APPENDIX B: BIOLOGICAL RESOURCES TECHNICAL STUDY

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Booster Station 5513 and Tank 5514 Project

Biological Resources Technical Study

prepared for

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1 Introduction

Rincon Consultants, Inc. (Rincon) prepared this Biological Resources Technical Study (BRTS) to document the current existing conditions and evaluate the potential for project-related impacts to biological resources during the construction of the Tank 5514 and Booster Station 05513 (BS05513) Project (project). Coachella Valley Water District (CVWD) is the project's lead agency. The project is located in the city of Rancho Mirage, Riverside County, California.

1.1 Project Location

The project consists of two developed sites in the Thunderbird Heights community in the central portion of the Coachella Valley in Riverside County, California (Figure 1). The proposed project sites are within the boundaries of the Coachella Valley Multiple Species Habitat Conservation Plan and Natural Community Conservation Plan (CVMSHCP/NCCP) and adjacent to, but outside of, the CVMSHCP/NCCP Santa Rosa and San Jacinto Mountains Conservation Area. Both project sites are surrounded by chain-link fencing that separates them from this Conservation Area.

The two sites are depicted on Township 5S, Range 5E, Section 11 of the U.S. Geological Survey *Cathedral City*, CA 7.5-minute topographic quadrangle, San Bernardino Baseline and Meridian. Tank 5514 is approximately 0.25 mile and BS 5513 approximately 0.6 mile southwest of California State Route 111. The dominant land uses adjacent to the project sites are residential and open space.

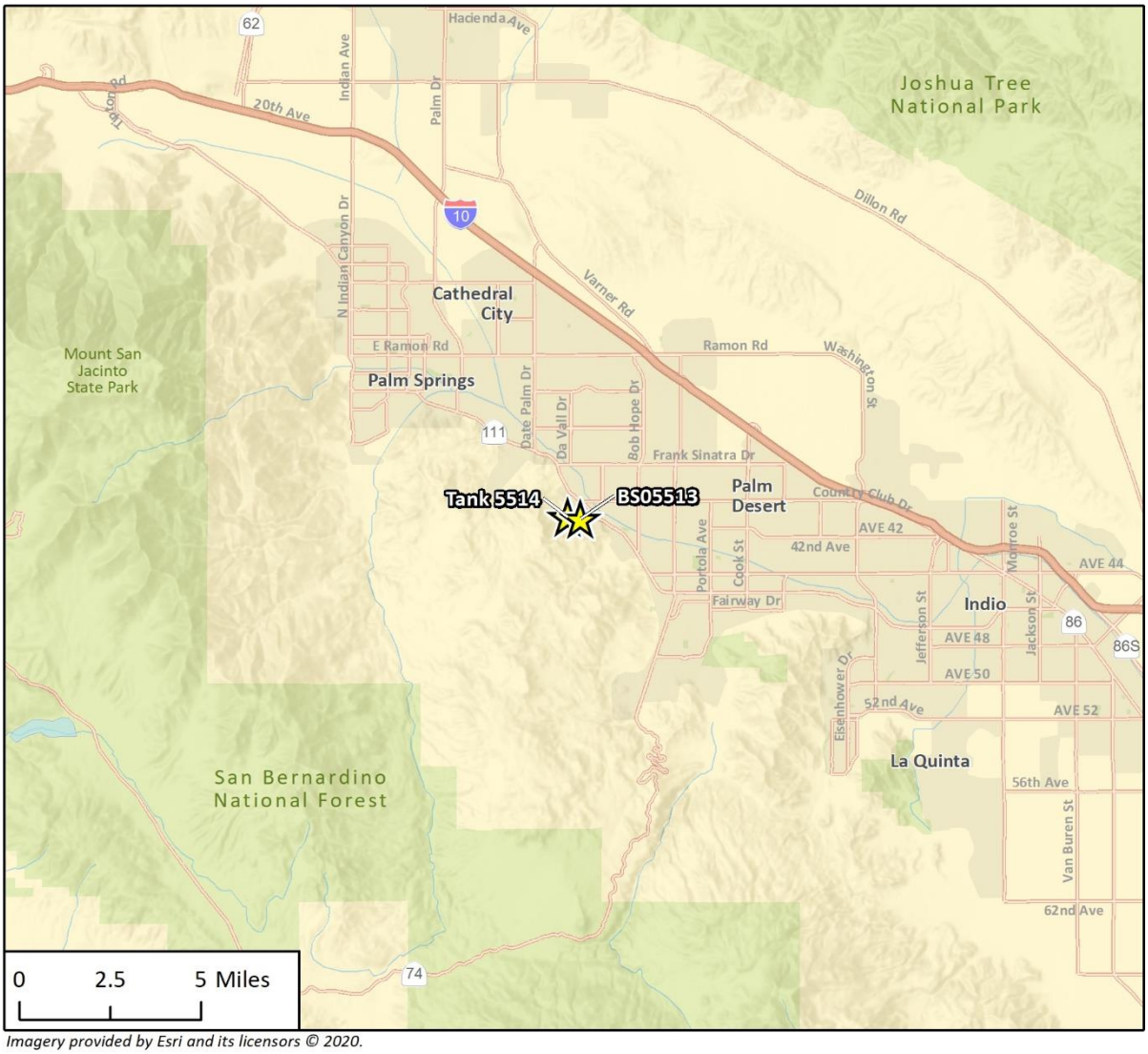
1.2 Project Description

The project involves construction of a new tank at an existing tank site, as well as upgrades to and rehabilitation of an existing booster station. Project components are described below.

1.2.1 Tank 5514

Tank 5514-1 is located at 70165 Thunderbird Road (Figure 2). The tank provides the water supply and storage for the Thunderbird Heights community in the city of Rancho Mirage. The Lower Thunderbird Pressure Zone currently has a storage deficiency of approximately 0.6 million gallons (MG) based on a recent storage capacity analysis. Thus, CVWD plans to construct a new tank, Tank 5514-2, at the existing Tank 5514-1 site. The construction of the 0.5-MG Tank 5514-2 will allow for the necessary rehabilitation and maintenance of Tank 5514-1 currently in operation (not included in this project). Tank 5514-2 construction includes removing and disposing of the existing hydropneumatic tanks, appurtenances and piping to the pump house. The new 477,357-gallon welded steel tank will have a diameter of 50 feet and a height of 32 feet 6 inches. Construction includes site grading, foundation, piping, coating and painting, appurtenances, electrical, and fencing. Associated piping would extend within the Thunderbird Road right-of-way to near the intersection of Thunderbird Road and Tonopah Road. Piping would be installed via approximately 3-foot wide trenches excavated to a depth of up to 4 feet. The proposed Tank 5514-2 would be partially buried to a depth of approximately 9 feet, with a foundation approximately 3 feet deep.

Figure 1 Regional Project Location



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Project Location

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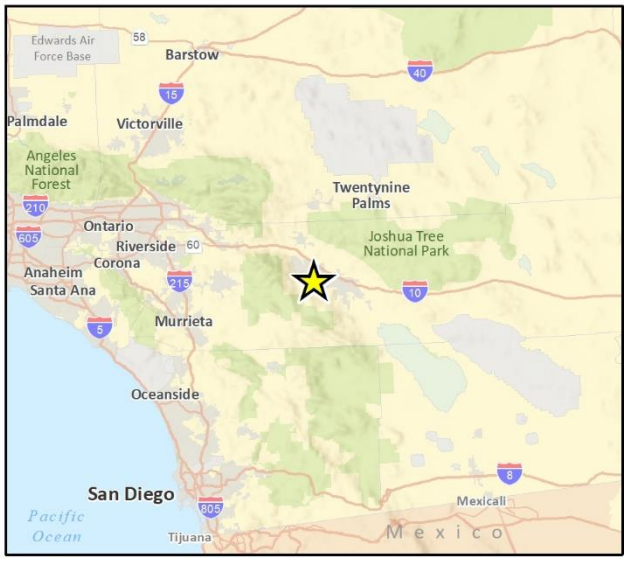

Figure 2 Project Location

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BSFig 2 Project Location

1.2.2 Booster Station 05513 Upgrades

Booster Station 05513 (BS05513) is located at 40860 Thunderbird Road, less than 0.5 mile east of the Tank 5514-1 site (Figure 2). BS05513 is 45 years old and pumps water to fill the nearby Tank 5514-1. Booster Station 05514 (BS05514) is a critical facility that boosts water from the Lower Thunderbird Pressure Zone to Upper Thunderbird Pressure Zone, serving approximately 80 customers. It is currently located at 70165 Thunderbird Road at the site of Tank 5514-1. In order to construct the new tank (Tank 5514-2) at the BS05514 site, as described above, BS05514 must be demolished and relocated. In order to demolish and reconstruct BS05514, BS05513 must be upgraded. The project will design a second domestic water pump station on the existing booster/reservoir site BS05513 to replace two existing booster pumps (including BS05514). This design will incorporate new equipment that will maximize pumping efficiencies and improve system reliability by combining the existing electrical panels with one new motor control center and SCADA cabinet. Additionally, a 600-foot section of pipeline extending from the BS05513, along Thunderbird Road southwest to near Thunderbird Mesa Drive, will be included in the design, as well as demolition plan and pressure reducing station. The project will rehabilitate and upgrade the existing BS05513 and all necessary aboveground and underground appurtenances including pumps and motors, piping, valves, mechanical, structural, electrical, instrumentation, telemetry and other miscellaneous work to improve the efficiency of the booster and allow for the demolition of BS05514. A backup electrical generator will also be purchased and installed.

Construction of the BS05513 upgrades would involve excavation to a depth of approximately 15 feet on the BS05513 site for booster suction cans. Associated piping would be installed predominantly within the Thunderbird Road right-of-way via approximately 3-foot wide trenches excavated to a depth of approximately 4 feet.

Construction schedule for both the Tank 5514-2 and BS05513 upgrades project components is dependent on funding availability but currently expected to begin in September 2021 and last for approximately 11 months.

1.3 Area of Potential Effects

The project Area of Potential Effects (APE) generally depicts all areas expected to be affected by the proposed project, including construction staging areas. For this study, the APE includes the project disturbance footprint associated with the construction of the BS05513 and Tank 5514-2. The project site must additionally be considered as a three-dimensional space and includes any ground disturbance associated with the project. As such, the APE also includes a 25-foot buffer around both the BS05513 site and the Tank 5514 site, which includes any staging areas, to address potential indirect project effects such as noise and dust.

2 Methodology

2.1 Regulatory Setting

This section provides a general summary of the applicable federal and state regulations related to biological resources that could occur within the APE and immediate vicinity. Regulated or sensitive biological resources considered and evaluated in this BRTS include special status plant and wildlife species, nesting birds and raptors, sensitive plant communities, jurisdictional waters and wetlands, wildlife movement, and locally protected resources, such as protected trees.

Coachella Valley Water District is the lead agency for this project under the California Environmental Quality Act (CEQA).

2.1.1 Environmental Statutes

For the purposes of this BRTS, potential project-related impacts to biological resources were analyzed according to the following regulatory statutes and guiding documents:

Federal

- Federal Endangered Species Act (ESA)
- Federal Clean Water Act (CWA)
- Migratory Bird Treaty Act (MBTA)
- The Bald and Golden Eagle Protection Act
- Coastal Zone Management Act
- Protection of Wetlands – Executive Order 11990
- Wild and Scenic Rivers Act
- Magnuson-Stevens Fishery Conservation and Management Act
- Fish and Wildlife Coordination Act
- Coastal Barriers Resources Act

With respect to the requirements of the federal Fish and Wildlife Coordination Act, it is anticipated that the State Water Resources Control Board would perform either formal or informal consultation with the U.S. Fish and Wildlife Service (USFWS) as part of its review of the project's eligibility for Drinking Water State Revolving Fund program assistance. Furthermore, coordination with the California Department of Fish and Wildlife (CDFW) would occur, as appropriate, pending a determination of CDFW as a trustee agency for the purposes of CEQA.

State

- California Environmental Quality Act (CEQA)
- California Endangered Species Act (CESA)
- California Fish and Game Code (CFGC)
- Porter-Cologne Water Quality Control Act

Local

- Riverside County Ordinance No. 559 Regulating the Removal of Trees
- Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP/NCCP)

2.1.2 Guidelines for Determining CEQA Significance

The following threshold criteria, as defined within the CEQA Guidelines, Appendix G – Initial Study Checklist, are used as the basis to evaluate potential environmental effects. Centered on these criteria, a proposed project would have a significant effect on biological resources if it would:

a) Have substantial adverse effects, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status-species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

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

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

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

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

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

2.2 Database and Literature Review

Prior to conducting the biological field survey for this BRTS, Rincon reviewed a variety of literature sources to obtain baseline information about the biological resources with potential to occur within the APE and in the surrounding areas. The literature review included information from standard biological reference materials and regionally applicable regulatory guiding documents including (but not limited to) the following: Baldwin et al. 2012; and Sawyer et al. 2009. Rincon also conducted queries of several relevant scientific databases that provide information about occurrences of sensitive biological resources: the CDFW California Natural Diversity Data Base (CNDDB) (CDFW 2020a) and Biogeographic Information and Observation System (CDFW 2020b); the USFWS Critical Habitat Portal (USFWS 2020a) and Information, Planning, and Conservation (IPaC) System Query (USFWS 2020b); National Wetlands Inventory (NWI) (USFWS 2020c); the United States Department of Agriculture, Natural Resource Conservation Service (NRCS) Web Soil Survey (NRCS 2020); and the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants of California (CNPS 2020). The CNDDB query included a 5-mile radius centered on the APE; the CNPS query included the *Cathedral City*, California USGS 7.5-minute topographic quadrangle and the other eight USGS quadrangles that surround it (*Desert Hot Springs, Seven Palms Valley, East Deception Canyon, Palm Springs, Myoma, Palm View Peak, Rancho Mirage, and La Quinta*).

Results of the special-status species queries were compiled and analyzed to determine which have potential to occur within the APE (Appendix A). The habitat requirements for each regionally occurring special-status species were assessed and compared to the type and quality of habitats observed in the APE during the biological field survey. Conclusions regarding which special-status species have the potential to occur were based not only on the background research and literature review previously mentioned, but also on the data collected in the field during the survey. Several regionally occurring special-status species were eliminated due to lack of suitable habitat within the APE, range in elevation, and/or geographic distribution. Special-status species determined to have the potential to occur within the APE are discussed in Section 4, Sensitive Biological Resources. Special-status species determined not to have potential to occur within the APE are not discussed further in this BRTS. Definitive surveys to confirm the presence or absence of special-status species were not performed and are not included in this analysis. The findings and opinions conveyed in this report are based exclusively on the methodology described above.

2.3 Biological Field Survey

Rincon Senior Biologist Ryan Gilmore conducted a biological field survey for this BRTS on April 30, 2020 from 1115 to 1230. Weather conditions during the survey included temperatures ranging from 89°F to 91°F, with calm winds and minimal cloud cover. The survey area included the APE, as defined above. The pedestrian survey was supplemented with remote observation of inaccessible areas and/or private property using binoculars.

During the field survey an inventory of all plant and wildlife species observed was compiled, the existing vegetation communities were further classified, and the general site conditions were documented. Plant species nomenclature and taxonomy follows *The Jepson Manual: Vascular Plants of California, Second Edition* (Baldwin et al. 2012). The vegetation classification used for this analysis is based on Sawyer et al. (2009) but it has been modified as needed to most accurately describe the existing land covers and/or vegetation communities in the APE. All species encountered were noted and identified to the lowest possible taxonomic level. Photographs were taken of representative areas of the APE as well as notable features (Appendix B).

The habitat requirements of each regionally occurring special-status species were assessed and compared to the type and quality of habitats observed within the APE during the survey. The survey was conducted to make an initial determination regarding the presence or absence of terrestrial biological resources including plants, birds, and other wildlife.

3 Existing Conditions

This section summarizes the results of the literature and database review as well as the biological field survey effort and provides further analysis of the data collected. Discussions regarding the general environmental setting, vegetation communities present, plant and wildlife species observed, special-status species potential, and other biological resource constraints in the APE are presented below. Representative photographs of the APE provided in Appendix B and a complete list of all the plant and wildlife species observed in the APE during the field survey is presented in Appendix C.

3.1 Topography, Watershed, and Soils

The APE is located in the city of Rancho Mirage in central Riverside County, within the Coachella Valley (Figure 1). The Coachella Valley is a desert valley that is bounded by the Little San Bernardino Mountains and Joshua Tree National Park in the north and east, San Jacinto Mountains and Santa Rosa Mountains to the west and southwest, the Salton Sea to the southeast, and San Gorgonio Mountain to the north. The APE is located in the Whitewater River watershed and has an elevation ranging from 338 to 520 feet above mean sea level.

Based on the most recent soil survey for Riverside County (NRCS 2020) the APE contains three mapped soil types:

- Carrizo stony sand, 2 to 9 percent slopes
- Carrizo cobbly sand, 2 to 9 percent slopes
- Rock outcrop, 0 to 2 percent slopes

The Carrizo series consists of excessively drained soils formed from recent alluvium. The Carrizo series soils and rocky outcrops are not used for agriculture. In an undeveloped state, natural vegetation typically found on these types includes ephemeral grasses and forbs, and a sparse cover of bursage, creosote bush, saltbush, mesquite and other desert shrubs and weeds. None of these soils are considered hydric.

These soil units are from the USDA NRCS Soil Survey of Riverside County, California, which was conducted on a broader scale than this study and did not necessarily include on-site observations. The physical characteristics of the soil units, as described above, are general and not necessarily indicative of characteristics currently present within the APE.

3.2 Land Cover and Vegetation

The APE is within the lower Colorado desert which is a subdivision of the Sonoran Desert Region (DSon) geographic subdivision of California. The DSon subdivision is a component of the larger Desert Province (D) geographic region, which occurs within the larger California Floristic Province (Baldwin et al. 2012). While both project sites are located entirely within a developed residential area, additional vegetation communities are present within the APE adjacent to the project sites. One land cover type and two vegetation communities occur within the APE and are discussed in more detail below: developed, creosote bush-brittle bush scrub, and smoketree wash woodland (Figure 3a and Figure 3b).

Figure 3a Land Cover and Vegetation

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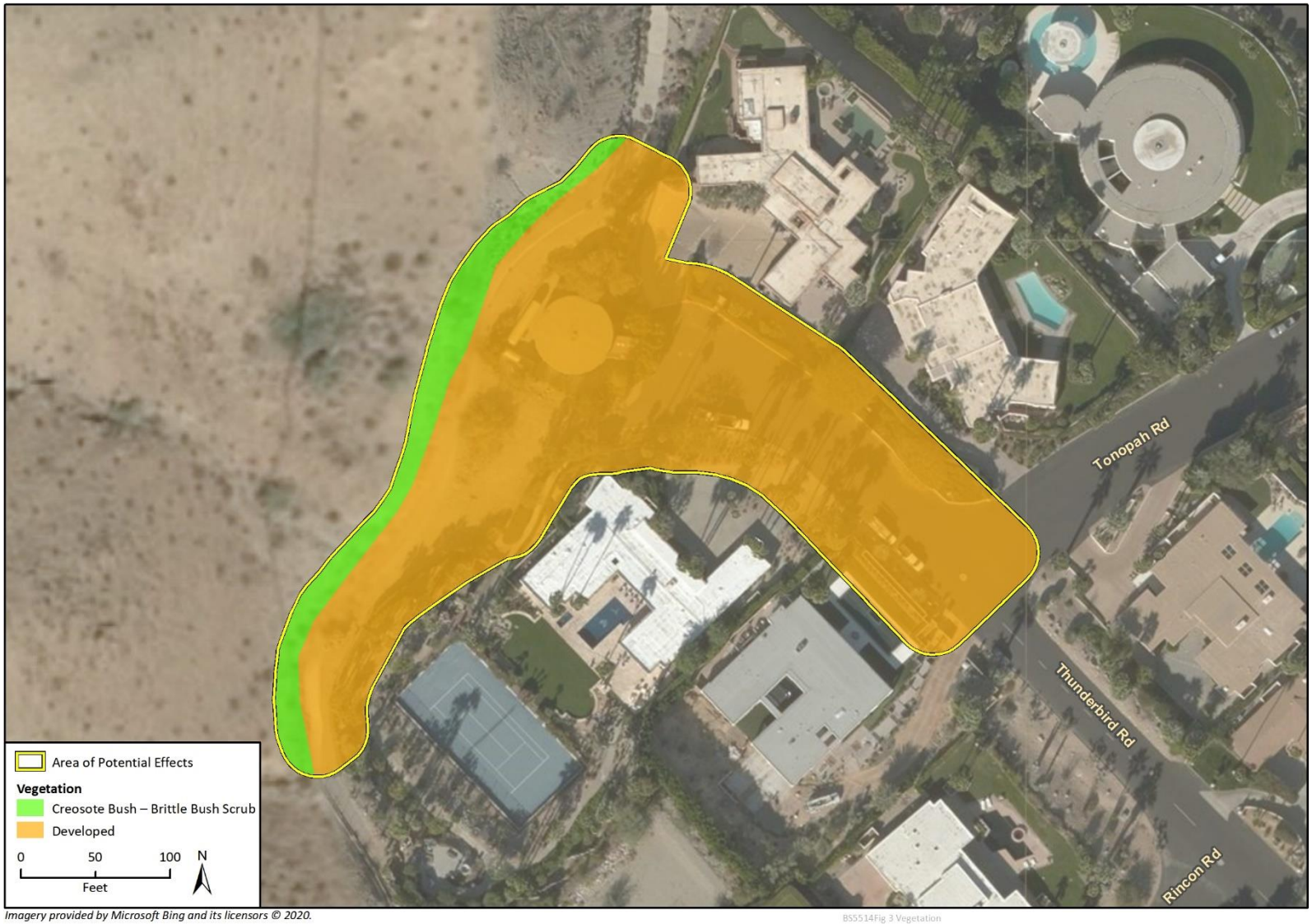
B55513Fig 3 Vegetation

Figure 3b Land Cover and Vegetation



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B55514Fig 3 Vegetation

Fifteen plant species were observed within the APE during the field survey (Appendix C).

3.2.1 Developed

Developed land includes areas that have been constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported. It is characterized by permanent or semi-permanent structures, pavement or hardscape, and landscaped areas that often require irrigation (Oberbauer et al. 2008). Developed land comprises the entirety of the two project sites (approximately 5.08 acres), which includes irrigated residential lots, water conveyance facilities, paved roads, and other buildings. Ornamental trees and shrubs in these areas include Mexican fan palm (*Washingtonia robusta*), oleander (*Nerium oleander*), date palm (*Phoenix dactylifera*), palo verde (*Parkinsonia* sp.), mesquite (*Prosopis* sp.), and chitalpa (*Chitalpa tashkentensis*).

3.2.2 Creosote Bush – Brittle Bush Scrub

The creosote bush and brittle bush scrub habitat in the APE corresponds to natural shrubland stands more recently described by Sawyer et al. (2009). Creosote bush and brittle bush scrub is dominated by native species including creosote (*Larrea tridentata*) and brittlebush (*Encelia farinosa*). Within the APE, this plant community has varying levels of disturbance. It occupies approximately 0.19 acre and primarily exists along the adjacent rocky slopes outside of the disturbance limits of the Tank 5514 project site.

3.2.3 Smoketree Wash Woodland

The smoketree wash woodland habitat in the APE corresponds to natural shrubland stands more recently described by Sawyer et al. (2009). Smoketree wash woodland is dominated by the native species smoketree (*Psorothamnus spinosa*). Within the APE, this plant community has varying levels of disturbance. It occupies approximately 0.04 acre and primarily exists along the adjacent dry wash outside of the disturbance limits of the BS05513 project site. Additionally, this vegetation community within the APE contains a large occurrence of invasive fountain grass (*Pennisetum setaceum*).

3.3 General Wildlife

The APE and surrounding areas provide habitat suitable for wildlife species that commonly occur in southern California suburban areas. Wildlife observed within or adjacent to the APE included bird species such as lesser goldfinch (*Spinus psaltria*), Costa's hummingbird (*Calypte costae*), house finch (*Haemorhous mexicanus*), mourning dove (*Zenaida macroura*), northern mockingbird (*Mimus polyglottos*), and common raven (*Corvus corax*).

4 Sensitive Biological Resources

This section discusses the general presence or potential for sensitive biological resources to occur within the APE.

4.1 Special-Status Species

Potential to occur assessments are based on the presence or absence of suitable habitat for each special-status species reported in the scientific database queries that were conducted for the proposed project. Several scientific databases were queried, multiple sources of pertinent scientific literature were reviewed, and the technical expertise of Rincon's staff was utilized to determine the habitat requirements, ecology, and distribution of the special-status plant and wildlife species potentially affected by the proposed project. All occurrences of special-status species, sensitive vegetation communities, and USFWS-designated critical habitats that have been reported by the resource agencies within a five-mile radius of the APE were plotted on a map using geographic information system (GIS) software. As discussed in Section 2.2, an analysis was conducted to determine which of the regionally occurring special-status species have potential to occur within the APE (Appendix A). The potential for each special-status species to occur in the APE was evaluated according to the following criteria:

- **Not Expected.** Habitat on and adjacent to the APE is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- **Low Potential.** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the APE is unsuitable or of very poor quality. The species is not likely to be found in the APE.
- **Moderate Potential.** Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the APE is unsuitable. The species has a moderate probability of being found in the APE.
- **High Potential.** All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the APE is highly suitable. The species has a high probability of being found in the APE.
- **Present.** Species is observed in the APE or has been recorded (e.g., CNDDB, other reports) in the APE recently (within the last 5 years).

Plant or animal taxa may be considered "special-status" due to declining populations, vulnerability to habitat change, or because they have restricted ranges. Some are listed as threatened or endangered by the USFWS by the CDFW, or both and are protected by the federal and state ESAs. Others have been identified as special status species by the USFWS, the CDFW, or by private conservation organizations, including the CNPS. Unlisted species of special concern do not have formal state or federal status.

For the purpose of this report, special-status species are those plants and animals listed, proposed for listing, or candidates for listing as Threatened or Endangered by the USFWS under the ESA; those listed or candidates for listing as Rare, Threatened, or Endangered by the CDFW under the CESA or Native Plant Protection Act; those designated as Fully Protected (FP) by the CFGC; those recognized

as Species of Special Concern (SSC) and watch list (WL) species identified by the CDFW; and plants occurring on lists 1 and 2 of the CNPS California Rare Plant Rank (CRPR) system, per the following definitions:

- **Rank 1A** = Plants presumed extinct in California;
- **Rank 1B.1** = Rare or endangered in California and elsewhere; seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat);
- **Rank 1B.2** = Rare or endangered in California and elsewhere; fairly endangered in California (20-80% occurrences threatened);
- **Rank 1B.3** = Rare or endangered in California and elsewhere, not very endangered in California (<20% of occurrences threatened or no current threats known);
- **Rank 2** = Rare, threatened or endangered in California, but more common elsewhere.

In addition, special-status species are ranked globally (G) and subnationally (S) 1 through 3 based on NatureServe's (2010) methodologies:

- **G1 or S1** - Critically Imperiled Globally or State-wide
- **G2 or S2** - Imperiled Globally or State-wide
- **G3 or S3** - Vulnerable to extirpation or extinction Globally or State-wide

4.1.1 Special-Status Plant Species

Rincon evaluated 10 special-status plant species tracked by the CNDDB and CNPS within a five-mile radius of the APE for their potential to occur within the APE (Appendix A). The assessment of the potential for these species to occur is based upon the presence of suitable habitat as identified during surveys and existing knowledge of species occurrences and distributions in the region. Of the 10 species evaluated, none have a moderate or high potential to occur based on the existing developed nature of the project site, the prior disturbance of the adjacent drainage feature (dry wash), lack of suitable soils, inappropriate hydrologic conditions, and absence of appropriate vegetation communities in the APE. In addition, many of the species' CNDDB occurrences are historical, dating from the early to mid-1900s. No special-status plant species were detected within the APE during the survey.

4.1.2 Special-Status Wildlife Species

Rincon evaluated 15 special-status wildlife species tracked by the CNDDB within 5 miles of the APE for their potential to occur within the APE (Appendix A). The assessment is based upon the presence of suitable habitat as identified during surveys and existing knowledge of species occurrences and distributions in the region. Of the 15 species evaluated, none have a moderate or high potential to occur within the APE based on low habitat quality in the developed areas, lack of suitable vegetation that would support special-status wildlife species, and regular maintenance of the grounds or other disturbance from frequent human activity. While native vegetation does exist within the APE's 25-foot buffer, the habitat quality is low relative to species requirements, and many CNDDB occurrences are historical (dating from the early to mid-1900s). Therefore, special-status wildlife species either have a low potential or are not expected within the APE buffer areas. While a portion of the Tank 5514 APE's 25-foot buffer extends beyond the fencing and into the CVMSHCP/NCCP Conservation Area and designated critical habitat for Peninsular bighorn sheep (*Ovis canadensis nelsoni*), the proposed project footprint is separated from these areas by chain link fences, which

create a barrier preventing large mammals from entering the project site. Additionally, located outside the fencing, outside the APE, and within the CVMSHCP/NCCP Conservation Area is a wildlife drinker (guzzler).

4.1.3 Nesting Birds

While not all birds are designated as special-status species, destruction of their eggs, nests, and nestlings is prohibited by federal and state law. Section 3503.5 of the CFGC specifically protects birds of prey, and their nests and eggs, against take, possession, or destruction. Section 3503 of the CFGC also incorporates restrictions imposed by the federal MBTA with respect to migratory birds (which consists of all native bird species). The APE provides suitable nesting habitat for numerous species of birds common in the area and nesting birds are likely to be present within the APE during the bird nesting season (January 1 through July 1 for raptors, February 1 through August 31 for burrowing owl (*Athene cunicularia*), and March 1 through September 15 for passerines).

4.2 Sensitive Plant Communities

Plant communities are considered sensitive biological resources if they have limited distributions, have high wildlife value, include sensitive species, or are particularly susceptible to disturbance. CDFW ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in CNDDB. Similar to special-status plant and wildlife species, vegetation alliances are ranked 1 through 5 based on NatureServe's (2010) methodology, with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive, though there are some exceptions.

According to the CNDDB, multiple occurrences of a single sensitive plant community are recorded within a 5-mile radius of the APE: desert fan palm oasis, located approximately one to five miles south and west of APE in the CVMSHCP/NCCP Santa Rosa and San Jacinto Mountains Conservation Area. No sensitive plant communities occur within the APE.

4.3 Jurisdictional Waters and Wetlands

In accordance with Section 1602 of the CFGC, the CDFW has jurisdiction over lakes and streambeds (including adjacent riparian resources). CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake. Under Section 404 of the Clean Water Act (CWA), the United States Army Corps of Engineers (USACE) has authority to regulate activities that discharge dredge or fill material into wetlands or other “waters of the United States” through issuance of a Section 404 Permit. Finally, the Regional Water Quality Control Board (RWQCB) has jurisdiction over “waters of the state” pursuant to the Porter-Cologne Water Quality Control Act and has the responsibility for review of the project water quality certification per Section 401 of the federal CWA.

Areas potentially subject to USACE, RWQCB, and CDFW jurisdiction were assessed during the literature review and field visit; however, a formal jurisdictional delineation was nor performed. The APEs for both the BS05513 and Tank 5514 sites contain dry, partially channelized ephemeral washes within the 25-foot buffer, but outside of the proposed project disturbance areas. While neither feature is mapped in the NWI, review of aerial imagery suggests that both features may have connectivity with downstream features mapped in the NWI (USFWS 2020c).

The feature at BS05513 is partially channelized with constructed concrete and rock slopes. Vegetation within the bed consists of a small immature occurrence of smoketree wash woodland. The feature at Tank 5514 has a partial concrete angled embankment. Creosote bush and brittle bush scrub is present within the feature. Water was not present in either feature at the time of the survey. Design of the drainages appears to contribute to managing stormwater runoff from surrounding mountain slopes to protect the water conveyance facilities and residential development. If precipitation and resulting overland flows are great enough, connectivity to downstream features could be possible.

The *Navigable Waters Protection Rule to define "Waters of the United States"* that was recently published by the USACE and U.S. Environmental Protection Agency and became effective on June 22, 2020, states that "ephemeral features that flow only in direct response to precipitation including ephemeral streams, swales, gullies, rills, and pools," are not considered jurisdictional. As a result, the ephemeral washes at BS05513 and Tank 5514 would not be considered waters of the U.S. under USACE jurisdiction. However, the drainages could potentially be subject to the jurisdiction of the CDFW, under Section 1602 of the CFGC, and RWQCB, under the Porter-Cologne Water Quality Control Act, given the presence of bed and bank and potential surface flow connection in a typical year.

4.4 Wildlife Movement

Wildlife corridors are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as between foraging and denning areas, or they may be regional in nature, allowing movement across the landscape. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Examples of barriers or impediments to movement include housing and other urban development, roads, fencing, unsuitable habitat, or open areas with little vegetative cover. Regional and local wildlife movements are expected to be concentrated near topographic features that allow convenient passage, including roads, drainages, and ridgelines.

The APE is adjacent to a natural landscape block and approximately 2.7 miles northeast of an essential habitat connectivity corridor mapped by the CNDDB BIOS (2020b) in the Santa Rosa and San Jacinto Mountains. While a small portion of the Tank 5514 APE's 25-foot buffer extends beyond the fence line and includes the toe of the mountain slopes that are potentially connected to this landscape block and habitat connectivity corridor, the proposed disturbance footprint is contained within the fenced area. The BS05513 APE is located entirely within the fenced area and does not extend to the toe of adjacent mountains slopes, is outside the CVMSHCP/NCCP Conservation Area, and does not overlap with the location of the wildlife drinker (guzzler). Both project sites are within a previously developed and routinely managed residential area that offers little to no value to wildlife movement. The proposed project disturbance areas are subject to frequent human disturbance that do not provide linkage to wildlife habitat.

4.5 Local Policies and Ordinances

Riverside County Ordinance 559 protects oak (*Quercus*) woodlands and requires a permit for removal of any native trees on parcels greater than one-half acre in size and above 5,000 feet in elevation. No trees in the APE meet these criteria.

4.6 Conservation Plans

The APE is within the CVMSHCP/NCCP area. The CVMSHCP/NCCP is a comprehensive, multi-jurisdictional habitat conservation plan focusing on the conservation of species and their associated habitats in the Coachella Valley region of Riverside County, and in which the CVWD is a participating entity. The overall goal of the CVMSHCP/NCCP is to maintain and enhance biological diversity and ecosystem processes within the region while allowing for future economic growth (Coachella Valley Association of Governments [CVAG] 2007).

The CVMSHCP/NCCP covers 27 special-status plant and wildlife species (CVMSHCP/NCCP covered species) as well as 27 natural communities and includes 21 conservation areas. Covered species include both listed and non-listed species that are conserved by the CVMSHCP/NCCP. The overall provisions for the Plan are subdivided according to specific resource conservation goals that have been organized according to geographic areas defined as Conservation Areas. These areas are identified as Core, Essential, or Other Conserved Habitat for special-status plant, invertebrate, amphibian, reptile, bird, and mammal species, Essential Ecological Process Areas, and Biological Corridors and Linkages.

Each Conservation Area has specific Conservation Objectives that must be satisfied. The CVMSHCP/NCCP received final approval on October 1, 2008. The approval of the CVMSHCP/NCCP and execution of the Implementing Agreement (IA) provides the signatories to the Plan coverage for take (with the exception of three species) during covered activities in concurrence with the appropriate wildlife agency. The three species not covered for take include peninsular bighorn sheep (*Ovis canadensis nelsoni*), Yuma clapper rail (*Rallus longirostris yumanensis*), and California black rail (*Laterallus jamaicensis coturniculus*). The CDFW acknowledges and agrees that if measures put forth in the CVMSHCP/NCCP are fully complied with, the covered activities are not likely to result in the take of these species.

In addition, the purpose of CVMSHCP/NCCP Section 4.5 Land Use Adjacency Guidelines is to avoid or minimize indirect effects from development adjacent to or within the Conservation Areas. In this context, “adjacent” means to share a common boundary with any parcel in a designated Conservation Area. Indirect effects include noise, lighting, drainage, intrusion of people, and the introduction of nonnative plants and nonnative predators such as dogs and cats.

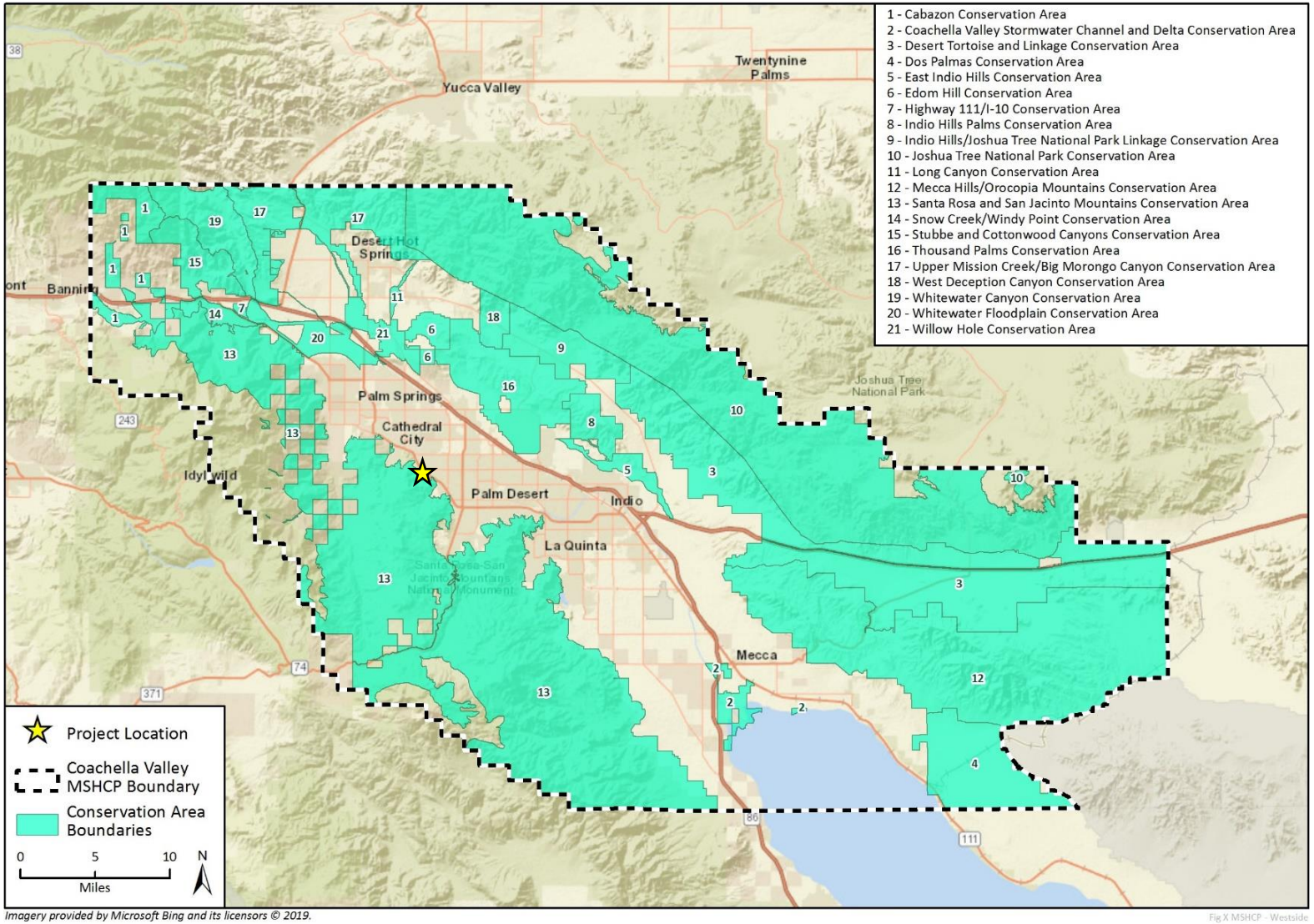
The APE occurs within the planning boundary of the CVMSHCP/NCCP but is not a part of any CVMSHCP/NCCP Conservation Area (Figure 4). The closest Conservation Area is the Santa Rosa and San Jacinto Mountains CVMSHCP/NCCP Conservation Area, which is adjacent to, but outside of, both the BS05513 and Tank 5514 project sites. Per the CVMSHCP/NCCP, this Conservation Area provides Essential Habitat for the Peninsular bighorn sheep, which is comprised of a narrow band of habitat located at the lower elevations of the Peninsular Ranges that include canyon bottoms, alluvial fans, and mountain slopes (refer to Figure 4-26b in the CVMSHCP/NCCP). Within this band of habitat, bighorn sheep need to be able to move daily, seasonally, and annually to make use of the sparse and sometimes sporadically available resources found within their home ranges. A small portion of the Tank 5514 APE’s 25-foot buffer extends beyond the fence line and up to five feet into this Conservation Area at the toe of the mountain slopes. A wildlife drinker (guzzler) is located outside the fencing and APE within this Conservation Area. Per the CVMSHCP/NCCP Section 4.5 Land Use Adjacency Guidelines, both project sites and APEs would be considered “adjacent” to this Conservation Area. In addition, the CVMSHCP/NCCP Section 7.1 Covered Activities Outside Conservation Areas indicates that CVMSHCP/NCCP permittee-proposed activities, and their

associated potential impacts to covered species, outside of Conservation Areas would be covered by the CVMSHCP/NCCP. Potential impacts to non-covered species would not be covered.

4.7 Critical Habitat, Coastal Zone, Wild and Scenic Rivers, Essential Fish Habitat, and Coastal Barrier Resources

The BS05513 and Tank 5514 APEs are not within or adjacent to the Coastal Zone or any federally designated Wild and Scenic Rivers. While the 25-foot buffer of the Tank 5514 APE extends beyond the fence line and up to five feet into critical habitat for Peninsular bighorn sheep, the proposed disturbance footprint is contained within the fenced area and does not intersect this critical habitat. The BS05513 APE is approximately 0.4 mile east of this critical habitat area. Furthermore, the APE is not within or adjacent any Essential Fish Habitat or within lands covered by the Coastal Barrier Resources System.

Figure 4 CVMSHCP/NCCP Conservation Areas



5 Impact Analysis and Mitigation Measures

This section discusses the possible adverse impacts to sensitive biological resources that may occur from implementation of the proposed project and suggests appropriate mitigation measures that would reduce those impacts to less than significant levels. The criteria used to evaluate potential project-related impacts to biological resources are presented in Section 2.1.2.

5.1 Special-Status Species

5.1.1 Special-Status Plant Species

As discussed in Section 4.1, the APE does not provide suitable habitat for most special-status plant species given the disturbance history of the APE, lack of suitable soils, inappropriate hydrologic conditions, or absence of appropriate vegetation communities. No special-status plant species have a moderate or high potential to occur within the APE. As a result, project impacts to special-status plant species are not expected and no mitigation measures are recommended.

5.1.2 Special-Status Wildlife Species

As discussed in Section 4.1, the APE does not provide suitable habitat for most special-status wildlife species given their known distributions and habitat requirements relative to existing site conditions that include existing development, low quality habitat relative to species needs, and regular maintenance or other disturbance from frequent human activity. No special-status wildlife species have a moderate or high potential to occur. Project impacts are limited to previously-disturbed areas with high human activity. As a result, no direct impacts to special-status species are expected. Water supply to the wildlife drinker (guzzler) adjacent to the APE will not be interrupted by project activities. Other indirect impacts from construction activities and resulting development would be addressed through implementation of Mitigation Measure (MM) BIO-2 and MM BIO-3 recommended below. No additional mitigation measures are recommended.

5.1.3 Nesting Birds

Nesting bird habitat is present within and adjacent to the APE, particularly within landscape trees. Nesting bird species are protected by the CFGC 3503, CFGC 3503.5, and MBTA. If initial ground disturbance and vegetation/tree trimming or removal is required during the nesting bird season, the project may impact nesting birds through injury, mortality, or disruption of normal adult behaviors resulting in the abandonment or harm to eggs and nestlings. Construction occurring within the vicinity of nesting birds may also indirectly impact individuals with construction noise, dust, and vibration from equipment. Measures necessary for compliance with CFGC 3503, CFGC 3503.5, and the MBTA are provided below.

BIO-1 Nesting Birds

Project-related activities should occur outside of the bird breeding season (typically January 1 to September 15 to account for both passerines and raptors) to the extent practicable. If construction must occur within the bird breeding season, then no more than three days prior to initiation of ground disturbance and/or vegetation removal, a nesting bird and raptor pre-construction survey

shall be conducted by a qualified biologist within the disturbance footprint plus a 100-foot buffer (500-for for raptors), where feasible. If the proposed project is phased or construction activities stop for more than one week, a subsequent pre-construction nesting bird and raptor survey will be required prior to each phase of construction within the APE.

Pre-construction nesting bird and raptor surveys shall be conducted during the time of day when birds are active and shall factor in sufficient time to perform this survey adequately and completely. A report of the nesting bird and raptor survey results, if applicable, shall be submitted to the lead agency for review and approval prior to ground and/or vegetation disturbance activities.

If nests are found, their locations shall be flagged. An appropriate avoidance buffer ranging in size from 25 to 50 feet for passerines, and up to 500 feet for raptors depending upon the species and the proposed work activity and CDFW approval, shall be determined and demarcated by a qualified biologist with bright orange construction fencing or other suitable flagging. Buffers will be determined in conjunction with CDFW through the development of a nesting bird management plan. Active nests shall be monitored at a minimum of once per week until it has been determined that the nest is no longer being used by either the young or adults. No ground disturbance shall occur within this buffer until the qualified biologist confirms that the breeding/nesting is completed and all the young have fledged. If project activities must occur within the buffer, they shall be conducted at the discretion of the qualified biologist. If no nesting birds are observed during pre-construction surveys, no further actions would be necessary.

5.2 Sensitive Vegetation Communities

No sensitive vegetation communities were documented within or adjacent to the APE. Furthermore, project impacts are limited to previously developed areas with high human activity. Therefore, the proposed project does not have the potential to result in direct or indirect impacts to sensitive vegetation communities. Due to the absence of potential impacts, no mitigation measures are recommended.

5.3 Jurisdictional Waters and Wetlands

As discussed in Section 4.3, features potentially under the jurisdiction of the CDFW and RWQCB are present within the 25-foot buffers, but outside of the proposed disturbance areas, of both the BS05513 and Tank 5514 APEs. Project activities are expected to be contained outside the slopes and beds of these features and, therefore, direct impacts are not anticipated. However, construction activities could result in indirect impacts (e.g., oil leaks from vehicles, soil erosion) that, if they were to escape the proposed disturbance area, could affect potential jurisdictional features and be potentially significant. Implementation of MM BIO-2 would reduce these potential indirect impacts to a less-than-significant level.

BIO-2 Jurisdictional Waters Avoidance and Minimization

As part of the project design, control measures should be implemented to prevent potential erosion, stormwater, and/or hazardous materials impacts to adjacent, potentially jurisdictional features. As part of a Stormwater Pollution Prevention Plan (SWPPP), best management practices should be developed and implemented to ensure avoidance of indirect impacts to potential jurisdictional resources. Erosion control measures that may be used include silt fences, sandbags, certified weed-free straw wattles and straw bales, and other control measures as needed. In

addition, a hazardous materials control plan should be developed and implemented to reduce the potential for release of hazardous materials (e.g., petroleum-based products used in construction equipment and vehicles) and to minimize associated impacts with an inadvertent spill. This plan should evaluate potential spill scenarios, identify avoidance and prevention measures, and outline appropriate response actions.

5.4 Wildlife Movement

Wildlife movement and habitat fragmentation are important issues in assessing impacts to wildlife. Habitat fragmentation occurs when a proposed action results in a single, unified habitat area being divided into two or more areas in such a way that the division isolates the two new areas from each other. Isolation of habitat occurs when wildlife cannot move freely from one portion of the habitat to another or from one habitat type to another, as in the fragmentation of habitats within and around "checkerboard" residential development. Habitat fragmentation also can occur when a portion of one or more habitats is converted into another habitat, as when annual burning converts scrub habitats to grassland habitats.

While the project APEs extend beyond the fence line and into areas connected to a natural landscape block and essential habitat connectivity corridor, the proposed project footprints are located within previously developed and routinely managed areas that offer little to no value to wildlife movement. In addition, water supply to the wildlife drinker (guzzler) adjacent to the APE will not be interrupted by project activities. The proposed project is not anticipated to have an incremental effect on localized and urban adapted wildlife movement or create habitat fragmentation in the region, nor is it anticipated to have significant impact on regional wildlife movement. Direct impacts to wildlife movement as a result of project implementation would be less than significant. No additional lighting is proposed, and no nocturnal noise generating activities are proposed. Therefore, indirect wildlife movement impacts would be less than significant, and no mitigation measures are recommended.

5.5 Local Policies and Ordinances

The proposed project is not expected to conflict with any local policies or ordinances. In addition, no protected trees are proposed for removal.

5.6 Adopted or Approved Plans

As discussed in Section 4.8, the CVWD participates in the CVMSHCP/NCCP and the proposed project is within the CVMSHCP/NCCP plan area. While a small portion of the Tank 5514 APE's 25-foot buffer extend beyond the fence line and up to five feet into the CVMSHCP/NCCP Santa Rosa and San Jacinto Mountains Conservation Area, project activities will be contained within the fenced area and outside of the Conservation Area. The BS05513 APE is entirely outside of this Conservation Area. In addition, water supply to the wildlife drinker (guzzler) adjacent to the APE will not be interrupted by project activities. As a result, proposed activities at both project sites would avoid direct impacts to CVMSHCP/NCCP Conservation Areas and would not conflict with the CVMSHCP/NCCP Conservation Objectives. The project would also comply with CVMSHCP/NCCP Section 4.5 Land Use Adjacency Guidelines to avoid and minimize indirect effects to this Conservation Area (CVAG 2007). These guidelines include measures regarding drainage, toxics, lighting, noise, invasive species, barriers, and grading/land development. With the implementation of these guidelines and MM BIO-3, the

proposed project would avoid direct and indirect impacts to this CVMSHCP/NCCP Conservation Area and would not conflict with the CVMSHCP/NCCP Conservation Objectives.

BIO-3 CVMSHCP/NCCP Land Use Adjacency Guidelines

The following Section 4.5 Land Use Adjacency Guidelines shall be implemented where applicable to minimize edge effects for adjacent Conservation Areas.

- Drainage - Proposed Development adjacent to or within a Conservation Area shall incorporate plans to ensure that the quantity and quality of runoff discharged to the adjacent Conservation Area is not altered in an adverse way when compared with existing conditions. Stormwater systems shall be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials or other elements that might degrade or harm biological resources or ecosystem processes within the adjacent Conservation Area.
- Toxics - Land uses proposed adjacent to or within a Conservation Area that use chemicals or generate bioproducts such as manure that are potentially toxic or may adversely affect wildlife and plant species, habitat, or water quality shall incorporate measures to ensure that application of such chemicals does not result in any discharge to the adjacent Conservation Area.
- Lighting - For proposed Development adjacent to or within a Conservation Area, lighting shall be shielded and directed toward the developed area. Landscape shielding or other appropriate methods shall be incorporated in project designs to minimize the effects of lighting adjacent to or within the adjacent Conservation Area in accordance with the guidelines to be included in the Implementation Manual.
- Noise - Proposed Development adjacent to or within a Conservation Area that generates noise in excess of 75 dBA Leq hourly shall incorporate setbacks, berms, or walls, as appropriate, to minimize the effects of noise on the adjacent Conservation Area in accordance with the guidelines to be included in the Implementation Manual.
- Invasives - Invasive, non-native plant species shall not be incorporated in the landscape for land uses adjacent to or within a Conservation Area. Landscape treatments within or adjacent to a Conservation Area shall incorporate native plant materials to the maximum extent feasible; recommended native species are listed in Table 4-112 of the CVMSHCP/NCCP. The plants listed in Table 4-113 of the CVMSHCP/NCCP shall not be used within or adjacent to a Conservation Area. This list may be amended from time to time through a Minor Amendment with Wildlife Agency Concurrence.
- Barriers - Land uses adjacent to or within a Conservation Area shall incorporate barriers in individual project designs to minimize unauthorized public access, domestic animal predation, illegal trespass, or dumping in a Conservation Area. Such barriers may include native landscaping, rocks/boulders, fencing, walls and/or signage.
- Grading/Land Development - Manufactured slopes associated with site development shall not extend into adjacent land in a Conservation Area.

5.7 Critical Habitat, Coastal Zone, Wild and Scenic Rivers, Essential Fish Habitat, and Coastal Barrier Resources

Since the APE is not within any Essential Fish Habitat or within or adjacent to the Coastal Zone, Coastal Barrier Resources System, or any federally designated Wild and Scenic Rivers, no impacts would occur and, therefore, no mitigation measures are recommended. The 25-foot buffer of the Tank 5514 APE extends up to five feet into critical habitat for Peninsular bighorn sheep. However, the Tank 5514 proposed disturbance footprint is contained within the fenced area and does not intersect this critical habitat. The BS05513 APE is approximately 0.4 mile east of this critical habitat area. Water supply to the wildlife drinker (guzzler) adjacent to the APE will not be interrupted by project activities. As a result, direct impacts to federally designated critical habitat are not expected. Indirect impacts could occur from proposed project activities, including construction noise or dust. However, implementation of MM BIO-2 and MM BIO-3, discussed above, would reduce potential indirect impacts (e.g., runoff, noise, lighting) from project activities to a less-than-significant level. No additional mitigation measures are recommended.

6 Limitations, Assumptions, and User Reliance

This BRTS has been performed in accordance with professionally accepted biological investigation practices conducted at this time and in this geographic area. Botanical field surveys for the presence or absence of certain taxa were not conducted as part of this assessment. The general biological field survey effort was limited by the environmental conditions present at the time of the surveys. In addition, general biological (or protocol) surveys do not guarantee that the organisms are not present and will not be discovered in the future within the APE. Our botanical and biological field studies were based on current industry practices, which change over time and may not be applicable in the future. No other guarantees or warranties, expressed or implied, are provided. The findings and opinions conveyed in this report are based on findings derived from review of specified database and literature sources and one site visit. Standard data sources relied upon during the completion of this report, such as the CNDDB, may vary with regard to accuracy and completeness. In particular, the CNDDB is compiled from research and observations reported to CDFW that may or may not have been the result of comprehensive or site-specific field surveys. Although Rincon considers the data sources reasonably reliable, Rincon cannot and does not guarantee the authenticity or reliability of the data sources it has used. Furthermore, pursuant to our contract, the data sources reviewed included only those that are practically reviewable without the need for extraordinary research and analysis.

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Appendix A

Regionally Occurring Special-Status Species

Regionally Occurring Special-Status Species

Scientific Name Common Name	Status Fed/State ESA CRPR,CDFW G-Rank/S-Rank	Habitat Requirements	Potential for Occurrence/Basis for Determination
Plants			
Abronia villosa var. *aurita* chaparral sand-verbena	None/None G5T2?/S2 1B.1	Chaparral, coastal scrub, desert dunes. Sandy areas. -60-1570 m. annual herb. Blooms (Jan)Mar-Sep	**Not Expected.** No suitable habitat (chaparral, coastal scrub, desert dunes) present.
Almutaster pauciflorus alkali marsh aster	None/None G4/S1S2 2B.2	Damp alkaline areas. 200-700 m. perennial herb. Blooms Jun-Oct.	**Not Expected.** No suitable habitat (damp alkaline areas) present.
Astragalus hornii var. *hornii* Horn's milk-vetch	None/None GUT1/S1 1B.1	Salty flats and lake shores. 60-300 m. annual/perennial herb. Blooms May-Sep.	**Not Expected.** No suitable habitat (salty flats, lake shores) present.
Astragalus lentiginosus var. *coachellae* Coachella Valley milk-vetch	Endangered/ None G5T1/S1 1B.2	Sonoran desert scrub, desert dunes. Sandy flats, washes, outwash fans, sometimes on dunes. 35-695 m. annual/perennial herb. Blooms Feb-May	**Not Expected.** No suitable habitat (sandy flats or washes) not present.
Ditaxis claryana glandular ditaxis	None/None G3G4/S2 2B.2	Mojavean desert scrub, Sonoran desert scrub. In dry washes and on rocky hillsides. Sandy soils. 0-465 m. perennial herb. Blooms Oct ,Dec, Jan, Feb, Mar	**Low Potential.** Suitable habitat (dry washes or rocky hillsides) present adjacent to both project sites within their APEs, but outside of proposed disturbance limits. Considering the prior disturbance to the drainage features (dry washes) at both project sites and the historical nature of the closest CNDDB record (1932), the species has a low potential to occur.
Euphorbia arizonica Arizona spurge	None/None G5/S3 2B.3	Sandy flats. Sandy sites. -300 m. perennial herb. Blooms Mar-Apr	**Not Expected.** No suitable habitat (sandy flats) present.
Euphorbia platysperma flat-seeded spurge	None/None G3/S1 1B.2	Desert dunes, Sonoran desert scrub. Sandy soils. -100 m. annual herb. Blooms May	**Not Expected.** No suitable habitat (dunes) present.
Nemacaulis denudata var. *gracilis* slender cottonheads	None/None G3G4T3?/S2 2B.2	Coastal dunes, desert dunes, Sonoran desert scrub. In dunes or sand. -50-400 m. annual herb. Blooms (Mar) Apr-May	**Not Expected.** No suitable habitat (dunes) present.
Stemodia durantifolia purple stemodia	None/None G5/S2 2B.1	Sonoran desert scrub. Sandy soils; mesic sites. 35-385 m. perennial herb. Blooms (Jan)Apr, Jun, Aug, Sep, Oct, Dec	**Not Expected.** No suitable habitat (Sonoran desert scrub or mesic sites) present.
Ferns			
Selaginella eremophila desert spike-moss	None/None G4/S2S3 2B.2	Shaded areas, sandy or gravelly soils, at base of rocks in cracks. <1100 m.	**Not Expected.** No suitable habitat (shady rocks with cracks) present.

Scientific Name Common Name	Status Fed/State ESA CRPR,CDFW G-Rank/S-Rank	Habitat Requirements	Potential for Occurrence/Basis for Determination
Insects			
Bombus crotchii Crotch bumble bee	None/None G1G2/S1S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.	**Not Expected.** No suitable food plants for this species are present in the APE.
Dinacoma caseyi Casey's June beetle	Endangered/ None G1/S1	Found only in two populations in a small area of southern Palm Springs. Found in sandy soils; the females live underground and only come to the ground surface to mate.	**Not Expected.** Disturbance history of the project site limits the possibility of occurrence. The APE is located outside of the two known occurrences.
Macrobaenetes valgum Coachella giant sand treader cricket	None/None G1G2/S1S2	Known from the sand dune ridges in the vicinity of Coachella Valley. Population size regulated by amount of annual rainfall; some spots favor permanent habitation where springs dampen sand.	**Not Expected.** No suitable habitat (dunes) present on or adjacent to the APE.
Stenopelmatus cahuilaensis Coachella Valley jerusalem cricket	None/None G1G2/S1S2	Inhabits a small segment of the sand and dune areas of the Coachella Valley, in the vicinity of Palm Springs. Found in the large, undulating dunes piled up at the north base of Mt San Jacinto.	**Not Expected.** No suitable habitat (dunes) present on or adjacent to the APE.
Fish			
Cyprinodon macularius desert pupfish	Endangered/ Endangered G1/S1	Desert ponds, springs, marshes and streams in Southern California. Can live in salinities from freshwater to 68 ppt; can withstand temps from 9 - 45 C and dissolved oxygen levels down to 0.1 ppm.	**Not Expected.** No suitable aquatic present on or adjacent to the APE. Well drained soils in the adjacent drainage features do not allow significant perennial ponding.
Reptiles			
Crotalus ruber red-diamond rattlesnake	None/None G4/S3 SSC	Chaparral, woodland, grassland, & desert areas from coastal San Diego County to the eastern slopes of the mountains. Occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects.	**Low Potential.** Suitable habitat (east facing rocky areas) present in the APE but outside of disturbance limits. Considering the prior disturbance to the drainage features (desert washes) at both project sites and the historical nature of the only CNDDB record within five miles (1932), the species has a low potential to occur.

Scientific Name Common Name	Status Fed/State ESA CRPR,CDFW G-Rank/S-Rank	Habitat Requirements	Potential for Occurrence/Basis for Determination
Phrynosoma mcallii flat-tailed horned lizard	None/None G3/S2 SSC	Restricted to desert washes and desert flats in central Riverside, eastern San Diego, and Imperial counties. Critical habitat element is fine sand, into which lizards burrow to avoid temperature extremes; requires vegetative cover and ants.	**Low Potential.** Suitable habitat (desert washes) present in the APE but outside of disturbance limits. Considering the prior disturbance to the drainage features (desert washes) at both project sites and the generally historical nature of the CNDDB records within five miles (primarily early to mid-1900s, the latest from 1997), the species has a low potential to occur.
Uma inornata Coachella Valley fringe-toed lizard	Threatened/ Endangered G1Q/S1	Limited to sandy areas in the Coachella Valley, Riverside County. Requires fine, loose, windblown sand (for burrowing), interspersed with hardpan and widely-spaced desert shrubs.	**Not Expected.** Species is highly dependent on sand dunes, which are absent from the APE.
Birds			
Empidonax traillii extimus southwestern willow flycatcher	Endangered/ Endangered G5T2/S1	Riparian woodlands in Southern California.	**Not Expected.** Elements of suitable habitat required for nesting are not present.
Falco mexicanus prairie falcon	None/None G5/S4 WL	Inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	**Not Expected.** Elements of suitable habitat required for nesting are not present.
Toxostoma lecontei Le Conte's thrasher	None/None G4/S3 SSC	Desert resident; primarily of open desert wash, desert scrub, alkali desert scrub, and desert succulent scrub habitats. Commonly nests in a dense, spiny shrub or densely branched cactus in desert wash habitat, usually 2-8 feet above ground.	**Low Potential.** Elements of suitable habitat required for nesting are limited in the APE, outside of the disturbance limits. Absence of dense spiny shrub or densely branched cactus.
Mammals			
Chaetodipus fallax pallidus pallid San Diego pocket mouse	None/None G5T34/ S3S4 SSC	Desert border areas in eastern San Diego County in desert wash, desert scrub, desert succulent scrub, pinyon-juniper, etc. Sandy, herbaceous areas, usually in association with rocks or coarse gravel.	**Low Potential.** The species could possibly be found in the large ephemeral desert wash. Considering the prior disturbance to the drainage features (desert washes) at both project sites and the historical nature of the only CNDDB record within five miles (1952), the species has a low potential to occur.
Lasiurus xanthinus western yellow bat	None/None G5/S3 SSC	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees.	**Low Potential.** While palm trees are scattered throughout the APE, they offer only minimal roosting habitat. The trees appear to be maintained and trimmed regularly.

Scientific Name Common Name	Status Fed/State ESA CRPR,CDFW G-Rank/S-Rank	Habitat Requirements	Potential for Occurrence/Basis for Determination
Ovis canadensis nelsoni Peninsular bighorn sheep	Endangered/ Threatened G4T3Q/S1 FP	Found in the lower elevations of the Peninsular ranges including canyon bottoms, alluvial fans, and mountain slopes.	**Low Potential.** Suitable habitat (Peninsular ranges) present within the APEs of both sites, but outside of the disturbance limits. Both sites have chain link fences separating the sites from the native slopes. Moderate potential to occasionally visit the area where the APE extends outside of the fenced area, but not expected within the fenced area where project activities will occur.
Xerospermophilus tereticaudus chlorus Palm Springs round-tailed ground squirrel	None/None G5T2Q/S2 SSC	Restricted to the Coachella Valley. Prefers desert succulent scrub, desert wash, desert scrub, alkali scrub, and levees. Prefers open, flat, grassy areas in fine-textured, sandy soil. Density correlated with winter rainfall.	**Not Expected.** Required habitat not present in project area. Species is dependent on dunes and grassy open areas that are not present within the APE. Also known from areas closer to the Whitewater River.

Regional Vicinity refers to within a 5-mile radius of the APE.

BCC = USFWS Bird of Conservation Concern
FC = Federal Candidate Species
FE = Federally Endangered
FP = CDFW Fully Protected
FT = Federally Threatened
SE = State Endangered
ST = State Threatened
SR = State Rare
SSC = CDFW Species of Special Concern

G-Rank/S-Rank = Global Rank and State Rank as per NatureServe and CDFW's CNDDB RareFind 5

CRPR (CNPS California Rare Plant Rank):
1A=Presumed Extinct in California
1B=Rare, Threatened, or Endangered in California and elsewhere
2=Rare, Threatened, or Endangered in California, but more common elsewhere
3=Need more information (a Review List)
4=Plants of Limited Distribution (a Watch List)

CRPR Threat Code Extension
.1=Seriously endangered in California (> 80% of occurrences threatened/high degree and immediacy of threat)
.2=Fairly endangered in California (20-80% occurrences threatened)
.3=Not very endangered in California (<20% of occurrences threatened)

Appendix B

Representative Photographs of the APE

Photograph 1. View looking east at BS05513.

Photograph 2. View looking east at dry wash adjacent BS05513.

Photograph 3. View looking west along access drive to BS05513.

Photograph 4. View looking northeast at BS05513. Note ornamental screening vegetation.

Photograph 5. View looking southwest along Thunderbird Road.

Photograph 6. View looking northeast along dry wash adjacent Thunderbird Road towards BS05513.

Photograph 7. View looking northeast at Tank 5514-1. Note the dry wash adjacent to the project site.

Photograph 8. View looking southwest from Tank 5514-1. Note adjacent mountain side with creosote scrub.

Photograph 9. View looking southwest along dry wash to southern edge of the Tank 5514-1 project site.

Photograph 10. View looking south at Tank 5514-1. Note ornamental screening vegetation.

Photograph 11. View looking north along dry wash with creosote scrub habitat on hillside opposite the Tank 5514-1 project site.

Photograph 12. View looking west from Thunderbird Road towards Tank 5514-1.

Appendix C

Plant and Wildlife Species Observed in the APE

Plant and Wildlife Species Observed in the APE on April 30, 2020

Scientific Name	Common Name	Origin
Plants		
Chamaesyce albomarginata	rattlesnake weed	Native
Cryptantha sp.	cryptantha	Native
Encelia farinosa	brittlebush	Native
Eriogonum species	buckwheat	Native
Erodium cicutarium	red-stemmed filaree	Non-native
Larrea tridentata	creosote	Native
Lupinus arizonicus	Arizona lupine	Native
Nerium oleander	oleander	Native
Parkinsonia florida	blue paloverde	Native
Plantago patagonica	woolly plantain	Native
Pennisetum setaceum	fountain grass	Native
Prosopis glandulosa	mesquite	Native
Psorothamnus spinosus	smoke tree	Native
Schismus barbatus	schismus	Native
Washingtonia robusta	Mexican fan palm	Non-native
Wildlife		
Birds		
Calypte costae	Costa's hummingbird	Native
Corvus brachyrhynchos	common raven	Native
Haemorhous mexicanus	house finch	Native
Mimus polyglottos	northern mockingbird	Native
Spinus psaltria	lesser goldfinch	Native
Zenaida macroura	mourning dove	Native

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Appendix D

Resumes

Ryan Gilmore, MURP

SENIOR BIOLOGIST/URBAN FORESTER/PROJECT MANAGER

Ryan Gilmore serves as a Senior Biologist/Urban Forester/Project Manager and ISA Certified Arborist under Rincon's Biological Services group. He has 12 years of professional consulting experience in the environmental field including work throughout California. His responsibilities include field surveys for habitat evaluation, nesting bird surveys, burrowing owl surveys, bighorn sheep surveys, resource constraints analysis, construction and mitigation monitoring, habitat restoration and success monitoring, general biological surveys, and the preparation of biological reports for compliance with both NEPA and CEQA. Additionally, he has performed a multitude of tasks in the field of forestry. These projects include assessment and inventory of native woodlands, managing and monitoring the relocation and preservation of trees on development sites, urban tree health assessments (including tree decay studies), global positioning system (GPS) mapping, construction monitoring, data analysis, hazardous tree assessments, invasive pests studies (GSOB & PSHB), and preparation of various arboricultural reports (including urban forestry management plans, street tree management plans, and native tree restoration plans). Additionally, has provided on-call arborist services for multiple Southern California cities and large land managers.

EDUCATION

M.U.R.P., Urban and Regional Planning, emphasis in Environmental, California State Polytechnic University, Pomona, 2010

B.A., Anthropology, emphasis in Archaeology, University of California, Santa Cruz, 2000

CERTIFICATIONS + QUALIFICATIONS

International Society of Arboriculture (ISA) Certified Arborist & Municipal Specialist (WE-9009AM)

ISA Tree Risk Assessment Qualification, 2017

American Society of Consulting Arborists, Trees and Plants Appraisal Qualification, 2019

TRAINING

ISA Tree Appraisal Workshop

Urban and Wildland Forests: Tree Pests and Diseases Workshop

Hour ACOE Wetland Delineation Training Program

Goldspotted Oak Borer Workshop

Stephen's Kangaroo rat field training

Desert Tortoise Surveying, Monitoring, and Handling Techniques Workshop

PROJECT EXPERIENCE

BOTANICAL SURVEY EXPERIENCE

- TRTP Project, Southern California Edison, Riverside County, Los Angeles, and Kern County, California – Conducted pre-construction botanical surveys, tree inventory, mitigation assessments, and habitat assessments along 175-mile corridor.
- Newhall Ranch, Los Angeles County – Conducted rare plant surveys and San Fernando spineflower mapping.
- Caltrans, Districts 7 and 8, Los Angeles County and San Bernardino County, California – Conducted rare plant focused botanical surveys and vegetation mapping.
- Various Projects, Verizon, San Bernardino County, California – Conducted rare plant focused botanical surveys and vegetation mapping
- Big Tujunga Wash Mitigation Bank, Los Angeles County Department of Public Works, Los Angeles County, California – Conducted restoration monitoring and annual reporting.
- Eagle Canyon and Debris Basin Habitat Mitigation Project, Riverside Flood Control and Water Conservation District, Riverside County, California – Conducted focused habitat restoration success monitoring, water quality testing, and preconstruction surveys for bighorn sheep and burrowing owl.
- Various Projects and Clients, Throughout Los Angeles, Orange, Riverside, San Bernardino, San Diego, Santa Barbara, and Ventura counties - Performed large- and small-scale evaluation of protected trees Provided GIS-based tree mapping and analysis of potential tree impacts from construction. Compiled all fieldwork data and analysis into technical reports.

Wildlife Survey Experience

- Various Projects, Caltrans, District 7, Los Angeles County, California – Conducted bighorn sheep surveys and monitoring in the San Gabriel Mountains.
- Soitec Solar Project, San Bernardino County, California – Conducted bird mortality studies.
- Sunrise Powerlink, San Diego Gas & Electric (SDG&E), San Diego County, California – Conducted protocol gold-spotted oak borer surveys within the Sunrise Powerlink mitigation site project boundaries. Developed pest management plan and monitoring for success.
- Vista Chino Road Improvement Project, City of Palm Springs, California – Conducted focused burrowing owl and Palm Springs round-tailed ground squirrel surveys.
- ISHB Monitoring and Extent Surveys Project, Orange County Transit Authority, Orange County, California – Conducted focused ISHB extent surveys, trapping and monitoring program, and management plan.
- ISHB Monitoring and Extent Surveys Project, Yucaipa Water District, City of Yucaipa, California – Conducted focused ISHB extent surveys, trapping and monitoring program, and management plan.
- Pre-Construction Burrowing Owl Survey for the Nuevo Bridge Widening and Road Improvements Project, City of Perris – Conducted burrowing owl surveys.
- Castaic Conduit Project, Santa Clara Water District, City of Santa Clarita - Least Bell's Vireo Surveys.
- Honby Pipeline Project, Santa Clarita Valley Water District, City of Santa Clarita – Least Bell's Vireo Surveys.

Biological Technical Reports

- Various Protected Tree Inventories, Southern California Gas, Los Angeles County, California – Prepared various Protect Tree Reports
- Lakeview Plaza Project, Lakeview Centre, LLC, City of Lake Elsinore, California – Prepared Western Riverside Multiple Species Habitat Conservation Plan Consistency Analysis/Habitat Assessment
- Limonite Gap Closure Project, City of Eastvale California –Prepared Western Riverside Multiple Species Habitat Conservation Plan Consistency Analysis/Habitat Assessment
- Anza Electric Broadband Line Project, Riverside County, California – Prepared Western Riverside Multiple Species Habitat Conservation Plan Consistency Analysis/Habitat Assessment and Biological Resource Assessment
- Morgan Park Phase Two Project, City of Perris, California – Prepared Western Riverside Multiple Species Habitat Conservation Plan Consistency Analysis/Habitat Assessment