Appendix C

Biological Resources Technical Report



2020/2021 Non-Potable Water (NPW) Connections Project

Biological Resources Technical Study

prepared by

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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 2020/2021 Non-Potable Water (NPW) Connections Project (project). Coachella Valley Water District (CVWD) is the project's lead agency.

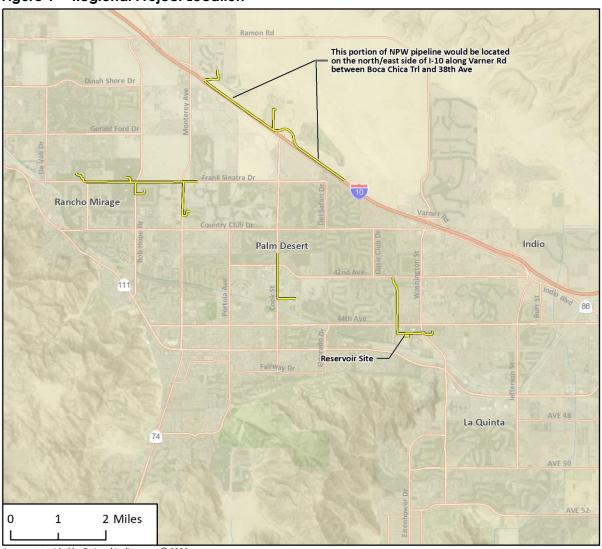
1.1 Project Location

The project alignment is located in in the Coachella Valley of central Riverside County, in the cities of Palm Desert, Rancho Mirage, Indian Wells, and La Quinta, as well as the community of Thousand Palms in unincorporated Riverside County (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) but outside of any designated conservation area. The project is depicted on the U.S. Geological Survey *Cathedral City, Myoma*, and *La Quinta* CA 7.5-minute topographic quadrangles.

1.2 Project Description

The proposed project involves the construction and operation of approximately 12 miles of NPW pipeline segments and connections to provide irrigation water to nine new end users, which include seven local golf courses, one community church, and one sports and entertainment venue, as listed below in Table 1. These end users currently use on-site pumped groundwater, or CVWD-supplied potable water for irrigation; there are no connections to canal water at this time. Under the proposed project, those water sources would shift to a blend of NPW from CVWD's existing Water Reclamation Plant No. 10 (WRP10) facility, located at 43000 Cook Street in Palm Desert, and Colorado River water from the Mid-Valley Pipeline (MVP) terminus at WRP10 or only Colorado River water directly from the MVP. WRP10 is equipped with a tertiary treatment design capacity of 15 million gallons per day (mgd). During the winter months, when current demand for recycled water is less than the available supply, a portion of the recycled water (tertiary water) is disposed through on-site percolation-evaporation ponds, which will be eliminated as more NPW users are connected to the NPW distribution system.

Figure 1 Regional Project Location



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INDFig 1 Regional Location

Table 1 Proposed Project Non-Potable Water End User Connections

Land Use Type	Connection Name	Location
Golf Course	Annenberg Estate aka Annenberg Retreat at Sunnylands Golf Course	37977 Bob Hope Drive Rancho Mirage, CA 92270
Golf Course	Rancho Mirage Country Club	38500 Bob Hope Drive Rancho Mirage, CA 92270
Golf Course	Tamarisk Country Club	70240 Frank Sinatra Drive Rancho Mirage, CA 92270
Golf Course	Suncrest Country Club	73450 Country Club Drive Palm Desert, CA 92260
Golf Course	Jack Ivey Ranch Country Club	74580 Varner Road Thousand Palms, CA 92276
Golf Course	Tri-Palm Estates and Country Club	32700 Desert Moon Drive Thousand Palms, CA 92276
Golf Course	Palm Royale Country Club	78259 Indigo Drive La Quinta, CA 92253
Church	Southwest Community Church	44175 Washington Street Indian Wells, CA 92210
Sports and Entertainment Venue	Indian Wells Tennis Garden	78200 Miles Avenue Indian Wells, CA 92210

Proposed Infrastructure

Pipeline Segments

The proposed project would install a total of approximately 68,000 linear feet (LF) of new NPW pipeline within public rights-of-way and private lands in the project area, as shown on Figure 2.

The proposed NPW pipelines would extend adjacent to Rancho Portola, a planned future development in Palm Desert, and the Eagle, a planned future development in Rancho Mirage. The proposed project NPW pipelines would supply NPW to existing and future customers through CVWD's Low and High Pressure Systems (NPW delivery systems), which are discussed below. The proposed project pipeline segments would convey NPW into existing water impoundments (surface lakes) located on site at each golf course facility identified in Table 1, and to the new storage reservoir described below, located near the Indian Wells Tennis Garden (IWTG) to serve the landscape irrigation needs of the IWTG and Southwest Community Church facilities.

Storage Reservoir

The proposed project would include construction of one water storage reservoir located in Indian Wells to serve the IWTG and Southwest Community Church facilities. This project component would be a lined surface water storage reservoir with a capacity of approximately one million gallons, and a pond-like configuration. During construction of the project's reservoir, approximately 5,000 cubic yards of material would be exported off site.

The proposed reservoir location is in the southeast portion of a parcel owned and maintained by the IWTG, bounded to the north and west by the other portions of the parcel, and to the east and south by existing paved access roads that bound the entire site (Figure 2). The site is approximately 922 feet (0.17 mile) east of Warner Trail and approximately 265 feet (0.05 mile) south of Entrada Las

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Brisas, which provides access from Warner Trail east to the entrance of Southwest Community Church on Washington Street, just south of Fred Waring Drive.

Valves and Meters

The proposed project would include installation of nine new motor-actuated valves and nine new CVWD meters. Each delivery point (end user connection) would be equipped with one motor actuated valve located in a belowground vault, adjacent to an existing golf course lake where a discharge site is located. The motor actuated valve will allow each terminal user to control delivery of NPW to the on-site water impoundment. NPW deliveries will be measured via CVWD-owned meters, located immediately outside of the public right-of-way within an easement obtained from the respective customer. Each meter vault will be equipped with an antenna and telemetry panel.

Construction Activities

Construction of the proposed project is anticipated to last approximately two years. Implementation of each of the proposed NPW pipeline segments would entail the following:

- Removal of existing ground cover (landscaping, asphalt, or concrete)
- Open trenching along the NPW pipeline alignment (a jack and bore technique may be used at major intersections)
- Placement of bedding within the trench
- Placement of NPW pipeline
- Backfilling of trenches and soil compaction
- Installation of meters and motor actuated valves

The new NPW pipeline segments would be constructed via open trench measuring approximately five feet in width and up to eight feet in depth, and/or by a jack and bore technique at major intersections. With the addition of approximately 68,000 LF of new pipeline segments under the proposed project, the total disturbed area would be up to approximately 340,000 square feet.

Project construction activities would involve the removal of approximately six inches of depth of existing asphalt along the project corridor. Where the project alignment transects unpaved golf course land, it is assumed that six inches of grass and soil would be removed in lieu of asphalt. Another six inches of soil and gravel would be removed during trenching to make room for the pipelines. Some native soil would remain on site to be used as backfill.

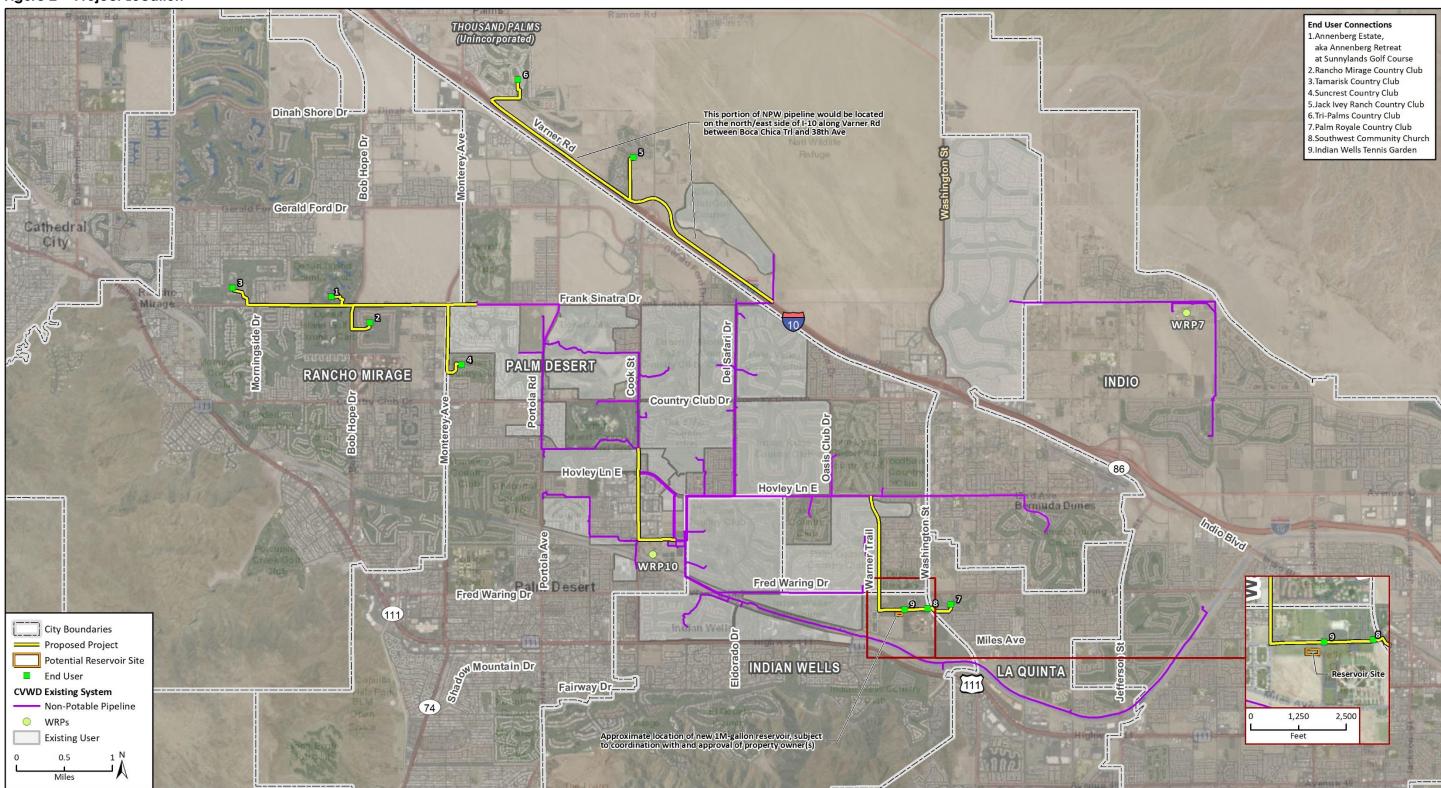
Operation and Maintenance Activities

Operation and maintenance of the proposed project would include conveyance of NPW from CVWD's existing WRP10 facility to each of the proposed end user connections to provide landscape irrigation water. The delivery of NPW would require pump station operation and motor-actuated valve operation. Operation and maintenance activities for the proposed project would include regular visual inspections of project infrastructure, and the implementation of repairs on an asneeded basis. These activities are consistent with ongoing operation and maintenance activities for CVWD's existing NPW distribution system.

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 pipeline and associated infrastructure. 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 50-foot buffer (25 feet on either side of the alignment) around the proposed project site to address potential indirect project effects such as noise and dust.

Figure 2 Project Location



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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). This project may also involve the use of funds provided by the federal government and would need to meet CEQA-Plus regulatory standards. The State Water Resources Control Board (SWRCB) would have the responsibility for CEQA-Plus review which applies federal standards to the CEQA process.

Environmental Statutes

For the purposes of this BRTS, potential project-related impacts to biological resources were guided by 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 the Clean 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

- CEQA
- California Endangered Species Act (CESA)
- California Fish and Game Code (CFGC)

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Porter-Cologne Water Quality Control Act

Local

- Riverside County Ordinance No. 559 Regulating the Removal of Trees
- City of Palm Desert Chapter 12.32 Tree Pruning Ordinance
- CVMSHCP/NCCP

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.
- 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 California Department of Fish and Wildlife (CDFW; formerly the California Department of Fish and Game) California Natural Diversity Data Base (CNDDB) (CDFW 2020a) and Biogeographic Information and Observation System (CDFW 2020b); the U.S. Fish and Wildlife Service (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, La Quinta*, and *Myoma*, California USGS 7.5-minute topographic quadrangles and the other eight USGS quadrangles that surround each of them (*Desert Hot Springs, Seven Palms Valley, East Deception Canyon, Palm Springs, Palm View Peak, Rancho Mirage, Indio, Toro Peak, Martinez Mountain, Valerie, West Berdoo Canyon, and Keys View).*

Results of the special-status species queries were compiled and analyzed to determine which species 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 June 12, 2020, from 0700 to 1330. Weather conditions during the survey included temperatures ranging from 80°F to 102°F, with calm winds and minimal cloud cover. The survey area included the APE, as defined above, except for the alignment extending west from WRP10 and north-south on Cook Street in Palm Desert and the proposed storage reservoir location, which were included in the proposed project after the survey. These additional components are located in developed areas and were evaluated via photographic documentation and desktop analysis described 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 practical 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 likely 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 are 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 cities of Indian Wells, Palm Desert, La Quinta, and Rancho Mirage, and the community of Thousand Palms in unincorporated 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 62 to 285 feet above mean sea level.

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

- Coachella fine sand, 0 to 2 percent slopes
- Coachella fine sandy loam, 0 to 2 percent slopes
- Gilman fine sandy loam, 0 to 2 percent slopes
- Gilman fine sandy loam, wet, 0 to 2 percent slopes
- Myoma fine sand, 0 to 5 percent slopes
- Myoma fine sand, 5 to 15 percent slopes

The Coachella, Gilman, and Myoma series consist of fine, mostly well drained soils formed from recent alluvium. In an undeveloped state, natural vegetation typically found on these types of soils includes ephemeral grasses and forbs, and a sparse cover of bursage, creosote bush, saltbush, mesquite and other desert shrubs and weeds. The Myoma soil types 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 the project sites are generally located within a developed urban area,

additional vegetation communities are present within the APE and adjacent to the project sites. One land cover type and one vegetation community occur within the APE and are discussed in more detail below: developed and fourwing saltbush (*Atriplex canescens*) scrub (Figure 3a through Figure 3f).

Thirty-one plant species were observed within the APE during the field survey (Appendix C).

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 majority of the project sites (approximately 144.98 within the APE), which includes golf courses, golf course freshwater lakes (ponds), 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*).

Fourwing Saltbush Scrub

The fourwing saltbush scrub habitat in the APE corresponds to natural shrubland stands more recently described by Sawyer et al. (2009). Fourwing saltbush scrub is dominated by native species fourwing saltbush (*Atriplex canescens*). Within the APE, this plant community has varying levels of disturbance. It occupies approximately 7.31 acres and primarily exists along the roadway shoulders adjacent to the project site along Varner Road (paved roadway) (Figure 3b).

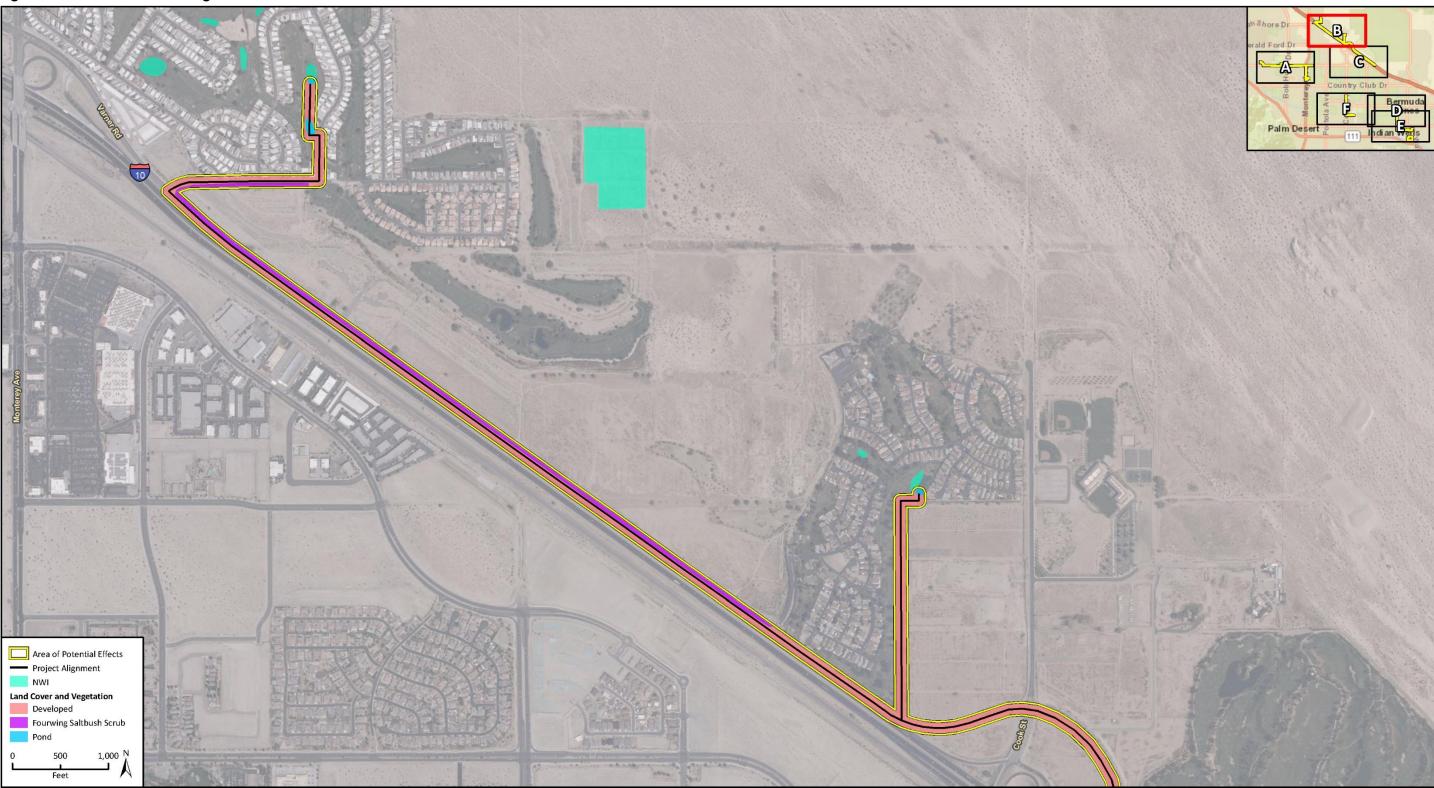
3.3 General Wildlife

The APE and surrounding areas provide habitat suitable for wildlife species that commonly occur in southern California suburban desert areas. Birds observed within or adjacent to the APE included species such as mallard (*Anas platyrhynchos*), verdin (*Auriparus flaviceps*), Canada goose (*Branta canadensis*), red-tailed hawk (*Buteo jamaicensis*), Costa's hummingbird (*Calypte costae*), common raven (*Corvus corax*), American kestrel (*Falco sparverius*), greater roadrunner (*Geococcyx californicus*), house finch (*Haemorhous mexicanus*), northern mockingbird (*Mimus polyglottos*), house sparrow (*Passer domesticus*), band-tailed pigeon (*Patagioenas fasciata*), lesser goldfinch (*Spinus psaltria*), and mourning dove (*Zenaida macroura*). Reptiles observed included desert iguana (*Dipososaurus dorsalis*) and western fence lizard (*Sceloporus occidentalis*). Evidence of roosting bats (guano staining/droppings at potential roosting locations) was not observed during the survey.

Figure 3a Land Cover and Vegetation



Figure 3b Land Cover and Vegetation



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Figure 3c Land Cover and Vegetation

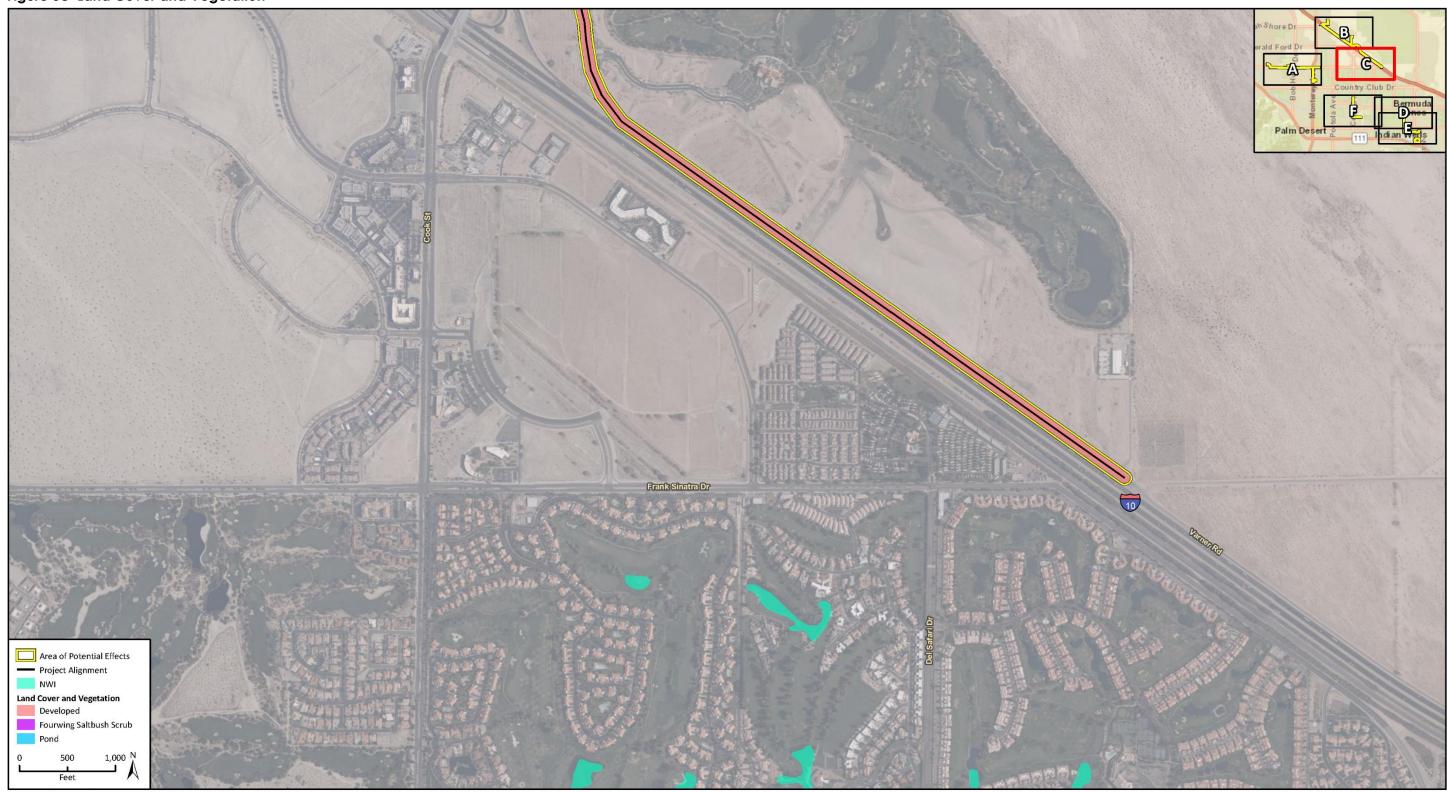
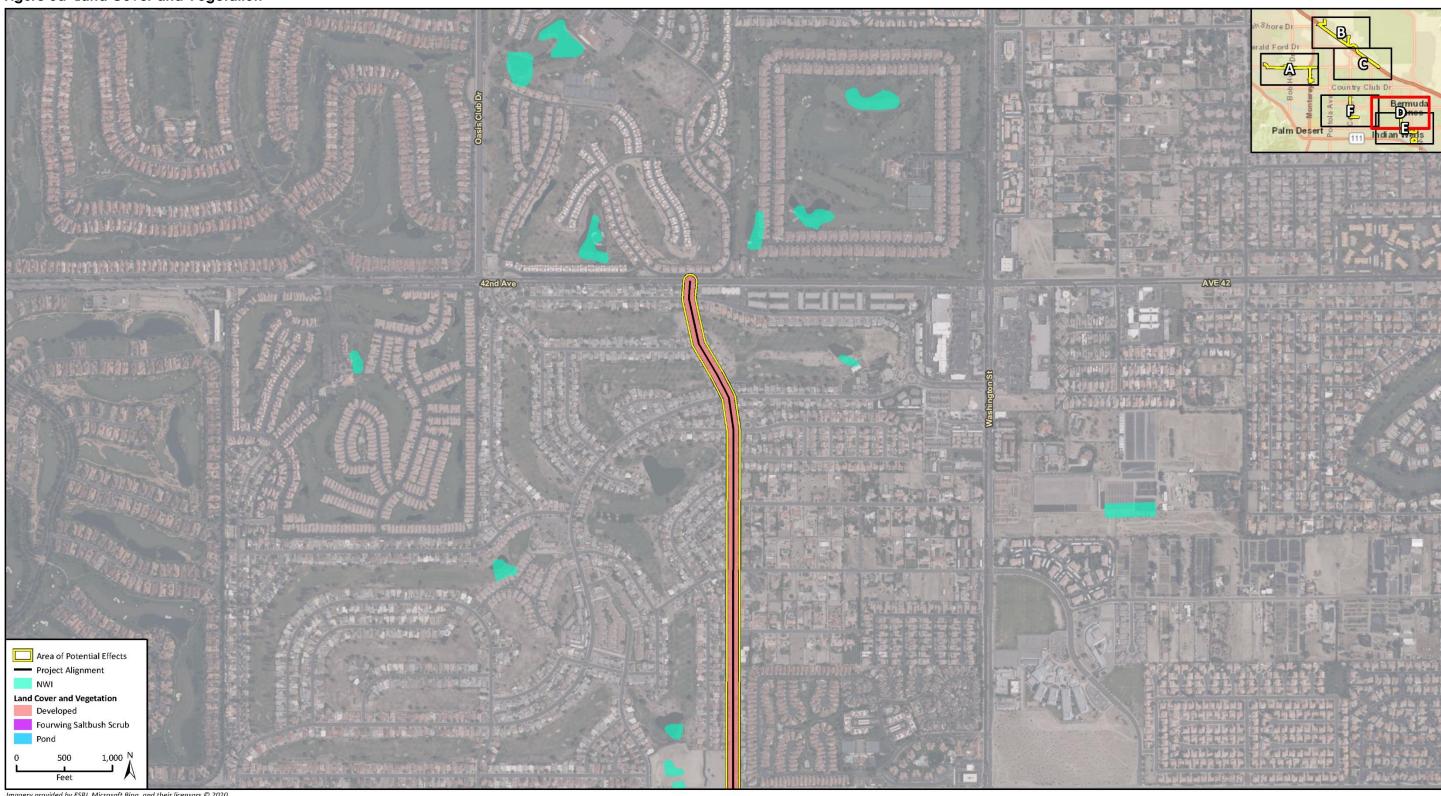
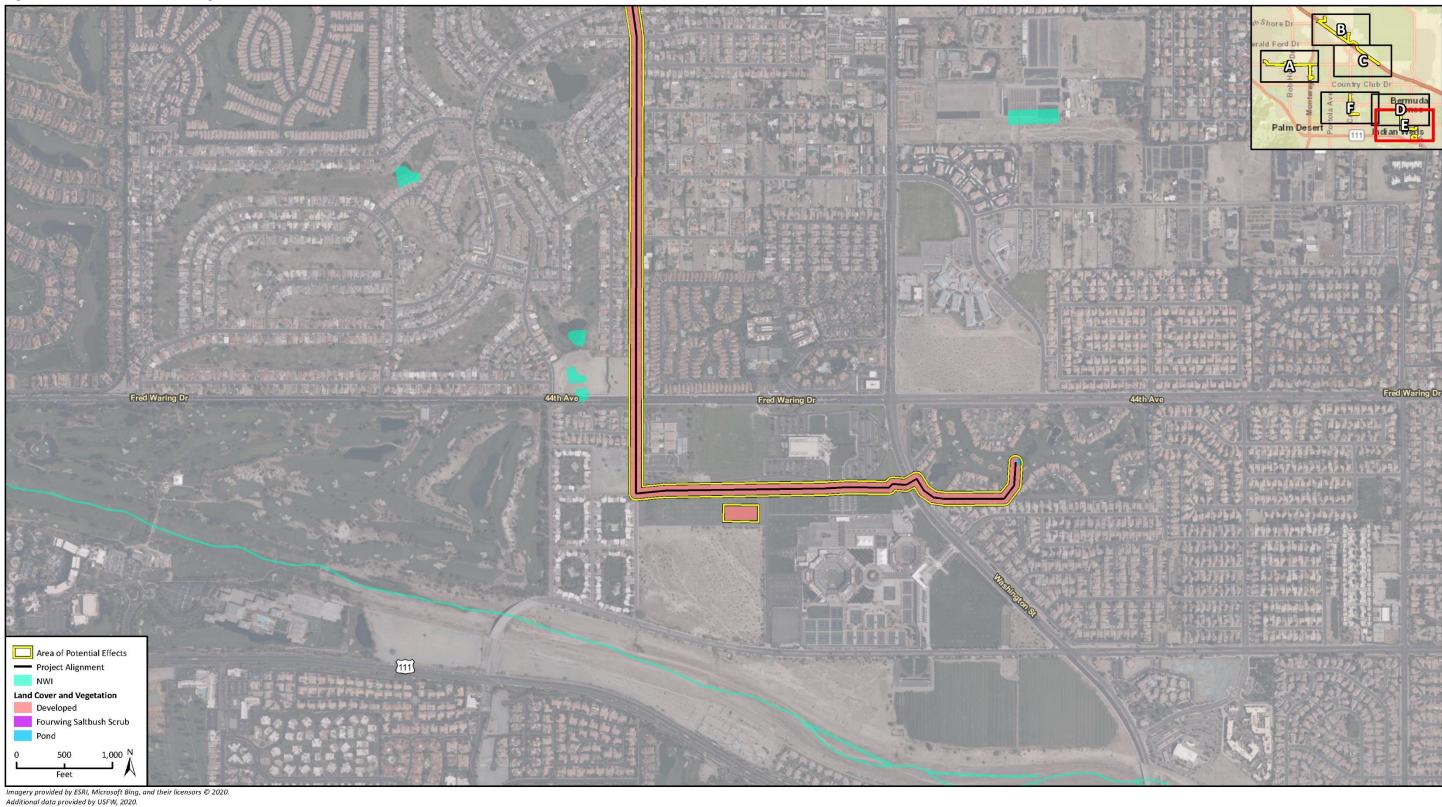


Figure 3d Land Cover and Vegetation



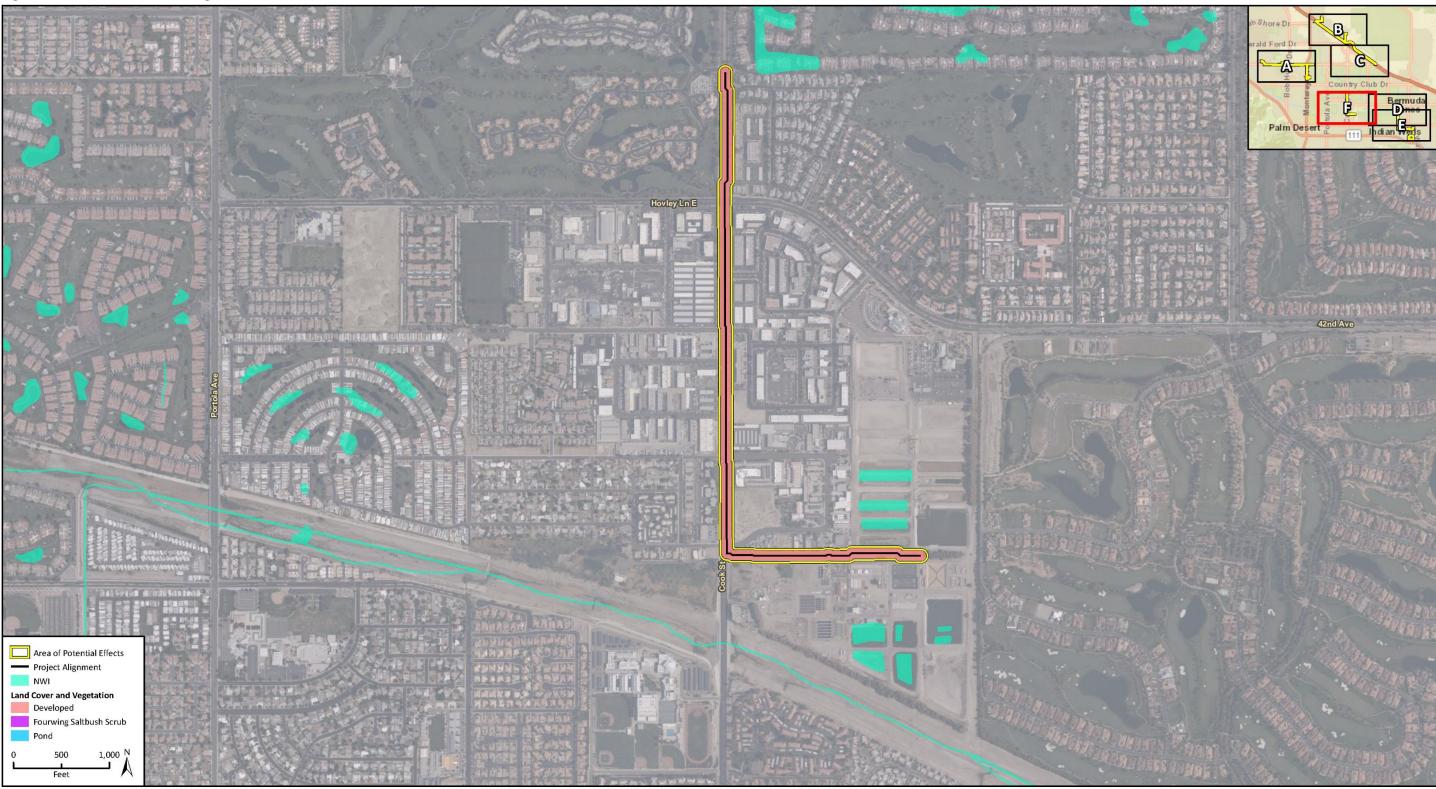
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Figure 3e Land Cover and Vegetation



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Figure 3f Land Cover and Vegetation



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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) 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

Special-Status Plant Species

Rincon evaluated 14 special-status plant species recorded 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 14 species evaluated, none have a moderate or high potential to occur based on the existing developed nature of the project site, 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.

Special-Status Wildlife Species

Rincon evaluated 26 special-status wildlife species recorded 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 26 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 outside of paved and developed areas, the habitat quality is low relative to species requirements, and many CNDDB occurrences are historical (dating from the early to mid-1900s). In particular, the APE along Varner Road intersects the southwestern boundary of Critical Habitat for the Coachella Valley fringe-toed lizard (Uma inornata). According to the USFWS (2010), this species "is specialized to occupy a specific habitat type consisting of accumulations of wind-blown (aeolian) sand. Deeper sand deposits with more topographic relief are preferred by the species over flatter sand sheets." In addition, "low sand compaction is an important preferred habitat characteristic because it is easier for [this species] to burrow in less compact sand." These habitat elements, which can be more broadly characterized as sand hummocks, accretion dunes, or sandy plains, are not present within

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the APE where it intersects the Critical Habitat, or elsewhere. The unpaved road shoulder of Varner Road that is included in the APE is generally compacted sand with disturbed fourwing saltbush scrub (refer to Attachment B, Photograph 1) and is not suitable to support Coachella Valley fringe-toed lizard. As a result, this species is not expected to occur within the APE. Therefore, special-status wildlife species either have a low potential or are not expected within the APE areas. No special-status wildlife species were detected within the APE during the survey.

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 3513 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 APEs during the bird nesting season (generally January 1 through September 15 for raptors).

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 (CDFW 2019). While records of sensitive communities are maintained in CNDDB, these occurrences are classified according to an older system (Holland 1986) that has been superseded by Sawyer et al. 2009. Regardless, the CNDDB occurrences are discussed here to provide a complete analysis of sensitive vegetation communities within, adjacent to, or outside of the APE.

According to the CNDDB, 18 occurrences of a single sensitive plant community are recorded within a 5-mile radius of the APE: desert fan palm oasis, the closest is located approximately two miles southwest of APE in the CVMSHCP/NCCP Santa Rosa and San Jacinto Mountains Conservation Area. No sensitive plant communities occur within the APE. As discussed in Section 4.3, below, riparian habitat is not located within the APE given the lack of such vegetation in the golf course ponds and the APE's distance from the Whitewater River, where such habitat could potentially occur.

4.3 Jurisdictional Waters and Wetlands

Areas potentially subject to United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and CDFW jurisdiction were assessed during the literature review and field visit; however, a formal jurisdictional delineation was not performed.

The proposed pipeline alignments terminate at seven individual artificial lakes (ponds) within seven golf courses all located within the APE. These lakes are classified by the USFWS NWI as excavated, unconsolidated bottom, permanently-flooded palustrine features (USFWS 2020c). These lakes are surrounded by ornamental vegetation typical of maintained golf courses. No native vegetation was present at these locations. These features do not have connectivity to navigable or other jurisdictional waters. The lakes are used as water storage basins for golf course irrigation with no offsite discharge. Additionally, no obligate (OBL) or facultative wetland (FACW) plant species were observed within the project area at these lakes. No suitable habitat for wildlife is present.

The artificial lakes are not subject the jurisdiction of the USACE given that they are constructed in uplands to supply irrigation, are not jurisdictional impoundments, and have no connection to offsite waters of the U.S. The lakes are also not under the jurisdiction of the CDFW as given they are well-maintained and subject to frequent disturbance, free of native vegetation, and do not provide suitable habitat for wildlife in the area. Finally, the lakes are not under the jurisdiction of the RWQCB considering that they are water storage basins for golf course irrigation that were excavated in uplands and have no offsite discharge into other waters of the State or a local storm drain system.

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 occurs within the planning boundary of the CVMSHCP/NCCP area but is not a part of any specific CVMSHCP/NCCP Conservation Area. The APE at the storage reservoir is 0.9 mile north of the CVMSHCP/NCCP Santa Rosa and San Jacinto Mountains Conservation Area (across the Whitewater River) and the APE along Varner Road is 500 feet southwest of the CVMSHCP/NCCP Thousand Palms Conservation Area. These Conservation Areas provide biological corridor and linkage between the San Jacinto/Santa Rosa Mountains, the San Bernardino Mountains, and Joshua Tree National Park.

The Whitewater River (Figure 3e and Figure 3f) is a vital regional wildlife corridor linking multiple areas throughout the Coachella Valley. However, the proposed project does not intersect this corridor; therefore, it would not have an incremental effect on localized and urban adapted wildlife movement or create habitat fragmentation within the river.

4.5 Local Policies and Ordinances

For unincorporated areas of 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.

For street trees in the city of Palm Desert an encroachment permit is required per Pruning Ordinance (Chapter 12.32 of the Municipal Code) to prune or remove a public tree. Before commencing work, the contractor should apply for and receive an encroachment permit to work within the public right-of-way. All tree pruning and/or removal is to be done by an experienced International Society of Arboriculture (ISA) certified tree worker and/or an experienced but non-certified tree worker under the direct supervision of one of the aforementioned ISA certified personnel.

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*). As stated in the CVMSHCP/NCCP Section 7.0, Take Authorization for Covered Activities and Term of Permit, 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 except as provided for pursuant to CFGC Section 2081.7."

The CVWD is a signatory to the IA. Each participating city or local jurisdiction within the Coachella Valley will impose a development mitigation fee for new development projects within its jurisdiction. With payment of the mitigation fee and compliance with the requirements of the CVMSHCP/NCCP, full mitigation in compliance with CEQA, the National Environmental Policy Act (NEPA), CESA, and FESA will be granted.

The APE occurs within the planning boundary of the CVMSHCP/NCCP but is not a part of any specific CVMSHCP/NCCP Conservation Area (Figure 4). However, the APE is approximately 0.9 mile northeast and 500 feet southwest of the Santa Rosa and San Jacinto Mountains CVMSHCP/NCCP Conservation Area and the Thousand Palms CVMSHCP/NCCP Conservation Area, respectively.

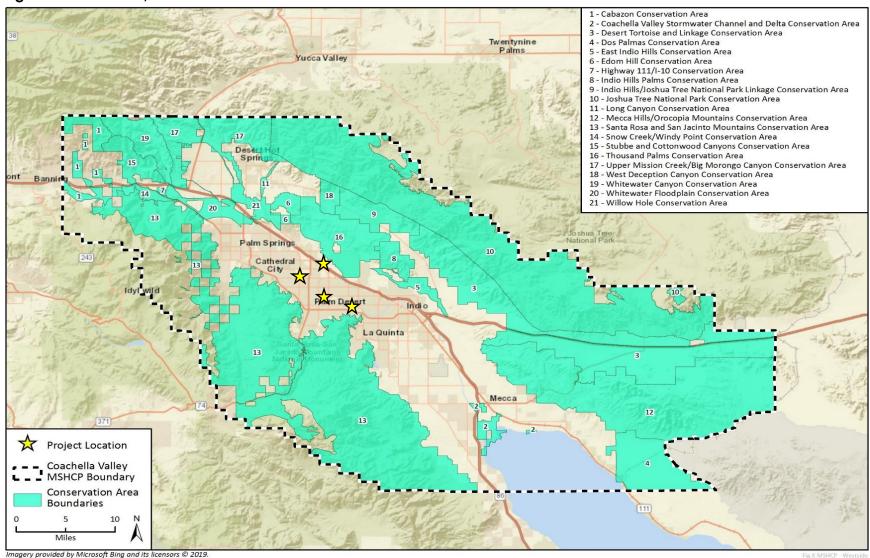
In addition, the purpose of CVMSHCP/NCCP Section 4.5 Land Use Adjacency Guidelines is to avoid or minimize indirect effects from development adjacent to or within the Conservation Areas. In this context, "adjacent" means to share a common boundary with any parcel in a designated Conservation Area. Indirect effects include noise, lighting, drainage, intrusion of people, and the introduction of nonnative plants and nonnative predators such as dogs and cats. Moreover, the CVMSHCP 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 APE is located within Critical Habitat for Coachella Valley fringe-toed lizard along the pipeline alignment along Varner Road. The USFWS Critical Habitat mapper locates the habitat within the existing paved Varner Road right-of-way (ROW) (USFWS 2020a). It should be noted that proposed construction activities will take place within the Varner Road ROW and not adjacent open lands. As discussed in Section 4.1, above, preferred habitat for Coachella Valley fringe-toed lizard, including sand hummocks, accretion dunes, or sandy plains, are not located within the ROW. The unpaved road shoulder of Varner Road that is included in the APE is generally compacted sand with disturbed fourwing saltbush scrub (refer to Attachment B, Photograph 1) and is not suitable to support Coachella Valley fringe-toed lizard. As a result, the APE in this area, though it overlaps the species' Critical Habitat, does not provide sufficient habitat elements to provide support the species. Additionally, this Critical Habitat overlaps a significant portion of the Thousand Palms CVMSHCP/NCCP Conservation Area, but the boundaries are not exactly the same.

The APE is not within or adjacent to the Coastal Zone or any federally designated Wild and Scenic Rivers. Furthermore, the APE is not within or adjacent any Essential Fish Habitat or within areas 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 avoidance, minimization, or 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

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.

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. Specifically, the habitat requirements for Coachella Valley fringe-toed lizard, including sand hummocks, accretion dunes, or sandy plains, are not located within the Varner Road ROW within the APE where it overlaps the species' Critical Habitat. As such, the APE would not be considered suitable habitat for or support Coachella Valley fringe-toed lizard. The project's impacts are limited to previously-disturbed areas with high human activity, including within the existing paved Varner Road. As a result, no direct impacts to special-status species are expected. Indirect impacts to special-status species are also not expected given the lack of suitable habitat elements to support special-status species, including the Coachella Valley fringe-toed lizard, adjacent to proposed work areas within the APE. As a result, no indirect impacts to special-status species are expected. No mitigation measures are recommended.

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 3513, 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 3513, and the MBTA are provided below.

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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 of at least 25 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 or riparian habitat were documented within or adjacent to the APE. Furthermore, project impacts are limited to previously developed areas with high human activity and no impacts to areas outside of those mapped as developed are anticipated. Therefore, the proposed project does not have the potential to result in direct or indirect impacts to sensitive vegetation communities. No mitigation measures are recommended.

5.3 Jurisdictional Waters and Wetlands

As discussed in Section 4.3, the proposed pipeline alignments terminate at seven individual artificial lakes within seven individual golf courses. The lakes are classified by the USFWS NWI as excavated, unconsolidated bottom, permanently-flooded palustrine features and are not considered jurisdictional. The pipelines will be installed below grade within the golf courses, and water will be discharged by an aboveground lake discharge, which will not result in impacts to the lakes. No other features are present within the APE that are jurisdictional. As a result, the proposed project does not have the potential to result in direct or indirect impacts to jurisdictional areas, wetlands, other waters, or riparian habitats. Due to the absence of potential impacts to jurisdictional features, no measures are recommended for proposed construction activities occurring at the seven artificial lakes or elsewhere within the APE.

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.

As discussed in Section 4.4, the APE is located in the vicinity, but not within, CVMSHCP/NCCP Conservation Areas and the Whitewater River, which constitute important wildlife habitat and corridors in the region. Direct and indirect impacts to the Whitewater River would not occur given the APE is located over 500 feet from the river at its closest point. The APE along Varner Road is approximately 500 feet southwest of the CVMSHCP/NCCP Thousand Palms Conservation Area. The proposed project would not affect any Conservation Areas as project activities would primarily occur within previously developed and routinely managed areas. Indirect impacts from any construction or operational noise, dust, or lighting could interrupt wildlife use of the Conservation Areas. Adherence to the CVMSHCP/NCCP Section 4.5 Landscape Use Adjacency Guidelines and implementation of MM BIO-3, below, would ensure avoidance of indirect impacts to Conservation Areas, thus reducing the potential impact to a less-than-significant level. As a result, the 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. No additional measures are recommended.

5.5 Local Policies and Ordinances

No trees within the APE meet the criteria for protection under Riverside County Ordinance 559 for oak woodlands and native trees. In addition, the project will comply with City of Palm Desert Pruning Ordinance (Municipal Code Chapter 12.32) to prune or remove a public tree. As a result, the proposed project will not conflict with any local policies or ordinances.

5.6 Adopted or Approved Plans

As discussed in Section 4.6, the CVWD participates in the CVMSHCP/NCCP and the proposed project is within the CVMSHCP/NCCP plan area. The APE is entirely outside any CVMSHCP/NCCP Conservation Area. As a result, proposed activities within the APE 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 the Thousand Palms CVMSHCP/NCCP Conservation Area located approximately 500 feet northeast of the APE (CVAG 2007). These guidelines include measures regarding drainage, toxics, lighting, noise, invasive species, barriers, and grading/land development. With the implementation of these guidelines, MM BIO-2, 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.

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BIO-2 CVMSHCP/NCCP Land Use Adjacency Guidelines

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

As discussed in Section 4.7, the APE is located within Critical Habitat for Coachella Valley fringe-toed lizard along the pipeline alignment on the north side of Varner Road. This Critical Habitat area overlaps and extends beyond the Thousand Palms CVMSHCP/NCCP Conservation Area. Proposed construction activities will take place within the Varner Road ROW and not adjacent open lands. Specifically, the habitat requirements for Coachella Valley fringe-toed lizard, including sand hummocks, accretion dunes, or sandy plains, are not located within the Varner Road ROW. Additionally, Coachella Valley fringe-toed lizard is a CVMSHCP/NCCP covered species. As a result, no direct impacts to suitable habitat for the Coachella Valley fringe-toed lizard are expected. Likewise, indirect impacts are not expected considering that the vicinity of the APE in the area of Varner Road similarly do not contain habitat elements necessary to support the species. Moreover, implementation of MM BIO-2 and compliance with CVMSHCP/NCCP Section 4.5 Land Use Adjacency Guidelines, discussed above, would reduce any 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 areas60-1570 m. annual herb. Blooms (Jan)Mar-Sep	Low Potential. Limited suitable habitat (sandy areas) present within the APE.
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 within APE. Single CNDDB occurrence 1936 approximately 2.1 miles west of the APE near end user 3.
Astragalus lentiginosus var. coachellae Coachella Valley milk-vetch	FE/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	Low Potential. Limited suitable habitat (sandy flats or washes) present within the APE and not within the project site. Minimal desert scrub habitat present within the APE and highly disturbed.
Astragalus sabulonum gravel milk-vetch	None/None G4G5/S2 2B.2	Desert dunes, Mojavean desert scrub, Sonoran desert scrub. Sandy or gravelly flats, washes, and roadsides 60-885 m. annual/perennial herb. Blooms Feb-Jun	Low Potential. Limited suitable habitat (Sonoran desert scrub) present within the APE. Minimal desert scrub habitat present within the APE and highly disturbed.
Astragalus tricarinatus triple-ribbed milk- vetch	FE/None G2/S2 1B.2	Joshua tree woodland, Sonoran desert scrub. Hot, rocky slopes in canyons and along edge of boulder-strewn desert washes, with Larrea and Encelia. 455-1525 m.	Not Expected. APE is outside preferred elevation range. Minimal desert scrub habitat present within the APE and highly disturbed.
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	Not Expected. No suitable habitat (dry washes or rocky hillsides) present within the APEs.
Ditaxis serrata var. californica California ditaxis	None/None G5T3T4/S2? 3.2	Sonoran desert scrub. On sandy washes and alluvial fans of the foothills and lower desert slopes. 30-1000 m.	Not Expected. Suitable habitat elements such as washes or alluvial fans are not present within the APE.
Euphorbia arizonica Arizona spurge	None/None G5/S3 2B.3	Sandy flats. Sandy sites300 m. perennial herb. Blooms Mar-Apr	Not Expected. No suitable habitat (sandy flats) present within the APE.
Euphorbia platysperma flat-seeded spurge	None/None G3/S1 1B.2	Desert dunes, Sonoran desert scrub. Sandy soils100 m. annual herb. Blooms May	Not Expected. Limited suitable habitat (dunes) present within the APE. Minimal desert scrub habitat present within the APE and highly disturbed.

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Scientific Name Common Name	Status Fed/State ESA CRPR,CDFW G-Rank/S-Rank	Habitat Requirements	Potential for Occurrence/ Basis for Determination
Nemacaulis denudata var. gracilis slender cottonheads	None/None G3G4T3?/S2 2B.2	Coastal dunes, desert dunes, Sonoran desert scrub. In dunes or sand50- 400 m. annual herb. Blooms (Mar) Apr-May	Not Expected. Limited suitable habitat (dunes) present within the APE. Minimal desert scrub habitat present within the APE and highly disturbed.
Petalonyx linearis narrow-leaf sandpaper-plant	None/None G4/S3? 2B.3	Mojavean desert scrub, Sonoran desert scrub. Sandy or rocky canyons. -30-1090 m. perennial shrub. Blooms (Jan-Feb)Mar-May(Jun-Dec)	Not Expected. No suitable habitat (sandy/rocky canyons) present within the APE. Single CNDDB occurrence 1921 located approximately 4.5 miles northeast of end user 6 of the APE.
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. Limited suitable habitat (mesic sites) present within APE.
<i>Xylorhiza cognata</i> Mecca-aster	None/None G2/S2 1B.2	Sonoran desert scrub. Steep canyon slopes, in sandstone and clay. 20-305 m. perennial herb. Blooms Jan-Jun	Not Expected. No suitable habitat (steep canyon slopes) present. Minimal desert scrub habitat present within the APE and highly disturbed.
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.
Insects			
Bombus crotchii Crotch bumble bee	None/SC 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	FE/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 and developed nature 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 or springs) present on or adjacent to the APE.
Oliarces clara cheeseweed owlfly (cheeseweed moth lacewing)	None/None G1G3/S2	Inhabits the lower Colorado River drainage. Found under rocks or in flight over streams. <i>Larrea tridentata</i> is the suspected larval host.	Not Expected. No suitable aquatic present within or adjacent to the APE.

Scientific Name Common Name	Status Fed/State ESA CRPR,CDFW G-Rank/S-Rank	Habitat Requirements	Potential for Occurrence/ Basis for Determination
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.
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.	Not Expected. No suitable habitat (east facing rocky areas) present within the APE. Single CNDDB occurrence 1932 located approximately 4 miles southwest of end user 3.
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. Limited suitable habitat (desert washes and fine sand) present in the APE.
Uma inornata Coachella Valley fringe-toed lizard	FT/SE 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 generally north of Varner Road and the APE. The eastern terminus of the APE along Varner Road overlaps the southwestern boundary of the critical habitat for this species. However, the critical habitat extends into the shoulder of Interstate-10. The habitat elements necessary for this species are not present in the APE along Varner Road.
Birds			
Athene cunicularia burrowing owl	None/None G4/S3 SSC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Low Potential. Limited elements of suitable habitat (grasslands, deserts, and scrublands) required for nesting are present adjacent the APE.
Empidonax traillii extimus southwestern willow flycatcher	FE/SE G5T2/S1	Riparian woodlands in Southern California.	Not Expected. Elements of suitable habitat (riparian woodlands) required for nesting are not present within the APE.
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 (cliffs) required for nesting are not present within the APE.

Scientific Name Common Name Lanius Iudovicianus loggerhead shrike	Status Fed/State ESA CRPR,CDFW G-Rank/S-Rank None/None G4/S4 SSC	Habitat Requirements Broken woodlands, savannah, pinyon- juniper, Joshua tree, and riparian woodlands, desert oases, scrub & washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	Potential for Occurrence/ Basis for Determination Not Expected. Elements of suitable habitat (woodlands, desert oases, dense shrubs) required for nesting are not present within the APE.
Pyrocephalus rubinus vermilion flycatcher	None/None G5/S2S3 SSC	During nesting, inhabits desert riparian adjacent to irrigated fields, irrigation ditches, pastures, and other open, mesic areas. Nest in cottonwood, willow, mesquite, and other large desert riparian trees.	Low Potential. Elements of suitable habitat (large desert trees) required for nesting are generally not present. However, ornamental mesquite and palo verde trees have been introduced as landscaping in the APE.
Toxostoma crissale Crissal thrasher	None/None G5/S3 SSC	Resident of southeastern deserts in desert riparian and desert wash habitats. Nests in dense vegetation along streams/washes; mesquite, screwbean mesquite, ironwood, catclaw, acacia, arrowweed, willow.	Not Expected. Elements of suitable habitat (dense vegetation along streams/washes) required for nesting are not present within the APE.
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.
Polioptila californica califórnica Coastal California gnatcatcher	FT/None G4G5T2Q/S2 SSC	Obligate, permanent resident of coastal sage scrub below 2500 ft in Southern California. Low, coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied.	Not Expected. No suitable coastal sage scrub habitat present. A single CNDDB record from 1918 is located 4.9 miles northwest of end user 3.
Polioptila melanura black-tailed gnatcatcher	None/None G5/S3S4 WL	Primarily inhabits wooded desert wash habitats; also occurs in desert scrub habitat, especially in winter. Nests in desert washes containing mesquite, palo verde, ironwood, acacia; absent from areas where salt cedar introduced.	Low Potential. Elements of suitable habitat (wooded desert wash) required for nesting are generally not present. However, ornamental mesquite and palo verde trees have been introduced as landscaping in the APE.
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. Limited habitat (sandy, herbaceous areas) present within or adjacent the APE. Two CNDDB records are located within five miles (1952 and 1995); the species has a low potential to occur. The closest record (1995) is located 3.7 miles northeast of the APE along Varner Road.

Scientific Name Common Name Dipodomys	Status Fed/State ESA CRPR,CDFW G-Rank/S-Rank None/None	Habitat Requirements Coastal sage scrub with coarse	Potential for Occurrence/ Basis for Determination Not Expected. Required habitat
merriami collinus Earthquake Merriam's kangaroo rat	G5T2?/S3S4	granitic soils. Visible disturbances.	(coastal sage scrub) not present in the APE.
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. These trees generally appear to be maintained and trimmed regularly.
Neotoma lepida intermedia San Diego desert woodrat	None/None G5T3T4/S3S4 SSC	Riversidean desert scrub, chamise chaparral, red shank chaparral, nonnative grassland, riversidean alluvial fan sage scrub, freshwater seep and southern willow scrub.	Not Expected. Required habitat not present in the APE.
Nyctinomops femorosaccus pocketed free-tailed bat	None/None G4/S3 SSC	Found in arid lowland valleys. Roosts in caves, tunnels, mines, and other man-made structures.	Low Potential. Limited preferred habitat (man-made structures) adjacent the APE. No natural habitat within APE. Single CNDDB record from 1994 located 3.7 miles south of end users 7, 8, and 9.
Ovis canadensis nelsoni Peninsular bighorn sheep	FE/ST G4T3Q/S1 FP	Found in the lower elevations of the Peninsular ranges including canyon bottoms, alluvial fans, and mountain slopes.	Not Expected. Suitable habitat (Peninsular ranges) not present within the APE.
Perognathus longimembris bangsi Palm Springs pocket mouse	None/None G5T2/S2 SSC	Desert riparian, desert scrub, desert wash and sagebrush habitats. Most common in creosote-dominated desert scrub. Rarely found on rocky sites. Occurs in all canopy coverage classes.	Low Potential. Limited habitat (desert wash and scrub) present within or adjacent the APE. A single CNDDB record from 2005 located 0.75 miles east of the eastern terminus of the APE along Varner Road.
Taxidea taxus American badger	None/None G5/S3 SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Not Expected. Required habitat not present in the APE.
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. Species is dependent on dunes and grassy open areas that are not present within the APE.

2020/2021 Non-Potable Water Connections Project

Status
Fed/State ESA

Scientific Name CRPR,CDFW Potential for Occurrence/
Common Name G-Rank/S-Rank Habitat Requirements Basis for Determination

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

SC = State Candidate Species

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)



Representative Photographs of the APE



Photograph 1. View looking northwest along Varner Road. Note disturbed fourwing saltbush scrub.



Photograph 2. View looking north at golf course pond at Tri-Palms Estates and Country Club.



Photograph 3. View looking south along pipeline alignment at Ivey Ranch Country Club.



Photograph 4. View looking northeast at golf course pond at Ivey Ranch Country Club.



Photograph 5. View of proposed storage reservoir location.



Photograph 6. View looking west along pipeline alignment within WRP10.



Photograph 7. View looking south along pipeline alignment on Cook Street south of intersection with Merle Drive.



Photograph 8. View looking north along pipeline alignment on Cook Street south of intersection with Green Way.



Photograph 9. View looking northwest at a lake at Sunnylands Golf Course. Note ornamental landscaping and trees.



Photograph 10. View looking east along pipeline alignment on Frank Sinatra Drive.



Photograph 11. View looking east along pipeline alignment within Tamarisk Country Club.



Photograph 12. View looking north lake at Suncrest Golf Course.



Plant and Wildlife Species Observed in the APE

Plant and Wildlife Species Observed in the APE on June 12, 2020

Scientific Name	Common Name	Origin
Plants		
Agave americana	century plant	Non-native
Ambrosia salsola	cheesebush	Native
Amsinckia sp.	fiddleneck	Native
Atriplex canescens	fourwing saltbush	Native
Chamaesyce albomarginata	rattlesnake weed	Native
Chitalpa tashkentensis	chitalpa	Non-native (ornamental native hybrid)
Cryptantha sp.	cryptantha	Native
Earharta erecta	veldtgrass	Non-native
Eriogonum species	buckwheat	Native
Erodium cicutarium	red-stemmed filaree	Non-native
Eucalyptus globulus	blue gum	Non-native
Ficus microcarpa	Indian laurel fig	Non-native
Jacaranda mimosifolia	jacaranda	Non-native
Lactuca serriola	prickly lettuce	Non-native
Lantana sp.	lantana	Non-native
Larrea tridentata	creosote	Native
Nerium oleander	oleander	Native
Parkinsonia florida	blue paloverde	Native
Parkinsonia sp.	mesquite	Non-native (ornamental)
Pennisetum setaceum	fountain grass	Native
Phoenix canariensis	Canary Island date palm	Non-native
Phoenix dactylifera	date palm	Non-native
Pinus halepensis	Aleppo pine	Non-native
Prosopis glandulosa	mesquite	Native
Prosopis sp.	mesquite	Non-native (ornamental)
Salsola tragus	Russian thistle	Non-native
Schismus barbatus	schismus	Native
Tribulus terrestris	puncture vine	Non-native
Washingtonia filifera	California fan palm	Native (ornamental)
Washingtonia robusta	Mexican fan palm	Non-native
Yucca spp.	yucca	Non-native

Coachella Valley Water District 2020/2021 Non-Potable Water Connections Project

Scientific Name	Common Name	Origin
Wildlife		
Birds		
Anas platyrhynchos	mallard	Native
Auriparus flaviceps	verdin	Native
Branta canadensis	Canada goose	Native
Buteo jamaicensis	red-tailed hawk	Native
Calypte costae	Costa's hummingbird	Native
Corvus brachyrhynchos	common raven	Native
Falco sparverius	American kestrel	Native
Geococcyx californicus	greater roadrunner	Native
Haemorhous mexicanus	house finch	Native
Mimus polyglottos	northern mockingbird	Native
Passer domesticus	house sparrow	Non-native
Patagioenas fasciata	band-tailed pigeon	Native
Spinus psaltria	lesser goldfinch	Native
Zenaida macroura	mourning dove	Native
Reptiles		
Dipososaurus dorsalis	desert iguana	Native
Sceloporus occidentalis	western fence lizard	Native

Appendix D

Resumes



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

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.

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 largeand 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 goldspotted 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

