sawyer et al. 2009) or the Natural Communities List (CDFG 2010), "developed land" refers to areas that have been constructed on or disturbed so severely that native vegetation is no longer supported. Developed land includes areas with permanent or semi-permanent structures, pavement or hardscape, landscaped areas, and areas with a large amount of debris or other materials.

Developed land takes the form of rural residential development that is located within the 500-foot buffer to the north, south, and east. In addition, an existing treatment plant immediately south of the project site is considered developed.

Disturbed Land

The classification of disturbed land is due to the predominance of bare ground, non-native plant species, and other disturbance-tolerant plant species. Oberbauer et al. (2008) describes disturbed land as areas that have been physically disturbed by previous human activity and are no longer recognizable as a native or naturalized vegetation association but that continue to retain a soil substrate. Typically, vegetation, if present, is nearly exclusively composed of non-native annual plant species.

Within the study area, disturbed land encompasses the dirt access roads surrounding the project site. While the disturbed land within the study area was composed primarily of bare ground, plant species observed in the study area within this land cover include foxtail brome (*Bromus madritensis* ssp. *rubens*) and short podded mustard (*Hirschfeldia incana*).

Floral Diversity

A total of 15 species of native or naturalized plants—9 native (60%) and 6 non-native (40%)—were recorded within the study area. This low plant diversity reflects the study area's small size and its proximity to adjacent developed areas. Plant species observed within the study area are listed in Attachment C.

Wildlife

Seven bird species were detected within the study area: lesser goldfinch (*Spinus psaltria*), California towhee (*Melozone crissalis*), Anna's hummingbird (*Calypte anna*), common raven (*Corvus corax*), red-tailed hawk (*Buteo jamaicensis*), California scrub-jay (*Aphelocoma californica*), and mourning dove (*Zenaida macroura*). No active bird nests were observed within the study area during the reconnaissance survey; however, the native scrub vegetation within the study area surrounding the project site provides habitat for nesting birds. No amphibian species were observed; however, western toad (*Anaxyrus boreas*) may occur. No reptile species was observed during the survey; however, western fence lizard (*Sceloporus occidentalis*) and common side-blotched lizard (*Uta stansburiana*) may both occur. Two mammal species were detected during the survey: coyote (*Canis latrans*) and desert cottontail (*Sylvilagus audubonii*). Wildlife species observed within the study area are listed in Attachment D.

Special-Status Plant Species

No special-status plant species were detected within the study area. One other non-listed special-status species—short-joint beavertail (*Opuntia basilaris* var. *brachyclada*)—has a high potential to occur on the project site.

Attachment E lists special-status plant species that have been documented in the U.S. Geological Survey 7.5-minute Cajon quadrangle and the eight surrounding quadrangles (CDFW 2018). For each species listed, a determination was made regarding the potential for the species to occur in the study area based on information gathered during the field reconnaissance, including the location of the site, habitats present, current site conditions, and past and present land use.

Special-Status Wildlife Species

No special-status wildlife species were detected within the study area. Three other non-listed species have a moderate or high potential to occur within the study area: Blainville's horned lizard (*Phrynosoma blainvillii*), loggerhead shrike (*Lanius ludovicianus*), and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*).

In addition, the federally threatened Mohave Desert tortoise (*Gopherus agassizii*) has a low potential to occur within the study area.

Attachment F lists special-status wildlife species that have been documented in the U.S. Geological Survey 7.5-minute Cajon quadrangle and the eight surrounding quadrangles (CDFW 2018). For each species listed, a determination was made regarding potential use of the project site based on information gathered during the field reconnaissance, known habitat preferences, and knowledge of the species' relative distributions in the area.

Mohave Desert Tortoise

The Mohave Desert tortoise is a federally threatened and state endangered species. Typical habitat for this species within the Mojave Desert is creosote bush scrub with a relatively high diversity of perennial plants. This species typically occurs on gently sloping terrain with sandy gravel soils in locations with sparse cover of low-

growing shrubs. Soils must be friable enough for the digging of burrows but firm enough to prevent burrow collapse (USFWS 2008).

The study area contains oak woodland and chamise chaparral with a degraded, ephemeral drainage and suitable sized burrows that together create marginal habitat for this species. The surrounding area contains rural residential development, and Oro Grande Wash is down the hill from the proposed project. There is only one historic occurrence (2000) of this species approximately 2.2 miles northeast within the Oro Grande Wash (CDFW 2018). Other occurrences (2004, 2007, and 2017) are located north of the California aqueduct over 6 miles to the north, which presents an anthropogenic barrier inhibiting terrestrial species from crossing towards the project site (CDFW 2018). Due to the hilly nature of the site, lack of ideal vegetation communities, and the barrier presented by residential development, there is low potential for Mohave Desert tortoise to occur within the study area.

Nesting Birds

The project site is adjacent to many shrubs that provide potential habitat for commonly occurring nesting birds, such as Anna's hummingbird or house finches (*Haemorhous mexicanus*). However, no nests were observed within the study area during the survey.

Jurisdictional Waters and Significant Drainage Courses

The proposed project contains two potentially jurisdictional features that flow from southwest to northeast through the study area. Drainage 1 contains defined bed and bank and a distinct absence of vegetation. This drainage appears to convey runoff from a pipe leading from the treatment facility immediately south of the project site and conveys water northeast and then south to where it appears to connect with Oro Grande Wash, which leads to Mojave River. This drainage is potentially a water of the United States.

Drainage 2 appears to originate as stormwater runoff from the communities southwest of the project site. This feature contains defined bed and bank and scour before connecting with Drainage 1 within the central portion of the study area. As previously stated, Drainage 1 leads to the Oro Grande Wash and then the Mojave River. This drainage is potentially a water of the United States.

Wildlife Corridors and Habitat Linkages

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the migration of animals. Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation; they may be continuous habitat or discrete habitat islands that function as stepping stones for wildlife dispersal. Wildlife movement within the site is unlikely due to the fence that currently surrounds the development; however, the remainder of the study area and the surrounding environment consist of rural development and open scrub habitat that likely function as open habitat but do not function as a corridor for wildlife.

Local Regulatory Setting

San Bernardino County Plant Protection and Management Code

Chapter 88.01 of the County Development Code provides regulatory and management guidance for plant resources within unincorporated areas of the County, as well as within mixed public and private lands within the County. The goal is to promote healthy plant community growth and the preservation of native species. In turn, the standardization of these practices helps with the conservation of natural waterways within the County and provides sustainable habitat for many local plant and wildlife species. This code primarily relates to tree and vegetation removal in public land and private land within unincorporated land within the County.

Impacts Analysis and Recommendations

This section addresses potential impacts to special-status biological resources that could result from implementation of the project. This section follows the CEQA checklist for biological resources. For the purposes of this biological analysis, it is assumed that the entire project site would be permanently impacted. Figure 4, Impacts, depicts the extent of project impacts.

Special-Status Vegetation Communities

No special-status vegetation communities are present within the study area. Table 2 lists impacts to the land covers as a result of the project.

Table 2 Impacts to Land Covers within the Project Site

Vegetation Community/Land Cover	Acreage
Vegetation Communities	
Tucker oak-chamise association	1.23
Chamise chaparral	<0.01
Disturbed Tucker oak-chamise association	0.17
Non-natural Land Covers	
Disturbed land	0.19
Developed land	0.03
Total	**1.62**

Special-Status Plants

Two non-listed special-status species, Palmer's mariposa lily (*Calochortus palmeri*) and short-joint beavertail (*Opuntia basilaris* var. *brachyclada*), have moderate and high potential to occur within the project site and therefore will be directly impacted by construction activities. Potential direct impacts to special-status plants

include mortality of the plant and seed bank within the native soil. Direct impacts to special-status plants are considered significant absent mitigation (Impact BIO-1). Implementation of mitigation measure (MM)-BIO-1 would reduce potential impacts to less than significant.

In addition, indirect impacts could occur to Palmer's mariposa lily and short-joint beavertail and their habitat. Potential indirect impacts to special-status plants include the generation of fugitive dust, the release of chemical pollutants, and the adverse effect of invasive plant species. Indirect impacts to special-status plants are considered significant absent mitigation (Impact BIO-2). Implementation of MM-BIO-2 would reduce potential impacts to less than significant.

Special-Status Wildlife

One federally threatened wildlife species, Mohave Desert tortoise, has low potential to occur within the project site. In addition, four non-listed special-status species have moderate or high potential to occur within the project site.

The proposed project will remove 1.62 acres of potential habitat for the Mohave desert tortoise, Blainville's horned lizard, loggerhead shrike, and San Diego black-tailed jackrabbit, which may directly impact these species through direct mortality. Direct impacts to special-status wildlife are considered significant absent mitigation (Impact-BIO-3). Implementation of MM-BIO-3, MM-BIO-4, and MM-BIO-5 would reduce potential impacts to less than significant.

Potential indirect impacts to special-status wildlife could result from fugitive dust that can degrade habitat and result in health implications for wildlife species; noise and vibration that can stress wildlife species or cause them to leave an area of otherwise suitable habitat; and release of chemical pollutants. Indirect impacts to special-status wildlife are considered significant absent mitigation (Impact-BIO-4). Implementation of MM-BIO-1 would reduce potential impacts to less than significant.

Nesting Birds

Project construction could result in direct and indirect impacts to nesting birds, including the loss of nests, eggs, and fledglings if vegetation clearing and ground-disturbing activities occur during the nesting season (generally February 1 through August 31). Construction activities during this time may result in reduced reproductive success and may violate the federal Migratory Bird Treaty Act and California Fish and Game Code. Direct or indirect impacts to nesting birds would be considered significant absent mitigation (Impact-BIO-5). Implementation of MM-BIO-5 would reduce impacts to less than significant.

Jurisdictional Waters

Two potentially jurisdictional features occur within the study area, and the proposed project would result in impacts to these features. Direct impacts to jurisdictional waters are considered significant absent mitigation (Impact BIO-6). Implementation of MM-BIO-6 would reduce impacts to less than significant.

Wildlife Corridors and Nursery Sites

The project site currently does not function as a wildlife corridor and does not support any wildlife nursery sites. As a result, implementation of the project would not result in impacts to these resources.

San Bernardino County Development Code

Oak tree woodlands are a protected resource under the Plant Protection and Management section of the existing Development Code (Section 88.01.050), and are considered a sensitive biological resource. The Development Code requires avoidance, minimization, or mitigation measures be implemented with the conversion of oak woodlands comprised of trees that are 5 inches or greater in diameter at breast height. Direct impacts to oak tree woodlands are considered significant absent mitigation (Impact BIO-7). Implementation of MM-BIO-7 would reduce impacts to less than significant. .

Avoidance, Minimization, and Mitigation Measures

MM-BIO-1 Special-Status Plants

Surveys shall be conducted for special-status plant species the season prior to construction. Surveys shall occur at the appropriate time to capture the characteristics necessary to identify the taxon. Surveys shall be conducted consistent with California Department of Fish and Wildlife (CDFW) protocols and by a qualified botanist knowledgeable of the local flora. If special-status plants are not observed during focused surveys, no additional mitigation is required.

If a special-status plant species is detected, the outer extent of each occurrence shall be flagged at the time of the survey and the following avoidance measures implemented:

- **Establish Environmentally Sensitive Areas (ESAs)**. Prior to the start of any ground- or vegetation-disturbing activities, a qualified biologist shall establish ESAs to protect and avoid special-status plants that occur outside of the project disturbance areas and within 100 feet of project disturbance areas. The locations of ESAs shall be clearly depicted on construction drawings, which shall also include all avoidance and minimization measures on the margins of the construction plans. ESAs shall be clearly delineated in the field with temporary construction fencing to ensure that avoided plants are not inadvertently harmed during construction.
- **Monitoring.** A qualified biologist shall conduct weekly monitoring of the ESAs that protect special-status plant occurrences. The monitor shall have the authority to stop construction activities in the vicinity (within 100 feet) of an ESA if it is determined as a result of monitoring that corrective actions are necessary to avoid and protect the ESA.

For direct permanent impacts, the loss of the occurrence shall be assessed in the context of the regional population for that species. If the loss of the occurrence would result in a greater than 10% loss of the population,

mitigation shall be implemented for direct impacts to special-status plants through one or a combination of the following strategies.

- **Off-site compensation**. Compensation lands with occupied habitat at a 1:1 ratio for any habitat occupied by special-status plants impacted by the project. Occupied habitat will be calculated on the project site and on the compensation lands as including each special-status plant occurrence and a surrounding 100-foot buffer area.
- **Salvage**. The County shall consult with the Rancho Santa Ana Botanic Gardens or another qualified entity to develop an appropriate experimental salvage and relocation strategy, based on the life history of the species permanently impacted. The plan shall include at minimum: (a) collection/salvage measures for plants or seed banks, to retain intact soil conditions and maximize success likelihood; (b) details regarding storage of plants or seed banks; (c) location of the proposed recipient site, and detailed site preparation and plant introduction techniques details for top soil storage, as applicable; (d) time of year that the salvage and replanting or seeding will occur and the methodology of the replanting; (e) a description of the irrigation, if used; (f) success criteria; and (g) a detailed monitoring program, commensurate with the plan's goals.

MM-BIO-2 General Avoidance and Minimization Measures

The following avoidance and minimization measures shall be implemented during project construction activities.

- Construction limits along the northern boundary of the project shall be clearly flagged so that adjacent native vegetation is avoided.
- Construction work and operations and maintenance areas shall be kept clean of debris, such as trash and construction materials. Fully covered trash receptacles that are animal-proof will be installed and used during construction to contain all food, food scraps, food wrappers, beverage containers, and other miscellaneous trash. Trash contained within the receptacles will be removed at least once a week from the proposed project site.
- Nighttime construction should be minimized to the extent possible. However, if nighttime activity (e.g., equipment maintenance) is necessary, then the speed limit shall be 10 mph.
- Staging and storage areas for spoils, equipment, materials, fuels, lubricants, and solvents shall be located within the designated impact area or adjacent developed areas.
- To prevent inadvertent entrapment of special-status wildlife during construction, all excavated steep-walled holes or trenches more than 2 feet deep shall be covered with plywood or similar materials at the close of each working day, or be provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped wildlife. If trapped animals are observed, escape ramps or structures shall be installed immediately to allow escape.
- All pipes, culverts, or similar structures with a diameter of 4 inches or more that are stored at a construction site for one or more overnight periods shall be thoroughly inspected for special-status wildlife or nesting birds before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If an animal is discovered inside a pipe, that section of pipe shall not be moved until the animal has either moved from the structure on its own accord or until the animal has been captured and relocated by a qualified biologist.

The following avoidance and minimization measure shall be implemented as part of project operations:

> The project landscape plan shall avoid the use of any invasive, non-native plant species rated as "high" or "moderate" by the California Invasive Plant Council's Invasive Plant Inventory (Cal-IPC 2018).

MM-BIO-3 Desert Tortoise

A pre-project survey shall be conducted in accordance with the U.S. Fish and Wildlife (USFWS) protocol (USFWS 2017). A pre-project survey should be conducted during the most active periods of the desert tortoise (April through May, or September through October).

If the survey is negative, no additional mitigation is required.

If the survey is positive, an incidental take permit (ITP) must be obtained from the USFWS and CDFW prior to initiation of construction activities. Occupied habitat should be mitigated at a minimum 1:1 ratio or as specified in the ITP. Avoidance and minimization measures should be implemented in accordance with provisions of the ITP and should include, at a minimum:

- Environmental awareness training for all construction personnel to educate them on desert tortoise, protective status, and avoidance measures to be implemented by all personnel, including looking under vehicles and equipment prior to moving.
- Presence of a qualified biological monitor during initial grading activities and as needed to document compliance with the conditions of the ITP; the biological monitor will have the authority to stop work as needed to avoid direct impact to desert tortoise.
- Should a desert tortoise be found during construction activities, activities shall cease until either the tortoise moves out of harm's way or a qualified biologist authorized under the project's ITP ("authorized biologist") relocates the tortoise.

Other potential provisions of the ITP include pre-construction surveys and site fencing.

MM-BIO-4 Burrowing Owl

The project shall conduct focused protocol surveys be completed in accordance with the latest CDFW protocol (CDFG 2012). This consists of four (4) focused burrowing owl surveys conducted during burrowing owl breeding season (February 1 to August 31). If the surveys determine that nesting burrowing owl occupy the site, mitigation for loss of habitat should be implemented in accordance with the CDFW protocol. Mitigation includes replacement of nesting burrows and sufficient habitat to support a breeding pair. Pre-construction surveys should also be completed in accordance with CDFW protocol, regardless of the results of the focused surveys.

MM-BIO-5 Nesting Birds

To maintain compliance with the Migratory Bird Treaty Act and Fish and Game Code, if ground disturbance and/or vegetation clearance activities are scheduled to occur during the avian nesting season (February 1 to August 31), a pre-construction nesting bird survey shall be conducted by a qualified biologist within the project footprint and a

300-foot buffer around the project footprint. Surveys shall be conducted within 3 days prior to initiation of activity and will be conducted between dawn and noon.

If an active nest is detected during the nesting bird survey, avoidance buffers shall be implemented as determined by a qualified biologist. The buffer will be of a distance to ensure avoidance of adverse effects to the nesting bird by accounting for topography, ambient conditions, species, nest location, and activity type. All nests will be monitored as determined by the qualified biologist until nestlings have fledged and dispersed or it is confirmed that the nest has been unsuccessful or abandoned.

MM-BIO-6 Delineation of Jurisdictional Waters

A delineation of Jurisdictional Waters shall be conducted. If jurisdictional waters are present, appropriate permits shall be obtained from the regulatory agencies, including a Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers, a Water Quality Certification from the Regional Water Quality Control Board, and a Streambed Alteration Agreement from CDFW.

All mitigation measures and conditions contained within the permits shall be implemented. At a minimum, the following shall be completed for mitigation for impacts to waters of the United States and jurisdictional streambed:

1. Compensation for Permanent Impacts: Permanent impacts to waters of the United States and jurisdictional streambeds shall be offset by compensation at a minimum 2:1 ratio, or as otherwise required by the respective permits.
2. Temporary Impacts: All areas temporarily impacted shall be restored to native grade and contour, and revegetated as outlined in the Long-Term Habitat Management Plan.
3. Best Management Practices. Avoided jurisdictional waters shall be fenced or flagged as an environmentally sensitive area. Best management practices shall be implemented to avoid indirect impacts to jurisdictional waters, including:
    a. Vehicles and equipment shall not be operated in ponded or flowing water except as described in the permits.
    b. Water containing mud, silt, or other pollutants from grading or other activities shall not be allowed to enter jurisdictional waters or be placed in locations that may be subjected to high storm flows.
    c. Spoil sites shall not be located within 30 feet from the boundaries of jurisdictional waters or in locations that may be subject to high storm flows, where spoils might be washed back into drainages.
    d. Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources, resulting from project-related activities, shall be prevented from contaminating the soil and/or entering avoided jurisdictional waters.

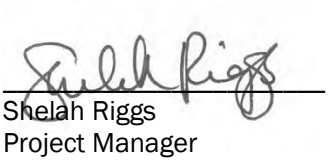
e. No equipment maintenance shall occur within 150 feet of jurisdictional waters and no petroleum products or other pollutants from the equipment will be allowed to enter these areas or enter any off-site state-jurisdictional waters under any flow.

MM-BIO-7 Oak Tree Evaluation

To maintain compliance with the San Bernardino County Development Code, a trained arborist will conduct an oak tree evaluation within the project site to determine if the oak trees are protected under Section 88.01.050 of the Development Code. The results of this evaluation, as well as any proposed avoidance, minimization, or mitigation measures, will be reported prior to project implementation, in accordance with the Development Code.

If you have any questions regarding this biological resources letter report, please call me at 951.300.2184.

Sincerely,



Shelah Riggs
Project Manager

Att.: *Attachment A – Figures*
Attachment B – Site Photographs
Attachment C – Vascular Plant Species
Attachment D – Wildlife Species
Attachment E – Special-Status Plant Species Detected or Potentially Occurring in the Study Area
Attachment F – Special-Status Wildlife Species Detected or Potentially Occurring in the Study Area

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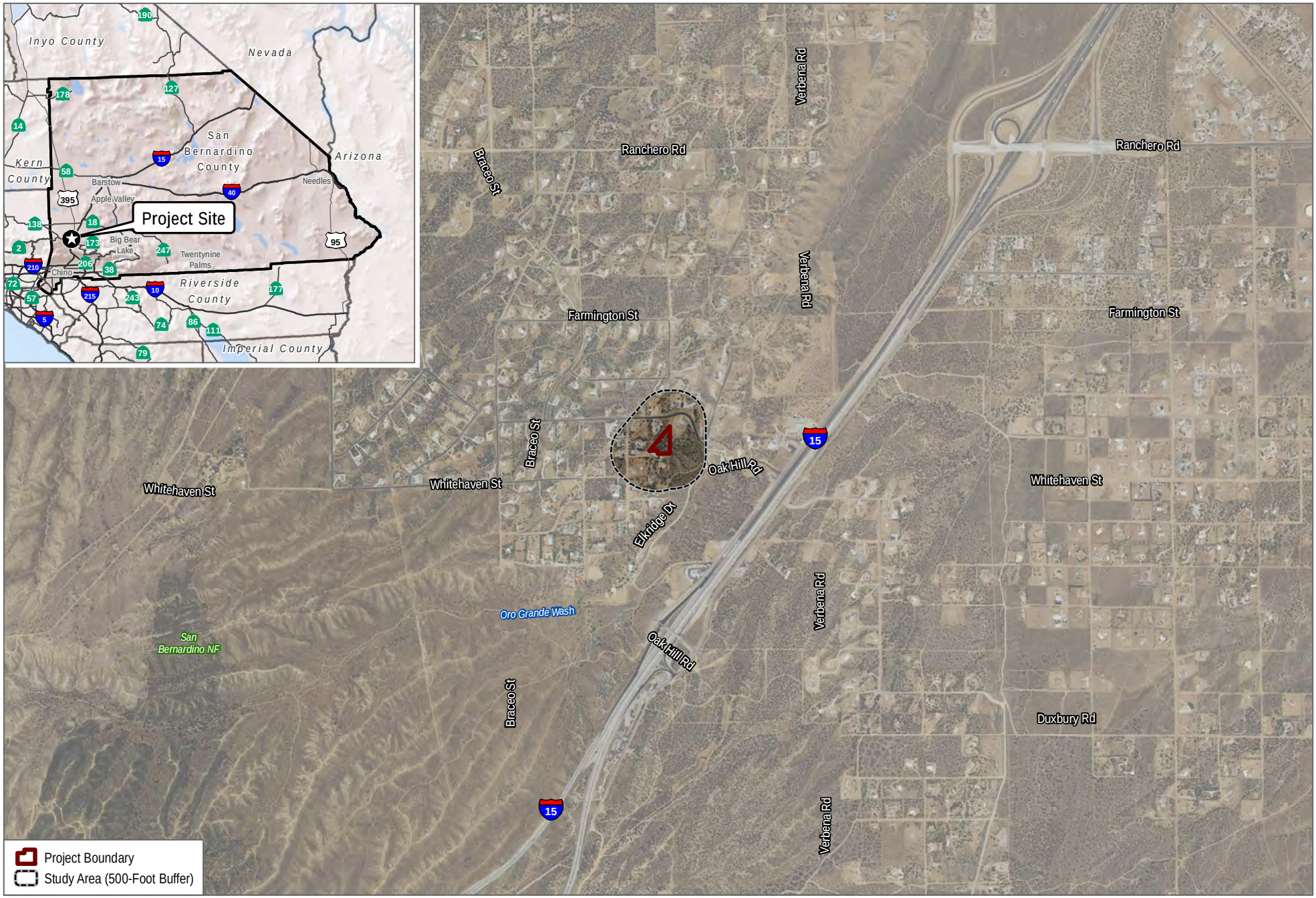
Attachment A

Figures



SOURCE: USDA 2018; ESRI 2018

DUDEK

0 1,000 2,000 Feet

FIGURE 1

Project Location

Biological Resources Letter Report for the Reservoir 3A and 2MG Tank Expansion Project

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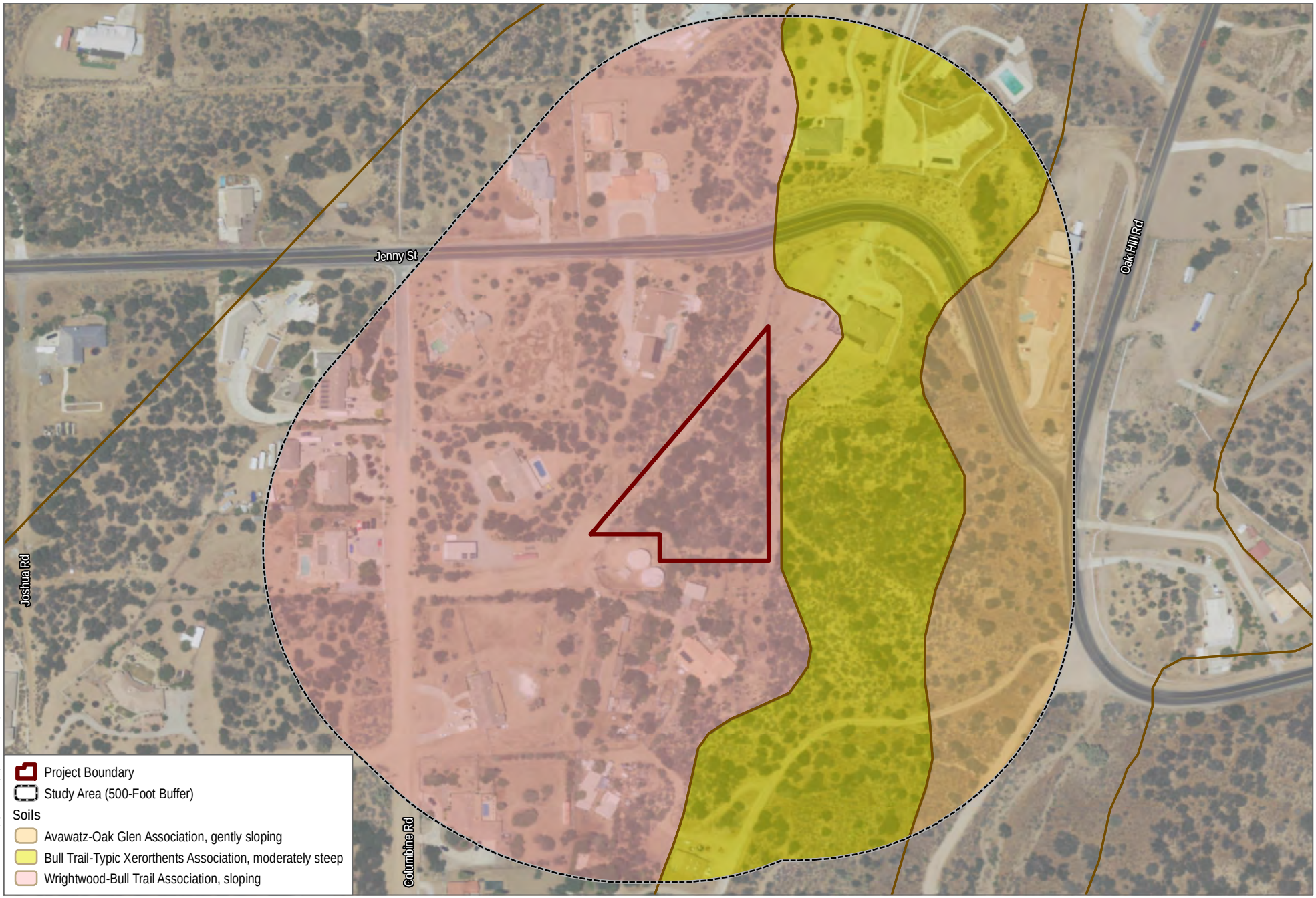

SOURCE: USDA 2017, 2018

DUDEK

0 150 300 Feet

FIGURE 2

Soils

Biological Resources Letter Report for the Reservoir 3A and 2MG Tank Expansion Project

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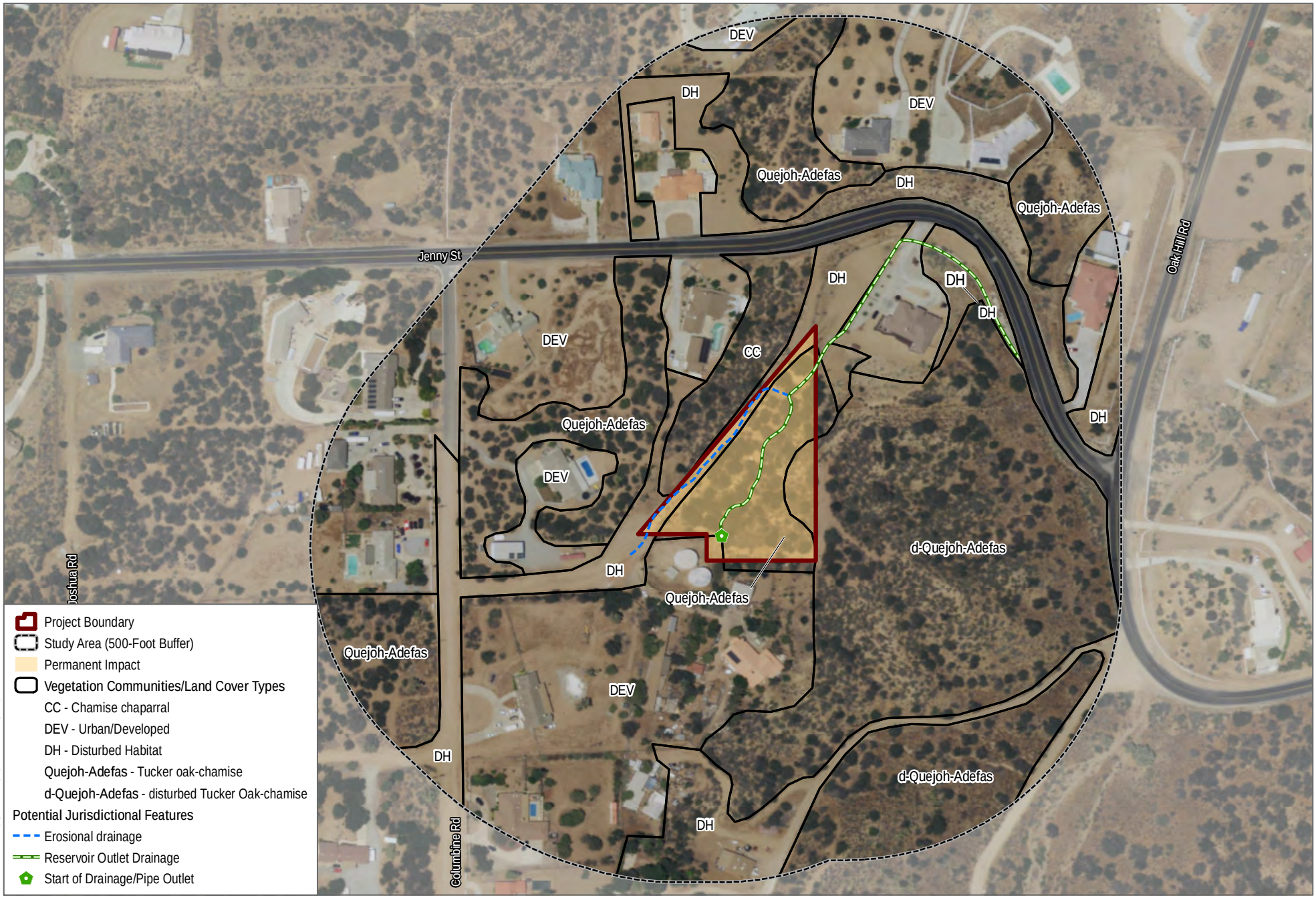

SOURCE: USDA 2018

DUDEK

0 150 300 Feet

FIGURE 4

Impacts

Biological Resources Letter Report for the Reservoir 3A and 2MG Tank Expansion Project

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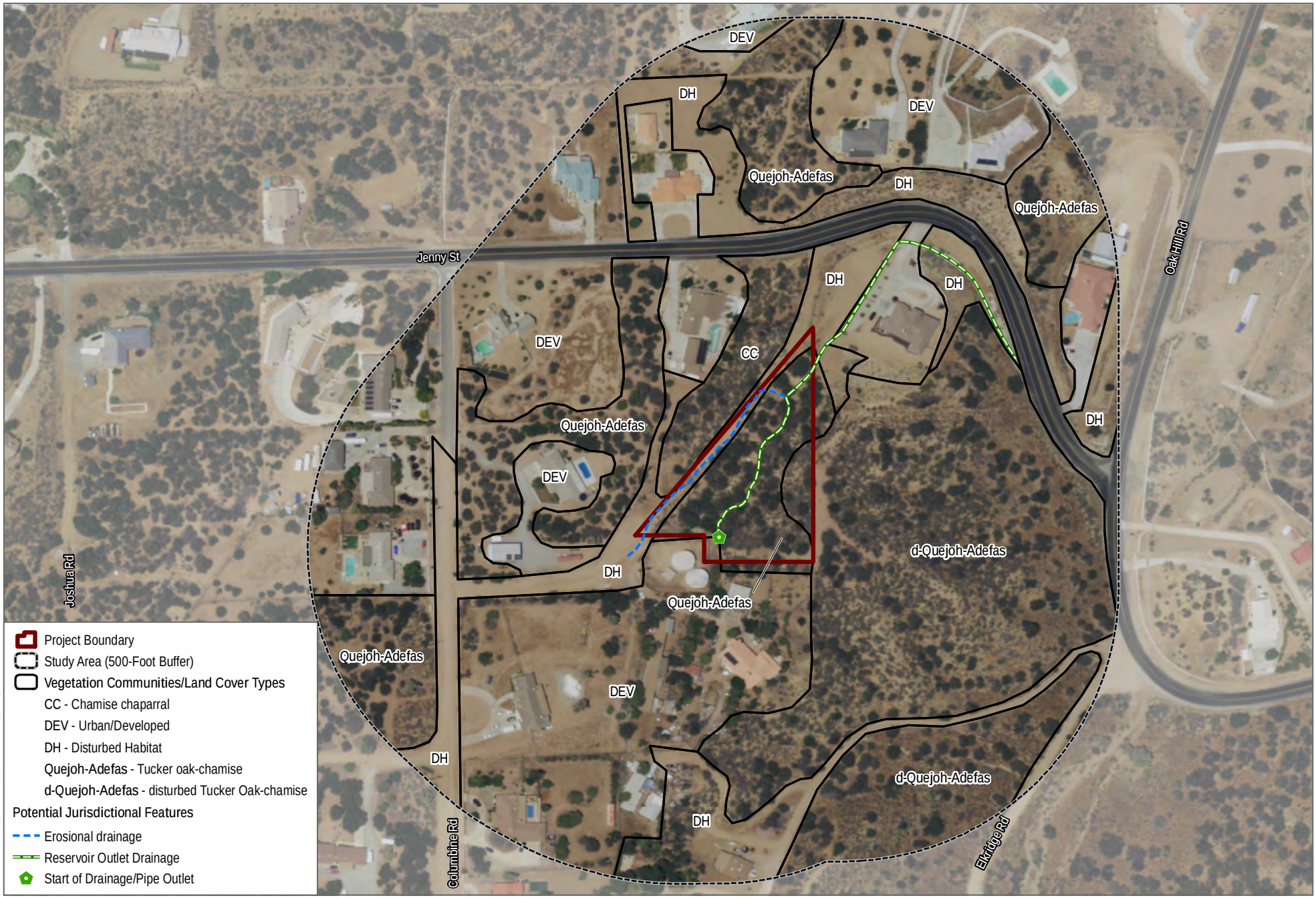

SOURCE: USDA 2018

DUDEK

0 150 300 Feet

FIGURE 3

Biological Resources

Biological Resources Letter Report for the Reservoir 3A and 2MG Tank Expansion Project

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Attachment B

Site Photographs

ATTACHMENT B
Photo Documentation

Photo 1: View of disturbed road west of existing water tank in southwestern portion of study area. Facing north.

Photo 2: Existing water tank facility in southern portion of study area. Facing east.

Photo 3: View of disturbed Tucker oak-chamise chaparral on the eastern slope in the study area. This area has been previously burned. Facing northeast.

Photo 4: View of Tucker oak-chamise chaparral vegetation community that comprises the majority of the project site. Facing northwest from center of study area.

Photo 5: View of drainage that runs north to south through the center of the project site. Facing north.

Photo 6: Pipe that releases water periodically into drainage within the center of the project site. Facing southwest.

Photo 7: Dirt road on the western side of the project site. An erosional drainage flows down the western side of the road and connects with the central drainage. Facing northeast.

Photo 8: View of central drainage from the dirt road northwest of the project site. Facing southeast.

Photo 9: View of dirt road northwest of project site from the northern portion of the project site. Facing south.

Photo 10: View of openings in the Tucker oak-chamise chaparral. Facing east from southwestern corner of project site.

Photo 11: View of break between Tucker oak-chamise chaparral and its disturbed form. Facing northwest from southeastern portion of project site.

Photo 12: View of disturbed Tucker oak-chamise chaparral on hillside. Facing northeast from southeastern portion of the study area.

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Attachment C

Vascular Plant Species

ATTACHMENT C
Plant Compendium

VASCULAR SPECIES

MONOCOTS

AGAVACEAE—AGAVE FAMILY

Yucca brevifolia—Joshua tree

POACEAE—GRASS FAMILY

* *Bromus madritensis* ssp. *rubens*—red brome

EUDICOTS

ANACARDIACEAE—SUMAC OR CASHEW FAMILY

Toxicodendron diversilobum—poison oak

ASTERACEAE—SUNFLOWER FAMILY

Ambrosia acanthicarpa—flatspine bur ragweed

Ericameria nauseosa—rubber rabbitbrush

BRASSICACEAE—MUSTARD FAMILY

* *Sisymbrium irio*—London rocket

* *Hirschfeldia incana*—shortpod mustard

FABACEAE—LEGUME FAMILY

Acmispon glaber—deer weed

FAGACEAE—OAK FAMILY

Quercus john-tuckeri—Tucker oak

GERANIACEAE—GERANIUM FAMILY

* *Erodium cicutarium*—redstem stork's bill

POLYGONACEAE—BUCKWHEAT FAMILY

Eriogonum gracile—slender woolly buckwheat

Eriogonum fasciculatum—California buckwheat

ROSACEAE—ROSE FAMILY

Adenostoma fasciculatum—chamise

* signifies introduced (non-native) species

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Attachment D

Wildlife Species

ATTACHMENT D
Wildlife Compendium

BIRD

EMBERIZINES

EMBERIZIDAE—EMBERIZIDS

Melozone crissalis—California towhee

FINCHES

FRINGILLIDAE—FRINGILLINE AND CARDUELINE FINCHES AND ALLIES

Spinus psaltria—lesser goldfinch

HAWKS

ACCIPITRIDAE—HAWKS, KITES, EAGLES, AND ALLIES

Buteo jamaicensis—red-tailed hawk

HUMMINGBIRDS

TROCHILIDAE—HUMMINGBIRDS

Calypte anna—Anna's hummingbird

JAYS, MAGPIES AND CROWS

CORVIDAE—CROWS AND JAYS

Aphelocoma californica—California scrub-jay

Corvus corax—common raven

PIGEONS AND DOVES

COLUMBIDAE—PIGEONS AND DOVES

Zenaida macroura—mourning dove

MAMMAL

CANIDS

CANIDAE—WOLVES AND FOXES

Canis latrans—coyote

HARES AND RABBITS

LEPORIDAE—HARES AND RABBITS

Sylvilagus audubonii—desert cottontail

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Attachment E

Special-Status Plant Species Detected or Potentially Occurring in the Study Area

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Ambrosia monogyra	singlewhorl burrobrush	None/None/2B.2	Chaparral, Sonoran desert scrub; sandy/perennial shrub/Aug–Nov/30–1,640	Not expected to occur. The study area is outside of the appropriate elevation range for this species.
Arctostaphylos glandulosa ssp. *gabrielensis*	San Gabriel manzanita	None/None/1B.2	Chaparral (rocky)/perennial evergreen shrub/Mar/1,950–4,920	Low potential to occur. The study area is within the appropriate elevation range and contains suitable vegetation that would support this species; however, there are no documented occurrences of this species north of the San Bernardino Mountains (CalFlora 2018, CDFW 2018).
Arenaria paludicola	marsh sandwort	FE/SE/1B.1	Marshes and swamps (freshwateror brackish); sandy, openings/perennial stoloniferous herb/May–Aug/5–560	Not expected to occur. The study area is outside of the appropriate elevation range for this species and does not contain suitable vegetation.
Asclepias nyctaginifolia	Mojave milkweed	None/None/2B.1	Mojavean desert scrub, Pinyon and juniper woodland/perennial herb/May–June/2,870–5,575	Not expected to occur. The study area is within the appropriate elevation range, but does not contain suitable vegetation that would support this species, and there is only a historic occurrence (1916) of this species within 5 miles of the study area (CalFlora 2018; CDFW 2018).
Astragalus lentiginosus var. *antonius*	San Antonio milk-vetch	None/None/1B.3	Lower montane coniferous forest, Upper montane coniferous forest/perennial herb/Apr–July/4,920–8,530	Not expected to occur. The study area is outside of the appropriate elevation range for this species.
Astragalus leucolobus	Big Bear Valley woollypod	None/None/1B.2	Lower montane coniferous forest, Pebble (Pavement) plain, Pinyon and juniper woodland, Upper montane coniferous forest; rocky/perennial herb/May–July/3,605–9,465	Not expected to occur. The study area is within the appropriate elevation range, but does not contain pebble plain or other suitable vegetation that would support this species. In addition, there are no documented occurrences of this species within 5 miles of the study area (CalFlora 2018).
Berberis nevinii	Nevin's barberry	FE/SE/1B.1	Chaparral, Cismontane woodland, Coastal scrub, Riparian scrub; sandy or gravelly/perennial evergreen shrub/(Feb)Mar–June/225–2,705	Not expected to occur. The study area is outside of the appropriate elevation range for this species.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Botrychium crenulatum	scalloped moonwort	None/None/2B.2	Bogs and fens, Lower montane coniferous forest, Meadows and seeps, Marshes and swamps (freshwater), Upper montane coniferous forest/perennial rhizomatous herb/June–Sep/4,160–10,760	Not expected to occur. The study area is within the appropriate elevation range, but does not contain forest or other suitable vegetation that would support this species. In addition, there are no documented occurrences of this species within 5 miles of the study area (CalFlora 2018; CDFW 2018).
Botrychium minganense	Mingan moonwort	None/None/2B.2	Bogs and fens, Lower montane coniferous forest, Meadows and seeps (edges), Upper montane coniferous forest; Mesic/perennial rhizomatous herb/July–Sep/4,770–7,150	Not expected to occur. The study area is outside of the appropriate elevation range for this species.
Brodiaea filifolia	thread-leaved brodiaea	FT/SE/1B.1	Chaparral (openings), Cismontane woodland, Coastal scrub, Playas, Valley and foothill grassland, Vernal pools; often clay/perennial bulbiferous herb/Mar–June/80–3,675	Not expected to occur. The study area is outside of the appropriate elevation range for this species.
Calochortus palmeri var. *palmeri*	Palmer's mariposa lily	None/None/1B.2	Chaparral, Lower montane coniferous forest, Meadows and seeps; mesic/perennial bulbiferous herb/Apr–July/2,325–7,840	Low potential to occur. The study area is within the appropriate elevation range, contains marginal habitat, and there are documented occurrences within 5 miles of the study area (CalFlora 2018; CDFW 2018).
Castilleja lasiorhyncha	San Bernardino Mountains owl's-clover	None/None/1B.2	Chaparral, Meadows and seeps, Pebble (Pavement) plain, Riparian woodland, Upper montane coniferous forest; mesic/annual herb (hemiparasitic)/May–Aug/4,265–7,840	Not expected to occur. The study area is outside of the appropriate elevation range for this species.
Centromadia pungens ssp. *laevis*	smooth tarplant	None/None/1B.1	Chenopod scrub, Meadows and seeps, Playas, Riparian woodland, Valley and foothill grassland; alkaline/annual herb/Apr–Sep/0–2,100	Not expected to occur. The study area is outside of the appropriate elevation range for this species, and there is no suitable habitat present.
Chloropyron maritimum ssp. *maritimum*	salt marsh bird's-beak	FE/SE/1B.2	Coastal dunes, Marshes and swamps (coastal salt)/annual herb (hemiparasitic)/May–Oct(Nov)/0–100	Not expected to occur. The site is outside of the species' known elevation range, and there is no suitable vegetation present.
Chorizanthe parryi var. *parryi*	Parry's spineflower	None/None/1B.1	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland; sandy or rocky, openings/annual herb/Apr–June/900–4,005	Low potential to occur. The study area is at the upper limit of the appropriate elevation range for this species, but contains suitable habitat. There are no documented occurrences north of the San Bernardino Mountains (CalFlora 2018).

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Chorizanthe xanti var. *leucotheca*	white-bracted spineflower	None/None/1B.2	Coastal scrub (alluvial fans), Mojavean desert scrub, Pinyon and juniper woodland; sandy or gravelly/annual herb/Apr–June/980–3,935	Not expected to occur. The study area is outside of the known elevation range for this species and there is no suitable habitat.
Deinandra mohavensis	Mojave tarplant	None/SE/1B.3	Chaparral, Coastal scrub, Riparian scrub; mesic/annual herb/(May)June–Oct(Jan)/2,095–5,250	Low potential to occur. The study area is within the appropriate elevation range and there is suitable habitat that would support this species; however, there are no documented occurrences within 5 miles of the study area (CalFlora 2018; CDFW 2018) and mesic conditions are not present.
Dodecahema leptoceras	slender-horned spineflower	FE/SE/1B.1	Chaparral, Cismontane woodland, Coastal scrub (alluvial fan); sandy/annual herb/Apr–June/655–2,495	Not expected to occur. The study area is outside of the appropriate elevation range for this species.
Eremothera boothii ssp. *boothii*	Booth's evening-primrose	None/None/2B.3	Joshua tree woodland, Pinyon and juniper woodland/annual herb/Apr–Sep/2,670–7,875	Not expected to occur. The study area is within the appropriate elevation range, but does not contain vegetation that would support this species. In addition, there are only a historic occurrences (1882, 1901, 1991) within 5 miles of the study area (CalFlora 2018; CDFW 2018).
Eriastrum densifolium ssp. *sanctorum*	Santa Ana River woollystar	FE/SE/1B.1	Chaparral, Coastal scrub (alluvial fan); sandy or gravelly/perennial herb/Apr–Sep/295–2,000	Not expected to occur. The study area is outside of the appropriate elevation range for this species.
Eriogonum microthecum var. *johnstonii*	Johnston's buckwheat	None/None/1B.3	Subalpine coniferous forest, Upper montane coniferous forest; rocky/perennial deciduous shrub/July–Sep/6,000–9,600	Not expected to occur. The study area is outside of the appropriate elevation range for this species, and there is no suitable habitat present.
Fimbristylis thermalis	hot springs fimbristylis	None/None/2B.2	Meadows and seeps (alkaline, near hot springs)/perennial rhizomatous herb/July–Sep/360–4,395	Not expected to occur. The study area is within the appropriate elevation range, but does not contain vegetation that would support this species. In addition, there are no documented occurrences of this species north of the San Bernardino Mountains (CalFlora 2018; CDFW 2018).

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Helianthus nuttallii ssp. *parishii*	Los Angeles sunflower	None/None/1A	Marshes and swamps (coastal salt and freshwater)/perennial rhizomatous herb/Aug–Oct/30–5,005	Not expected to occur. The study area is within the appropriate elevation range, but does not contain vegetation that would support this species. In addition, there are no documented occurrences of this species north of the San Bernardino Mountains (CalFlora 2018; CDFW 2018).
Heuchera parishii	Parish's alumroot	None/None/1B.3	Alpine boulder and rock field, Lower montane coniferous forest, Subalpine coniferous forest, Upper montane coniferous forest; rocky, sometimes carbonate/perennial rhizomatous herb/June–Aug/4,920–12,465	Not expected to occur. The study area is outside of the appropriate elevation range for this species.
Horkelia cuneata var. *puberula*	mesa horkelia	None/None/1B.1	Chaparral (maritime), Cismontane woodland, Coastal scrub; sandy or gravelly/perennial herb/Feb–July(Sep)/225–2,655	Not expected to occur. The study area is outside of the appropriate elevation range for this species.
Imperata brevifolia	California satintail	None/None/2B.1	Chaparral, Coastal scrub, Mojavean desert scrub, Meadows and seeps (often alkali), Riparian scrub; mesic/perennial rhizomatous herb/Sep–May/0–3,985	Not expected to occur. The study area is outside of the appropriate elevation range for this species.
Lilium parryi	lemon lily	None/None/1B.2	Lower montane coniferous forest, Meadows and seeps, Riparian forest, Upper montane coniferous forest; mesic/perennial bulbiferous herb/July–Aug/4,000–9,005	Not expected to occur. The study area is at the lower limit of the appropriate elevation range for this species and does not contain suitable habitat. There are no documented occurrences north of the San Bernardino Mountains (CalFlora 2018; CDFW 2018).
Linanthus concinnus	San Gabriel linanthus	None/None/1B.2	Chaparral, Lower montane coniferous forest, Upper montane coniferous forest; rocky, openings/annual herb/Apr–July/4,985–9,185	Not expected to occur. The study area is outside of the appropriate elevation range for this species.
Loeflingia squarrosa var. *artemisiarum*	sagebrush loeflingia	None/None/2B.2	Desert dunes, Great Basin scrub, Sonoran desert scrub; sandy/annual herb/Apr–May/2,295–5,300	Not expected to occur. While the study area is within the appropriate elevation range, there is no suitable habitat or sandy soils that would support this species. In addition, there are no documented occurrences of this species within 5 miles of the study area (CalFlora 2018, CDFW 2018).

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Lycium parishii	Parish's desert-thorn	None/None/2B.3	Coastal scrub, Sonoran desert scrub/perennial shrub/Mar–Apr/440–3,280	Not expected to occur. The study area is outside of the appropriate elevation range for this species, and there is no suitable vegetation present.
Malacothamnus parishii	Parish's bush-mallow	None/None/1A	Chaparral, Coastal scrub/perennial deciduous shrub/June–July/1,000–1,495	Not expected to occur. The study area is outside of the appropriate elevation range for this species.
Monardella australis ssp. *jokerstii*	Jokerst's monardella	None/None/1B.1	Chaparral, Lower montane coniferous forest; Steep scree or talus slopes between breccia, secondary alluvial benches along drainages and washes./perennial rhizomatous herb/July–Sep/4,425–5,740	Not expected to occur. The study area is outside of the appropriate elevation range for this species.
Opuntia basilaris var. *brachyclada*	short-joint beavertail	None/None/1B.2	Chaparral, Joshua tree woodland, Mojavean desert scrub, Pinyon and juniper woodland/perennial stem succulent/Apr–June(Aug)/1,390–5,905	High potential to occur. The study area is within the appropriate elevation range, contains suitable vegetation, and there are documented occurrences within 1 mile of the study area (CalFlora 2018; CDFW 2018). In addition, Opuntia species were observed within the project site; however, it was not blooming and therefore could not be properly identified.
Oreonana vestita	woolly mountain-parsley	None/None/1B.3	Lower montane coniferous forest, Subalpine coniferous forest, Upper montane coniferous forest; gravel or talus/perennial herb/Mar–Sep/5,295–11,485	Not expected to occur. The study area is outside of the appropriate elevation range for this species.
Orobanche valida ssp. *valida*	Rock Creek broomrape	None/None/1B.2	Chaparral, Pinyon and juniper woodland; granitic/perennial herb (parasitic)/May–Sep/4,100–6,560	Low potential to occur. While the study area has suitable vegetation to support this species, it is on the low end of the appropriate elevation range, and there are no documented occurrences north of the San Bernardino Mountains (CalFlora 2018; CDFW 2018).
Pediomelum castoreum	Beaver Dam breadroot	None/None/1B.2	Joshua tree woodland, Mojavean desert scrub; Sandy, washes and roadcuts/perennial herb/Apr–May/2,000–5,005	Not expected to occur. While the study area is within the appropriate elevation range, there is no suitable habitat or sandy soils that would support this species. In addition, there is only a historic (1992) documented occurrence within 5 miles of the study area (CalFlora 2018; CDFW 2018).

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Sagittaria sanfordii	Sanford's arrowhead	None/None/1B.2	Marshes and swamps (assorted shallow freshwater)/perennial rhizomatous herb (emergent)/May–Oct(Nov)/0–2,135	Not expected to occur. The study area is outside of the appropriate elevation range for this species, and there is no suitable vegetation present.
Schoenus nigricans	black bog-rush	None/None/2B.2	Marshes and swamps (often alkaline)/perennial herb/Aug–Sep/490–6,560	Not expected to occur. While the study area is within the appropriate elevation range, there is no suitable vegetation that would support this species. In addition, there are no documented occurrences north of the San Bernardino Mountains (CalFlora 2018; CDFW 2018).
Scutellaria bolanderi ssp. *austromontana*	southern mountains skullcap	None/None/1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest; mesic/perennial rhizomatous herb/June–Aug/1,390–6,560	Low potential to occur. The study area is within the appropriate elevation range and contains suitable vegetation that would support this species; however, there are no documented occurrences within 5 miles of the study area (CalFlora 2018; CDFW 2018) and mesic conditions are not present.
Streptanthus campestris	southern jewelflower	None/None/1B.3	Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland; rocky/perennial herb/(Apr)May–July/2,950–7,545	Low potential to occur. The study area is within the appropriate elevation range and contains suitable vegetation that would support this species; however, there are no documented occurrences north of the San Bernardino Mountains (CalFlora 2018).
Symphyotrichum defoliatum	San Bernardino aster	None/None/1B.2	Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Meadows and seeps, Marshes and swamps, Valley and foothill grassland (vernally mesic); near ditches, streams, springs/perennial rhizomatous herb/July–Nov/5–6,695	Low potential to occur. The study area is within the appropriate elevation range and contains marginal habitat that would support this species; however, there are no documented occurrences north of the San Bernardino Mountains (CalFlora 2018; CDFW 2018).
Symphyotrichum greatae	Greata's aster	None/None/1B.3	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Riparian woodland; mesic/perennial rhizomatous herb/June–Oct/980–6,595	Low potential to occur. The study area is within the appropriate elevation range and contains suitable vegetation that would support this species; however, there are no documented occurrences north of the San Bernardino Mountains (CalFlora 2018; CDFW 2018).

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Viola pinetorum ssp. *grisea*	grey-leaved violet	None/None/1B.2	Meadows and seeps, Subalpine coniferous forest, Upper montane coniferous forest/perennial herb/Apr–July/4,920–11,155	Not expected to occur. The study area is outside of the appropriate elevation range for this species and there is no suitable vegetation present.
Viola purpurea ssp. *aurea*	golden violet	None/None/2B.2	Great Basin scrub, Pinyon and juniper woodland; sandy/perennial herb/Apr–June/3,280–8,200	Not expected to occur. While the study area is within the appropriate elevation range, there is no suitable vegetation or sandy soils that would support this species. In addition, there are no documented occurrences north of the San Bernardino Mountains (CalFlora 2018).

Status Legend
Federal
FE: Federally listed as endangered
FT: Federally listed as threatened
State
SE: State listed as endangered
CRPR: California Rare Plant Rank
1A: Plants presumed extirpated in California and either rare or extinct in elsewhere
1B: Plants rare, threatened, or endangered in California and elsewhere
2B: Plants rare, threatened, or endangered in California, but more common elsewhere
Threat Rank
0.1 – Seriously threatened in California (more than 80% of occurrences threatened/high degree and immediacy of threat)
0.2 – Moderately threatened in California (20%–80% occurrences threatened/moderate degree and immediacy of threat)
0.3 – Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

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Attachment F

Special-Status Wildlife Species Detected or Potentially Occurring in the Study Area

ATTACHMENT F
Special-Status Wildlife Species Detected or Potentially Occurring in the Study Area

Row Labels	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Amphibians				
Anaxyrus californicus	arroyo toad	FE/SSC	Semi-arid areas near washes, sandy riverbanks, riparian areas, palm oasis, Joshua tree, mixed chaparral and sagebrush; stream channels for breeding (typically third order); adjacent stream terraces and uplands for foraging and wintering.	Not expected to occur. The study area does not contain persistent aquatic habitat that could support this species.
Rana draytonii	California red-legged frog	FT/SSC	Lowland streams, wetlands, riparian woodlands, livestock ponds; dense, shrubby or emergent vegetation associated with deep, still or slow-moving water; uses adjacent uplands.	Not expected to occur. The study area does not contain suitable aquatic habitat that could support this species.
Rana muscosa	mountain yellow-legged frog	FE/SE, WL	Lakes, ponds, meadow streams, isolated pools, and open riverbanks; rocky canyons in narrow canyons and in chaparral.	Not expected to occur. The study area does not contain suitable aquatic habitat that could support this species.
Spea hammondii	western spadefoot	None/SSC	Primarily grassland and vernal pools, but also in ephemeral wetlands that persist at least 3 weeks in chaparral, coastal scrub, valley–foothill woodlands, pastures, and other agriculture.	Not expected to occur. The study area does not contain suitable aquatic habitat that could support this species.
Reptiles				
Actinemys marmorata	western pond turtle	None/SSC	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter.	Not expected to occur. The study area does not contain suitable aquatic habitat that could support this species.
Anniella stebbinsi	southern California legless lizard	None/SSC	Coastal dunes, stabilized dunes, beaches, dry washes, valley–foothill, chaparral, and scrubs; pine, oak, and riparian woodlands; associated with sparse vegetation and moist sandy or loose, loamy soils.	Not expected to occur. The study area is outside of the known geographic range for this species.
Arizona elegans occidentalis	California glossy snake	None/SSC	Commonly occurs in desert regions throughout southern California. Prefers open sandy areas with scattered brush. Also found in rocky areas.	Not expected to occur. The study area is outside of the known geographic range for this species.
Aspidoscelis tigris stejnegeri	San Diegan tiger whiptail	None/SSC	Hot and dry areas with sparse foliage, including chaparral, woodland, and riparian areas.	Not expected to occur. The study area is outside of the known geographic range for this species.
Charina umbratica	southern rubber boa	None/ST	Montane oak–conifer and mixed-conifer forests, montane chaparral, wet meadows; usually in vicinity of streams or wet meadows.	Not expected to occur. The study area is outside of the known geographic range for this species.
Gopherus agassizii	Mohave Desert tortoise	FT/ST	Arid and semi-arid habitats in Mojave and Sonoran Deserts, including sandy or gravelly locations along riverbanks, washes, sandy dunes, canyon bottoms, desert oases, rocky hillsides, creosote flats, and hillsides.	Low potential to occur. The study area contains marginal habitat, including burrows, that could support this species and there is one historic (2000) documented occurrence within 5 miles of the study area (CDFW 2018).
Phrynosoma blainvillii	Blainville's horned lizard	None/SSC	Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley–foothill hardwood, conifer, riparian, pine–cypress, juniper, and annual grassland habitats.	High potential to occur. The study area contains suitable vegetation to support this species and there are numerous documented occurrences within 5 miles of the study area (CDFW 2018).

Row Labels	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Thamnophis hammondii	two-striped gartersnake	None/SSC	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools.	Not expected to occur. The study area does not contain suitable aquatic habitat that could support this species.
Birds				
*Asio otus (*nesting*)*	long-eared owl	None/SSC	Nests in riparian habitat, live oak thickets, other dense stands of trees, edges of coniferous forest; forages in nearby open habitats.	Not expected to occur. The study area does not contain riparian vegetation that would support this species.
*Athene cunicularia (*burrow sites & some wintering sites)	burrowing owl	BCC/SSC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows.	Low potential to occur. The study area contains suitable burrows for this species, but is fairly dense chaparral with some openings. There is a documented occurrence within 5 miles of the study area (CDFW 2018).
*Empidonax traillii extimus (*nesting*)*	southwestern willow flycatcher	FE/SE	Nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during migration.	Not expected to occur. The study area does not contain riparian vegetation that could support this species.
*Haliaeetus leucocephalus (*nesting & wintering)	bald eagle	FD, BCC/SE, FP	Nests in forested areas adjacent to large bodies of water, including seacoasts, rivers, swamps, large lakes; winters near large bodies of water in lowlands and mountains.	Not expected to occur. The study area does not contain suitable aquatic or forested habitat that could support this species.
Lanius ludovicianus (nesting)	loggerhead shrike	BCC/SSC	Nests and forages in open habitats with scattered shrubs, trees, or other perches.	Moderate potential to nest and forage. The study area contains suitable open habitat with scattered trees and shrubs that could support this species.
Polioptila californica californica	coastal California gnatcatcher	FT/SSC	Nests and forages in various sage scrub communities, often dominated by California sagebrush and buckwheat; generally avoids nesting in areas with a slope of greater than 40%; majority of nesting at less than 1,000 feet above mean sea level.	Not expected to occur. The study area is outside of the known geographic and elevation range for this species.
*Setophaga petechia (*nesting*)*	yellow warbler	BCC/SSC	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats.	Not expected to occur. The study area does not contain riparian vegetation that could support this species.
Toxostoma lecontei	LeConte's thrasher	BCC/SSC	Nests and forages in desert wash, desert scrub, alkali desert scrub, desert succulent, and Joshua tree habitats; nests in spiny shrubs or cactus.	Low potential to forage and nest. The study area contains marginal habitat that would support this species.
*Vireo bellii pusillus (*nesting*)*	least Bell's vireo	FE/SE	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season.	Not expected to occur. The study area does not contain riparian vegetation that could support this species.
*Vireo vicinior (*nesting*)*	gray vireo	BCC/SSC	Nests and forages in pinyon–juniper woodland, oak, and chamise and redshank chaparral.	Low potential to nest and forage. The study area contains suitable oak and chamise vegetation that could support this species; however, there are no documented occurrences within 5 miles of the study area (CDFW 2018).
Fishes				
Rhinichthys osculus ssp. *3*	Santa Ana speckled dace	None/SSC	Headwaters of the Santa Ana and San Gabriel Rivers; may be extirpated from the Los Angeles River system.	Not expected to occur. The study area does not contain suitable aquatic habitat that could support this species.

Row Labels	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Siphateles bicolor mohavensis	Mohave tui chub	FE/SE, FP	Lacustrine ponds or pools; 4 feet min water depth; freshwater flow; mineralized and alkaline environment; habitat for aquatic invertebrate prey and egg attachment substrate; Ruppia maritima preferred for egg attachment and thermal refuge in summer months.	Not expected to occur. The study area does not contain suitable aquatic habitat that could support this species.
Mammals				
Antrozous pallidus	pallid bat	None/SSC	Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees.	Low potential to occur. The study area contains suitable shrubland and man-made structures; however, there are no documented occurrences within 5 miles of the study area (CDFW 2018).
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	None/SSC	Coastal scrub, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon–juniper, and annual grassland.	Low potential to occur. The study area contains suitable chaparral habitat that could support this species; however, there are no documented occurrences of this species north of the San Bernardino Mountains (CDFW 2018).
Chaetodipus fallax pallidus	pallid San Diego pocket mouse	None/SSC	Desert wash, desert scrub, desert succulent scrub, and pinyon–juniper woodland.	Not expected to occur. The study area does not contain suitable vegetation that could support this species.
Dipodomys merriami parvus	San Bernardino kangaroo rat	FE/SSC	Sparse scrub habitat, alluvial scrub/coastal scrub habitats on gravelly and sandy soils near river and stream terraces.	Not expected to occur. The study area does not contain suitable vegetation that could support this species.
Eumops perotis californicus	western mastiff bat	None/SSC	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, trees, and tunnels.	Low potential to forage, not expected to roost. The study area contains suitable chaparral habitat to support the foraging of this species, but contains no vertical cliff faces for roosting. In addition, there are no documented occurrences of this species within 5 miles of the study area (CDFW 2018).
Lasiurus xanthinus	western yellow bat	None/SSC	Valley–foothill riparian, desert riparian, desert wash, and palm oasis habitats; below 2,000 feet above mean sea level; roosts in riparian and palms.	Not expected to occur. The study area does not contain riparian vegetation that could support this species.
Lepus californicus bennettii	San Diego black-tailed jackrabbit	None/SSC	Arid habitats with open ground; grasslands, coastal scrub, agriculture, disturbed areas, and rangelands.	Moderate potential to occur. The study area contains open habitat that could support this species; however, there are no documented occurrences within 5 miles of the study area (CDFW 2018).
Neotoma lepida intermedia	San Diego desert woodrat	None/SSC	Coastal scrub, desert scrub, chaparral, cacti, rocky areas.	Low potential to occur. The study area contains chaparral vegetation that could support this species; however, there are no documented occurrences within 5 miles of the study area (CDFW 2018).
Nyctinomops femorosaccus	pocketed free-tailed bat	None/SSC	Pinyon–juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oases; roosts in high cliffs or rock outcrops with drop-offs, caverns, and buildings.	Low potential to forage, not expected to roost. The study area contains suitable chaparral habtiat to support the foraging of this species, but contains no vertical cliff faces for roosting. In addition, there are no documented occurrences of this species within five miles of the study are (CDFW 2018).
Ovis canadensis nelsoni	Nelson's bighorn sheep	None/FP	Steep slopes and cliffs, rough and rocky topography, sparse vegetation; also canyons, washes, and alluvial fans.	Not expected to occur. The study area does not contain suitable habitat to support this species.
Perognathus longimembris brevinasus	Los Angeles pocket mouse	None/SSC	Lower-elevation grassland, alluvial sage scrub, and coastal scrub.	Not expected to occur. The study area does not contain suitable habitat to support this species.

Row Labels	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Spermophilus (Xerospermophilus) mohavensis	Mohave ground squirrel	None/ST	Desert scrub habitats including those dominated by creosote bush and burrobush, desert sink scrub, and desert saltbush scrub.	Not expected to occur. The study area does not contain desert sink or desert saltbush scrub that could support this species. In addition, there are no documented occurrences within 5 miles of the study area (CDFW 2018).
Taxidea taxus	American badger	None/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils.	Not expected to occur. The study area does not contain suitable habitat to support this species.

Status Legend
Federal
BCC: USFWS—Birds of Conservation Concern
FD: Federally delisted; monitored for 5 years
FE: Federally listed as endangered
FT: Federally listed as threatened
State
FP: CDFW Fully Protected Species
SE: State listed as endangered
ST: State listed as threatened
SSC: California Species of Special Concern
WL: CDFW Watch List Species

ATTACHMENT B

CNPS Search Results

ScientificName	CommonName	Family	Lifeform	CRPR	GRank	SRank	CESA	FESA	BloomingPeriod
Acanthoscyphus parishii var. parishii	Parish's oxytheca	Polygonaceae	annual herb	4.2	G4?T3T4	S3S4	None	None	Jun-Sep
Ambrosia monogyra	singlewhorl burrobrush	Asteraceae	perennial shrub	2B.2	G5	S2	None	None	Aug-Nov
Androsace elongata ssp. acuta	California androsace	Primulaceae	annual herb	4.2	G5?T3T4	S3S4	None	None	Mar-Jun
Arctostaphylos glandulosa ssp. gabrielensis	San Gabriel manzanita	Ericaceae	perennial evergreen shrub	1B.2	G5T3	S3	None	None	Mar
Arenaria paludicola	marsh sandwort	Caryophyllaceae	perennial stoloniferous herb	1B.1	G1	S1	CE	FE	May-Aug
Asclepias nyctaginifolia	Mojave milkweed	Apocynaceae	perennial herb	2B.1	G4?	S2	None	None	May-Jun
Asplenium vespertinum	western spleenwort	Aspleniaceae	perennial rhizomatous herb	4.2	G4	S4	None	None	Feb-Jun
Astragalus bicristatus	crested milk-vetch	Fabaceae	perennial herb	4.3	G3	S3	None	None	May-Aug
Astragalus lentiginosus var. antonius	San Antonio milk-vetch	Fabaceae	perennial herb	1B.3	G5T2	S2	None	None	Apr-Jul
Azolla microphylla	Mexican mosquito fern	Azollaceae	annual/perennial herb	4.2	G5	S4	None	None	Aug
Berberis nevinii	Nevin's barberry	Berberidaceae	perennial evergreen shrub	1B.1	G1	S1	CE	FE	(Feb)Mar-Jun
Botrychium ascendens	upswept moonwort	Ophioglossaceae	perennial rhizomatous herb	2B.3	G3G4	S2	None	None	(Jun)Jul-Aug
Botrychium crenulatum	scalloped moonwort	Ophioglossaceae	perennial rhizomatous herb	2B.2	G4	S3	None	None	Jun-Sep
Brodiaea filifolia	thread-leaved brodiaea	Themidaceae	perennial bulbiferous herb	1B.1	G2	S2	CE	FT	Mar-Jun
Calochortus catalinae	Catalina mariposa lily	Liliaceae	perennial bulbiferous herb	4.2	G3G4	S3S4	None	None	(Feb)Mar-Jun
Calochortus palmeri var. palmeri	Palmer's mariposa lily	Liliaceae	perennial bulbiferous herb	1B.2	G3T2	S2	None	None	Apr-Jul
Calochortus plummerae	Plummer's mariposa lily	Liliaceae	perennial bulbiferous herb	4.2	G4	S4	None	None	May-Jul
Calochortus simulans	La Panza mariposa-lily	Liliaceae	perennial bulbiferous herb	1B.3	G2	S2	None	None	Apr-Jun
Calochortus weedii var. intermedius	intermediate mariposa lily	Liliaceae	perennial bulbiferous herb	1B.2	G3G4T2	S3	None	None	May-Jul
Canbya candida	white pygmy-poppy	Papaveraceae	annual herb	4.2	G3G4	S3S4	None	None	Mar-Jun
Castilleja lasiorhyncha	San Bernardino Mountains owl's-clover	Orobanchaceae	annual herb (hemiparasitic)	1B.2	G2?	S2?	None	None	May-Aug
Castilleja plagiotoma	Mojave paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	4.3	G4	S4	None	None	Apr-Jun
Centromadia pungens ssp. laevis	smooth tarplant	Asteraceae	annual herb	1B.1	G3G4T2	S2	None	None	Apr-Sep
Chloropyron maritimum ssp. maritimum	salt marsh bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	1B.2	G4?T1	S1	CE	FE	May-Oct(Nov)
Chorizanthe parryi var. parryi	Parry's spineflower	Polygonaceae	annual herb	1B.1	G3T2	S2	None	None	Apr-Jun
Chorizanthe spinosa	Mojave spineflower	Polygonaceae	annual herb	4.2	G4	S4	None	None	Mar-Jul
Chorizanthe xanti var. leucotheca	white-bracted spineflower	Polygonaceae	annual herb	1B.2	G4T3	S3	None	None	Apr-Jun
Claytonia peirsonii ssp. peirsonii	Peirson's spring beauty	Montiaceae	perennial herb	1B.2	G2G3T2	S2	None	None	(Mar)May-Jun
Cryptantha incana	Tulare cryptantha	Boraginaceae	annual herb	1B.3	G2	S2	None	None	Jun-Aug
Deinandra mohavensis	Mojave tarplant	Asteraceae	annual herb	1B.3	G2	S3	CE	None	(Jan-May)Jun-Oct
Diplacus johnstonii	Johnston's monkeyflower	Phrymaceae	annual herb	4.3	G4	S4	None	None	May-Aug
Dodecahema leptoceras	slender-horned spineflower	Polygonaceae	annual herb	1B.1	G1	S1	CE	FE	Apr-Jun
Eremothera boothii ssp. boothii	Booth's evening-primrose	Onagraceae	annual herb	2B.3	G5T4	S3	None	None	Apr-Sep

ScientificName	CommonName	Family	Lifeform	CRPR	GRank	SRank	CESA	FESA	BloomingPeriod
Eriastrum densifolium ssp. sanctorum	Santa Ana River woollystar	Polemoniaceae	perennial herb	1B.1	G4T1	S1	CE	FE	Apr-Sep
Erigeron breweri var. jacinteus	San Jacinto Mountains daisy	Asteraceae	perennial rhizomatous herb	4.3	G5T3	S3	None	None	Jun-Sep
Eriogonum microthecum var. alpinum	alpine slender buckwheat	Polygonaceae	perennial herb	4.3	G5T3	S3	None	None	Jul-Sep
Eriogonum microthecum var. johnstonii	Johnston's buckwheat	Polygonaceae	perennial deciduous shrub	1B.3	G5T2	S2	None	None	Jul-Sep
Eriogonum umbellatum var. minus	alpine sulfur-flowered buckwheat	Polygonaceae	perennial herb	4.3	G5T4	S4	None	None	Jun-Sep
Eriophyllum lanatum var. obovatum	southern Sierra woolly sunflower	Asteraceae	perennial herb	4.3	G5T4	S4	None	None	Jun-Jul
Fimbristylis thermalis	hot springs fimbristylis	Cyperaceae	perennial rhizomatous herb	2B.2	G4	S1S2	None	None	Jul-Sep
Frasera neglecta	pine green-gentian	Gentianaceae	perennial herb	4.3	G4	S4	None	None	May-Jul
Fritillaria pinetorum	pine fritillary	Liliaceae	perennial bulbiferous herb	4.3	G4	S4	None	None	May-Jul(Sep)
Galium angustifolium ssp. gabrielense	San Antonio Canyon bedstraw	Rubiaceae	perennial herb	4.3	G5T3	S3	None	None	Apr-Aug
Galium jepsonii	Jepson's bedstraw	Rubiaceae	perennial rhizomatous herb	4.3	G3	S3	None	None	Jul-Aug
Galium johnstonii	Johnston's bedstraw	Rubiaceae	perennial herb	4.3	G4	S4	None	None	Jun-Jul
Heuchera caespitosa	urn-flowered alumroot	Saxifragaceae	perennial rhizomatous herb	4.3	G3	S3	None	None	May-Aug
Heuchera parishii	Parish's alumroot	Saxifragaceae	perennial rhizomatous herb	1B.3	G3	S3	None	None	Jun-Aug
Horkelia cuneata var. puberula	mesa horkelia	Rosaceae	perennial herb	1B.1	G4T1	S1	None	None	Feb-Jul(Sep)
Hulsea vestita ssp. gabrielensis	San Gabriel Mountains sunflower	Asteraceae	perennial herb	4.3	G5T3	S3	None	None	May-Jul
Imperata brevifolia	California satintail	Poaceae	perennial rhizomatous herb	2B.1	G4	S3	None	None	Sep-May
Johnstonella costata	ribbed cryptantha	Boraginaceae	annual herb	4.3	G4G5	S4	None	None	Feb-May
Juglans californica	Southern California black walnut	Juglandaceae	perennial deciduous tree	4.2	G4	S4	None	None	Mar-Aug
Juncus duranii	Duran's rush	Juncaceae	perennial rhizomatous herb	4.3	G3	S3	None	None	Jul-Aug
Lepechinia fragrans	fragrant pitcher sage	Lamiaceae	perennial shrub	4.2	G3	S3	None	None	Mar-Oct
Lilium humboldtii ssp. ocellatum	ocellated Humboldt lily	Liliaceae	perennial bulbiferous herb	4.2	G4T4?	S4?	None	None	Mar-Jul(Aug)
Lilium parryi	lemon lily	Liliaceae	perennial bulbiferous herb	1B.2	G3	S3	None	None	Jul-Aug
Linanthus concinnus	San Gabriel linanthus	Polemoniaceae	annual herb	1B.2	G2	S2	None	None	Apr-Jul
Loeflingia squarrosa var. artemisiarum	sagebrush loeflingia	Caryophyllaceae	annual herb	2B.2	G5T3	S2	None	None	Apr-May
Lycium parishii	Parish's desert-thorn	Solanaceae	perennial shrub	2B.3	G4	S1	None	None	Mar-Apr
Monardella australis ssp. jokerstii	Jokerst's monardella	Lamiaceae	perennial rhizomatous herb	1B.1	G4T1?	S1?	None	None	Jul-Sep
Monardella saxicola	rock monardella	Lamiaceae	perennial rhizomatous herb	4.2	G3	S3	None	None	Jun-Sep
Muhlenbergia californica	California muhly	Poaceae	perennial rhizomatous herb	4.3	G4	S4	None	None	Jun-Sep
Muilla coronata	crowned muilla	Themidaceae	perennial bulbiferous herb	4.2	G3	S3	None	None	Mar-Apr(May)
Opuntia basilaris var. brachyclada	short-joint beavertail	Cactaceae	perennial stem	1B.2	G5T3	S3	None	None	Apr-Jun(Aug)
Oreonana vestita	woolly mountain-parsley	Apiaceae	perennial herb	1B.3	G3	S3	None	None	Mar-Sep
Orobanche valida ssp. valida	Rock Creek broomrape	Orobanchaceae	perennial herb (parasitic)	1B.2	G4T2	S2	None	None	May-Sep

ScientificName	CommonName	Family	Lifeform	CRPR	GRank	SRank	CESA	FESA	BloomingPeriod
Pediomelum castoreum	Beaver Dam breadroot	Fabaceae	perennial herb	1B.2	G3	S2	None	None	Apr-May
Pentachaeta aurea ssp. aurea	golden-rayed pentachaeta	Asteraceae	annual herb	4.2	G4T3	S3	None	None	Mar-Jul
Phacelia mohavensis	Mojave phacelia	Hydrophyllaceae	annual herb	4.3	G4Q	S4	None	None	Apr-Aug
Quercus durata var. gabrielensis	San Gabriel oak	Fagaceae	perennial evergreen shrub	4.2	G4T3	S3	None	None	Apr-May
Romneya coulteri	Coulter's matilija poppy	Papaveraceae	perennial rhizomatous herb	4.2	G4	S4	None	None	Mar-Jul(Aug)
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (em	1B.2	G3	S3	None	None	May-Oct(Nov)
Saltugilia latimeri	Latimer's woodland-gilia	Polemoniaceae	annual herb	1B.2	G3	S3	None	None	Mar-Jun
Schoenus nigricans	black bog-rush	Cyperaceae	perennial herb	2B.2	G4	S2	None	None	Aug-Sep
Scutellaria bolanderi ssp. austromontana	southern mountains skullcap	Lamiaceae	perennial rhizomatous herb	1B.2	G4T3	S3	None	None	Jun-Aug
Selaginella asprella	bluish spike-moss	Selaginellaceae	perennial rhizomatous herb	4.3	G4	S4	None	None	Jul
Senecio astephanus	San Gabriel ragwort	Asteraceae	perennial herb	4.3	G3	S3	None	None	May-Jul
Sidotheca caryophylloides	chickweed oxytheca	Polygonaceae	annual herb	4.3	G4	S4	None	None	Jul-Sep(Oct)
Streptanthus bernardinus	Laguna Mountains jewelflower	Brassicaceae	perennial herb	4.3	G3G4	S3S4	None	None	May-Aug
Streptanthus campestris	southern jewelflower	Brassicaceae	perennial herb	1B.3	G3	S3	None	None	(Apr)May-Jul
Symphyotrichum defoliatum	San Bernardino aster	Asteraceae	perennial rhizomatous herb	1B.2	G2	S2	None	None	Jul-Nov
Symphyotrichum greatae	Greata's aster	Asteraceae	perennial rhizomatous herb	1B.3	G2	S2	None	None	Jun-Oct
Syntrichopappus lemmonii	Lemmon's syntrichopappus	Asteraceae	annual herb	4.3	G4	S4	None	None	Apr-May(Jun)
Viola pinetorum ssp. grisea	grey-leaved violet	Violaceae	perennial herb	1B.2	G4G5T3	S3	None	None	Apr-Jul

ATTACHMENT C

CNDDB Summary Table

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Query Criteria: Quad IS (Cajon (3411734) OR Phelan (3411745) OR Baldy Mesa (3411744) OR Hesperia (3411743) OR Silverwood Lake (3411733) OR San Bernardino North (3411723) OR Devore (3411724) OR Telegraph Peak (3411735) OR Cucamonga Peak (3411725))

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Accipiter cooperii Cooper's hawk	G5 S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	3,361 3,361	118 S:1	0	0	0	0	0	1	1	0	1	0	0
Aimophila ruficeps canescens southern California rufous-crowned sparrow	G5T3 S3	None None	CDFW_WL-Watch List	2,056 2,056	235 S:1	0	1	0	0	0	0	0	1	1	0	0
Ambrosia monogyra singlewhorl burrobrush	G5 S2	None None	Rare Plant Rank - 2B.2	1,550 1,550	30 S:1	0	0	0	0	0	1	1	0	1	0	0
Anaxyrus californicus arroyo toad	G2G3 S2S3	Endangered None	CDFW_SSC-Species of Special Concern IUCN_EN-Endangered	2,530 3,590	139 S:12	5	2	0	0	0	5	3	9	12	0	0
Anniella stebbinsi Southern California legless lizard	G3 S3	None None	CDFW_SSC-Species of Special Concern USFS_S-Sensitive	1,253 2,862	426 S:19	0	9	3	3	1	3	6	13	18	1	0
Antrozous pallidus pallid bat	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	2,820 2,820	420 S:1	0	0	0	0	0	1	0	1	1	0	0
Arctostaphylos glandulosa ssp. gabrielensis San Gabriel manzanita	G5T3 S3	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	5,760 5,760	35 S:1	0	0	0	0	0	1	1	0	1	0	0
Arenaria paludicola marsh sandwort	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_SBBG-Santa Barbara Botanic Garden	1,000 1,000	19 S:1	0	0	0	0	1	0	1	0	0	0	1
Arizona elegans occidentalis California glossy snake	G5T2 S2	None None	CDFW_SSC-Species of Special Concern	1,093 2,737	260 S:10	0	0	0	0	0	10	5	5	10	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Artemisiospiza belli belli Bell's sage sparrow	G5T2T3 S3	None None	CDFW_WL-Watch List USFWS_BCC-Birds of Conservation Concern	920 2,782	61 S:2	0	0	0	0	1	1	1	1	1	1	0
Asclepias nyctaginifolia Mojave milkweed	G4? S2	None None	Rare Plant Rank - 2B.1		67 S:1	0	0	0	0	0	1	1	0	1	0	0
Asio otus long-eared owl	G5 S3?	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	3,220 3,880	56 S:2	0	0	0	0	0	2	2	0	2	0	0
Aspidoscelis hyperythra orange-throated whiptail	G5 S2S3	None None	CDFW_WL-Watch List IUCN_LC-Least Concern USFS_S-Sensitive	1,520 1,520	369 S:1	0	0	0	1	0	0	0	1	0	1	0
Aspidoscelis tigris stejnegeri coastal whiptail	G5T5 S3	None None	CDFW_SSC-Species of Special Concern	1,650 2,767	148 S:3	0	1	1	0	0	1	0	3	3	0	0
Astragalus lentiginosus var. antonius San Antonio milk-vetch	G5T2 S2	None None	Rare Plant Rank - 1B.3 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_USDA-US Dept of Agriculture USFS_S-Sensitive	5,000 6,200	12 S:3	0	1	0	0	0	2	1	2	3	0	0
Athene cunicularia burrowing owl	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	1,407 3,700	2011 S:18	2	11	2	2	0	1	1	17	18	0	0
Batrachoseps gabrieli San Gabriel slender salamander	G2G3 S2S3	None None	IUCN_DD-Data Deficient USFS_S-Sensitive	3,200 4,200	8 S:3	0	0	0	0	0	3	3	0	3	0	0
Berberis nevinii Nevin's barberry	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_SBBG-Santa Barbara Botanic Garden	5,200 5,200	32 S:1	0	0	0	0	1	0	1	0	0	0	1

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Bombus crotchii Crotch bumble bee	G3G4 S1S2	None None		1,600 6,000	437 S:8	0	0	0	0	0	8	8	0	8	0	0
Botrychium ascendens upswept moonwort	G3G4 S2	None None	Rare Plant Rank - 2B.3 USFS_S-Sensitive	7,000 7,000	53 S:1	0	0	0	0	0	1	1	0	1	0	0
Botrychium crenulatum scalloped moonwort	G4 S3	None None	Rare Plant Rank - 2B.2 USFS_S-Sensitive	7,000 7,000	155 S:1	0	0	0	0	0	1	1	0	1	0	0
Brodiaea filifolia thread-leaved brodiaea	G2 S2	Threatened Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_CRES-San Diego Zoo CRES Native Gene Seed Bank	1,900 1,900	141 S:2	0	0	1	0	0	1	1	1	2	0	0
California Walnut Woodland California Walnut Woodland	G2 S2.1	None None		2,200 2,200	76 S:1	0	0	0	0	0	1	1	0	1	0	0
Calochortus palmeri var. palmeri Palmer's mariposa-lily	G3T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_SBBG-Santa Barbara Botanic Garden USFS_S-Sensitive	1,700 3,800	111 S:5	0	0	0	0	0	5	3	2	5	0	0
Calochortus plummerae Plummer's mariposa-lily	G4 S4	None None	Rare Plant Rank - 4.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	1,480 5,900	230 S:43	1	9	4	2	2	25	14	29	41	1	1
Calochortus weedii var. intermedius intermediate mariposa-lily	G3G4T2 S3	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	1,752 1,960	197 S:3	1	0	0	0	0	2	0	3	3	0	0

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Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Canbya candida white pygmy-poppy	G3G4 S3S4	None None	Rare Plant Rank - 4.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	3,000 3,900	30 S:5	0	0	0	0	0	5	5	0	5	0	0
Castilleja lasiorhyncha San Bernardino Mountains owl's-clover	G2? S2?	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	3,750 3,750	46 S:2	0	0	1	0	0	1	2	0	2	0	0
Centromadia pungens ssp. laevis smooth tarplant	G3G4T2 S2	None None	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	1,300 1,300	137 S:1	0	0	1	0	0	0	1	0	1	0	0
Chaetodipus fallax fallax northwestern San Diego pocket mouse	G5T3T4 S3S4	None None	CDFW_SSC-Species of Special Concern	1,200 2,000	101 S:10	0	4	2	0	2	2	6	4	8	2	0
Chaetodipus fallax pallidus pallid San Diego pocket mouse	G5T3T4 S3S4	None None	CDFW_SSC-Species of Special Concern	2,100 2,100	79 S:1	0	0	0	0	0	1	1	0	1	0	0
Charina umbratica southern rubber boa	G2G3 S2S3	None Threatened	USFS_S-Sensitive	5,000 5,600	74 S:2	0	0	0	0	0	2	2	0	2	0	0
Chloropyron maritimum ssp. maritimum salt marsh bird's-beak	G4?T1 S1	Endangered Endangered	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_CRES-San Diego Zoo CRES Native Gene Seed Bank SB_SBBG-Santa Barbara Botanic Garden	1,000 1,000	30 S:1	0	0	0	0	1	0	1	0	0	1	0
Chorizanthe parryi var. parryi Parry's spineflower	G3T2 S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	1,400 2,100	150 S:15	0	3	1	1	0	10	4	11	15	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Chorizanthe xanti var. leucotheca white-bracted spineflower	G4T3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_USDA-US Dept of Agriculture USFS_S-Sensitive	2,100 5,500	59 S:9	2	0	0	0	0	7	3	6	9	0	0
Claytonia peirsonii ssp. peirsonii Peirson's spring beauty	G2G3T2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	7,850 8,380	9 S:5	0	5	0	0	0	0	1	4	5	0	0
Coastal and Valley Freshwater Marsh Coastal and Valley Freshwater Marsh	G3 S2.1	None None		2,480 2,480	60 S:1	0	0	0	0	0	1	1	0	1	0	0
Deinandra mohavensis Mojave tarplant	G2 S3	None Endangered	Rare Plant Rank - 1B.3 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	3,100 3,189	84 S:2	0	0	0	0	0	2	0	2	2	0	0
Diadophis punctatus modestus San Bernardino ringneck snake	G5T2T3 S2?	None None	USFS_S-Sensitive	3,137 4,797	14 S:4	3	1	0	0	0	0	0	4	4	0	0
Dipodomys merriami parvus San Bernardino kangaroo rat	G5T1 S1	Endangered Candidate Endangered	CDFW_SSC-Species of Special Concern	1,174 2,226	81 S:39	0	4	6	0	6	23	13	26	33	6	0
Dodecahema leptoceras slender-horned spineflower	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	2,040 2,400	41 S:5	0	0	0	0	3	2	4	1	2	2	1
Empidonax traillii extimus southwestern willow flycatcher	G5T2 S1	Endangered Endangered	NABCI_RWL-Red Watch List	2,680 2,770	70 S:3	3	0	0	0	0	0	0	3	3	0	0
Emys marmorata western pond turtle	G3G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_S-Sensitive	3,124 3,135	1398 S:2	1	1	0	0	0	0	0	2	2	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Eremophila alpestris actia California horned lark	G5T4Q S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	1,546 1,546	94 S:1	0	0	0	1	0	0	0	1	1	0	0
Eremothera boothii ssp. boothii Booth's evening-primrose	G5T4 S3	None None	Rare Plant Rank - 2B.3	2,800 2,880	35 S:2	0	0	0	0	0	2	2	0	2	0	0
Eriastrum densifolium ssp. sanctorum Santa Ana River woollystar	G4T1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	1,300 2,000	31 S:6	2	1	1	0	2	0	2	4	4	1	1
Eriogonum microthecum var. johnstonii Johnston's buckwheat	G5T2 S2	None None	Rare Plant Rank - 1B.3 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	8,600 8,700	7 S:2	1	0	0	0	0	1	1	1	2	0	0
Euchloe hyantis andrewsi Andrew's marble butterfly	G3G4T1 S1	None None		4,800 5,000	6 S:2	0	0	0	0	0	2	2	0	2	0	0
Eumops perotis californicus western mastiff bat	G4G5T4 S3S4	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern WBWG_H-High Priority	1,520 1,520	296 S:1	0	0	0	1	0	0	1	0	1	0	0
Euphydryas editha quino quino checkerspot butterfly	G5T1T2 S1S2	Endangered None		5,000 5,000	152 S:1	0	0	0	0	1	0	1	0	0	0	1
Falco columbarius merlin	G5 S3S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	1,713 1,713	37 S:1	1	0	0	0	0	0	0	1	1	0	0
Fimbristylis thermalis hot springs fimbristylis	G4 S1S2	None None	Rare Plant Rank - 2B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	1,900 1,900	19 S:1	0	0	0	1	0	0	0	1	1	0	0
Glaucomys oregonensis californicus San Bernardino flying squirrel	G5T1T2 S1S2	None None	CDFW_SSC-Species of Special Concern USFS_S-Sensitive	4,600 5,150	12 S:4	0	1	1	0	0	2	2	2	4	0	0
Gopherus agassizii desert tortoise	G3 S2S3	Threatened Threatened	IUCN_VU-Vulnerable	3,700 3,700	985 S:1	0	1	0	0	0	0	1	0	1	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Haliaeetus leucocephalus bald eagle	G5 S3	Delisted Endangered	BLM_S-Sensitive CDF_S-Sensitive CDFW_FP-Fully Protected IUCN_LC-Least Concern USFS_S-Sensitive USFWS_BCC-Birds of Conservation Concern	3,120 5,150	329 S:3	0	1	0	0	0	2	2	1	3	0	0
Helianthus nuttallii ssp. parishii Los Angeles sunflower	G5TX SX	None None	Rare Plant Rank - 1A	5,000 5,000	7 S:1	0	0	0	0	0	1	1	0	1	0	0
Helminthoglypta taylori westfork shoulderband	G1 S1	None None		3,034 3,377	6 S:6	0	0	0	0	1	5	2	4	5	0	1
Heuchera parishii Parish's alumroot	G3 S3	None None	Rare Plant Rank - 1B.3 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	5,100 5,100	70 S:1	0	1	0	0	0	0	0	1	1	0	0
Horkelia cuneata var. puberula mesa horkelia	G4T1 S1	None None	Rare Plant Rank - 1B.1 USFS_S-Sensitive	1,350 1,400	103 S:3	0	0	0	0	1	2	3	0	2	1	0
Imperata brevifolia California satintail	G4 S3	None None	Rare Plant Rank - 2B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_SBBG-Santa Barbara Botanic Garden USFS_S-Sensitive	1,950 1,950	32 S:1	0	0	0	0	0	1	1	0	1	0	0
Juniperella mirabilis juniper metallic wood-boring beetle	G1 S1	None None		4,300 4,300	2 S:1	0	0	0	0	0	1	0	1	1	0	0
Lanius ludovicianus loggerhead shrike	G4 S4	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	3,424 3,424	110 S:1	0	0	1	0	0	0	0	1	1	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Lasiurus xanthinus western yellow bat	G4G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern WBWG_H-High Priority	1,400 1,400	58 S:2	0	0	0	0	0	2	2	0	2	0	0
Lepus californicus bennettii San Diego black-tailed jackrabbit	G5T3T4 S3S4	None None	CDFW_SSC-Species of Special Concern	1,285 1,880	103 S:3	1	0	1	0	1	0	1	2	2	1	0
Lilium parryi lemon lily	G3 S3	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	2,750 7,150	160 S:6	0	1	0	0	0	5	5	1	6	0	0
Linanthus concinnus San Gabriel linanthus	G2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	5,700 8,400	43 S:9	0	2	0	0	0	7	2	7	9	0	0
Loeflingia squarrosa var. artemisiarum sagebrush loeflingia	G5T3 S2	None None	Rare Plant Rank - 2B.2 BLM_S-Sensitive	3,300 3,300	26 S:1	0	0	1	0	0	0	0	1	1	0	0
Lycium parishii Parish's desert-thorn	G4 S1	None None	Rare Plant Rank - 2B.3		21 S:1	0	0	0	0	1	0	1	0	0	0	1
Malacothamnus parishii Parish's bush-mallow	GXQ SX	None None	Rare Plant Rank - 1A	1,250 1,250	1 S:1	0	0	0	0	1	0	1	0	0	1	0
Monardella australis ssp. jokerstii Jokerst's monardella	G4T1? S1?	None None	Rare Plant Rank - 1B.1 USFS_S-Sensitive	4,450 5,700	3 S:2	0	0	0	0	0	2	1	1	2	0	0
Muhlenbergia californica California muhly	G4 S4	None None	Rare Plant Rank - 4.3	7,000 7,000	5 S:1	0	0	0	0	0	1	1	0	1	0	0
Neolarra alba white cuckoo bee	GH SH	None None		1,800 1,800	8 S:1	0	0	0	0	0	1	1	0	1	0	0
Neotamias speciosus speciosus lodgepole chipmunk	G4T3T4 S2S3	None None		4,920 4,920	24 S:1	0	0	0	0	0	1	1	0	1	0	0
Neotoma lepida intermedia San Diego desert woodrat	G5T3T4 S3S4	None None	CDFW_SSC-Species of Special Concern	1,396 1,800	132 S:5	0	2	0	1	2	0	3	2	3	2	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Nyctinomops femorosaccus pocketed free-tailed bat	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern WBWG_M-Medium Priority	1,200 1,200	90 S:1	0	0	0	0	0	1	1	0	1	0	0
Opuntia basilaris var. brachyclada short-joint beavertail	G5T3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	2,500 6,300	199 S:73	3	10	10	1	0	49	19	54	73	0	0
Oreonana vestita woolly mountain-parsley	G3 S3	None None	Rare Plant Rank - 1B.3 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	2,630 8,960	55 S:11	1	2	0	0	0	8	7	4	11	0	0
Orobanche valida ssp. valida Rock Creek broomrape	G4T2 S2	None None	Rare Plant Rank - 1B.2 USFS_S-Sensitive	5,700 6,300	12 S:2	0	1	0	0	0	1	1	1	2	0	0
Ovis canadensis nelsoni desert bighorn sheep	G4T4 S3	None None	BLM_S-Sensitive CDFW_FP-Fully Protected USFS_S-Sensitive		46 S:1	0	0	0	0	0	1	1	0	1	0	0
Palaeoxenus dohrni Dohrn's elegant eucnemid beetle	G3? S3?	None None		4,000 4,000	3 S:1	0	0	0	0	0	1	0	1	1	0	0
Pandion haliaetus osprey	G5 S4	None None	CDF_S-Sensitive CDFW_WL-Watch List IUCN_LC-Least Concern	3,396 3,396	504 S:1	0	0	0	0	0	1	0	1	1	0	0
Pediomelum castoreum Beaver Dam breadroot	G3 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	3,310 3,310	26 S:1	0	0	0	0	0	1	1	0	1	0	0
Perognathus longimembris brevinasus Los Angeles pocket mouse	G5T2 S1S2	None None	CDFW_SSC-Species of Special Concern	1,293 2,000	70 S:7	0	3	2	1	0	1	3	4	7	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Phrynosoma blainvillii coast horned lizard	G3G4 S3S4	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	1,275 5,290	784 S:31	2	5	2	2	3	17	27	4	28	0	3
Plebejus saepiolus aureolus San Gabriel Mountains blue butterfly	G5T1 S1	None None	USFS_S-Sensitive	6,000 6,000	2 S:1	0	0	0	0	0	1	1	0	1	0	0
Polioptila californica californica coastal California gnatcatcher	G4G5T3Q S2	Threatened None	CDFW_SSC-Species of Special Concern NABCI_YWL-Yellow Watch List	1,300 2,250	1087 S:12	1	1	0	0	6	4	11	1	6	4	2
Rana draytonii California red-legged frog	G2G3 S2S3	Threatened None	CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable	3,120 3,120	1664 S:1	0	0	0	0	0	1	1	0	1	0	0
Rana muscosa southern mountain yellow-legged frog	G1 S1	Endangered Endangered	CDFW_WL-Watch List IUCN_EN-Endangered USFS_S-Sensitive	2,200 3,500	186 S:7	0	0	0	0	7	0	7	0	0	5	2
Rhinichthys osculus ssp. 8 Santa Ana speckled dace	G5T1 S1	None None	AFS_TH-Threatened CDFW_SSC-Species of Special Concern USFS_S-Sensitive	2,500 2,780	13 S:2	0	0	2	0	0	0	2	0	2	0	0
Riversidian Alluvial Fan Sage Scrub Riversidian Alluvial Fan Sage Scrub	G1 S1.1	None None		1,300 2,080	30 S:7	0	2	0	0	1	4	7	0	6	0	1
Sagittaria sanfordii Sanford's arrowhead	G3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	1,656 1,656	126 S:1	0	0	0	0	0	1	0	1	1	0	0
Schoenus nigricans black bog-rush	G4 S2	None None	Rare Plant Rank - 2B.2 IUCN_LC-Least Concern USFS_S-Sensitive	1,950 5,000	13 S:6	0	0	0	0	0	6	3	3	6	0	0
Scutellaria bolanderi ssp. austromontana southern mountains skullcap	G4T3 S3	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	3,140 3,140	43 S:1	0	0	0	0	0	1	0	1	1	0	0
Setophaga petechia yellow warbler	G5 S3S4	None None	CDFW_SSC-Species of Special Concern USFWS_BCC-Birds of Conservation Concern	1,990 3,660	78 S:2	0	0	1	0	0	1	1	1	2	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Siphateles bicolor mohavensis Mohave tui chub	G4T1 S1	Endangered Endangered	AFS_EN-Endangered CDFW_FP-Fully Protected	2,700 3,400	24 S:4	0	0	0	0	4	0	4	0	0	2	2
Southern Riparian Forest Southern Riparian Forest	G4 S4	None None		2,360 2,360	20 S:1	0	0	0	0	0	1	1	0	1	0	0
Southern Sycamore Alder Riparian Woodland Southern Sycamore Alder Riparian Woodland	G4 S4	None None		2,240 3,840	230 S:7	0	0	0	0	0	7	7	0	7	0	0
Spea hammondii western spadefoot	G2G3 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened	1,402 2,209	1422 S:6	0	1	0	0	0	5	0	6	6	0	0
Streptanthus bernardinus Laguna Mountains jewelflower	G3G4 S3S4	None None	Rare Plant Rank - 4.3 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	5,400 6,000	22 S:2	1	1	0	0	0	0	2	0	2	0	0
Streptanthus campestris southern jewelflower	G3 S3	None None	Rare Plant Rank - 1B.3 BLM_S-Sensitive USFS_S-Sensitive	4,489 4,489	73 S:1	0	0	0	1	0	0	0	1	1	0	0
Symphyotrichum defoliatum San Bernardino aster	G2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_CRES-San Diego Zoo CRES Native Gene Seed Bank USFS_S-Sensitive	3,400 3,400	102 S:2	0	0	0	0	0	2	2	0	2	0	0
Symphyotrichum greatae Greata's aster	G2 S2	None None	Rare Plant Rank - 1B.3 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	3,440 3,440	56 S:1	0	0	0	0	0	1	1	0	1	0	0
Taxidea taxus American badger	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	3,301 3,301	594 S:1	0	0	0	0	0	1	1	0	1	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Thamnophis hammondii two-striped gartersnake	G4 S3S4	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive	1,352 3,498	184 S:7	2	2	1	0	0	2	2	5	7	0	0
Toxostoma lecontei Le Conte's thrasher	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	3,200 4,100	238 S:2	0	0	0	0	0	2	2	0	2	0	0
Viola pinetorum ssp. grisea grey-leaved violet	G4G5T3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	8,500 8,500	90 S:1	1	0	0	0	0	0	0	1	1	0	0
Vireo bellii pusillus least Bell's vireo	G5T2 S2	Endangered Endangered	IUCN_NT-Near Threatened NABCI_YWL-Yellow Watch List	1,750 2,680	503 S:5	0	2	2	0	0	1	2	3	5	0	0
Vireo vicinior gray vireo	G5 S2	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern NABCI_YWL-Yellow Watch List USFS_S-Sensitive USFWS_BCC-Birds of Conservation Concern	3,200 3,260	28 S:2	0	0	0	0	0	2	2	0	2	0	0
Xerospermophilus mohavensis Mohave ground squirrel	G2G3 S2S3	None Threatened	BLM_S-Sensitive IUCN_VU-Vulnerable	3,180 3,460	432 S:3	0	1	0	0	2	0	2	1	1	1	1

ATTACHMENT D

Plant Species Observed

SCIENTIFIC NAME	COMMON NAME
Acmispon glaber	deerweed
Adenostoma fasciculatum	chamise
Ambrosia acanthicarpa	annual bursage
Amsinckia sp.	fiddleneck
Arctostaphylos sp.	manzanita
Ceanothus leucodermis	chaparral whitethorn
Cylindropuntia californica	California cholla
Ericameria nauseosa	rabbitbrush
Eriogonum fasciculatum	California buckwheat
Eucalyptus sp.*	eucalyptus
Hesperoyucca whipplei	chaparral yucca
*Hirschfeldia incana**	short-podded mustard
Isocoma sp.	goldenbush
Opuntia basilaris	beavertail cactus
Phoradendron sp.	mistletoe
Quercus john-tuckeri	Tucker oak
Rhamnus ilicifolia	hollyleaf redberry
Senecio flaccidus	threadleaf ragwort
Stephanomeria sp.	wirelettuce
Yucca brevifolia	Joshua tree
Yucca schidigera	Mojave yucca

* Nonnative species

ATTACHMENT E

Representative Site Photos

Photo 1. Representative photograph of Tucker oak-chamise vegetation on the property from eastern side of property, facing southeast.

Photo 2. Representative photograph of Tucker oak-chamise vegetation on the property from western side of the property, facing east.

Photo 3. Burnt vegetation and regrowth in eastern portion of the property, facing north.

Photo 4. Unauthorized trash dumping located on western boundary of property, facing east.

Photo 5. Drainage feature located along the western property boundary, facing southwest.

Photo 6. Drainage feature, not discussed in the 2018 Dudek report, near southwest portion of property looking upstream, facing southwest

Photo 7. Drainage feature, pipe from corner of existing water tank facility, and Tucker oaks present on the property, facing north

Photo 8. Drainage feature running through center of the property, facing upstream from northeast corner of property.

Photo 9. Drainage feature, not documented in the 2018 Dudek report, located on eastern edge of property, facing north.

Photo 10. Representative photo of concrete aggregate pile on property which likely does not provide suitable burrowing habitat for burrowing owls due to the steep slope

Photo 11. Three Joshua tree sprouts observed outside of the proposed impact area but along the western property boundary, facing northeast