WHITEWATER PRESERVE LEVEE REPLACEMENT PROJECT

Riverside County, California

Habitat Assessment and Coachella Valley Multiple Species Habitat Conservation Plan Consistency Analysis

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July 2020

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The undersigned certify that the statements furnished in this report and exhibits present data and information required for this biological evaluation, and the facts, statements, and information presented is a complete and accurate account of the findings and conclusions to the best of our knowledge and beliefs.



Travis J. McGill
Director/Biologist



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July 2020

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Section 1 Introduction

This report contains the findings of ELMT Consulting's (ELMT) Habitat Assessment and Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) Consistency Analysis for the Whitewater Preserve Levee Replacement Project located in Riverside County, California. ELMT biologists Thomas J. McGill, Ph.D., Travis J. McGill, and Jacob H. Lloyd Davies inventoried and evaluated the condition of the habitat within the project site on January 7, and April 2, 2020.

The habitat assessment was conducted to characterize existing site conditions and assess the potential for the occurrence of special-status[1] plant and wildlife species that could pose a constraint to project implementation. Special attention was given to the suitability of the on-site habitat to support arroyo toad (*Anaxyrus californicus*), riparian bird species [i.e., least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*)], Coachella Valley milk-vetch (*Astragalus lentiginosus* var. *coachellae*), triple-ribbed milk-vetch (*Astragalus tricarinatus*), little San Bernardino Mountains linanthus (*Linanthus maculatus*), Parry's spineflower (*Chorizanthe parryi* var. *parryi*) and white-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*), as well as other special-status species identified by the California Natural Diversity Database (CNDDB) and other electronic databases as potentially occurring on or within the general vicinity of the project site were.

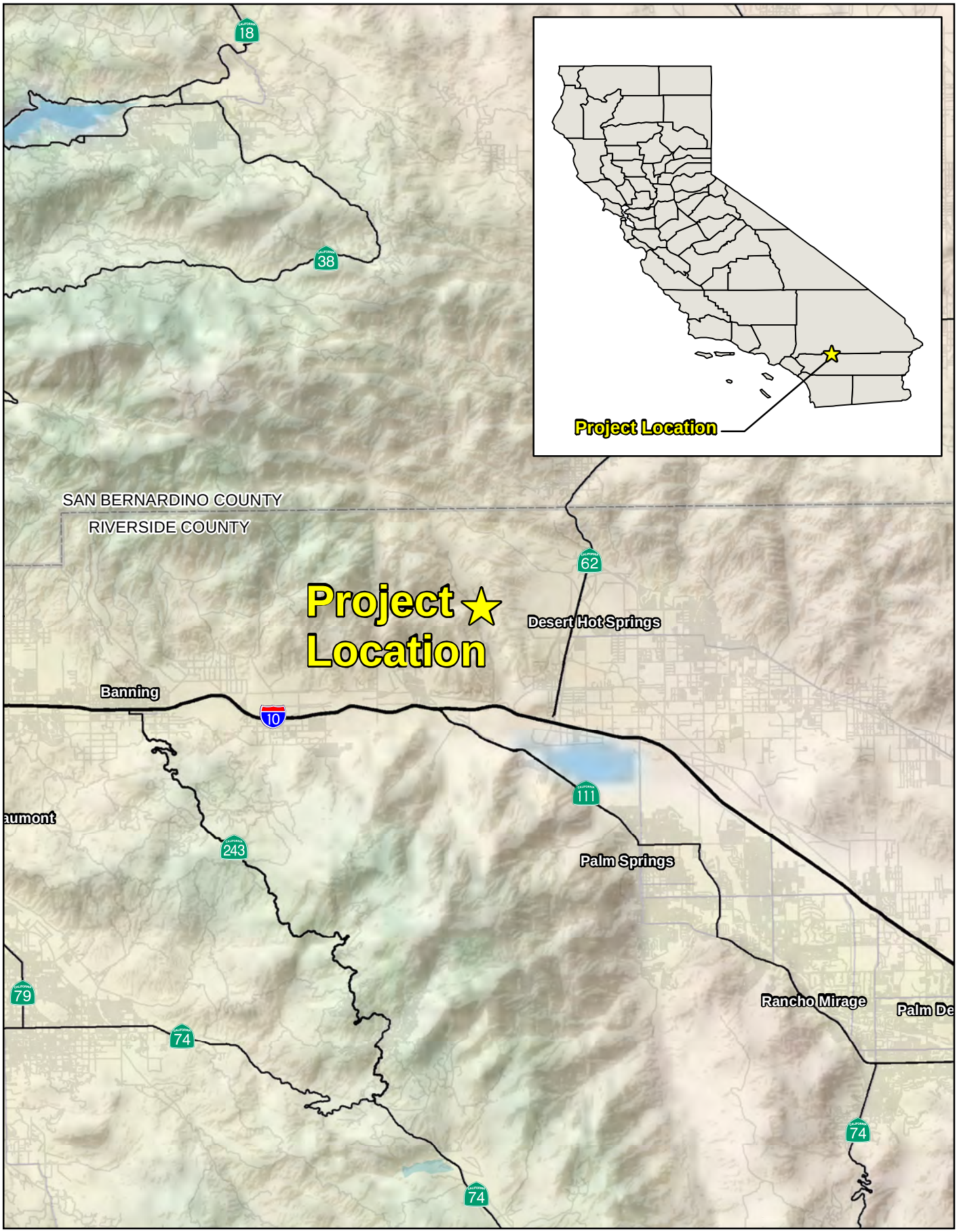
1.1 PROJECT LOCATION

The project site is located on the Whitewater River, north of Interstate 10, west of State Route 62, east of Kitching Peak, and southwest of Morongo Valley in Whitewater, Riverside County, California (Exhibit 1, *Regional Vicinity*). The project site is depicted on the White Water quadrangle of the United States Geological Survey (USGS) 7.5-minute topographic map series in Sections 15 and 22 of Township 2 South, Range 3 East (Exhibit 2, *Site Vicinity*). Specifically, the project site is located along the Whitewater River, adjacent to the Whitewater Preserve located at 9160 Whitewater Canyon Road. (Exhibit 3, *Project Site*).

1.2 PROJECT DESCRIPTION

The project proposes to build a permanent flood control structure to protect the Whitewater Preserve infrastructure and wetland habitats. Further, building a permanent flood control structure will protect the existing riparian forest within the preserve and downstream of the preserve from major flood events.

[1] As used in this report, "special-status" refers to plant and wildlife species that are federally or State listed, proposed, or candidates; plant species that have been designated a California Native Plant Society (CNPS) Rare Plant Rank; and wildlife species that are designated by the California Department of Fish and Wildlife (CDFW) as fully protected, species of special concern or watch list species.



WHITEWATER PRESERVE LEVEE REPLACEMENT PROJECT
HABITAT ASSESSMENT AND CVMSHCP CONSISTENCY ANALYSIS

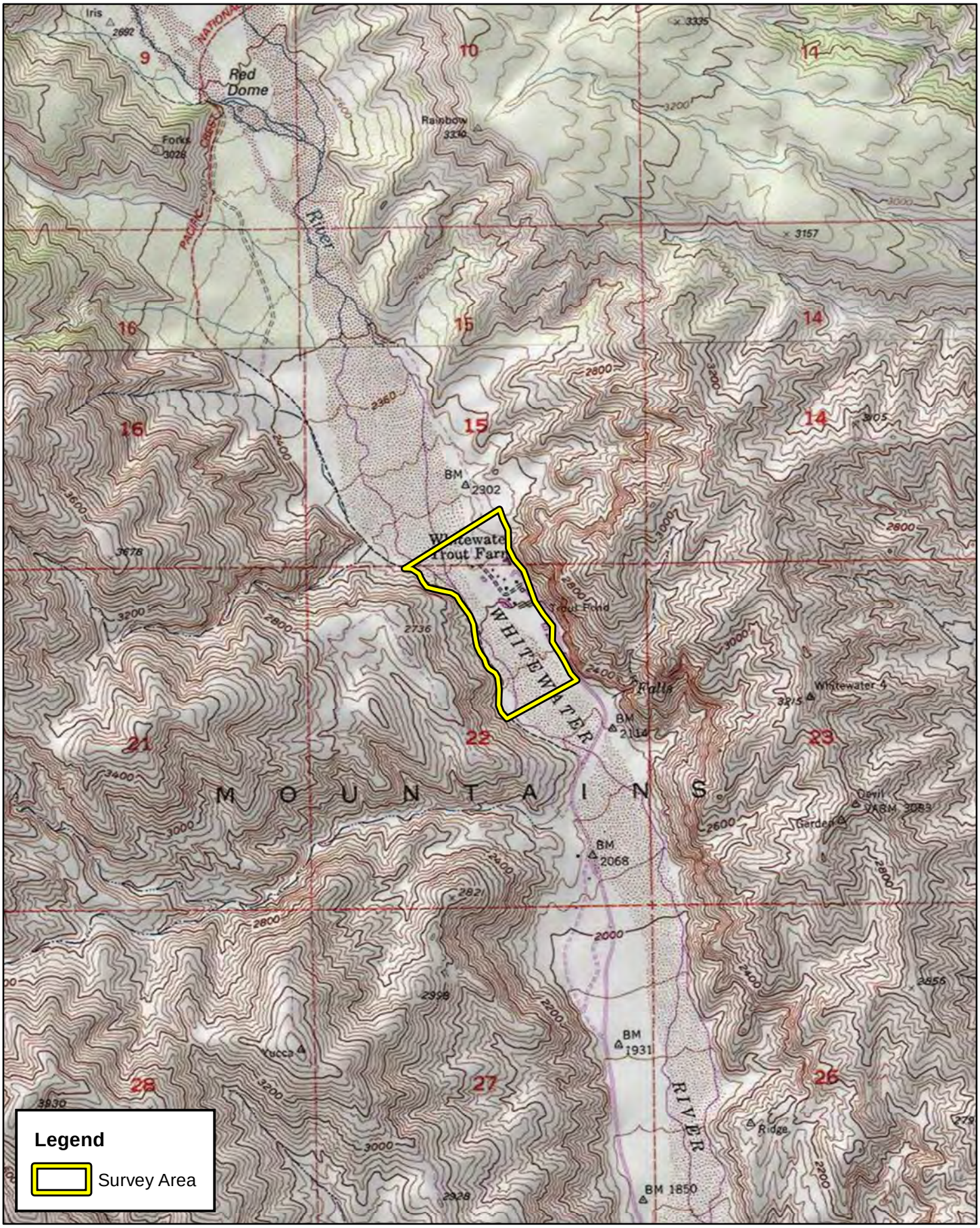
Regional Vicinity

ELMT CONSULTING

0 2.5 5 Miles

Source: ESRI Relief Map, National Highway Planning Network

Exhibit 1



WHITEWATER PRESERVE LEVEE REPLACEMENT PROJECT
HABITAT ASSESSMENT AND CVMSHCP CONSISTENCY ANALYSIS

Site Vicinity

ELMT CONSULTING

0 1,000 2,000 4,000 Feet

Source: USA Topographic Map, Riverside County

Exhibit 2



WHITEWATER PRESERVE LEVEE REPLACEMENT PROJECT
HABITAT ASSESSMENT AND CVMSHCP CONSISTENCY ANALYSIS

ELMT CONSULTING

0 250 500 1,000 Feet

Source: ESRI Aerial Imagery, Riverside County

Project Site

Exhibit 3

Section 2 Methodology

A thorough literature review and records search was conducted to determine which special-status biological resources have the potential to occur on or within the general vicinity of the project site. In addition, a general habitat assessment and field investigation of the project site was conducted and provided information about the existing conditions on the project site and the potential for special-status biological resources to occur.

2.1 COACHELLA VALLEY MSHCP CONSISTENCY ANALYSIS

The Coachella Valley Mountains Conservancy is a permittee under the CVMSHCP. The proposed project is not listed as a planned "Covered Activity" under the published CVMSHCP but is still considered to be a current Covered Activity pursuant to Section 7.3 of the CVMSHCP. According to Section 7.3 of the CVMSHCP, implementation of the Plan will provide permits for covered species for Covered Activities within conservation areas if: "*Development and the associated ground disturbance, consistent with the Conservation Goals and Conservation Objectives within Conservation Areas and Species Conservation Goals and Objectives; and including the construction, operation, and maintenance of new flood control facilities and local roadways which are either: (1) approved as part of a development proposal or (2) dedicated, or offered for dedication, for public use, are Covered Activities*."

As a Covered Activity located within a designated conservation area, construction of the proposed project is subject to the applicable avoidance, minimization, and mitigation measures as described in Section 4.4 of the CVMSHCP. In accordance with the CVMSHCP required measures for the Whitewater Canyon Conservation Area, activities and projects involving water diversions in modeled arroyo toad habitat are not considered Covered Activities if arroyo toad is present. If arroyo toad is present, take authorization for such activities will requires a Minor Amendment to the CVMSHCP with Wildlife Agency concurrence. It should be noted that the 2013 article, *Correction of Locality Records for the Endangered Arroyo Toad (Anaxyrus californicus) from the Desert Region of Southern California*, refuted the previous identifications of arroyo toad within the Sonoran Desert portions of Riverside County and stated that there are no longer any valid records of the arroyo toad within the Sonoran Desert bioregion, including the Whitewater River and the project site. Therefore, a Minor Amendment to the CVMSHCP is not anticipated.

The project was reviewed to determine consistency with the CVMSHCP. Geographic Information System (GIS) software was utilized to map the project site in relation to the CVMSHCP areas, including conservation areas, corridors and linkages, species habitat and sand transport areas. The CVMSHCP requires that permittees comply with various protective measures for covered species, communities, essential ecological processes, and biological corridors. In addition, certain projects may be subject to local development mitigation fees, a Joint Project Review Process, or other conservation or implementation measures. These requirements are discussed in greater detail in this report.

2.2 LITERATURE REVIEW

Prior to conducting the habitat assessment, a literature review and records search was conducted for special-status biological resources potentially occurring on or within the vicinity of the project site. Previously

recorded occurrences of special-status plant and wildlife species and their proximity to the project site were determined through a query of the CDFW QuickView Tool in the Biogeographic Information and Observation System (BIOS), CNDDB Rarefind 5, the California Native Plant Society (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California, Calflora Database, compendia of special-status species published by CDFW, the U.S. Fish and Wildlife Service (USFWS) species listings, and the CVMSHCP and associated technical documents.

All available reports, survey results, and literature detailing the biological resources previously observed on or within the vicinity of the project site were reviewed to understand existing site conditions and note the extent of any disturbances that have occurred on the project site that would otherwise limit the distribution of special-status biological resources. Standard field guides and texts were reviewed for specific habitat requirements of special-status and non-special-status biological resources, as well as the following resources:

- Google Earth Pro historic aerial imagery (1996 – 2020);
- Coachella Valley Multiple Species Habitat Conservation Plan:
- United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Web Soil Survey;
- USFWS Critical Habitat designations for Threatened and Endangered Species;
- Primary Constituent Elements (PCEs) for arroyo toad, southwestern willow flycatcher, desert tortoise, least Bell's vireo, and Coachella Valley milk-vetch.

2.3 FIELD INVESTIGATION

ELMT biologists Thomas J. McGill, Ph.D, Travis J. McGill, and Jacob H. Lloyd inventoried and evaluated the extent and conditions of the plant communities found within the boundaries of the project site between 0700 and 1400 hours on January 7, and April 2, 2020. Plant communities identified on aerial photographs during the literature review were verified in the field by walking meandering transects throughout the plant communities and along boundaries between plant communities. In addition, aerial photography was reviewed prior to the site investigation to locate potential natural wildlife corridors and linkages that may support the movement of wildlife through the area. These areas were then walked during the habitat assessment.

All plant and wildlife species observed, as well as dominant plant species within each plant community, were recorded. Wildlife detections were made through observation of scat, trails, tracks, burrows, nests, and/or visual and aural observation. In addition, site characteristics such as soil condition, topography, hydrology, anthropogenic disturbances, indicator species, condition of on-site plant communities, and presence of potential jurisdictional drainage and/or wetland features were noted.

2.4 SOIL SERIES ASSESSMENT

On-site and adjoining soils were researched prior to the field visit using the USDA NRCS Custom Soil Resource Report for Riverside County, Coachella Valley Area, California. In addition, a review of the local

geological conditions and historical aerial photographs was conducted to assess the ecological changes and disturbances that have occurred on the project site.

2.5 PLANT COMMUNITIES

Plant communities were mapped using USGS 7.5-minute topographic base maps and aerial photography. The plant communities were classified in accordance with the CVMSHCP, were referenced with Sawyer, Keeler-Wolf and Evens (2009), CDFW (2010) and Holland (1986), delineated on an aerial photographs, and then digitized into ArcGIS. The ArcGIS application was used to compute the area of each plant community in acres.

2.6 PLANTS

Common plant species observed during the field survey were identified by visual characteristics and morphology in the field and recorded in a field notebook. Unusual and less familiar plants were photographed in the field and identified in the laboratory using taxonomic guides. Taxonomic nomenclature used in this study follows the 2012 Jepson Manual (Hickman 2012). In this report, scientific names are provided immediately following common names of plant species (first reference only).

2.7 WILDLIFE

Wildlife species detected during field surveys by sight, calls, tracks, scat, or other sign were recorded during surveys in a field notebook. Field guides were used to assist with identification of wildlife species during the survey included The Sibley Field Guide to the Birds of Western North America (Sibley 2003), A Field Guide to Western Reptiles and Amphibians (Stebbins 2003), and A Field Guide to Mammals of North America (Reid 2006). Although common names of wildlife species are fairly well standardized, scientific names are provided immediately following common names in this report (first reference only).

2.8 JURISDICTIONAL DRAINAGES AND WETLANDS

Aerial photography was reviewed prior to conducting a field investigation in order to locate and inspect potential natural drainage features, ponded areas, or water bodies that may be considered riparian/riverine habitat and/or fall under the jurisdiction of the United State Army Corps of Engineers (Corps), Regional Water Quality Control Board (Regional Board), or CDFW. In general, surface drainage features indicated as blue-line streams on USGS maps that are observed or expected to exhibit evidence of flow are considered potential riparian/riverine habitat and are also subject to state and federal regulatory jurisdiction.

Section 3 Existing Conditions

3.1 LOCAL CLIMATE

Riverside County is characterized by cool winter temperatures and warm summer temperatures, with its rainfall occurring almost entirely in the winter. Relative to other areas in Southern California, winters are colder with chilly to cold morning temperatures common. Climatological data was not available for the City of Whitewater. Data was instead obtained for the nearest city, the City of Palm Springs, which indicates the average annual precipitation is 4.85 inches per year. Almost all of the precipitation occurs in the months between December and February, with hardly any occurring between the months of April and June. The wettest month is January, with a monthly average total precipitation of 1.14 inches. The average maximum and minimum temperatures for the City of Palm Springs are 89 and 60 degrees Fahrenheit (F) respectively with July being the hottest month (monthly average 108.0° F) and December being the coldest (monthly average 44.0° F). Temperatures during the site visits were in the mid- to high 60s to 70s (degrees Fahrenheit) with infrequent, light winds and little to no cloud cover.

3.2 TOPOGRAPHY AND SOILS

On-site surface elevation ranges from approximately 2,150 to 2,300 feet above mean sea level and generally slopes from north to south. The project site is located at the bottom of the Whitewater Canyon within the Whitewater River. The slopes of the canyon above the Whitewater River are steep, vertical walls while the bottom of the canyon is relatively flat and slopes from north to south. Generally, the Whitewater River, within the survey area, is composed of cobble and boulders with patches of loose sand and gravel. The NRCS USDA Web Soil Survey has not mapped the soils within the boundaries of the project site. Instead, data from the U.S. General Soil Map was acquired for the project site. Per the U.S. General Soil Map data, the project site is underlain by the following soil units: Urban Land – Tujunga – Soboba – Hanford and Tecopa – Rock Outcrop – Lithic Torriorthents.

3.3 SURROUNDING LAND USES

Land uses in the vicinity of the project site mostly consists of vacant, undeveloped land consisting of natural habitats associated with Whitewater Canyon. The Whitewater River traverses the central portion of the project site from north to south. The unincorporated community of Bonnie Bell is located south of the Whitewater Preserve, which is approximately 9.5 miles northwest of Palm Springs. Areas to the east and west consist of vacant, undeveloped land within the San Bernardino Mountains

The project site occurs within Whitewater Canyon along the eastern bank of the Whitewater River. The site is undeveloped, composed of natural habitats, and is surrounded by the following land uses:

North: The area to the north of the site is composed almost entirely of undeveloped, vacant land within the San Bernardino Mountains. Several developed structures associated with historical and ongoing operations of the Whitewater Preserve Ranger Station and former Whitewater Trout Farm are supported in the immediate 600 feet.

East: Immediately to the east of the site are the Whitewater Preserve Ranger Station and Visitors' Center, trout ponds associated with the former Whitewater Trout Farm, paved parking areas, and Whitewater Canyon Road. Undeveloped, vacant land occurs beyond these structures within the San Bernardino Mountains.

South: The area to the south of the site is composed almost entirely of undeveloped, vacant land within the San Bernardino Mountains. The Whitewater River occurs immediately south of the project site and Whitewater Canyon Road occurs approximately 1,400 feet to the southeast.

West: The area to the west of the site is composed entirely of undeveloped, vacant land within the San Bernardino Mountains. Immediately to the west of the site is the Whitewater River.

Section 4 Discussion

4.1 SITE CONDITIONS

The Whitewater Preserve is owned by the Wildlands Conservancy and operates as a non-profit nature preserve. It offers free access to the public for outdoor recreation, includes a visitor center located in the former Whitewater Trout Farm, and serves as an access point into the Sand to Snow National Monument. With the exception of the infrastructure associate with the historic trout farm, the project site is relatively undeveloped and supports native habitats.

4.2 VEGETATION

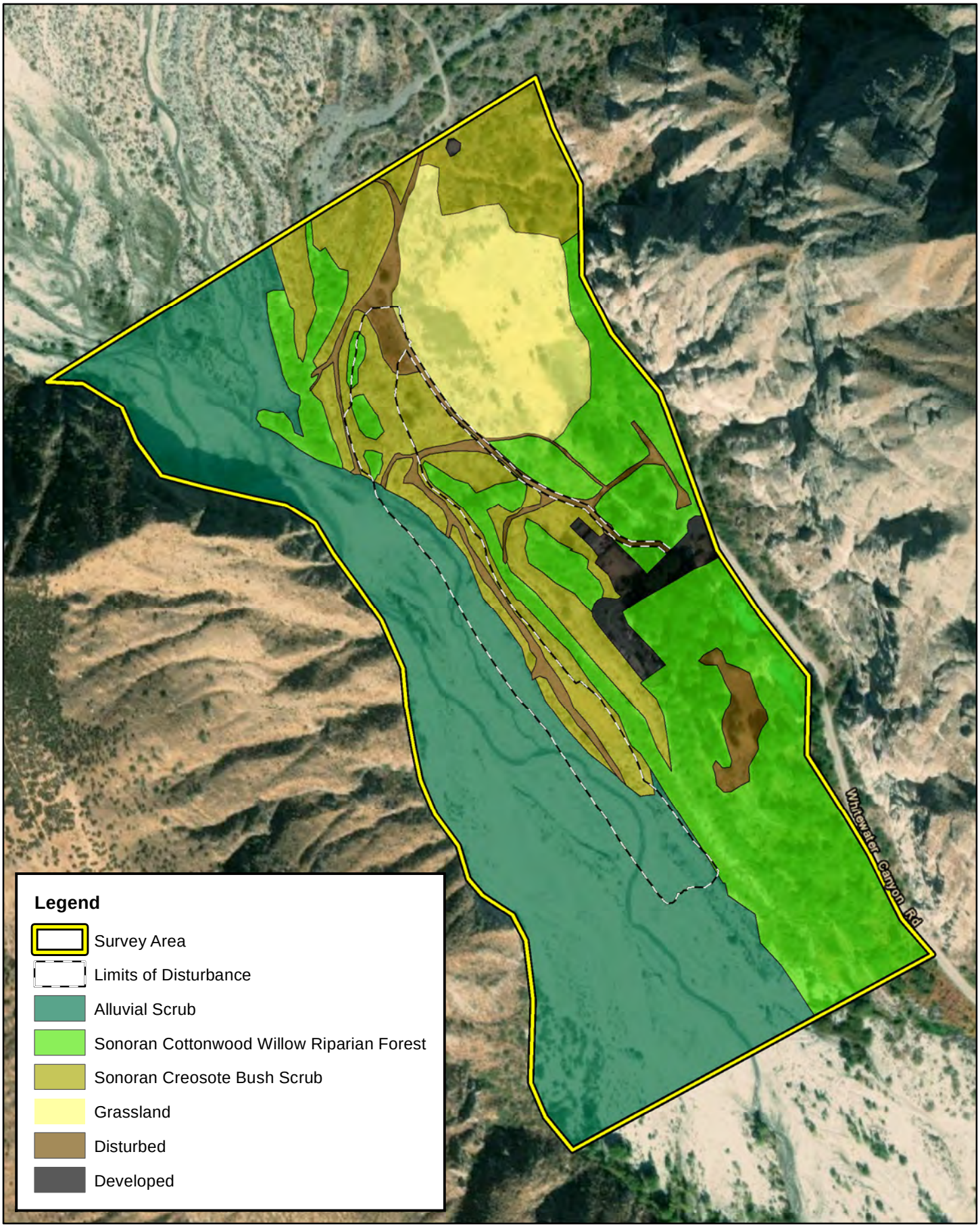
Four (4) plant communities were observed within the boundaries of the survey area during the survey: alluvial scrub, Sonoran cottonwood willow riparian forest, Sonoran creosote bush scrub, and grassland (Exhibit 4, *Vegetation*). In addition, the survey area contains two land cover types that would be classified as disturbed and developed. These plant communities and land cover types are described in further detail below.

4.2.1 Alluvial Scrub

The alluvial scrub plant community is found on the western portion of the survey area in association with the active channel of the Whitewater River. The active channel of the Whitewater River flows through this plant community, and this plant community is subject to flooding events following significant storm events. This plant community is characterized by braided channels of intermittent streams and rivers. Substrates consist of open cobble with sandy soil deposits. Plant species observed within this plant community include scalebroom (*Lepidospartum squamatum*), yerba santa (*Eriodictyon trichocalyx*), mulefat (*Baccharis salicifolia*), California buckwheat (*Eriogonum fasciculatum*), beavertail cactus (*Opuntia basilaris*), deerweed (*Acmispon glaber*), cheesebush (*Ambrosia salsola*), sweetbush (*Bebbia juncea*), California croton (*Croton californicus*), Wiggins' cholla (*Condea emoryi*), hairy parish viguiera (*Bahiopsis parishii*), and brittlebush (*Encelia farinosa*).

4.2.2 Sonoran Cottonwood Willow Riparian Forest

The Sonoran cottonwood willow riparian forest plant community was observed on the eastern and northwestern portions of the survey area. Dominant trees within this plant community include narrowleaf willow (*Salix exigua*), red willow (*Salix laevigata*), and mulefat. In addition, western sycamore (*Platanus racemosa*) and Fremont cottonwood (*Populus fremontii*) are found within this plant community. Low growing plant species found within the understory of this plant community includes California mugwort (*Artemisia douglasiana*), yellow sweetclover (*Melilotus indicus*), yellow monkey flower (*Mimulus guttatus*), rabbits foot grass (*Polypogon monspeliensis*), and stinging nettle (*Urtica dioica*).



WHITEWATER PRESERVE LEVEE REPLACEMENT PROJECT
HABITAT ASSESSMENT AND CVMSHCP CONSISTENCY ANALYSIS

Vegetation

ELMT CONSULTING

Source: ESRI Aerial Imagery, Riverside County

Exhibit 4

4.2.3 Sonoran Creosote Bush Scrub

The top of the existing earthen levee and northeastern poriton fo the site supports a Sonoran creosote scrub plant community. Plant species observed within this plant community include cheesebush, sweetbush, brittlebush, and desert mallow (*Sphaeralcea ambigua*). Other low growing plant species found within this plant community include California buckwheat, California croton, yellow turbans (*Eriogonum pusillum*), desert trumpet (*Eriogonum inflatum*), and desert chicory (*Rafinesquia neomexicana*).

4.2.4 Grassland

The grassland plant community can be found within the northeast portion of the survey area, within the existing Whitewater Preserve. This plant community is dominated by non-native plant species: wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), foxtail brome (*Bromus madritensis* ssp. *rubens*), downy brome grass (*Bromus tectorum*), fountain grass (*Pennisetum setaceum*), and Mediterranean grass (*Schismus barbatus*).

4.2.5 Disturbed

Disturbed areas primarily occur in the middle of the survey area in association with the existing earthen levee and dirt access roads/trails. These areas are routinely exposed to anthropogenic disturbances associated with vehicle traffic and recreational activities. Surface soils within these areas are generally devoid of vegetation and when vegetation is present, these areas can support early successional and non-native weedy plant species.

4.2.6 Developed

Developed areas encompass all paved impervious services and includes all buildings associated with the Whitewater Preserve in the middle of the eastern boundary of the survey area.

4.3 WILDLIFE

Plant communities provide foraging habitat, nesting/denning sites, and shelter from adverse weather or predation. This section provides a discussion of those wildlife species that were observed or are expected to occur within the project site. The discussion is to be used a general reference and is limited by the season, time of day, and weather conditions in which the field survey was conducted. Wildlife detections were based on calls, songs, scat, tracks, burrows, and direct observation.

4.3.1 Fish

No fish were observed within the survey area, in particular within the flowing water along the western boundary of the survey area within the Whitewater River during the field investigation. The Whitewater River provides a source of water and habitat sufficient to support populations of fish known to occur within the vicinity of the project site. Fish species that could occur within the Whitewater River include largemouth bass (*Micropterus salmoides*), green sunfish (*Lepomis cyanellus*), bluegill (*Lepomis macrochirus*), and coastal rainbow trout (*Oncorhynchus mykiss irideus*).

4.3.2 Amphibians

The Whitewater River also provides a source of water and habitat for populations of amphibians known to occur within the project site. Two amphibian species were observed during the field investigations: Baja California treefrog (*Pseudacris hypochondriaca hypochondriaca*) and western toad (*Anaxyrus boreas*). Other amphibians that have the potential to occur within the boundaries of the project site include red-spotted toad (*Anaxyrus punctatus*) and California tree frog (*Pseudacris cadaverina*).

4.3.3 Reptiles

Western side-blotched lizard (*Uta stansburiana elegans*), desert iguana (*Dipsosaurus dorsalis*), and two-stripped garter snake (*Thamnophis hammondii*) were the only reptilian species observed during the habitat assessment. Although diversity was low during the habitat assessment, habitat on the project site is suitable for a number of reptilian species such as western zebra-tailed lizard (*Callisaurus draconoides rhodostictus*), Great Basin whiptail (*Aspidoscelis tigris tigris*), and red racer (*Coluber flagellum piceus*).

4.3.4 Avian

The project site provides suitable foraging, nesting, and cover habitat for a variety of resident and migrant bird species. Avian species identified during the habitat assessment included red-tailed hawk (*Buteo jamaicensis*), mourning dove (*Zenaida macroura*), greater roadrunner (*Geococcyx californianus*), Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), Say's phoebe (*Sayronis saya*), vermillion flycatcher (*Pyrocephalus rubinus*), ash-throated flycatcher (*Myiarchus cinerascens*), spotted towhee (*Pipilo maculatus*), California towhee (*Melozone crissalis*), blue grosebeak (*Passerina caerulea*) California quail (*Callipepla californica*), American crow (*Corvus brachyrhynchos*), common yellowthroat (*Geothlypis trichas*), house finch (*Haemorhous mexicanus*), painopepla (*Phainopepla nitens*), lesser goldfinch (*Spinus psaltria*), northern rough-winged swallow (*Stelgidopteryx serripennis*), and least Bell's Vireo (*Vireo bellii pusillus*).

4.3.5 Mammals

No mammalian species were observed during the habitat assessment. However, the project site and surrounding areas have the potential to support a limited variety of mammalian species including coyote (*Canis latrans*), white-tailed antelope squirrel (*Ammospermophilus leucurus*), black-tailed jackrabbit (*Lepus californicus*), and Merriam's kangaroo rat (*Dipodomys merriami*). Soils within the limits of disturbance are generally rocky and do not support loose friable soils for burrowing.

4.4 NESTING BIRDS

On-site plant communities provide suitable foraging and cover habitat for year-round/seasonal avian residents, migrating songbirds, and raptors that occur in the area. Vegetation within and adjacent to the project site has the potential to provide suitable nesting opportunities for a number of avian species. The habitat assessment was conducted in the beginning of September, outside of the breeding season, but no actively breeding bird species or birds displaying nesting behaviors were observed.

4.5 MIGRATORY CORRIDORS AND LINKAGES

Habitat linkages provide links between larger habitat areas that are separated by development. Wildlife corridors are similar to linkages, but provide specific opportunities for animals to disperse or migrate between areas. A corridor can be defined as a linear landscape feature of sufficient width to allow animal movement between two comparatively undisturbed habitat fragments. Adequate cover is essential for a corridor to function as a wildlife movement area. It is possible for a habitat corridor to be adequate for one species yet, inadequate for others. Wildlife corridors are significant features for dispersal, seasonal migration, breeding, and foraging. Additionally, open space can provide a buffer against both human disturbance and natural fluctuations in resources.

The project site is located within the Whitewater Canyon Conservation Area of the CVMSHCP. The area along the Whitewater River provides a Linkage and wildlife corridor between the Snow Creek/Windy Point Conservation Area and the Core Habitat portion of the Whitewater Floodplain Conservation area, as well as with the Whitewater Canyon Conservation Area. The survey area generally consists of vacant, undeveloped land that is dominated by natural habitats throughout. These natural areas allow wildlife to move through the region in search of food, shelter, or nesting habitat. Additionally, the project site could be used as a wildlife movement corridor between the Coachella Valley and Little San Bernardino Mountain to the east and the San Bernardino Mountains to the west. Although the development of the proposed permanent flood control structure may result in the loss of natural habitats, project activities are not expected to eliminate wildlife movement opportunities or prevent the surrounding habitat from continuing to function as a wildlife corridor. Further, the replacement of the levee will protect riparian habitats within the Whitewater River during large storm events. Although the proposed project may result in a temporal loss of wildlife movement opportunities during construction, the completion of the project will provide long-term protection of wildlife movement opportunities along the Whitewater River

4.6 JURISDICTIONAL AREAS

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The U.S. Army Corps of Engineers (Corps) Regulatory Branch regulates discharge of dredge and/or fill materials into “waters of the United States” pursuant to Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Of the State agencies, the CDFW regulates alterations to streambed and associated plant communities pursuant to Section 1602 of the Fish and Game Code, and the Regional Water Quality Control Board (Regional Board) regulates discharges into surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act.

One drainage feature, Whitewater River, and its associated floodplain were observed within the survey area. Whitewater River conveys flows in a north to south direction through the western portion of the survey area. Surface flows within the Whitewater River are provided by direct precipitation, and runoff from the adjacent mountains. Within the survey area, the Whitewater River is an earthen feature characterized by rocky substrate with a regular distribution of gravel and cobble. Four (4) plant communities were observed within the boundaries of the survey area during the survey: alluvial scrub, Sonoran cottonwood willow riparian forest, Sonoran creosote bush scrub, and grassland. The Ordinary High Water Mark (OHWM) ranged from 6 to 20 feet in width, and was delineated using the following indicators: flow patterns; scour;

and substrate characteristics. During the field investigation surface water was present that ranged in depth from 6 to 24 inches.

A total of 25.69 acre (2,827 linear feet) of Corps and Regional Board jurisdictional waters are located within the survey area. Based on the proposed project design, a total of 0.42 acre (614 linear feet) of permanent impacts and 0.56 acre (818 linear feet) of temporary impacts to Corps and Regional Board jurisdictional waters will be impacted from project implementation. All temporary impacts will be restored to existing site conditions.

The on-site drainage feature also exhibited characteristics consistent with CDFW's methodology and would be considered CDFW streambed. Approximately 46.38 acre (2,827 linear feet) of CDFW jurisdiction are located within boundaries of the survey area. Based on the proposed project design, a total of 1.01 acre (1,517 linear feet) of permanent impacts and 1.33 acre (1,888 linear feet) of temporary impacts to CDFW jurisdictional waters will be impacted from project implementation. All temporary impacts will be restored to existing site conditions.

Based on current site conditions and design plans, impacts to the Whitewater River will occur from project implementation. As a result, the project applicant must obtain the following regulatory approvals prior to impacts occurring within the identified jurisdictional areas: Corps CWA Section 404 Permit; Regional Board CWA Section 401 Water Quality Certification; and CDFW Section 1602 Streambed Alteration Agreement (SAA).

4.7 SPECIAL-STATUS BIOLOGICAL RESOURCES

The CNDDB Rarefind 5, CNDDB Quickview Tool in BIOS, and the CNPS Electronic Inventory of Rare and Endangered Vascular Plants of California was queried for reported locations of special-status plant and wildlife species as well as special-status plant communities in the White Water, Desert Hot Springs, Morongo Valley, and Catclaw Flat USGS 7.5-minute quadrangles. The habitat assessment evaluated the conditions of the habitat(s) within the boundaries of the project site to determine if the existing plant communities, at the time of the survey, have the potential to provide suitable habitat(s) for special-status plant and wildlife species.

The literature search identified thirty-five (35) special-status plant species, ninety-two (92) special-status wildlife species, and three (3) special-status plant communities as having potential to occur within the White Water, Desert Hot Springs, Morongo Valley, and Catclaw Flat USGS 7.5-minute quadrangles. Special-status plant and wildlife species were evaluated for their potential to occur within the project site based on habitat requirements, availability and quality of suitable habitat, and known distributions. Species determined to have the potential to occur within the general vicinity of the project site are presented in *Table B-1: Potentially Occurring Special-Status Biological Resources*, provided in Appendix B.

4.7.1 Special-Status Plant Species

Thirty-five (35) special-status plant species have been recorded in the CNDDB and CNPS in the White Water, Desert Hot Springs, Morongo Valley, and Catclaw Flat USGS 7.5-minute quadrangles (refer to Appendix B). No special-status plant species were observed on-site during the habitat assessment or during

the 2020 focused special-status plant survey (refer to Appendix E). Based on habitat requirements for specific special-status plant species and the availability and quality of habitats needed by each species, the undeveloped portions of the project site were determined to have a high potential to provide suitable habitat for Coachella Valley milk-vetch, and a moderate potential to support triple-rubbed milk-vetch, Parry's spineflower, white-bracted spineflower, and little San Bernardino mountains linanthus. All other special-status species documented as occurring within the vicinity of the project site were determined to have a low potential to occur or were presumed absent.

Please refer to the following sections for a detailed assessment of the potential occurrence of the aforementioned special-status plant species and results from the 2020 focused survey.

Coachella Valley Milk-vetch

Coachella Valley milk-vetch is an erect winter annual or a short-lived perennial that blooms between February and May, producing pink to deep-magenta colored flowers. It is federally listed as endangered and is designated by the CNPS with the Rare Plant Rank 1B.2, indicating that it is rare, threatened, or endangered in California and elsewhere, and is considered fairly threatened in California, with 20-80% of its known occurrences threatened. It is endemic to California and is only known from Riverside County and occurs in dunes and sandy flats, along the disturbed margins of sandy washes, and in sandy soils along roadsides where they occur adjacent to existing sand dunes. Coachella Valley milk-vetch occurs in the coarser sands at the margins of dunes and is strongly affiliated with sandy substrates. This species may also occur in sandy substrates in creosote bush scrub not associated with sand dune habitats and in localized pockets where sand has been deposited by wind or by active washes.

It should be noted that the northern portion of the project site is located within designated Critical Habitat for this species (78 Federal Register [FR] 10449 10497). The project site supports the fluvial sand transport processes that provides suitable habitat favored by this species. It was determined that Coachella Valley milk-vetch has a high potential to occur within the boundaries of the survey area. This species was not observed within the project footprint during a 2020 focused special-status plant survey.

Triple-ribbed Milk-vetch

Triple-ribbed milk-vetch is short-lived erect perennial (2 to 10 inches in height) in the Fabacae (pea) family that blooms from February to May, producing white or pale cream-colored flowers. It is federally listed as endangered and is designated by the CNPS with the Rare Plant Rank 1B.2, indicating that it is rare, threatened, or endangered in California and elsewhere, and is considered fairly threatened in California, with 20-80% of its known occurrences threatened. Triple-ribbed milk-vetch is found in a narrow range primarily from the northwestern portion of the Coachella Valley, from the vicinity of Whitewater Canyon, in Mission Creek Canyon across Highway 62 to Dry Morongo Wash and Big Morongo Canyon. Preferred habitat for triple-ribbed milk-vetch has been characterized as sandy and gravelly soils of dry washes or on decomposed granite or gravelly soils at the base of canyon slopes. However, most observations of this species have been in natural or man-made disturbed areas. For example observations have been made along washes, on canyon bottoms where slides or flooding occurs.

Further the project site provides the suitable habitat for this species; sandy and gravelly soils along a wash that is at the base of a canyon slope. In 2010, an unknown number of triple-ribbed milk-vetch was recorded

in the northern portion of the project site (CNDDB 2010). It was determined that triple-ribbed milk-vetch has a moderate potential to occur within the boundaries of the survey area. This species was not observed within the project footprint during a 2020 focused special-status plant survey.

Little San Bernardino Mountains Liananthus

Little San Bernardino Mountains linanthus is an annual herb in the Phlox family. It is designated by the CNPS with the Rare Plant Rank 1B.2, that it is rare, threatened, or endangered in California and elsewhere, and is considered fairly threatened in California, with 20-80% of its known occurrences threatened. The preferred Habitat of Little San Bernardino Mountains linanthus is in loose soft sandy soils on low benches along washes, generally where the substrate shows some evidence of water flow. It seems to occur in areas where few or no competing species are found, with little shrub or tree cover in the immediate vicinity. The sand is loose and well-aerated, soft and unconsolidated. This species typically occurs on the margins of washes on shallow sandy benches, not on areas where a hard surface layer occurs, and not on loose blowsand away from washes. It is associated with creosote bush scrub, but avoids growing in the shadow of other plants.

The project site provides the suitable habitat for this species, sandy or rocky openings within Sonoran Desert scrub plant community. An unknown number of little San Bernardino Mountains linanthus was observed just south of the survey area. It was determined little San Bernardino Mountains linanthus has a moderate potential to occur within the boundaries of the survey area. This species was not observed within the project footprint during a 2020 focused special-status plant survey.

Parry's Spineflower

Parry's spineflower is an annual species in the buckwheat family. It blooms from April to June and comprised of white flowers with brown achenes 2.5 to 3mm long. It is designated by the CNPS with the Rare Plant Rank 1B.1, indicating that it is rare, threatened, or endangered in California and elsewhere, and is considered seriously endangered in California. Parry's spineflower is knowm from the flats and foothills of the San Gabriel, San Bernardino and San Jacinto Mountains within Los Angeles, San Bernardino and Riverside Counties of southern California. Preferred habitat for Parry's spineflower has been characterized as alluvial chaparral and scrub of the San Bernardino and San Jacinto Mountains.

The project site provides the suitable habitat for this species; sandy or rocky openings within chaparral plant community. In 2003, an unknown number of Parry's spineflower was observed just west of the survey area about midway between Bonnie Bell and Whitewater Preserve (CNDDB 2003). It was determined Parry's spineflower has a moderate potential to occur within the boundaries of the survey area. This species was not observed within the project footprint during a 2020 focused special-status plant survey.

White-bracted Spineflower

White-bracted spineflower is an annual species in the buckwheat family. It blooms from April to June and comprised of pink to red flowers. It is designated by the CNPS with the Rare Plant Rank 1B.2, indicating that it is rare, threatened, or endangered in California and elsewhere, and is considered fairly threatened in California, with 20-80% of its known occurrences threatened. White-bracted spineflower is endemic to

California and is only known from San Jacinto and San Bernardino Mountains. Preferred habitat for this species has been characterized as sandy or gravelly soils within alluvial fans.

The project site provides the suitable habitat for this species, sandy or rocky soils within alluvial fans. In 2003, an unknown number of white-bracted spineflower was observed just west of the survey area about midway between Bonnie Bell and Whitewater Preserve (CNDDB 2003). It was determined white-bracted spineflower has a moderate potential to occur within the boundaries of the survey area. This species was not observed within the project footprint during a 2020 focused special-status plant survey.

4.7.2 Special-Status Wildlife Species

Ninety-two (92) special-status wildlife species have been reported by the CNDDB in the White Water, Desert Hot Springs, Morongo Valley, and Catclaw Flat USGS 7.5-minute quadrangles (refer to Appendix B). Cooper's hawk (*Accipiter cooperii*), southwestern willow flycatcher, American peregrine falcon (*Falco peregrinus anatum*), yellow-breasted chat (*Icteria virens*), summer tanager (*Piranga rubra*), black-tailed gnatcatcher (*Polioptila melanura*), vermillion flycatcher (*Pyrocephalus rubinus*), yellow warbler (*Setophaga petechia*), two-stripped garter snake (*Thamnophis hammondii*), and least Bell's vireo were the only special-status wildlife species observed within the project site during the field investigations.

Based on habitat requirements for specific special-status wildlife species and the availability and quality of habitats needed by each species, the undeveloped portions of the project site were determined to have a high potential to provide suitable habitat for great blue heron (*Ardea herodias*), Costa's hummingbird (*Calypte costae*), little willow flycatcher (*Empidonax traillii brewsteri*), loggerhead shrike (*Lanius ludovicianus*); and a moderate potential to provide suitable habitat for sharp-shinned hawk (*Accipiter striatuserii*), California glossy snake (*Arizona elegans occidentalis*), snowy egret (*Egretta thula*), prairie falcon (*Falco mexicanus*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*). All remaining special-status wildlife species have a low potential to occur or are presumed to be absent from the project site based on habitat requirements, availability/quality of habitat needed by each species, and known distributions. Please refer to the following sections for a detailed assessment of the potential occurrence of arroyo toad, southwestern willow flycatcher, and least Bell's vireo.

Arroyo Toad

The arroyo toad inhabits rivers and streams of coastal southern California, from Monterey County southward into northern Baja California, Mexico. In the United States, the arroyo toad was listed as an endangered species on December 16, 1994 (59 Federal Register 64859). In California, the arroyo toad is federally endangered and is considered a California Species of Concern. This species is also fully covered under the CVMSHCP. The arroyo toad is about 2 to 3 inches in length with light olive green, gray, or light brown skin color with a light-colored stripe shaped "V" across the head and eyelids. Arroyo toads are found in low gradient, medium-to-large streams and rivers with intermittent and perennial flow in coastal and desert drainages in central and southern California, and Baja California, Mexico. Arroyo toads occupy aquatic, riparian, and upland habitats within its range and require slow-moving steams that are composed of sandy soils with sandy streamside terraces. Suitable habitat is created and maintained by periodic flooding and scouring that modify stream channels, redistribute channel sediments, and alter pool location and form.

The most important factors in determining habitat suitability for arroyo toads are stream order, elevation, and floodplain width. Stream order ranks the size and potential power of streams. The smallest channels in a watershed with no tributaries are referred to as first-order streams. When two first-order streams unite, they form a second-order stream; when two second-order streams unite, they form a third-order stream, and so on. Fifth- and sixth-order streams are usually larger rivers, while first- and second-order streams are often small, steep, or intermittent. Arroyo toads are found at the lower end of the third to sixth order stream segments where the coarsest sediments are lacking and flow rates are great enough to keep silt and clay suspended. Arroyo toads breed and deposit egg masses in shallow, sandy pools bordered by sand and gravel flood terraces. Outside of the breeding season, arroyo toads are terrestrial utilizing riparian habitats with low to moderate vegetative cover for foraging and burrowing. Adult and sub-adult arroyo toads seek shelter during the day and other periods of inactivity by burrowing into upland terraces, along flood channels, and often in the soils below the canopy edge of willows or cottonwoods.

The substrate in habitats preferred by arroyo toads consists of sand, fine gravel, or friable soil, with varying amounts of large gravel, cobble, and boulders. Areas utilized by juveniles consists of sand or fine gravel bars adjacent to stabilized sandy terraces and oak flats. Habitats used outside of the breeding season for foraging and burrowing include riparian habitats such as sand bars, alluvial terraces, and streamside benches with no vegetation or have low to moderate cover composed of California sycamore, coast live oak (*Quercus agrifolia*), mulefat, cottonwoods, and willows. The types of uplands habitats include alluvial scrub, coastal sage scrub, chaparral, grassland, and oak woodland. Studies have shown that arroyo toads are known to utilize upland habitats up to 1,063 feet from the active channel.

Arroyo toad was not observed within the boundaries of the project site during the field investigations. Per the CVMSHCP, a population of arroyo toads was observed in Whitewater Canyon in 1992. In 1994, this Whitewater River population was included in the species account update as one of the six known desert populations. However, following this update, numerous surveys of the area have not identified arroyo toad. In 2001 and 2003, U.S. Geological Survey (USGS) conducted detailed inventories, but did not detect this species within Whitewater Canyon (Ervin, Beaman, and Fisher 2013). Further, the initial reports contained photo documentation that was later examined and determined to be an adult red-spotted toad (*Bufo punctatus*), not a juvenile arroyo toad (Ervin, Beaman, and Fisher 2013). Based on USGS surveys and the reevaluation of photographic evidence taken from the Whitewater River, the original records of arroyo toads occurring in within Whitewater Canyon is considered an error. Further, there is no other evidence of this species occurring within the Coachella Valley. USFWS has reconsidered the critical habitat determination of arroyo toad for the Whitewater River area stating that area does not meet the criteria for critical habitat of the species (USFWS 2011). Arroyo toads are presumed absent within the boundaries of the project site.

Southwestern Willow Flycatcher

The willow flycatcher is a nearly transcontinental species which breeds widely across temperate North America and migrates to Middle and northwestern South America for the winter. It consists of the following four subspecies, all of which are migratory. The species as a whole winters from southern Mexico south through Central America to Panama and western Venezuela. Subspecies *extimus* has been collected in winter in Guatemala, El Salvador, Honduras, and Costa Rica (Unitt, 1997). Migrants of the more northern subspecies occur commonly in the breeding range of *extimus*. Because southern California lies across the

main migration route of *brewsteri*, and specimens of *brewsteri* outnumber specimens of *extimus* in its own range. In fact, with the population crash of *extimus*, almost all Willow Flycatchers seen in southern California are *brewsteri*. *Extimus* is encountered only at the few sites where it breeds. In southern California the subspecies *extimus* arrives in spring, usually in early May.

The southwestern willow flycatcher is a federally and state endangered species that usually arrives in southern California in early May, but rarely as early as the last two or three days of April. This species is also fully covered under the CVMSHCP. In fall, adults depart mainly during the last half of August, but rarely can remain as late as September 4th. Juveniles remain until later in September but all have departed by October 1st. The southwestern willow flycatcher breeds only in riparian habitats, typically along a dynamic river or lakeside. Surface water or saturated soil is usually present in or adjacent to nesting sites during at least the initial portion of the nesting period (Muiznieks et al., 1994; Tibbits et al., 1994). Riparian habitats used by southwestern willow flycatchers typically have a dense thicket of trees and shrubs that can range in height from about 2 to 30 meters. Preferred nesting sites usually contain riparian foliage from the ground level up to a dense (about 50 to 100 percent) tree or shrub canopy.

Southwestern willow flycatcher was detected within the riparian habitats adjacent to the project site, outside of the proposed limits of disturbance during the 2020 focused surveys (refer to Appendix F). However, these individuals were observed during the beginning of their migration period and are assuming to be migratory individuals that are not nesting onsite.

Least Bell's Vireo

Least Bell's vireo is a federally and state endangered subspecies of the Bell's vireo. Least Bell's vireo is also covered under the CVMSHCP. It is a summer migrant to California and is the only regularly-occurring subspecies of Bell's vireo in San Bernardino County. Its nesting habitat typically consists of a well-developed over-story and understory, along with low densities of aquatic and herbaceous plant cover. The understory frequently contains dense sub-shrub or shrub thickets that are often dominated by plants such as willow, mulefat, and one or more herbaceous species. Least Bell's vireos begin to arrive at their breeding grounds in southern California riparian areas from mid-March to early April. Upon arrival, males establish breeding territories that range in size from 0.5 to 7.4 acres, with an average size of approximately two acres. In California, females begin laying eggs in April, fledging birds until the end of July (Kus et al. 2010). The fledglings will remain in the parental territory for up to a month. Bell's vireos leave the breeding grounds and migrate south mid- to late September. Although not common, a few have been found wintering in southern California (Hamilton and Willick 1996).

Least Bell's vireo was detected during 2020 focused surveys within the riparian habitats adjacent to the project site, outside of the proposed limits of disturbance. This plant community provides the preferred plant species composition, density, and structure needed to provide suitable nesting habitat for least Bell's vireo. Since least Bell's vireo is a CVMSHCP covered species, although the project development will not directly impact least Bell's vireo habitat, adherence to the avoidance and minimization measures from the CVMSHCP should be followed in order to ensure no impacts to least Bell's vireo.

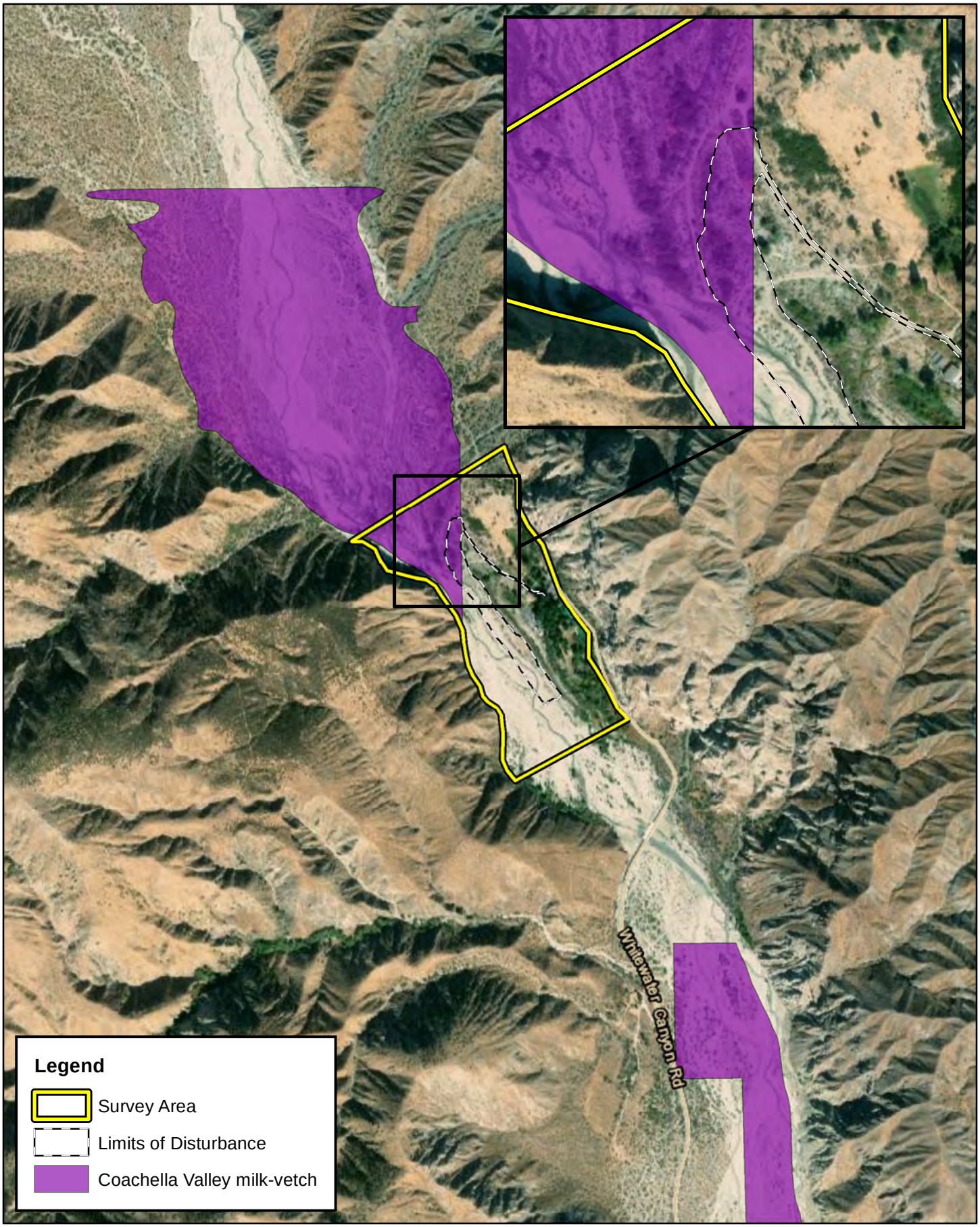
4.7.3 Special-Status Plant Communities

According to the CNDDB, three (3) special-status plant community have been in the White Water, Desert Hot Springs, Morongo Valley, and Catclaw Flat USGS 7.5-minute quadrangles: Desert Fan Palm Oasis Woodland, Mesquite Bosque, and Mojave Riparian Forest. Based on the results of the habitat assessment, no special-status plant communities are present within the project site.

4.8 CRITICAL HABITAT

Under the federal Endangered Species Act, "Critical Habitat" is designated at the time of listing of a species or within one year of listing. Critical Habitat refers to specific areas within the geographical range of a species at the time it is listed that include the physical or biological features that are essential to the survival and eventual recovery of that species. Maintenance of these physical and biological features requires special management considerations or protection, regardless of whether individuals or the species are present or not. All federal agencies are required to consult with the United States Fish and Wildlife Service (USFWS) regarding activities they authorize, fund, or permit which may affect a federally listed species or its designated Critical Habitat. The purpose of the consultation is to ensure that projects will not jeopardize the continued existence of the listed species or adversely modify or destroy its designated Critical Habitat. The designation of Critical Habitat does not affect private landowners, unless a project they are proposing is on federal lands, uses federal funds, or requires federal authorization or permits (e.g., funding from the Federal Highways Administration or a CWA Permit from the Corps). If a there is a federal nexus, then the federal agency that is responsible for providing the funding or permit would consult with the USFWS.

The northern boundary of the project footprint is located within designated Critical Habitat for Coachella Valley milk-vetch (Exhibit 5, *Critical Habitat*). The issuance of a CWA Section 404 permit for impacts to the Whitewater River will trigger the need for the Corps to consult with the USFWS under Section 7 of the FESA for loss or adverse modification to Critical Habitat. However, consistency with the CVMSHCP will streamline the Section 7 process.



WHITEWATER PRESERVE LEVEE REPLACEMENT PROJECT
HABITAT ASSESSMENT AND CVMSHCP CONSISTENCY ANALYSIS

Critical Habitat

ELMT CONSULTING

Source: ESRI Aerial Imagery, Riverside County

Exhibit 5

Section 5 CVMSHCP Consistency Analysis

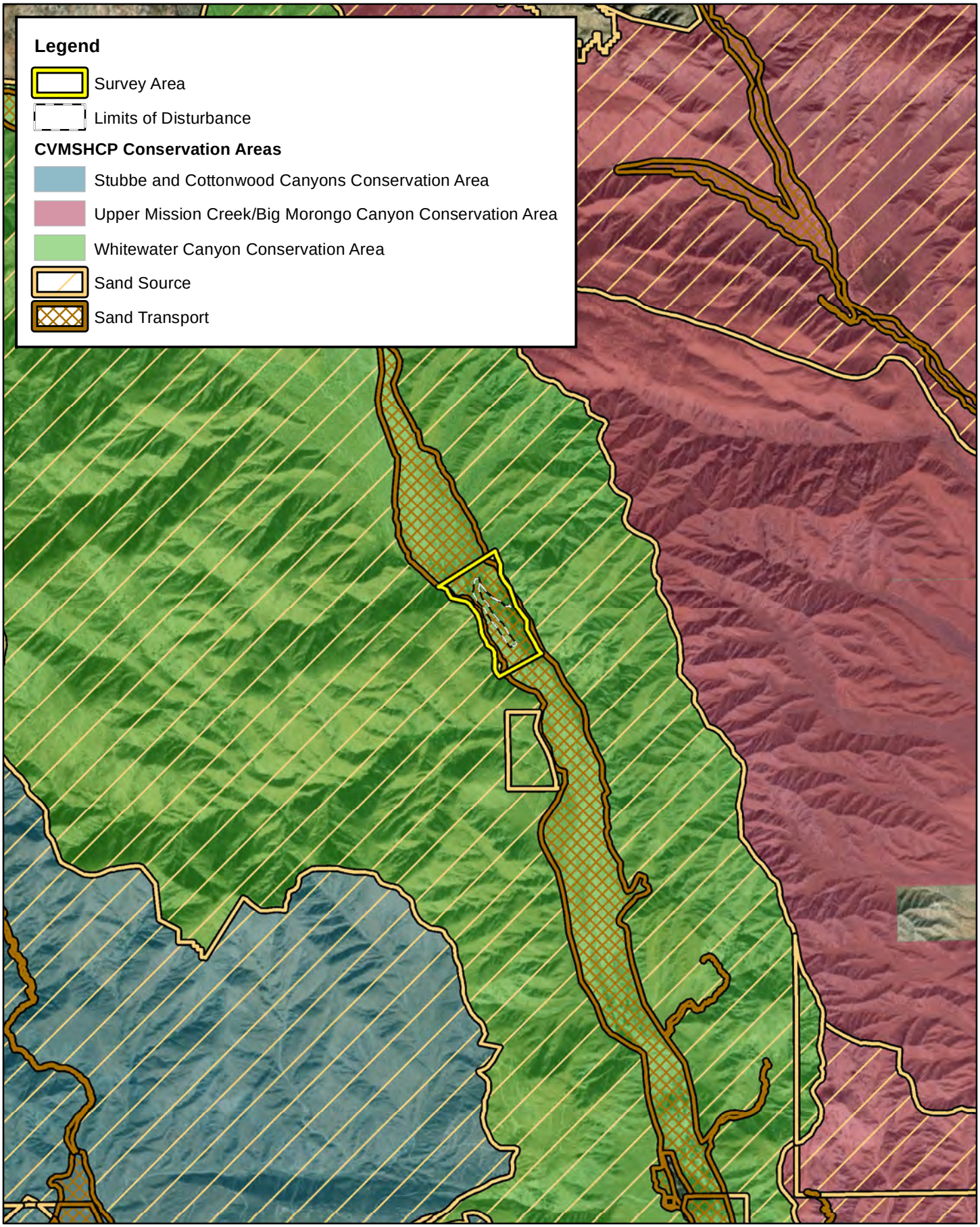
The project site is located within the boundaries of the CVMSHCP Area, specifically within the Whitewater Canyon Conservation Area (Exhibit 6, *CVMSHCP Conservation Areas*).

5.1 ACTIVITIES WITHIN CONSERVATION AREAS

The proposed project is not listed as a planned "Covered Activity" under the published CVMSHCP, but is still considered to be a current Covered Activity pursuant to Section 7.3 of the CVMSHCP. According to Section 7.3 of the CVMSHCP, implementation of the Plan will provide permits for covered species for Covered Activities within conservation areas if: "*Development and the associated ground disturbance, consistent with the Conservation Goals and Conservation Objectives within Conservation Areas and Species Conservation Goals and Objectives; and including the construction, operation, and maintenance of new flood control facilities and local roadways which are either: (1) approved as part of a development proposal or (2) dedicated, or offered for dedication, for public use, are Covered Activities.*"

As a Covered Activity located within a designated conservation area, construction of the proposed project is subject to the applicable avoidance, minimization, and mitigation measures as described in Section 4.4 of the CVMSHCP (refer to Appendix C). In accordance with the CVMSHCP, the conservation objectives for this Conservation Area are:

- In total, 1,440 acres of the Whitewater Canyon Conservation Area shall be conserved. (This may be less than the sum of acres indicated in the following objectives because there can be overlap among areas covered by the objectives. For example, Core Habitat for two or more species may overlap, or Core Habitat and an Essential Ecological Process area may overlap. The individual acreage figures will be used in compliance monitoring.)
- Conserve at least 1,084 acres of Core Habitat for desert tortoise in the unincorporated portion of the area, allowing evolutionary processes and natural population fluctuations to occur. Minimize fragmentation, human-caused disturbance, and edge effects to Core Habitat by conserving contiguous Habitat and effective Linkages between patches of Core Habitat. Protect individual tortoises within the area if allowed Development does occur.
- Conserve at least 850 acres of the sand source area in the San Bernardino Mountains in the unincorporated portion of the area to maintain the natural erosion processes that provide sediment for the blowsand ecosystem.
- Conserve at least 435 acres in the fluvial (water-borne) sand transport area in the Riverside County portion of the area. Maintain the current capacity for fluvial sand transport in the Whitewater River.
- Conserve at least 348 acres of Other Conserved Habitat for the Little San Bernardino Mountains linanthus in the Riverside County portion of the area.
- Conserve at least 368 acres of Core Habitat for the triple-ribbed milkvetch in the Riverside County portion of the area.
- Conserve at least 706 acres of modeled Habitat for the arroyo toad in the Riverside County portion of the area.



WHITEWATER PRESERVE LEVEE REPLACEMENT PROJECT
HABITAT ASSESSMENT AND CVMSHCP CONSISTENCY ANALYSIS

CVMSHCP Conservation Areas

ELMT CONSULTING

0 1,250 2,500 5,000 Feet

Source: ESRI Aerial Imagery, Riverside County

Exhibit 6

- In the Riverside County portion of the area, conserve at least 107 acres of existing Sonoran cottonwood-willow riparian forest natural community, which provides Habitat for riparian birds and other Covered Species. For the remaining acreage of this natural community where disturbance is authorized by the Plan, ensure no net loss.
- In the Riverside County portion of the area, maintain functional Biological Corridors under I-10 by conserving at least 201 acres in the Whitewater River Biological Corridor north of the freeway to maintain potential Habitat connectivity for desert tortoise, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse, and to maintain ecosystem function for Covered Species. Aside from the freeway bridge and any Existing Use areas, which are unavoidably narrow segments, the Biological Corridor shall expand to one mile wide to minimize edge effects.

5.2 JOINT PROJECT REVIEW

All projects implemented under local permittees' jurisdiction in a conservation area that would result in disturbance to habitat, natural communities, biological corridors, or essential ecological processes are subject to a Joint Project Review Process. The purpose of the review is to allow the Coachella Valley Conservation Commission (CVCC) to facilitate and monitor the implementation of the CVMSHCP within the Plan Area. The proposed project is located within the Whitewater Canyon Conservation Area and would result in both positive and negative impacts to habitat, natural communities, biological corridors, and essential ecological processes (i.e. sand transport), and thus is subject to the Joint Project Review Process.

5.3 HABITAT ASSESSMENT RESULTS AND FOCUSED SURVEYS

This section describes surveys that may be required by the CVMSHCP for covered species that are known to occur within the Whitewater Canyon Conservation Area, as well as a review of their potential to occur within the project site based on the field investigations. Mitigation text is taken directly from Section 4.4 of the MSHCP, but only those parts that are relevant to the project site are included.

Coachella Valley Milk-vetch

It should be noted that the northern portion of the project site is located within designated Critical Habitat for this species (78 Federal Register [FR] 10449 10497). The project site supports the fluvial sand transport processes that provides suitable habitat favored by this species. It was determined that Coachella Valley milk-vetch has a high potential to occur within the boundaries of the survey area. This species was not observed within the project footprint during a 2020 focused special-status plant survey. The CVMSHCP does not require any surveys or additional measures for this species to remain in compliance.

Triple-ribbed Milk-vetch

The project site provides the suitable habitat for this species; sandy and gravelly soils along a wash that is at the base of a canyon slope. In 2010, an unknown number of triple-ribbed milk-vetch was recorded in the northern portion of the project site (CNDDB 2010). It was determined that triple-ribbed milk-vetch has a moderate potential to occur within the boundaries of the survey area. This species was not observed within the project footprint during a 2020 focused special-status plant survey.

Per the CVMSHCP, for covered activities within modeled triple-ribbed milk-vetch habitat, surveys by an acceptable biologist will be required for activities during the growing and flowering period from February 1 – May 15. Any occurrence of the species will be flagged and public infrastructure projects shall avoid impacts to the plants to the maximum extent feasible.

Arroyo Toad

Arroyo toad was not detected within the project site during the field investigations. Based the reevaluation of previous survey data and the lack of arroyo toad within the boundaries of the project site during past surveys, it was determined this species is presumed absent within the boundaries of the project site. Presence/absence surveys for arroyo toad are not recommended.

Little San Bernardino Mountains Linanthus

The project site provides the suitable habitat for this species, sandy or rocky openings within Sonoran Desert scrub plant community. An unknown number of little San Bernardino Mountains linanthus was observed just south of the survey area. It was determined little San Bernardino Mountains linanthus has a moderate potential to occur within the boundaries of the survey area. This species was not observed within the project footprint during a 2020 focused special-status plant survey.

Southwestern Willow Flycatcher

Southwestern willow flycatcher was detected within the riparian habitats adjacent to the project site, outside of the proposed limits of disturbance during the 2020 focused surveys. However, these individuals were observed during the beginning of their migration period and are assuming to be migratory individuals that are not nesting onsite.

Per the CVMSHCP, Covered activities, including Operation and Maintenance Activities (O&M) of facilities and construction of permitted new projects, in riparian habitats will be conducted to the maximum extent feasible outside of the May 1 – September 15 nesting season for southwestern willow flycatcher. If Covered Activities must occur during the nesting season, surveys shall be conducted to determine if any active nests area present. If active nests are identified, the Covered Activity shall not be conducted within 200 feet of an active nest. If surveys conducted during the nesting season document that Covered nesting riparian bird species are not present, the Covered Activity may proceed.

Least Bell's Vireo

Least Bell's vireo was detected during 2020 focused surveys within the riparian habitats adjacent to the project site, outside of the proposed limits of disturbance. This plant community provides the preferred plant species composition, density, and structure needed to provide suitable nesting habitat for least Bell's vireo. Since least Bell's vireo is a CVMSHCP covered species, although the project development will not directly impact least Bell's vireo habitat, adherence to the avoidance and minimization measures from the CVMSHCP should be followed in order to ensure no impacts to least Bell's vireo.

Per the CVMSHCP, Covered activities, including Operation and Maintenance Activities (O&M) of facilities and construction of permitted new projects, in riparian habitats will be conducted to the maximum extent feasible outside of the March – September 15 nesting season for least Bell's vireo. If Covered

Activities must occur during the nesting season, surveys shall be conducted to determine if any active nests area present. If active nests are identified, the Covered Activity shall not be conducted within 200 feet of an active nest. If surveys conducted during the nesting season document that Covered nesting riparian bird species are not present, the Covered Activity may proceed.

5.4 LAND USE ADJACENCY GUIDELINES

The purpose of Land Use Adjacency Guidelines (Section 4.5 of the CVMSHCP) is to avoid or minimize indirect effects from development adjacent to or within the Conservation Areas. Adjacent means sharing a common boundary with any parcel in a Conservation Area. Such indirect effects are commonly referred to as edge effects, and may include noise, lighting, drainage, intrusion of people, and the introduction of non-native plants and non-native predators such as dogs and cats. The project site is located within the Whitewater Canyon Conservation Area, and as such the following Land Use Adjacency Guidelines shall be considered and implemented where applicable.

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.

The proposed project would minimally alter the flow direction of water within the Whitewater River, but all existing and future flows are still located within the Whitewater River Conservation Area. The proposed levee will generally be located within the existing footprint of the existing earthen levee.

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.

The proposed project would not generate toxic bioproducts or use toxic chemicals. Any spills of hazardous materials from project vehicles or equipment would be contained, cleaned up, and disposed of immediately.

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.

The proposed project would not require any additional lighting.

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.

The project site should have a physical separation or barrier included in its design between the proposed development and the Sonoran cottonwood-willow riparian forest plant community, east of the project footprint. A barrier would significantly lessen any noise exposure to any CVMSHCP-covered species. Construction-related noise will be mitigated to be consistent with the City of Riverside's Noise Ordinances by limiting construction activities to daytime hours and requiring construction equipment to be tuned and equipped with mufflers. Under the CVMSHCP, wildlife within the CVMSHCP Conservation Area should not be subject to noise that would exceed 75dBA Leg.

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. The plants listed in Table 4-113 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.

The proposed project will not require any landscaping or planting.

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.

The proposed project would not change any land uses in the area other than to replace an earthen levee with a permanent structure along the eastern bank of the Whitewater River.

Grading/Land Development

Manufactured slopes associated with site Development shall not extend into adjacent land in a Conservation Area.

The proposed project footprint will be limited to the eastern bank of the Whitewater River and will generally follow the existing earthern levee that is failing. The footprint has been minimized to the maximum extent possible to allow for the protection of the Preserve while satisfying the regulations of the CVMSHCP.

5.5 FLUVIAL SAND TRANSPORT

"Fluvial sand transport" refers to the process by which sand and sediment particles are pushed downstream along a floodplain by the movement of water. In the Coachella Valley, fluvial sand transport begins in the mountains, where streams and rivers push sediment down into the valley. On the valley floor, continued occasional water flow will maintain fluvial transport, but high winds will also pick up sediment and carry it (Aeolian transport) (Exhibit 8, *CVMSHCP Sand Transport Area*). In accordance with Section 4.4 of the MSHCP, the following additional measure would be required for the proposed project to remain in compliance with the MSHCP. The following text is taken directly from Section 4.4:

Activities, including O&M of facilities and construction of permitted new projects, in fluvial sand transport areas in the Cabazon, Stubbe and Cottonwood Canyons, Snow Creek/Windy Point, Whitewater Canyon, Whitewater Floodplain, Upper Mission Creek/Big Morongo Canyon, Mission Creek/Morongo Wash, Willow Hole, Long Canyon, Edom Hill, Thousand Palms, West Deception Canyon, and Indio Hills/Joshua Tree National Park Linkage Conservation Areas will be conducted in a manner to maintain the fluvial sand transport capacity of the system.

A sediment transport study was conducted to verify if the loss of the current levee system would change the current pattern of sand transport associated with the Whitewater River. The current sand dune habitats in the Coachella Valley are adapted to the current pattern of sand transport along the Whitewater River. Modification of this pattern could also affect downstream areas in the Whitewater River floodplain that provides core habitat for many species associated with sand dune habitats.

The hydrologic analysis performed was intended to serve as the hydrologic basis to be used in the planning and design of the proposed flood protection improvements, including the determination of impacts, mitigation requirements, and engineering constraints. The hydrologic basis supports the analysis of debris yield, hydraulics, sediment transport, and scour through model development and simulation as well as the use of spreadsheet calculations. This analysis was performed by Q3 Consulting in June 2020.

The hydrologic basis was formulated being mindful of the following goals:

- Conveyance of floodwaters along the edge conditions and near vicinity of the proposed improvements as it relates to stream stability, flood and erosion protection, and consequences to adjacent properties and existing infrastructure
- Increased runoff volume and/or flow redistribution attributed to the improvements

The hydrologic objectives focused on the determination of the following for the portion of the Whitewater River watershed that is relevant to the Whitewater Preserve Area:

- *Regional flood frequency curves*. A regional flood frequency analysis was performed based on most current available streamflow data to determine peak flow rates using stochastic methods based on recorded observations to provide a metric for evaluating the reasonableness of peak flow rates computed based on deterministic methods
- *Regional peak flow rates and flood hydrographs.* Peak flow rates and flood hydrographs were determined for selected combinations of frequencies and durations to support the development, simulation, and analysis of steady- and unsteady-flow hydraulic models and supplementary

calculations, which contribute to the basis of design formulated for the proposed levee improvements.

The following general approach and assumptions were employed:

- Flood frequency analysis were performed based on the method of *L*-moments (Hosking and Wallis, 1997)
- The Riverside County Hydrology Manual (RCHM; RCFCWCD, 1978) Synthetic Unit Hydrograph Method (SUHM) was used as the framework for the deterministic computation of peak flow rates and flood hydrographs
- The relevant Whitewater River watershed was identified as the area tributary to the historic USGS streamflow gage site at Whitewater (USGS ID 10256000), located between Interstate 10 and the Whitewater Preserve Area
- The 50-, 20-, 10-, 2-, 1-, 0.5, and 0.2-percent annual chance storm events were evaluated
- Parameter development was performed using a combination of GIS and spreadsheet applications

The project is a flood control levee that would be constructed for the specific purpose of protecting Whitewater Preserve from future flood flows. Levees, by definition, alter the course of water flows for the purpose of protecting natural or manmade resources such as the preserve. However, the project is a replacement levee that would not change future water flows but rather improve upon the protection provided by the existing levee at the site. In addition, there is not potential for substantial erosion or siltation on- or off-site due to the fact that a levee currently exists on the site. The project will not obstruct fluvial sand transport or obstruct natural watercourses, and the rate of flow and sediment transport will not be impeded.

Section 6 Conclusion and Recommendations

The project site occurs within Whitewater Canyon along the eastern bank of the Whitewater River. The Whitewater Preserve is owned by the Wildlands Conservancy and operates as a non-profit nature preserve. It offers free access to the public for outdoor recreation, includes a visitor center located in the former Whitewater Trout Farm, and serves as an access point into the Sand to Snow National Monument. With the exception of the infrastructure associate with the historic trout farm, the project site is relatively undeveloped and supports native habitats. Four (4) plant communities were observed within the boundaries of the survey area during the survey: alluvial scrub, Sonoran cottonwood willow riparian forest, Sonoran creosote bush scrub, and grassland. In addition, the survey area contains two land cover types that would be classified as disturbed and developed.

Special-Status Plant Species

No special-status plant species are expected to be impacted from project implementation.

Special-Status Wildlife Species

Per the CVMSHCP, Covered activities, including O&M of facilities and construction of permitted new projects, in riparian habitats will be conducted to the maximum extent feasible outside of the March – September 15 nesting season for least Bell's vireo, and other migratory birds. If Covered Activities must occur during the nesting season, surveys shall be conducted to determine if any active nests area present. If active nests are identified, the Covered Activity shall not be conducted within 200 feet of an active nest. If surveys conducted during the nesting season document that Covered nesting riparian bird species are not present, the Covered Activity may proceed.

Pre-Construction Nesting Bird Clearance Survey

If ground disturbance and vegetation removal cannot occur outside of the nesting season, normally between February 1 through August 31, but can vary each year based on seasonal weather conditions, a pre-construction clearance survey for nesting birds should be conducted within three (3) days of the start of any ground disturbing activities to ensure that no nesting birds will be disturbed during construction. This survey will ensure no impacts to the special-status avian species determined to have the potential to occur on-site would occur from site development. The proposed limits of disturbance and adjacent areas within 500 feet of the project footprint will be surveyed by a qualified biologist. The biologist conducting the clearance survey should document a negative survey with a brief letter report indicating that no impacts to active avian nests will occur

Biological Monitoring

If the Biologist finds an active nest on the project site and determines that the nest may be impacted, the Biologist shall delineate an appropriate buffer zone around the nest. The size of the buffer shall be determined by the Biologist and shall be based on the nesting species, its sensitivity to disturbance, expected types of disturbance, and location in relation to the construction activities. These buffers are typically 300 feet from the nests of non-listed species and 500 feet from the nests of raptors and listed species. Any active nests observed during the survey shall be mapped on an aerial photograph. Only construction activities (if

any) that have been approved by a Biological Monitor shall take place within the buffer zone until the nest is vacated. The Biologist shall serve as a Construction Monitor when construction activities take place near active nest areas to ensure that no inadvertent impacts on these nests occur. Results of the pre-construction survey and any subsequent monitoring shall be provided to the Property Owner/Developer and the City. The monitoring report shall summarize the results of the nest monitoring, describe construction restrictions currently in place, and confirm that construction activities can proceed within the buffer area without jeopardizing the survival of the young birds.

Jurisdictional Drainages

One drainage feature, the Whitewater River runs north to south through the project site. The on-site drainage feature possesses a surface hydrologic connection downstream to the Salton Sea, a waters of the U.S., and will be subject to Corps jurisdiction under Section 404 of the CWA. The on-site drainage feature also qualifies as "waters of the State" and would fall under the regulatory authority of the Regional Board and CDFW. Impacts to the Whitewater River will require the following regulatory approvals: 1) Corps CWA Section 404 Permit; 2) Regional Board Report of CWA Section 401 Water Quality Certification; and 3) CDFW Section 1602 Streambed Alteration Agreement.

Wildlife Corridors

The proposed project is not expected to compromise wildlife movement opportunities associated with the Whitewater River, or prevent the surrounding habitat in the foothills from continuing to function as wildlife movement corridors. Therefore, implementation of the proposed project is not expected to have any adverse impacts to wildlife movement.

Critical Habitat

The project site is located within designated Critical Habitat for Coachella Valley milk-vetch. The issuance of a CWA Section 404 permit for impacts to the Whitewater River will trigger the need for the Corps to consult with the USFWS under Section 7 of the FESA for loss or adverse modification to Critical Habitat. However, consistency with the CVMSHCP will help streamline the Section 7 process.

Local and Regional Plans

The project site is located within the boundaries of the CVMSHCP, specifically within the Whitewater Canyon Conservation Area. The proposed project is not specifically designated as a planned Covered Activity under the published CVMSHCP, but is still considered to be a Covered Activity pursuant to Section 7.3 of the CVMSHCP. With implementation of the applicable avoidance and minimization measures, as well as payment of the CVMSHCP local development mitigation fee, the proposed project would be fully consistent with the biological goals and objectives of the CVMSHCP.

Per the CVMSHCP, Covered activities, including O&M of facilities and construction of permitted new projects, in riparian habitats will be conducted to the maximum extent feasible outside of the May 1 – September 15 nesting season for southwestern willow flycatcher. If Covered Activities must occur during the nesting season, surveys shall be conducted to determine if any active nests area present. If active nests are identified, the Covered Activity shall not be conducted within 200 feet of an active nest. If surveys conducted during the nesting season document that Covered nesting riparian bird species are not present,

the Covered Activity may proceed. Southwestern willow flycatcher surveys will be conducted on accordance with the updated 2010 survey guidelines.

Section 7 References

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Appendix A Site Photographs



Photograph 1: View of the Whitewater Preserve visitor facility located within the northeast portion of the survey area.



Photograph 2: Standing within the northern portion of the survey area looking south.



Photograph 3: Standing within the northwest portion of the survey area looking north across the semi-desert chaparral plant community.



Photograph 4: Standing on Whitewater Canyon Road looking north at the Whitewater River and survey area.



Photograph 5: Standing on Whitewater Canyon Road looking south across the survey area.



Photograph 6: Standing within the chamise chaparral plant community looking west.



Photograph 7: Standing within the central portion of the survey area looking north across the semi-desert chaparral plant community.



Photograph 8: Standing within the southern portion of the survey area looking north across the Whitewater River.



Photograph 9: Standing within the southwest portion of the survey area looking northeast.



Photograph 10: Standing within the southwest portion of the survey area looking south. The Sonoran cottonwood-willow riparian forest plant community can be seen in the distance.

Appendix B Potentially Occurring Special-Status Biological Resources

Table B-1: Potentially Occurring Sensitive Biological Resources

Scientific Name Common Name	**Status**	**Habitat**	**Observed On-site**	**Potential to Occur**
SPECIAL – STATUS WILDLIFE SPECIES				
Accipiter cooperii Cooper's hawk	USFWS: None CDFW: WL CVMSHCP: Not Covered	Generally found in forested areas up to 3,000 feet in elevation, especially near edges and rivers. Prefers hardwood stands and mature forests, but can be found in urban and suburban areas where there are tall trees for nesting. Common in open areas during nesting season.	Yes	**Present** Was observed foraging onsite during the LBVI/SWWF focused survyes. .
Accipiter striatus sharp-shinned hawk	USFWS: None CDFW: WL CVMSHCP: Not Covered	Primarily occurs in coniferous forests, but is also found in boreal mixed conifer-birch-aspen forests. Less common in other woodland types, except in mountainous areas. Open areas are used for foraging, but not for nesting.	No	**Moderate** There is suitable habitat within and adjacent to the project site. This species does not nest in this region.
Aimophila ruficeps canescens southern California rufous-crowned sparrow	USFWS: None CDFW: WL CVMSHCP: Not Covered	Typically found between 3,000 and 6,000 feet in elevation. Breed in sparsely vegetated shrublands on hillsides and canyons. Prefers coastal sage scrub dominated by California sagebrush (*Artemisia californica*), but can also be found breeding in coastal bluff scrub, low-growing serpentine chaparral, and along the edges of tall chaparral habitats.	No	**Presumed Absent** The project site and impact area are out of the elevation range for this species.
Anaxyrus californicus arroyo toad	USFWS: **END** CDFW: SSC CVMSHCP: Covered	Occurs in washes and intermittent streams with a mixture of gravel and sandy substrate. Requires a moderate cover of willows, cottonwoods, mulefat, and sycamore to provide shade over the water, and oaks in the upland area to forage for ants.	No	**Presumed Absent** Recent data suggest that this species was misidentified and does not occur in the Sonoran Desert bioregion.
Anniella stebbinsi Southern California legless lizard	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Occurs in sparsely vegetated habitat types including coastal sand dunes, chaparral, pine-oak woodland, desert scrub, open grassland, and riparian areas. Requires sandy or loose loamy substrates conducive to burrowing.	No	**Presumed Absent** The project site and impact area are out of the elevation range for this species.
Antrozous pallidus pallid bat	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Locally common species of low elevation in California. Occurs in grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests. Most common in open, dry habitats with rocky areas for roosting.	No	**Low** There is marginal foraging habitat within and adjacent to the project site.
Aquila chrysaetos golden eagle	USFWS: None CDFW: FP; WL CVMSHCP: Not Covered	Occupies nearly all terrestrial habitats of the western states except densely forested areas. Favors secluded cliffs with overhanging ledges and large trees for nesting and cover. Hilly or mountainous country where takeoff and soaring are supported by updrafts is generally preferred to flat habitats. Deeply cut canyons rising to open mountain slopes and crags are ideal habitat.	No	**Low** There is marginal foraging and nesting habitat within and adjacent to the project site.
Ardea herodias great blue heron	USFWS: None CDFW: None CVMSHCP: Not Covered	Fairly common all year throughout most of California, in shallow estuaries and fresh and saline emergent wetlands. Less common along riverine and rocky marine shores, in croplands, pastures, and in mountains about foothills.	No	**High** There is suitable habitat within and adjacent to the project site.
Arizona elegans occidentalis California glossy snake	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Inhabits arid scrub, rocky washes, grasslands, and chaparral habitats.	No	**Moderate** There is suitable habitat within and adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Observed On-site**	**Potential to Occur**
Asio flammeus short-eared owl	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Suitable habitats include salt- and freshwater marshes, irrigated alfalfa or grain fields, and ungrazed grasslands and old pastures. Tule marsh or tall grasslands with cover 30 to 50 cm in height can support nesting pairs.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Asio otus long-eared owl	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Uncommon yearlong resident throughout the state except the Central Valley and Southern California deserts where it is an uncommon winter visitor. Requires riparian habitat and uses live oak thickets and other dense stands of trees.	No	**Low** There is marginal habitat within and adjacent to the project site.
Aspidoscelis hyperythra orange-throated whiptail	USFWS: None CDFW: WL CVMSHCP: Not Covered	Inhabits low-elevations coastal scrub, chamise-redshank chaparral, mixed chaparral, and valley-foothill hardwood habitats. Semi-arid brushy areas typically with loose soil and rocks, including washes, streamsides, rocky hillsides, and coastal chaparral.	No	**Low** There is marginal habitat within and adjacent to the project site.
Aspidoscelis tigris stejnegeri coastal whiptail	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Found in a variety of ecosystems, primarily hot and dry open areas with sparse foliage - chaparral, woodland, and riparian areas.	No	**Low** There is marginal habitat within and adjacent to the project site.
Athene cunicularia burrowing owl	USFWS: None CDFW: SSC CVMSHCP: Covered	Primarily a grassland species, but it persists and even thrives in some landscapes highly altered by human activity. Occurs in open, annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. The overriding characteristics of suitable habitat appear to be burrows for roosting and nesting and relatively short vegetation with only sparse shrubs and taller vegetation.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Aythya americana redhead	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Occurs year round in California, though status varies regionally. Nest in freshwater emergent wetlands where dense stands of cattails and tules are interspersed with areas of deep, open water.	No	**Low** The ponds located within the preserve area provide marginal foraging habitat.
Aythya valisineria canvasback	USFWS: None CDFW: None CVMSHCP: Not Covered	Found in marshes, ponds, lakes, rivers, and bays. Winters in deep, freshwater lakes and rivers as well as on sheltered bays and estuaries.	No	**Low** The ponds located within the preserve area provide marginal foraging habitat.
Baeolophus inornatus oak titmouse	USFWS: None CDFW: None CVMSHCP: Not Covered	Common resident in a variety of habitats, but primarily associated with oaks. Occurs in montane hardwood-conifer, montane hardwood, blue, valley, and coastal oak woodlands, and montane and valley foothill riparian habitats in cismontane California, from the Mexican border to Humboldt Co. Range encircles San Joaquin Valley, extending east from the coast through Kern Co. onto the western slope of the Sierra Nevada north to Shasta Co.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Bombus crotchii Crotch bumble bee	USFWS: None CDFW: CE CVMSHCP: Not Covered	Exclusive to coastal California east towards the Sierra-Cascade Crest; less common in western Nevada.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Botaurus lentiginosus American bittern	USFWS: None CDFW: None CVMSHCP: Not Covered	Often breed in shallow wetlands dominated by tall emergent vegetation, including cattail marshes, wet meadows, bogs, and shrubby marshes and occasionally hayfields.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Observed On-site**	**Potential to Occur**
Buteo regalis ferruginous hawk	USFWS: None CDFW: WL CVMSHCP: Not Covered	Common winter resident of grasslands and agricultural areas in southwestern California. Frequents open grasslands, sagebrush flats, desert scrub, low foothills surrounding valleys, and fringes of pinyon-juniper habitats. Does not breed in California.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Buteo swainsoni Swainson's hawk	USFWS: None CDFW: **THR** CVMSHCP: Not Covered	Typical habitat is open desert, grassland, or cropland containing scattered, large trees or small groves. Breeds in stands with few trees in juniper-sage flats, riparian areas, and in oak savannah in the Central Valley. Forages in adjacent grassland or suitable grain or alfalfa fields or livestock pastures.	No	**Presumed absent.** No suitable habitat is present on-site.
Calypte costae Costa's hummingbird	USFWS: None CDFW: None CVMSHCP: Not Covered	Desert and semi-desert, arid brushy foothills and chaparral. A desert hummingbird that breeds in the Sonoran and Mojave Deserts. Departs desert heat moving into chaparral, scrub, and woodland habitats.	No	**High** The desert scrub habitats provide suitable habitat.
Chaetodipus fallax fallax northwestern San Diego pocket mouse	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Occurs in desert and coastal habitats in southern California, Mexico, and northern Baja California, from sea level to at least 1,400 meters (4,593 ft) above msl. Found in a variety of temperate habitats ranging from chaparral and grasslands to scrub forests and deserts. Requires low growing vegetation or rocky outcroppings, as well as sandy soils for burrowing.	No	**Low** There is marginal habitat within and adjacent to the project site.
Chaetodipus fallax pallidus pallid San Diego pocket mouse	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Common resident of sandy herbaceous areas, usually in association with rocks or course gravel in southwestern California. Occurs mainly in arid coastal and desert border areas. Habitats include coastal scrub, chamise-redshank chaparral, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon-juniper, and annual grassland.	No	**Low** There is marginal habitat within and adjacent to the project site.
Chaetura vauxi Vaux's swift	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Prefers redwood and Douglas-fir habitats with nest-sites in large hollow trees and snags, especially tall, burned-out stubs.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Circus hudsonius northern harrier	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Frequents meadows, grasslands, open rangelands, desert sinks, fresh and saltwater emergent wetlands; seldom found in wooded areas. Mostly found in flat, or hummocky, open areas of tall, dense grasses moist or dry shrubs, and edges for nesting, cover, and feeding.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Coccyzus americanus occidentalis western yellow-billed cuckoo	USFWS: **THR** CDFW: **END** CVMSHCP: Not Covered	In California, the breeding distrution is now thought to be restricted to isolated sites in Sacramento, Amargosa, Kern, Santa Ana, and Colorado River valleys. Obligate riparian species with a primary habitat association of willow-cottonwood riparian forest.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Coleonyx variegatus abbotti San Diego banded gecko	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Prefers rocky areas in coastal sage and chaparral within granite or rocky outcrops. Occurs in coastal and cismontane southern California from interior Ventura Co. south.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.

Scientific Name Common Name	**Status**		**Habitat**	**Observed On-site**	**Potential to Occur**
Contopus cooperi olive-sided flycatcher	USFWS: CDFW: CVMSHCP:	None SSC Not Covered	Uncommon to common, summer resident in a wide variety of forest and woodland habitats below 9,000 ft. throughout California exclusive of the deserts, the Central Valley, and other lowland valleys and basins. Preferred nesting habitats include mixed conifer, montane hardwood-conifer, Douglas-fir, redwood, red fir, and lodgepole pine.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Corynorhinus townsendii Townsend's big-eared bat	USFWS: CDFW: CVMSHCP:	None SSC Not Covered	Now considered uncommon in California. Details of its distribution are not well known. This species is found in all but subalpine and alpine habitats, and may be found at any season throughout its range. Most abundant in mesic habitats.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Crotalus ruber red-diamond rattlesnake	USFWS: CDFW: CVMSHCP:	None SSC Not Covered	It can be found from the desert, through dense chaparral in the foothills (it avoids the mountains above around 4,000 feet), to warm inland mesas and valleys, all the way to the cool ocean shore. It is most commonly associated with heavy brush with large rocks or boulders. Dense chaparral in the foothills, cactus or boulder associated coastal sage scrub, oak and pine woodlands, and desert slope scrub associations are known to carry populations of the northern red-diamond rattlesnake; however, chamise and red shank associations may offer better structural habitat for refuges and food resources for this species than other habitats.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Dinacoma caseyi Casey's June beetle	USFWS: CDFW: CVMSHCP:	**END** None Not Covered	All *Dinacoma* populations are associated with alluvial sediments occurring in or contiguous with bases of desert alluvial fans, and the broad, gently sloping, depositional surfaces at the base of the Santa Rosa mountain ranges in the dry Coachella valley region. Most commonly associated with the Carsitas series soil.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Dipodomys merriami parvus San Bernardino kangaroo rat	USFWS: CDFW: CVMSHCP:	**END** CE; SSC Not Covered	Primarily found in alluvial fan sage scrub and sandy loam soils, alluvial fans and flood plains, and along washes with nearby sage scrub. May occur at lower densities in upland sage scrub, chaparral and grassland in uplands and tributaries in proximity to alluvial fan sage scrub habitats. Tend to avoid rocky substrates and prefer sandy loam substrates for digging of shallow burrows.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Egretta thula snowy egret	USFWS: CDFW: CVMSHCP:	None None Not Covered	Widespread in California along shores of coastal estuaries, fresh and saline emergent wetlands, ponds, slow-moving rivers, irrigation ditches, and wet fields. In southern California, common yearlong in the Imperial Valley and along the Colorado River.	No	**Moderate** There is suitable habitat within and adjacent to the project site.
Elanus leucurus white-tailed kite	USFWS: CDFW: CVMSHCP:	None FP Not Covered	Occurs in low elevation, open grasslands, savannah-like habitats, agricultural areas, wetlands, and oak woodlands. Uses trees with dense canopies for cover. Important prey item is the California vole.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.

Scientific Name Common Name	**Status**		**Habitat**	**Observed On-site**	**Potential to Occur**
Empidonax traillii brewsteri little willow flycatcher	USFWS: CDFW: CVMSHCP:	None **END** Not Covered	Breeds in the Pacific northwest and south in the Sierra Nevada in central California. Breeds only in riparian woodland, typically adjacent to or even over water.	No	**High** There is suitable habitat within the willow scrub plant community. This species is not expected to nest onsite.
Empidonax traillii extimus southwestern willow flycatcher	USFWS: CDFW: CVMSHCP:	**END** **END** Covered	Occurs in riparian woodlands in southern California. Typically requires large areas of willow thickets in broad valleys, canyon bottoms, or around ponds and lakes. These areas typically have standing or running water, or are at least moist.	Yes	**Present** Observed during the 2020 LBVI/SWWF focused surveys. This species is assumed to be migrating through the area and was not observed nesting onsite.
Eremarionta morongoana Morongo (=Colorado) desertsnail	USFWS: CDFW: CVMSHCP:	None None Not Covered	Only known to occur in a gulch on the north side of Morongo Pass, near the Riverside County line, where it is found under rocks in Sonoran desert scrub.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Eremophila alpestris actia California horned lark	USFWS: CDFW: CVMSHCP:	None WL Not Covered	Occurs in meadows, grasslands, open fields, prairie, and alkali flats. This subspecies is typically found in coastal regions.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Euphydryas editha quino quino checkerspot butterfly	USFWS: CDFW: CVMSHCP:	**END** None Not Covered	Range is now limited to a few populations in Riverside and San Diego counties. Common in meadows and upland sage scrub/chapparal habitat.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Falco columbarius merlin	USFWS: CDFW: CVMSHCP:	None WL Not Covered	Nest in forested openings, edges, and along rivers across northern North America. Found in open forests, grasslands, and especially coastal areas with flocks of small songbirds or shorebirds.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Falco mexicanus prairie falcon	USFWS: CDFW: CVMSHCP:	None WL Not Covered	Commonly occur in arid and semiarid shrubland and grassland community types. Also occasionally found in open parklands within coniferous forests. During the breeding season, they are found commonly in foothills and mountains which provide cliffs and escarpments suitable for nest sites.	No	**Moderate** There is suitable habitat within and adjacent to the project site.
Falco peregrinus anatum American peregrine falcon	USFWS: CDFW: CVMSHCP:	Delisted FP Not Covered	Very uncommon breeding resident, and uncommon as a migrant. Active nesting sites are known along the coast north of Santa Barbara, in the Sierra Nevada, and in other mountains of northern California. Breeds mostly in woodland, forest, and coastal habitats. Riparian areas and coastal and inland wetlands are important habitats yearlong, especially in nonbreeding seasons.	Yes	**Present** Observed during the 2020 LBVI/SWWF focused surveys
Gavia immer common loon	USFWS: CDFW: CVMSHCP:	None SSC Not Covered	Lakes with coves and islands are preferred habitat as they provide cover from predators. In their winter range along the coasts, they occur fairly close to the shore and in bays and estuaries.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Observed On-site**	**Potential to Occur**
Gopherus agassizii desert tortoise	USFWS: **THR** CDFW: **THR** CVMSHCP: Covered	Widely distributed in the Mojave, Sonoran, and Colorado deserts from below sea level to 7,220 feet. Most common in desert scrub, desert wash, and Joshua tree habitats, but occurs in almost every desert habitat except those on the most precipitous slopes.	No	**Presumed Absent** No desert tortoises, sign, or burrows were observed during the habitat assessment. The habitat within the project site is generally too rocky for desert tortoise.
Gymnogyps californianus California condor	USFWS: **END** CDFW: **END**; FP CVMSHCP: Not Covered	Permanent resident of the semi-arid, rugged mountain ranges surrounding the southern San Joaquin Valley, including the Coast Ranges from Santa Clara Co. south to Los Angeles Co., the Transverse Ranges, Tehachapi Mts., and southern Sierra Nevada. Forages over wide areas of open rangelands, roots on cliffs and in large trees and snags.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Habropoda pallida white-faced bee	USFWS: None CDFW: None CVMSHCP: Not Covered	Builds nests in clay-rich sandy slopes along water courses in the Mojave Desert. In California, it occurs from Into County south to Imperial County and east to the Nevada and Arizona borders. Prefers areas with a high density of creosote and dune-restricted endemic plants.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Haliaeetus leucocephalus bald eagle	USFWS: Delisted CDFW: **END**; FP CVMSHCP: Not Covered	Occur primarily at or near seacoasts, rivers, swamps, and large lakes. Need ample foraging opportunities, typically near a large water source.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Icteria virens yellow-breasted chat	USFWS: None CDFW: SSC CVMSHCP: Covered	Primarily found in tall, dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush with well-developed understories. Nesting areas are associated with streams, swampy ground, and the borders of small ponds. Breeding habitat must be dense to provide shade and concealment. It winters south the Central America.	Yes	**Present** Observed during the 2020 LBVI/SWWF focused surveys
Lanius ludovicianus loggerhead shrike	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Often found in broken woodlands, shrublands, and other habitats. Prefers open country with scattered perches for hunting and fairly dense brush for nesting.	No	**High** There is suitable habitat within and adjacent to the project site.
Larus californicus California gull	USFWS: None CDFW: WL CVMSHCP: Not Covered	Require isolated islands in rivers, reservoirs and natural lakes for nesting, where predations pressures from terrestrial mammals are diminished. Uses both fresh and saline aquatic habitats at variable elevations and degrees of aridity for nesting and for opportunistic foraging.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Lepus californicus bennettii San Diego black-tailed jackrabbit	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Found in diverse habitats, but primarily is found in arid regions supporting shortgrass habitats. Openness of open scrub habitat is preferred over dense chaparral.	No	**Moderate** There is suitable habitat within and adjacent to the project site.
Macrobaenetes valgum Coachella giant sand treader cricket	USFWS: None CDFW: None CVMSHCP: Covered	Nocturnal and moisture sensitive insects. Emergence occurs with winter rains and appear at maximum densities in January-February. Can be detected via their characteristic delta-shaped burrow excavations.	No	**Low** There is marginal habitat within and adjacent to the project site.
Melanerpes lewis Lewis' woodpecker	USFWS: None CDFW: None CVMSHCP: Not Covered	Inhabit open forests and grasslands with a few scattered trees. Optimal habitat consists of trees or snags for nesting and perching, nearby open sites for foraging, and a shrub layer for insect cover and fruit/berry production.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.

Scientific Name Common Name	**Status**		**Habitat**	**Observed On-site**	**Potential to Occur**
Myiarchus tyrannulus brown-crested flycatcher	USFWS: CDFW: CVMSHCP:	None WL Not Covered	Summer resident of desert riparian thickets, including trees, snags, and shrubs that it uses for foraging perches, nesting cavities, and cover. Particularly favors mesquite, willow, and cottonwood vegetation. Typically found along the Colorado River but sometimes ventures as far west as Victorville.	No	**Low** There is marginal habitat within the Sonoran cottonwood-willow riparian scrub forest.
Neotoma lepida intermedia San Diego desert woodrat	USFWS: CDFW: CVMSHCP:	None SSC Not Covered	Occurs in coastal scrub communities between San Luis Obispo and San Diego Counties. Prefers moderate to dense canopies, and especially rocky outcrops.	No	**Low** There is no marginal habitat within or adjacent to the project site.
Nycticorax nycticorax black-crowned night heron	USFWS: CDFW: CVMSHCP:	None None Not Covered	Common in wetlands across North America, including saltmarshes, freshwater marshes, swamps, streams, rivers, lakes, ponds, lagoons, tidal mudflats, and wet agricultural fields. They require aquatic habitat for foraging and terrestrial vegetation for cover.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Oreothlypis luciae Lucy's warbler	USFWS: CDFW: CVMSHCP:	None SSC Not Covered	Found in desert and riparian areas of the southwestern US and northwestern Mexico. Often found in mesquite woodlands. Also breed in cottonwood-willow riparian woodlands, sycamore-oak woods, and salt cedar stands.	No	**Low** There is suitable habitat within the willow scrub habitat.
Ovis canadensis nelsoni desert bighorn sheep	USFWS: CDFW: CVMSHCP:	None FP Not Covered	Preferred habitat is near mountainous terrain above the desert floor that is visually open, as well as steep and rocky. Most Mojave Desert mountain ranges satisfy these requirements well. Surface water is another element that is considered important to population health.	No	**Presumed Absent** There is no suitable habitat within the project site and impact area. However, there is suitable habitat outside the boundaries of the project site. within the surrounding mountainous terrain.
***Ovis canadensis nelsoni* pop. 2** Peninsular bighorn sheep DPS	USFWS: CDFW: CVMSHCP:	**END** **THR**; FP Covered	Preferred habitat is near mountainous terrain above the desert floor that is visually open, as well as steep and rocky. Most Mojave Desert mountain ranges satisfy these requirements well. Surface water is another element that is considered important to population health. Found mainly in the Peninsular Ranges.	No	**Presumed Absent** There is no suitable habitat within the project site and impact area. The project site is outside of the species known range. Desert bighorn sheep occur in this area.
Pandion haliaetus osprey	USFWS: CDFW: CVMSHCP:	None WL Not Covered	Occurs in a variety of plant communities in association with riparian habitats including shrublands, grasslands, swamps, and coniferous and deciduous forests. In California, ospreys are primarily associated with ponderosa pine (*Pine ponderosa*) and mixed-conifer types.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Parnopes borregoensis Borrego parnopes cuckoo wasp	USFWS: CDFW: CVMSHCP:	None None Not Covered	Parasitizes bembicine sand wasps, which are dependent on healthy fly populations.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Observed On-site**	**Potential to Occur**
Passerculus sandwichensis rostratus large-billed savannah sparrow	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Breeding habitats of this species is specialized. It is limited to open, low salt marsh vegetation, including grasses (*Spartina, Distichlis*), pickleweed (*Salicornia* spp.), and iodine bush (*Allenrolfea* spp.) around the mouth of the Colorado River and adjacent coastlines of the uppermost Gulf of California. Restricted almost entirely restricted to shorelines within its California nonbreeding range.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Pelecanus erythrorhynchos American white pelican	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Limited by the availability of remote nesting sites and rich foraging habitats. In California, nesting occurs on the ground on earthen, sandy, and rocky islands or (rarely) peninsulas and (locally) on floating tulemat islands, particularly in the Klamath Basin. Nests may be in the open in the sand or interspersed with or adjacent to tall weeds and open, low-stature shrubs.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Perognathus longimembris bangsi Palm Springs pocket mouse	USFWS: None CDFW: SSC CVMSHCP: Covered	Inhabits areas having flat to gently sloping topography, sparse to moderate vegetative cover, and loosely packed or sandy soils on slopes ranging from 0% to approximately 15%. Remaining habitat in the Coachella Valley and environs is about 142,000 acres.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Perognathus longimembris brevinasus Los Angeles pocket mouse	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Occurs in lower elevation grasslands and coastal sage scrub communities in and around the Los Angeles Basin. Prefers open ground with fine sandy soils. May not dig extensive burrows, but instead will seek refuge under weeds and dead leaves instead.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Phalacrocorax auritus double-crested cormorant	USFWS: None CDFW: WL CVMSHCP: Not Covered	Yearlong resident along the entire coast of California and on inland lakes, in fresh, salt and estuarine waters. August to May, fairly common to locally very common along the coast and in estuaries and salt ponds. Uncommon in marine subtidal habitats from San Luis Obispo Co. south, and very rare to the north.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Phrynosoma blainvillii coast horned lizard	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Occurs in a wide variety of vegetation types including coastal sage scrub, annual grassland, chaparral, oak woodland, riparian woodland and coniferous forest. In inland areas, this species is restricted to areas with pockets of open microhabitat, created by disturbance (i.e. fire, floods, roads, grazing, fire breaks). The key elements of such habitats are loose, fine soils with a high sand fraction; an abundance of native ants or other insects; and open areas with limited overstory for basking and low, but relatively dense shrubs for refuge.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Phrynosoma mcallii flat-tailed horned lizard	USFWS: None CDFW: SSC CVMSHCP: Covered	Typical habitat is sandy desert hardpan or gravel flats with scattered sparse vegetation of low species diversity. Most common in areas with high density of harvester ants and fine windblown sand, but rarely occurs on dunes.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Piranga rubra summer tanager	USFWS: None CDFW: SSC CVMSHCP: Covered	Breed in gaps and edges of open deciduous or pine-oak forests across the southern and mid-Atlantic U.S. Uncommon (formerly common) summer resident and breeder in desert riparian habitat along lower Colorado River. Breeds in mature, desert riparian habitat dominated by cottonwoods and willows.	Yes	**Present** Observed during the 2020 LBVI/SWWF focused surveys

Scientific Name Common Name	**Status**	**Habitat**	**Observed On-site**	**Potential to Occur**
Polioptila californica californica coastal California gnatcatcher	USFWS: **THR** CDFW: SSC CVMSHCP: Not Covered	Obligate resident of sage scrub habitats that are dominated by California sagebrush (Artemisia californica). This species generally occurs below 750 feet elevation in coastal regions and below 1,500 feet inland. Ranges from the Ventura County, south to San Diego County and northern Baja California and it is less common in sage scrub with a high percentage of tall shrubs. Prefers habitat with more low-growing vegetation.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Polioptila melanura black-tailed gnatcatcher	USFWS: None CDFW: WL CVMSHCP: Not Covered	In Mojave, Great Basin, Colorado and Sonoran desert communities, prefers nesting and foraging in densely lined arroyos and washes dominated by creosote bush and salt bush with scattered bursage, burrowed, ocotillo, saguaro, barrel cactus, nipple cactus, and prickly pear and cholla.	Yes	**Present** Observed during the 2020 LBVI/SWWF focused surveys
Pyrocephalus rubinus vermilion flycatcher	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Occupies desert riparian habitat, particularly cottonwoods, willows, mesquite, and other large desert riparian trees, in habitat adjacent to irrigated fields, irrigation ditches, pastures, and other open, mesic areas where it can forage.	Yes	**Present** This species was observed onsite during the field investigations.
Rana draytonii California red-legged frog	USFWS: **THR** CDFW: SSC CVMSHCP: Not Covered	Found mainly near ponds in humid forests, woodlands, grasslands, coastal scrub, and streamsides with plant cover. Most common in lowlands or foothills. Frequently found in woods adjacent to streams. Occurs along the coast ranges from Mendocino County south and in portions of the Sierra Nevada and Cascades ranges.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the proposed limits of disturbance. It should be noted that a population was introduced by the USGS into the trout ponds outside of the limits of disturbance.
Rana muscosa southern mountain yellow-legged frog	USFWS: **END** CDFW: **END**; WL CVMSHCP: Not Covered	Inhabits lakes, ponds, meadow streams, isolated pools, sunny riverbanks in the southern Sierra Nevada Mountains. In the mountains of southern California, inhabits rocky streams in narrow canyons and in the chaparral belt.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Selasphorus rufus rufous hummingbird	USFWS: None CDFW: None CVMSHCP: Not Covered	During breeding, they are found in forests, on seed-tree harvest units, riparian shrub, and spruce-fir habitats. During the winter, it migrates to lowland stream bottoms, foothill brush land, seacoast and high mountain meadows.	No	**Low** There is marginal habitat within the willow scrub plant community.
Setophaga petechia yellow warbler	USFWS: None CDFW: SSC CVMSHCP: Covered	Nests over all of California except the Central Valley, the Mojave Desert region, and high altitudes and the eastern side of the Sierra Nevada. Winters along the Colorado River and in parts of Imperial and Riverside Counties. Nests in riparian areas dominated by willows, cottonwoods, sycamores, or alders or in mature chaparral. May also use oaks, conifers, and urban areas near stream courses.	Yes	**Present** Observed during the 2020 LBVI/SWWF focused surveys
Spinus lawrencei Lawrence's goldfinch	USFWS: None CDFW: None CVMSHCP: Not Covered	Typical habitats include valley foothill hardwood, valley foothill hardwood-conifer, and, in southern California, desert riparian, palm oasis, pinyon-juniper, and lower montane habitats. Nearby herbaceous habitats often used for feeding. Open woodlands, chaparral, and weedy fields. Closely associated with oaks. Nests in open oak or other arid woodland and chaparral near water.	No	**Low** There is suitable habitat within the willow scrub.

Scientific Name Common Name	**Status**		**Habitat**	**Observed On-site**	**Potential to Occur**
Spizella breweri Brewer's sparrow	USFWS: CDFW: CVMSHCP:	None None Not Covered	Habitats include sagebrush and brushy plains.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Stenopelmatus cahuilaensis Coachella Valley Jerusalem cricket	USFWS: CDFW: CVMSHCP:	None None Covered	Restricted to desert dunes.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Strix occidentalis occidentalis California spotted owl	USFWS: CDFW: CVMSHCP:	None SSC Not Covered	Primarily associated with oak and oak-conifer habitats and uses dense, multi-layered canopy cover for roost seclusion. Requires mature forest with permanent water and suitable nesting trees and snags.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Taxidea taxus American badger	USFWS: CDFW: CVMSHCP:	None SSC Not Covered	Primarily occupy grasslands, parklands, farms, tallgrass and shortgrass prairies, meadows, shrub-steppe communities and other treeless areas with sandy loam soils where it can dig more easily for its prey. Occasionally found in open chaparral (with less than 50% plant cover) and riparian zones.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Thamnophis hammondii two-striped garter snake	USFWS: CDFW: CVMSHCP:	None SSC Not Covered	Generally found around pools, creeks, cattle tanks, and other water sources, often in rocky areas, in oak woodland, chaparral, brushland, and coniferous forest.	Yes	**Present** This species was detected during the field investigation.
Toxostoma bendirei Bendire's thrasher	USFWS: CDFW: CVMSHCP:	None SSC Not Covered	Generally, they are associated with *Yucca* and *Opuntia* as well as firmly packed dirt with less rocks, sand, and desert pavement than other Mojave soil types. This species avoids areas with steep slopes and rocky terrain.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Toxostoma crissale Crissal thrasher	USFWS: CDFW: CVMSHCP:	None SSC Covered	Year round resident in California. Occupies a relatively large variety of desert riparian and scrub habitats from below sea level to over 6,000 feet. Occurs in areas dominated by mesquite hummocks and thickets with acacias, arrowweed, and desert saltbush scrub.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Toxostoma lecontei Le Conte's thrasher	USFWS: CDFW: CVMSHCP:	None SSC Covered	An uncommon to rare, local resident in southern California deserts from southern Mono Co. south to the Mexican border, and in western and southern San Joaquin Valley. Occurs primarily in open desert wash, desert scrub, alkali desert scrub, and desert succulent shrub habitats; also occurs in Joshua tree habitat with scattered shrubs.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Uma inornata Coachella Valley fringe-toed lizard	USFWS: CDFW: CVMSHCP:	**THR** **END** Covered	Sparsely-vegetated arid areas with fine wind-blown sand, including dunes, washes, and flats with sandy hummocks formed around the bases of vegetation. Needs fine, loose sand for burrowing.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Uma notata Colorado Desert fringe-toed lizard	USFWS: CDFW: CVMSHCP:	None SSC Not Covered	Dunes, flats with sandy hummocks surrounding vegetation, or riverside banks. Requires soft, loose sand into which they can easily burrow. Lives primarily on wind-blown sand deposits characterized by sparsely vegetated areas.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.

Scientific Name Common Name	**Status**		**Habitat**	**Observed On-site**	**Potential to Occur**
Vireo bellii pusillus least Bell's vireo	USFWS: CDFW: CVMSHCP:	**END** **END** Covered	Primarily occupy Riverine riparian habitat that typically feature dense cover within 1 -2 meters of the ground and a dense, stratified canopy. Typically it is associated with southern willow scrub, cottonwood-willow forest, mule fat scrub, sycamore alluvial woodlands, coast live oak riparian forest, arroyo willow riparian forest, or mesquite in desert localities. It uses habitat which is limited to the immediate vicinity of water courses, 2,000 feet elevation in the interior.	Yes	**Present** This species was detected during the field investigations in the riparian habitat outside of the project footprint, but within 500 feet of the limits of disturbance.
Vireo vicinior gray vireo	USFWS: CDFW: CVMSHCP:	None SSC Covered	A common factor to the habitat type is shrub cover that forms a continuous zone of twig growth from one to five feet above the ground. Shrubbery may either be closed as in chaparral, or partly open, as in the understory of pinyon-juniper woodland.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Xanthocephalus xanthocephalus yellow-headed blackbird	USFWS: CDFW: CVMSHCP:	None SSC Not Covered	Occurs in freshwater emergent wetlands, and moist, open areas along croplands and mud flats of lacustrine habitats. Prefers to nest in dense wetland vegetation characterized by tules, cattails, or other similar plant species along the border of lakes and ponds.	No	**Low** There is marginal habitat within the willow scrub habitat.
Xerospermophilus tereticaudus chlorus Palm Springs round-tailed ground squirrel	USFWS: CDFW: CVMSHCP:	None SSC Covered	Inhabits sandy arid regions of Lower Sonoran Life Zone. Its scrub and wash habitats include mesquite and creosote dominated sand dunes, creosote bush scrub, creosote palo verde and saltbush/alkali scrub.	No	**Low** There is marginal habitat within the scrub habitats on-site.
SPECIAL – STATUS PLANT SPECIES					
Abronia villosa* var. *aurita chaparral sand-verbena	Fed: CA: CNPS: CVMSHCP:	None None 1B.1 Not Covered	Found on the coastal side of the southern California mountains in chaparral and coastal sage scrub plant communities in areas of full sun and sandy soils. Found at elevations ranging from 262 to 5,249 feet. Blooming period is from January to September.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Aloysia wrightii Wright's beebrush	Fed: CA: CNPS: CVMSHCP:	None None 4.3 Not Covered	Prefers rocky and carbonate soils within Joshua tree woodland, pinyon and juniper woodland. Found at elevations ranging from 2,953 to 5,249 feet. Blooming period is from April to October.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Astragalus lentiginosus* var. *coachellae Coachella Valley milk-vetch	Fed: CA: CNPS: CVMSHCP:	**END** None 1B.2 Covered	Preferred habitat includes desert dunes and sandy Sonoran desert scrub. Found at elevations ranging from 131 to 2,149 feet in elevation. Blooming period is from February to May.	No	**High** There is suitable habitat within and adjacent to the project site.
Astragalus tricarinatus triple-ribbed milk-vetch	Fed: CA: CNPS: CVMSHCP:	**END** None 1B.2 Covered	Found in sandy or gravelly soils within Joshua tree woodland and Sonoran desert scrub habitats. Found at elevations ranging from 1,476 to 3,904 feet. Blooming period is from February to May.	No	**Moderate** There is marginal habitat within and adjacent to the project site.
Boechera lincolnensis Lincoln rockcress	Fed: CA: CNPS: CVMSHCP:	None None 2B.3 Not Covered	Typically found in chenopod scrub and Mojavean desert scrub on limestone soils. Found at elevations ranging from 3,609 to 8,875 feet. Blooming period is from March to May.	No	**Presumed Absent** The project site is out of the elevation range for this species.

Scientific Name Common Name	**Status**		**Habitat**	**Observed On-site**	**Potential to Occur**
Boechera parishii Parish's rockcress	Fed: CA: CNPS: CVMSHCP:	None None 1B.2 Not Covered	Grows on pebble plain, pinyon and juniper woodland, and upper montane coniferous forest vegetation types, typically in rocky or quartzite areas on clay (sometimes on carbonate). Found at elevations ranging from 5,807 to 9,810 feet. Blooming period is from April to May.	No	**Presumed Absent** The project site is out of the elevation range for this species.
Calochortus palmeri* var. *palmeri Palmer's mariposa-lily	Fed: CA: CNPS: CVMSHCP:	None None 1B.2 Not Covered	Occurs in meadows and seeps, chaparral, and lower montane coniferous forest in vernally moist places. From 3,281 to 7,841 feet in elevation. Blooming period is from April to July.	No	**Presumed Absent** The project site is out of the elevation range for this species.
Chorizanthe parryi* var. *parryi Parry's spineflower	Fed: CA: CNPS: CVMSHCP:	None None 1B.1 Not Covered	Occurs on sandy and/or rocky soils in chaparral, coastal sage scrub, and sandy openings within alluvial washes and margins. Found at elevations ranging from 951 to 3,773 feet. Blooming period is from April to June.	No	**Moderate** There is moderate habitat within and adjacent to the project site.
Chorizanthe xanti* var. *leucotheca white-bracted spineflower	Fed: CA: CNPS: CVMSHCP:	None None 1B.2 Not Covered	Grows on sandy or gravelly soils within coastal scrub (alluvial fans), Mojavean desert scrub, pinyon and juniper woodland habitats. Found at elevations ranging from 984 to 3,937 feet. Blooming period is from April to June.	No	**Moderate** There is moderate habitat within and adjacent to the project site.
Diplacus johnstonii Johnston's monkeyflower	Fed: CA: CNPS: CVMSHCP:	None None 4.3 Not Covered	Found in lower montane coniferous forest (scree, disturbed areas, rocky or gravelly, roadside). Found at elevations ranging from 3,199 to 9,580 feet. Blooming period is from May to August.	No	**Presumed Absent** The project site is out of the elevation range for this species.
Dodecahema leptoceras slender-horned spineflower	Fed: CA: CNPS: CVMSHCP:	**END** **END** 1B.1 Not Covered	Chaparral, coastal scrub (alluvial fan sage scrub). Flood deposited terraces and washes. Found at elevations ranging from 1,181 to 2,690 feet. Blooming period is from April to June.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Eriastrum harwoodii Harwood's eriastrum	Fed: CA: CNPS: CVMSHCP:	None None 1B.2 Not Covered	Found in desert dune habitats. Found at elevations ranging from 411 to 3,002 feet. Blooming period is from March to June.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Erigeron breweri* var. *jacinteus San Jacinto Mountains daisy	Fed: CA: CNPS: CVMSHCP:	None None 4.3 Not Covered	Grows in rocky soils within subalpine coniferous forest and upper montane coniferous forest. Found at elevations ranging from 8,858 to 9,514 feet. Blooming period is from June to September.	No	**Presumed Absent** The project site is out of the elevation range for this species.
Eschscholzia androuxii Joshua Tree poppy	Fed: CA: CNPS: CVMSHCP:	None None 4.3 Not Covered	Occurs on sandy, gravelly, and/or rocky desert washes, flats, and slopes in Joshua tree woodland and Mojavean desert scrub. Found at elevations ranging from 1,900 to 5,530 feet above msl. Blooming period is February to June.	No	**Presumed Absent** The project site is out of the elevation range for this species.
Euphorbia misera cliff spurge	Fed: CA: CNPS: CVMSHCP:	None None 2B.2 Not Covered	Found on rocky soils within coastal bluff scrub, coastal scrub, and Mojavean desert scrub habitat. Found at elevations ranging from 33 to 1,640 feet. Blooming period is from December to October.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.

Scientific Name Common Name	**Status**		**Habitat**	**Observed On-site**	**Potential to Occur**
Galium angustifolium* ssp. *gabrielense San Antonio Canyon bedstraw	Fed: CA: CNPS: CVMSHCP:	None None 4.3 Not Covered	Grows in granitic, sandy, or rocky soils within chaparral and lower montane coniferous forest. Found at elevations ranging from 3,937 to 8,694 feet. Blooming period is from April to August.	No	**Presumed Absent** The project site is out of the elevation range for this species.
Galium angustifolium* ssp. *gracillimum slender bedstraw	Fed: CA: CNPS: CVMSHCP:	None None 4.2 Not Covered	Grows on rocky, granitic soils within Joshua tree woodland and Sonoran desert scrub habitats. Found at elevations ranging from 427 to 5,085 feet. Blooming period is from April to June.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Galium jepsonii Jepson's bedstraw	Fed: CA: CNPS: CVMSHCP:	None None 4.3 Not Covered	Found in granitic, rocky, or gravelly soils within lower montane coniferous forest and upper montane coniferous forest. Found at elevations ranging from 5,053 to 8,202 feet. Blooming period is from July to August.	No	**Presumed Absent** The project site is out of the elevation range for this species.
Galium johnstonii Johnston's bedstraw	Fed: CA: CNPS: CVMSHCP:	None None 4.3 Not Covered	Preferred habitats include chaparral, riparian woodland, lower montane coniferous forest, pinyon and juniper woodland. Found at elevations ranging from 4,003 to 7,546 feet. Blooming period is from June to July.	No	**Presumed Absent** The project site is out of the elevation range for this species.
Heuchera parishii Parish's alumroot	Fed: CA: CNPS: CVMSHCP:	None None 1B.3 Not Covered	Grows in alpine boulder and rock fields, lower and upper montane coniferous forest, and subalpine coniferous forest. Found at elevations ranging from 4,921 to 12,467 feet. Blooming period is from June to August.	No	**Presumed Absent** The project site is out of the elevation range for this species.
Hulsea vestita* ssp. *parryi Parry's hulsea	Fed: CA: CNPS: CVMSHCP:	None None 4.3 Not Covered	Occurs in granitic and gravelly soils within alpine boulder and rock field, and subalpine coniferous forest. Found at elevations ranging from 9,301 to 12,795 feet. Blooming period is from June to October.	No	**Presumed Absent** The project site is out of the elevation range for this species.
Imperata brevifolia California satintail	Fed: CA: CNPS: CVMSHCP:	None None 2B.1 Not Covered	Found in chaparral, coastal scrub, Mojavean desert scrub, riparian scrub, meadows and seeps habitats. Found at elevations ranging from 0 to 3,986 feet. Blooming period is from September to May.	No	**Low** There is minimal habitat within and adjacent to the project site.
Ivesia argyrocoma* var. *argyrocoma silver-haired ivesia	Fed: CA: CNPS: CVMSHCP:	None None 1B.2 Not Covered	Found in alkaline meadows and seeps, pebble plain, and upper montane coniferous forest. Found at elevations ranging from 5,000 to 9,711 feet. Blooming period is from June to August.	No	**Presumed Absent** The project site is out of the elevation range for this species.
Linanthus maculatus* ssp. *maculatus Little San Bernardino Mtns. linanthus	Fed: CA: CNPS: CVMSHCP:	None None 1B.2 Covered	Preferred habitats include desert dunes, Joshua tree woodland, Mojavean desert scrub, and Sonoran Desert scrub in sandy soils. Found at elevations ranging from 640 to 6,808 feet. Blooming period is from March to May.	No	**Moderate** There is moderate habitat within and adjacent to the project site.
Lycium torreyi Torrey's box-thorn	Fed: CA: CNPS: CVMSHCP:	None None 4.2 Not Covered	Grows in sandy, rocky, washes, streambanks, desert valleys within Mojavean desert scrub and Sonoran desert scrub habitats. Found at elevations ranging from 164 to 4,003 feet. Blooming period is from March to June.	No	**Low** There is minimal habitat within and adjacent to the project site.

Scientific Name Common Name	**Status**		**Habitat**	**Observed On-site**	**Potential to Occur**
Mentzelia tricuspis spiny-hair blazing star	Fed: CA: CNPS: CVMSHCP:	None None 2B.1 Not Covered	Habitats include Mojavean desert scrub. Prefers sandy, gravelly, slopes and washes. Found at elevations ranging from 492 to 4,199 feet. Blooming period is from March to May.	No	**Low** There is minimal habitat within and adjacent to the project site.
Monardella robisonii Robison's monardella	Fed: CA: CNPS: CVMSHCP:	None None 1B.3 Not Covered	Occurs in pinyon and juniper woodland. Found at elevations ranging from 2,001 to 4,921 feet. Blooming period is from February to October.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Muhlenbergia californica California muhly	Fed: CA: CNPS: CVMSHCP:	None None 4.3 Not Covered	Found in mesic, seeps, and streambanks within chaparral, coastal scrub, lower montane coniferous forest, and meadows and seeps. Found at elevations ranging from 328 to 6,562 feet. Blooming period is from June to September.	No	**Low** There is minimal habitat within and adjacent to the project site.
Nemacaulis denudata* var. *gracilis slender cottonheads	Fed: CA: CNPS: CVMSHCP:	None None 2B.2 Not Covered	Occurs in coastal dunes, desert dunes, and Sonoran desert scrub habitats. Found at elevations ranging from 164 to 1,312 feet. Blooming period is from March to May.	No	**Presumed Absent** The project site is out of the elevation range for this species.
Penstemon pseudospectabilis* ssp. *pseudospectabilis desert beardtongue	Fed: CA: CNPS: CVMSHCP:	None None 2B.2 Not Covered	Occurs in Mojavean desert scrub and Sonoran Desert scrub, typically in sandy washes and sometimes in rocky washes. Found at elevations ranging from 262 to 6,348 feet. Blooming period is from January to May.	No	**Low** There is minimal habitat within and adjacent to the project site.
Petalonyx linearis narrow-leaf sandpaper-plant	Fed: CA: CNPS: CVMSHCP:	None None 2B.3 Not Covered	Occurs in sandy or rocky canyons in Mojavean desert scrub or Sonoran Desert scrub. Found at elevations ranging from -82 to 3,658 feet. Blooming period ranges from January to December.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Saltugilia latimeri Latimer's woodland-gilia	Fed: CA: CNPS: CVMSHCP:	None None 1B.2 Not Covered	Habitats include chaparral, Mojavean desert scrub, pinyon and juniper woodland. Prefers rocky or sandy, often granitic, soils. Found at elevations ranging from 1,312 to 6,234 feet. Blooming period is from March to June.	No	**Low** There is minimal habitat within and adjacent to the project site.
Sedum niveum Davidson's stonecrop	Fed: CA: CNPS: CVMSHCP:	None None 4.2 Not Covered	Grows in rocky soils within lower montane coniferous forest, subalpine coniferous forest, and upper montane coniferous forest. Found at elevations ranging from 6,808 to 9,843 feet. Blooming period is from June to August.	No	**Presumed Absent** The project site is out of the elevation range for this species.
Selaginella eremophila desert spike-moss	Fed: CA: CNPS: CVMSHCP:	None None 2B.2 Not Covered	Found in chaparral and Sonoran desert scrub habitats within gravelly or rocky soil. Found at elevations ranging from 656 to 2,953 feet. Blooming period is from May to July.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Syntrichopappus lemmonii Lemmon's syntrichopappus	Fed: CA: CNPS: CVMSHCP:	None None 4.3 Not Covered	Grows in sandy or gravelly soils within chaparral, Joshua tree woodland, and pinyon and juniper woodland. Found at elevations ranging from 1,640 to 6,004 feet. Blooming period is from April to May.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
SPECIAL – STATUS PLANT COMMUNITIES					

Scientific Name Common Name	**Status**	**Habitat**	**Observed On-site**	**Potential to Occur**
Desert Fan Palm Oasis Woodland	CDFW Sensitive Habitat	Rare plant community that is one of the most unusual biological resources located within the Coachella Valley. Found within canyons and along the San Andreas Fault Zone, where water occurs naturally. Generally characterized by open to dense groves of native desert fan palms, which are the most massive native palm in North America, growing more than 66 feet.	No	**Absent**.
Mesquite Bosque	CDFW Sensitive Habitat	Mesquite bosques, or woodlands, occur in the Sonoran Desert and other parts of the arid southwest. Consist primarily of mesquite trees and diverse understory of vegetation that may provide habitat for a wide-variety of species.	No	**Absent**.
Mojave Riparian Forest	CDFW Sensitive Habitat	An open, broad-leafed, winter-deciduous community dominated by Fremont cottonwood, black willow, and red willow. The understory is typically composed of Torrey's saltbush, rubber rabbitbrush, Woods' rose, and sandbar willow. Typically below 4000 feet in elevation.	No	**Absent**

U.S. Fish and Wildlife Service (USFWS) - Federal
END - Federal Endangered
THR - Federal Threatened

California Department of Fish and Wildlife (CDFW) - California
END - California Endangered
THR - California Threatened
SSC - California Species of Concern
WL - Watch List
FP - California Fully Protected

California Native Plant Society (CNPS)
California Rare Plant Rank
1A - Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere
1B - Plants Rare, Threatened, or Endangered in California and Elsewhere
2B - Plants Rare, Threatened, or Endangered in California, but More Common Elsewhere
4 - Plants of Limited Distribution – A Watch List

Threat Ranks
0.1 - Seriously threatened in California
0.2 - Moderately threatened in California
0.3 - Not very threatened in California

Appendix C CVMSHCP Avoidance, Minimization, and Mitigation Measures

4.4 Required Avoidance, Minimization, and Mitigation Measures

This section describes certain avoidance, minimization, and mitigation requirements for Covered Activities within the Conservation Area, in addition to Conservation Area specific measures described in the Conservation Area subsections in Section 4.3. The measures described in this section do not apply to single-family homes, emergency response activities, and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot. To assist Permittees with implementation of these measures, CVCC will maintain maps of modeled Habitat and a natural communities map and will provide them to each of the Permittees. CVCC will also maintain a list of Acceptable Biologists who may be used to conduct surveys for specified Covered Species identified in this section. Any Permittee may submit the names of biologists for inclusion in the initial list of Acceptable Biologists. The list shall be updated at least annually. CVCC will develop procedures for individual biologists to submit their name for inclusion on the list. Individuals conducting survey activities for listed endangered or threatened species or species for which a state or federal protocol exists must have the appropriate permit (i.e., in accordance with the federal Endangered Species Act, Section 10(a)(1)(A), or state Endangered Species Act, California Fish and Game Code, Section 2081(a)) to conduct such surveys. Annually, or whenever the list is revised, CVCC shall submit the list to the Wildlife Agencies for review. The Wildlife Agencies shall have thirty (30) days to provide input on the qualifications of any biologists on the list. If the Wildlife Agencies have not responded within thirty days (30) of receipt of the list from CVCC, the biologists on the list shall be deemed acceptable.

In the event that a survey of a parcel is required pursuant to the MSHCP, it will be conducted by an Acceptable Biologist. The survey shall be conducted in the appropriate season, in accordance with established accepted protocols if they exist. Within one (1) year of Permit issuance, the Wildlife Agencies and the MPA, in consultation with CVCC, shall develop survey protocols for those species for which a protocol is required. CVCC will maintain a list of accepted survey protocols. For those species for which protocols do not exist at the time surveys are needed, the Acceptable Biologist shall use a survey protocol generally accepted by biologists familiar with the species. Survey results shall be documented in both mapped and text form and shall be presented for review by the appropriate Permittee and CVCC. Wildlife Agencies' concurrence or acceptance of the surveys and/or the results contained therein is not required by the MSHCP.

Biological Corridors. Specific roads in Conservation Areas, where culverts or undercrossings are required to maintain Biological Corridors, are delineated in the Section 4.3 subsections on individual Conservation Areas.

Burrowing Owl. This measure does not apply to single-family residences and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot, or to O&M of Covered Activities other than levees, berms, dikes, and similar features that are known to contain burrowing owl burrows. O&M of

roads is not subject to this requirement. For other projects that are subject to CEQA, the Permittees will require burrowing owl surveys in the Conservation Areas using an accepted protocol (as determined by the CVCC in coordination with the Permittees and the Wildlife Agencies). Prior to Development, the construction area and adjacent areas within 500 feet of the Development site, or to the edge of the property if less than 500 feet, will be surveyed by an Acceptable Biologist for burrows that could be used by burrowing owl. If a burrow is located, the biologist will determine if an owl is present in the burrow. If the burrow is determined to be occupied, the burrow will be flagged and a 160-foot buffer during the non-breeding season and a 250-foot buffer during the breeding season, or a buffer to the edge of the property boundary if less than 500 feet, will be established around the burrow. The buffer will be staked and flagged. No Development or O&M activities will be permitted within the buffer until the young are no longer dependent on the burrow.

If the burrow is unoccupied, the burrow will be made inaccessible to owls, and the Covered Activity may proceed. If either a nesting or escape burrow is occupied, owls shall be relocated pursuant to accepted Wildlife Agency protocols. A burrow is assumed occupied if records indicate that, based on surveys conducted following protocol, at least one burrowing owl has been observed occupying a burrow on site during the past three years. If there are no records for the site, surveys must be conducted to determine, prior to construction, if burrowing owls are present. Determination of the appropriate method of relocation, such as eviction/passive relocation or active relocation, shall be based on the specific site conditions (e.g., distance to nearest suitable habitat and presence of burrows within that habitat) in coordination with the Wildlife Agencies. Active relocation and eviction/passive relocation require the preservation and maintenance of suitable burrowing owl habitat determined through coordination with the Wildlife Agencies.

Within one (1) year of Permit issuance, CVCC will cooperate with County Flood Control, CVWD and IID to conduct an inventory of levees, berms, dikes, and similar features in the Plan Area maintained by those Permittees. Burrowing owl burrow locations will be mapped and each of these Permittees will incorporate the information into its O&M practices to avoid impacts to the burrowing owl to the maximum extent Feasible. CVCC in cooperation with County Flood Control, CVWD, and IID will prepare a manual for maintenance staff, educating them about the burrowing owl and appropriate actions to take when owls are encountered to avoid impacts to the maximum extent Feasible. The manual will be submitted to the Wildlife Agencies for review and comment within two (2) years of Permit issuance. In conjunction with the Monitoring Program, the maps of the burrowing owl locations along the above-described levees, berms, dikes, and similar features will be periodically updated.

Covered Riparian Bird Species. This measure does not apply to single-family residences and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot. Riparian Habitat here refers to the following natural communities: southern arroyo willow riparian forest, Sonoran cottonwood-willow riparian forest, desert fan palm oasis woodland, and southern sycamore-alder riparian woodland in the Cabazon, Stubbe and Cottonwood Canyons,

Whitewater Canyon, Upper Mission Creek/Big Morongo Canyon, Thousand Palms, Indio Hills Palms, Joshua Tree National Park, Mecca Hills and Orocopia Mountains, Dos Palmas, Coachella Valley Stormwater Channel and Delta, and Santa Rosa and San Jacinto Mountains Conservation Areas. Covered Activities, including O&M of facilities and construction of permitted new projects, in riparian Habitat will be conducted to the maximum extent Feasible outside of the March 15 – September 15 nesting season for least Bell's vireo, and the May 1 – September 15 nesting season for southwestern willow flycatcher, summer tanager, yellow warbler, and yellow-breasted chat. If Covered Activities must occur during the nesting season, surveys shall be conducted to determine if any active nests are present. If active nests are identified, the Covered Activity shall not be conducted within 200 feet of an active nest. If surveys conducted during the nesting season document that Covered nesting riparian bird Species are not present, the Covered Activity may proceed.

Crissal Thrasher. This measure does not apply to single-family residences and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot, or to O&M of Covered Activities. In modeled crissal thrasher Habitat in the Willow Hole, Thousand Palms, Indio Hills Palms, East Indio Hills, Dos Palmas, and Coachella Valley Stormwater Channel and Delta Conservation Areas, surveys will be conducted by an Acceptable Biologist prior to the start of construction activities during the nesting season, January 15 – June 15, to determine if active nest sites for this species occur on the construction site and/or within 500 feet of the construction site, or to the edge of the property boundary if less than 500 feet. If nesting crissal thrashers are found, a 500-foot buffer, or a buffer to the edge of the property boundary if less than 500 feet, will be established around the nest site. The buffer will be staked and flagged. No construction activities will be permitted within the buffer during the breeding season of January 15 – June 15 or until the young have fledged.

Desert tortoise. This measure does not apply to single-family residences and any non-commercial accessory uses and structures, including but not limited to second units on an existing legal lot, or to O&M of Covered Activities for Permittee infrastructure facilities. Within Conservation Areas, the Permittees will require surveys for desert tortoise for Development in modeled desert tortoise Habitat. Prior to Development, an Acceptable Biologist will conduct a presence/absence survey of the Development area and adjacent areas within 200 feet of the Development area, or to the property boundary if less than 200 feet and permission from the adjacent landowner cannot be obtained, for fresh sign of desert tortoise, including live tortoises, tortoise remains, burrows, tracks, scat, or egg shells. The presence/absence survey must be conducted during the window between February 15 and October 31. Presence/absence surveys require 100% coverage of the survey area. If no sign is found, a clearance survey is not required. A presence/absence survey is valid for 90 days or indefinitely if tortoise-proof fencing is installed around the Development site.

If fresh sign is located, the Development area must be fenced with tortoise-proof fencing and a clearance survey conducted during the clearance window. Desert tortoise clearance surveys shall be conducted during the clearance window from February 15 to

June 15 and September 1 to October 31 or in accordance with the most recent Wildlife Agency protocols. Clearance surveys must cover 100% of the Development area. A clearance survey must be conducted during different tortoise activity periods (morning and afternoon). All tortoises encountered will be moved from the Development site to a specified location. Prior to issuance of the Permits, CVCC will either use the *Permit Statement Pertaining to High Temperatures for Handling Desert Tortoises* and *Guidelines for Handling Desert Tortoises During Construction Projects*, revised July 1999, or develop a similar protocol for relocation and monitoring of desert tortoise, to be reviewed and approved by the Wildlife Agencies. Thereafter, the protocol will be revised as needed based on the results of monitoring and other information that becomes available.

For O&M activities in the Conservation Areas, the Permittees shall ensure that personnel conducting such activities are instructed to be alert for the presence of desert tortoise. If a tortoise is spotted, activities adjacent to the tortoise's location will be halted and the tortoise will be allowed to move away from the activity area. If the tortoise is not moving, it will be relocated by an Acceptable Biologist to nearby suitable Habitat and placed in the shade of a shrub. To the maximum extent Feasible, O&M activities will avoid the period from February 15 and October 31.

Utility development protocols have been developed to avoid or minimize potential adverse impacts to the desert tortoise in the Conservation Areas from utility and road right-of-way projects, such as the installation and maintenance of water, sewer, and electric lines and roadway maintenance. The objectives of these protocols are to provide reliable and consistent direction on utility development within the Conservation Areas. Two utility development protocols, inactive and active season, provide specific direction on site preparation and construction phases of utility projects in the Conservation Areas. The protocols include steps to be followed during the desert tortoise active and/or inactive season. The inactive season protocol must be used for utility maintenance or development within the November 1 to February 14 time frame; the active season protocol must be used for utility maintenance or development within the February 15 to October 31 time frame. Deviations from these time frames must be presented to the RMOC.

Inactive Season Protocol. This protocol is applicable to pre-construction and construction phases of utility Covered Activity projects occurring between November 1 and February 14. These protocols apply only to the site preparation and construction phases of projects. The project proponent must follow the eight pre-construction protocol requirements listed below.

1. A person from the entity contracting the construction shall act as the contact person with the representative of the appropriate RMUC. He/she will be responsible for overseeing compliance with the protective stipulations as stated in this protocol.
2. Prior to any construction activity within the Conservation Areas, the contact person will meet with the representative of the appropriate RMUC to review the

plans for the project. The representative of the appropriate RMUC will review alignment, pole spacing, clearing limits, burrow locations, and other specific project plans which have the potential to affect the desert tortoise. He or she may recommend modifications to the contact person to further avoid or minimize potential impacts to desert tortoise.

3. The construction area shall be clearly fenced, marked, or flagged at the outer boundaries to define the limits of construction activities. The construction right-of-way shall normally not exceed 50 feet in width for standard pipeline corridors, access roads and transmission corridors, and shall be minimized to the maximum extent Feasible. Existing access roads shall be used when available, and rights-of-way for new and existing access roads shall not exceed 20 feet in width unless topographic obstacles require greater road width. Other construction areas including well sites, storage tank sites, substation sites, turnarounds, and laydown/staging sites which require larger areas will be determined in the pre-construction phase. All construction workers shall be instructed that their activities shall be confined to locations within the fenced, flagged, or marked areas.

4. An Acceptable Biologist shall conduct pre-construction clearance surveys of all areas potentially disturbed by the proposed project. Any winter burrows discovered in the Conservation Areas during the pre-construction survey shall be avoided or mitigated. The survey shall be submitted to the representative of the appropriate RMUC as part of plan review.

5. All site mitigation criteria shall be determined in the pre-construction phase, including but not limited to seeding, barrier fences, leveling, and laydown/staging areas, and will be reviewed by the representative of the appropriate RMUC prior to implementation.

6. A worker education program shall be implemented prior to the onset of each construction project. All construction employees shall be required to read an educational brochure prepared by the representative of the appropriate RMUC and/or the RMOC and attend a tortoise education class prior to the onset of construction or site entry. The class will describe the sensitive species which may be found in the area, the purpose of the MSHCP Reserve System, and the appropriate measures to take upon discovery of a sensitive species. It will also cover construction techniques to minimize potential adverse impacts.

7. All pre-construction activities which could Take tortoises in any manner (e.g., driving off an established road, clearing vegetation, etc.) shall occur under the supervision of an Acceptable Biologist.

8. If there are unresolvable conflicts between the representative of the appropriate RMUC and the contact person, then the matter will be arbitrated by the RMOC and, if necessary, by CVCC.

The following terms are established to protect the desert tortoise during utility-related construction activities in the Conservation Areas and are to be conducted by an Acceptable Biologist.

- An Acceptable Biologist shall oversee construction activities to ensure compliance with the protective stipulations for the desert tortoise.
- Desert tortoises found above ground inside the project area during construction shall be moved by an Acceptable Biologist out of harm's way and placed in a winter den (at a distance no greater than 250 feet). If a winter den cannot be located, the USFWS or CDFG shall determine appropriate action with respect to the tortoise. Tortoises found above ground shall be turned over to the Acceptable Biologist
- No handling of tortoises will occur when the air temperature at 15 centimeters above ground exceeds 90 degrees Fahrenheit.
- Desert tortoise burrows shall be avoided to the maximum extent Feasible. An Acceptable Biologist shall excavate any burrows which cannot be avoided and will be disturbed by construction. Burrow excavation shall be conducted with the use of hand tools only, unless the Acceptable Biologist determines that the burrow is unoccupied immediately prior to burrow destruction.
- Only burrows within the limits of clearing and surface disturbance shall be excavated. Burrows outside these limits, but at risk from accidental crushing, shall be protected by the placement of deterrent barrier fencing between the burrow and the construction area. Installation and removal of such barrier fencing shall be under the direction and supervision of an Acceptable Biologist.
- For electrical transmission line and road construction projects, only burrows within the right-of-way shall be excavated. Burrows outside the right-of-way, but at risk from accidental crushing, shall be protected by the placement of deterrent barrier fencing between the burrow and the right-of-way. Installation and removal of such barrier fencing shall be under the direction and supervision of an Acceptable Biologist.
- Tortoises in the Conservation Areas are not to be removed from burrows until appropriate action is determined by USFWS or CDFG with respect to the tortoise. The response shall be carried out within 72 hours.
- Blasting is not permissible within 100 feet of an occupied tortoise burrow.

During construction, contractors will comply with the mitigation and minimization measures contained within this protocol. These measures are:

- All trenches, pits, or other excavations shall be inspected for tortoises by an Acceptable Biologist prior to filling.
- All pipes and culverts stored within desert tortoise Habitat shall have both ends capped to prevent entry by desert tortoises. During construction, all open ended pipeline segments that are welded in place shall be capped during periods of

construction inactivity to prevent entry by desert tortoises.

- Topsoil removed during trenching shall be re-spread on the pipeline construction area following compaction of the backfill. The area shall be restored as determined during the environmental review.
- All test pump water will be routed to the nearest wash or natural drainage. The route will be surveyed by an Acceptable Biologist. If tortoises are found in the drainage area the Acceptable Biologist will remove the tortoises.
- Powerlines associated with water development, such as to provide power for pumps, should be buried underground adjacent to the pipe. All above ground structures deemed to be necessary shall be equipped with functional anti-perching devices that would prevent their use by ravens and other predatory birds, and shall adhere to the electrical distribution protocol which follows.
- In order to perform routine O&M of the water systems such as wells, pumps, water lines and storage tanks, etc., employees are to be trained in the area of desert tortoise education. This training will be performed on a regular basis by an Acceptable Biologist for those personnel not previously trained. The training will include at a minimum the following: identification of tortoises, burrows, and other sign; and instructions on installing tortoise barrier fencing. During the course of basic O&M, desert tortoise will be avoided. Untrained employees shall not perform maintenance operations within the reserve.
- All disturbance areas around poles or concrete pads will be reduced to a size just large enough for the construction activity.
- Areas disturbed around poles or construction pads will be restored as determined during the pre-construction process.
- Poles or other above ground structures necessary for electrical distribution development shall be minimized as much as possible. All above ground structures shall be equipped with functional anti-perching devices that would prevent their use by ravens and other predatory birds.
- In order to perform routine O&M of the electrical distribution systems such as transmission lines and poles, substations, etc., employees are to be trained in the area of desert tortoise education. This training will be performed on a regular basis by a qualified biologist for those personnel not previously trained. The training will include at a minimum the following: identification of tortoises, burrows, and other sign; and instructions on installing tortoise barrier fencing. During the course of basic O&M, desert tortoise will be avoided. Untrained employees shall not perform maintenance operations within the non-Take areas.
- All trash and food items shall be promptly contained and removed daily from the project site to reduce the attractiveness of the area to common ravens and other desert tortoise predators.
- Construction activities which occur between dusk and dawn shall be limited to areas which have already been cleared of desert tortoises by the Acceptable Biologist and graded or located in a fenced right-of-way. Construction activities

shall not be permitted between dusk and dawn in areas not previously graded.

Active Season Protocol. This protocol is applicable to pre-construction and construction phases of utility development projects occurring between February 15 and November 1. It is identical to the Inactive Season Protocol with the following additions:

- Work areas shall be inspected for desert tortoises within 24 hours of the onset of construction. To facilitate implementation of this condition, burrow inspection and excavation may begin no more than seven (7) days in advance of construction activities, as long as a final check for desert tortoises is conducted at the time of construction.
- All pre-construction activities which could Take tortoises in any manner (e.g., driving off an established road, clearing vegetation, etc.) shall occur under the overall supervision of an Acceptable Biologist. Any hazards to tortoises created by this activity, such as drill holes, open trenches, pits, other excavations, or any steep-sided depressions, shall be checked three times a day for desert tortoises. These hazards shall be eliminated each day prior to the work crew leaving the site, which may include installing a barrier that will preclude entry by tortoises. Open trenches, pits or other excavations will be backfilled within 72 hours, whenever possible. A 3:1 slope shall be left at the end of every open trench to allow trapped desert tortoises to escape. Trenches not backfilled within 72 hours shall have a barrier installed around them to preclude entry by desert tortoises. All trenches, pits, or other excavations shall be inspected for tortoises by a biological monitor trained and approved by the Acceptable Biologist prior to filling.
- If a desert tortoise is found, the biological monitor shall notify the Acceptable Biologist who will remove the animal as soon as possible.
- Only burrows within the limits of clearing and surface disturbance shall be excavated. Burrows outside these limits, but at risk from accidental crushing, shall be protected by the placement of deterrent barrier fencing between the burrow and the construction area. The barrier fence shall be at least 20 feet long and shall be installed to direct the tortoise leaving the burrow away from the construction area. Installation and removal of such barrier fencing shall be under the direction and supervision of the biological monitor.
- If blasting is necessary for construction, all tortoises shall be removed from burrows within 100 feet of the blast area.

Disposition of Sick, Injured, or Dead Specimens. Upon locating dead, injured, or sick desert tortoises under any utility or road project, initial notification by the contact representative or Acceptable Biologist must be made to the USFWS or CDFG within three (3) working days of its finding. Written notification must be made within five (5) calendar days with the following information: date; time; location of the carcass; photograph of the carcass; and any other pertinent information. Care must be taken in handling sick or injured animals to ensure effective treatment and care. Injured animals shall be taken care of by the Acceptable Biologist or an appropriately trained

veterinarian. Should any treated tortoises survive, USFWS or CDFG should be contacted regarding the final disposition of the animals.

Fluvial Sand Transport. Activities, including O&M of facilities and construction of permitted new projects, in fluvial sand transport areas in the Cabazon, Stubbe and Cottonwood Canyons, Snow Creek/Windy Point, Whitewater Canyon, Whitewater Floodplain, Upper Mission Creek/Big Morongo Canyon, Mission Creek/Morongo Wash, Willow Hole, Long Canyon, Edom Hill, Thousand Palms, West Deception Canyon, and Indio Hills/Joshua Tree National Park Linkage Conservation Areas will be conducted in a manner to maintain the fluvial sand transport capacity of the system.

Le Conte's Thrasher. This measure does not apply to single-family residences and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot, or to O&M of Covered Activities. In modeled Le Conte's thrasher Habitat in all the Conservation Areas, during the nesting season, January 15 - June 15, prior to the start of construction activities, surveys will be conducted by an Acceptable Biologist on the construction site and within 500 feet of the construction site, or to the property boundary if less than 500 feet. If nesting Le Conte's thrashers are found, a 500 foot buffer, or to the property boundary if less than 500 feet, will be established around the nest site. The buffer will be staked and flagged. No construction will be permitted within the buffer during the breeding season of January 15 - June 15 or until the young have fledged.

Mesquite Hummocks and Mesquite Bosque Natural Communities. This measure does not apply to single-family residences and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot, or to O&M of Covered Activities. Construction activities in the Cabazon, Willow Hole, Thousand Palms, Indio Hills Palms, East Indio Hills, Dos Palmas, Coachella Valley Stormwater Channel and Delta, and Santa Rosa and San Jacinto Mountains Conservation Areas will avoid mesquite hummocks and mesquite bosque to the maximum extent Feasible.

Peninsular Bighorn Sheep Habitat. Completion of Covered Activities in Peninsular bighorn sheep Habitat in the Cabazon, Snow Creek/Windy Point, and Santa Rosa and San Jacinto Mountains Conservation Areas will be conducted outside of the January 1 - June 30 lambing season unless otherwise authorized through a Minor Amendment to the Plan with concurrence from the Wildlife Agencies. O&M of Covered Activities, including but not limited to refinishing the inside of water storage tanks, shall be scheduled to avoid the lambing season, but may extend into the January 1 – June 30 period if necessary to complete the activity, upon concurrence with the Wildlife Agencies.

For new projects in the above listed Conservation Areas, no toxic or invasive plant species may be used for landscaping. For existing public infrastructure facilities which have landscaping in Peninsular bighorn sheep Habitat in the Cabazon, Snow Creek/Windy Point, and Santa Rosa and San Jacinto Mountains Conservation Areas, the

Permittees who have such facilities will, with respect to those facilities, develop and implement a plan and schedule to remove or prevent access to oleander and any other plants known to be toxic to Peninsular bighorn sheep. The plan and schedule will be prepared within one (1) year of Permit issuance.

Triple-ribbed milkvetch. This measure does not apply to single-family residences and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot, or to O&M of Covered Activities. It is understood that O&M for infrastructure developed as part of a private development approved in compliance with the MSHCP that is later transferred to a public entity is included as a Covered Activity. For Covered Activities within modeled triple-ribbed milkvetch Habitat in the Whitewater Canyon, Whitewater Floodplain, Upper Mission Creek/Big Morongo Canyon, and Santa Rosa and San Jacinto Mountains Conservation Areas, surveys by an Acceptable Biologist will be required for activities during the growing and flowering period from February 1 - May 15. Any occurrences of the species will be flagged and public infrastructure projects shall avoid impacts to the plants to the maximum extent Feasible. In particular, known occurrences on a map maintained by CVCC shall not be disturbed.

Palm Springs Pocket Mouse. To avoid impacts to the Palm Springs pocket mouse and its habitat in the Upper Mission Creek/Big Morongo Canyon and Willow Hole Conservation Areas, Flood Control-related construction activities will comply with the following avoidance and minimization measures.

- **Clearing**: For construction that would involve disturbance to Palm Springs pocket mouse habitat, activity should be phased to the extent feasible and practicable so that suitable habitat islands are no farther than 300 feet apart at any given time to allow pocket mice to disperse between habitat patches across non-suitable habitat (i.e., unvegetated and/or compacted soils). Prior to project construction, a biological monitor familiar with this species should assist construction crews in planning access routes to avoid impacts to occupied habitat as much as feasible (i.e., placement of preferred routes on project plans and incorporation of methods to avoid as much suitable habitat/soil disturbance as possible). Furthermore, during construction activities, the biological monitor will ensure that connected, naturally vegetated areas with sandy soils and typical native vegetation remain intact to the extent feasible and practicable. Finally, construction that involves clearing of habitat should be avoided during the peak breeding season (approximately March to May), and activity should be limited as much as possible during the rest of the breeding season (January to February and June to August).
- **Revegetation**: Clearing of native vegetation (e.g., creosote, rabbitbrush, burrobush, cheesebush) should be followed by revegetation, including natural reestablishment and other means, resulting in habitat types of equal or superior biological value for Palm Springs pocket mouse.
- **Trapping/Holding**: All trapping activity should be conducted in accordance with accepted protocols and by a qualified biologist who possesses a Memorandum of

Understanding with CDFG for live-trapping of heteromyid species in Southern California.

- **Translocation**: Should translocation between distinct population groups be necessary, as determined through the Adaptive Management and Monitoring Program, activity should be conducted by a qualified biologist who possesses a Memorandum of Understanding with CDFG for live-trapping of heteromyid species in Southern California. Trapping and subsequent translocation activity should be conducted in accordance with accepted protocols. Translocation programs should be coordinated by or conducted by the CVCC and/or RMOC to determine the appropriate trapping, holding, marking, and handling methods and potential translocation sites.

Little San Bernardino Mountains Linanthus. This measure does not apply to single-family residences and any non-commercial accessory uses and structures, including but not limited to second units on an existing legal lot, or to O&M of Covered Activities. To avoid and minimize impacts to this species as much as possible, the following avoidance and minimization effort shall occur:

- **Salvage**: Salvage of top soil and/or seeds should occur prior to ground disturbance in accordance with Section 6.6.1. Salvage should be conducted by or in cooperation with the CVCC.

Appendix D Regulations

Special status species are native species that have been afforded special legal or management protection because of concern for their continued existence. There are several categories of protection at both federal and state levels, depending on the magnitude of threat to continued existence and existing knowledge of population levels.

Federal Regulations

Endangered Species Act of 1973

Federally listed threatened and endangered species and their habitats are protected under provisions of the Federal Endangered Species Act (ESA). Section 9 of the ESA prohibits "take" of threatened or endangered species. "Take" under the ESA is defined as to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any of the specifically enumerated conduct." The presence of any federally threatened or endangered species that are in a project area generally imposes severe constraints on development, particularly if development would result in "take" of the species or its habitat. Under the regulations of the ESA, the United States Fish and Wildlife Service (USFWS) may authorize "take" when it is incidental to, but not the purpose of, an otherwise lawful act.

Critical Habitat is designated for the survival and recovery of species listed as threatened or endangered under the ESA. Critical Habitat includes those areas occupied by the species, in which are found physical and biological features that are essential to the conservation of an ESA listed species and which may require special management considerations or protection. Critical Habitat may also include unoccupied habitat if it is determined that the unoccupied habitat is essential for the conservation of the species.

Whenever federal agencies authorize, fund, or carry out actions that may adversely modify or destroy Critical Habitat, they must consult with USFWS under Section 7 of the ESA. The designation of Critical Habitat does not affect private landowners, unless a project they are proposing uses federal funds, or requires federal authorization or permits (e.g., funding from the Federal Highway Administration or a permit from the U.S. Army Corps of Engineers (Corps)).

If USFWS determines that Critical Habitat will be adversely modified or destroyed from a proposed action, the USFWS will develop reasonable and prudent alternatives in cooperation with the federal institution to ensure the purpose of the proposed action can be achieved without loss of Critical Habitat. If the action is not likely to adversely modify or destroy Critical Habitat, USFWS will include a statement in its biological opinion concerning any incidental take that may be authorized and specify terms and conditions to ensure the agency is in compliance with the opinion.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 U.S. Government Code [USC] 703) makes it unlawful to pursue, capture, kill, possess, or attempt to do the same to any migratory bird or part, nest, or egg of any such bird listed in wildlife protection treaties between the United States, Great Britain, Mexico, Japan, and the countries of the former Soviet Union, and authorizes the U.S. Secretary of the Interior to protect and regulate the taking of migratory birds. It establishes seasons and bag limits for hunted species and protects migratory birds, their occupied nests, and their eggs (16 USC 703; 50 CFR 10, 21).

The MBTA covers the taking of any nests or eggs of migratory birds, except as allowed by permit pursuant to 50 CFR, Part 21. Disturbances causing nest abandonment and/or loss of reproductive effort (i.e., killing or abandonment of eggs or young) may also be considered "take." This regulation seeks to protect migratory birds and active nests.

In 1972, the MBTA was amended to include protection for migratory birds of prey (e.g., raptors). Six families of raptors occurring in North America were included in the amendment: Accipitridae (kites, hawks, and eagles); Cathartidae (New World vultures); Falconidae (falcons and caracaras); Pandionidae (ospreys); Strigidae (typical owls); and Tytonidae (barn owls). The provisions of the 1972 amendment to the MBTA protects all species and subspecies of the families listed above. The MBTA protects over 800 species including geese, ducks, shorebirds, raptors, songbirds and many relatively common species.

State Regulations

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) provides for the protection of the environment within the State of California by establishing State policy to prevent significant, avoidable damage to the environment through the use of alternatives or mitigation measures for projects. It applies to actions directly undertaken, financed, or permitted by State lead agencies. If a project is determined to be subject to CEQA, the lead agency will be required to conduct an Initial Study (IS); if the IS determines that the project may have significant impacts on the environment, the lead agency will subsequently be required to write an Environmental Impact Report (EIR). A finding of non-significant effects will require either a Negative Declaration or a Mitigated Negative Declaration instead of an EIR. Section 15380 of the CEQA Guidelines independently defines "endangered" and "rare" species separately from the definitions of the California Endangered Species Act (CESA). Under CEQA, "endangered" species of plants or animals are defined as those whose survival and reproduction in the wild are in immediate jeopardy, while "rare" species are defined as those who are in such low numbers that they could become endangered if their environment worsens.

California Endangered Species Act (CESA)

In addition to federal laws, the state of California implements the CESA which is enforced by CDFW. The CESA program maintains a separate listing of species beyond the FESA, although the provisions of each act are similar.

State-listed threatened and endangered species are protected under provisions of the CESA. Activities that may result in "take" of individuals (defined in CESA as; "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") are regulated by CDFW. Habitat degradation or modification is not included in the definition of "take" under CESA. Nonetheless, CDFW has interpreted "take" to include the destruction of nesting, denning, or foraging habitat necessary to maintain a viable breeding population of protected species.

The State of California considers an endangered species as one whose prospects of survival and reproduction are in immediate jeopardy. A threatened species is considered as one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the

absence of special protection or management. A rare species is one that is considered present in such small numbers throughout its range that it may become endangered if its present environment worsens. State threatened and endangered species are fully protected against take, as defined above.

The CDFW has also produced a species of special concern list to serve as a species watch list. Species on this list are either of limited distribution or their habitats have been reduced substantially, such that a threat to their populations may be imminent. Species of special concern may receive special attention during environmental review, but they do not have formal statutory protection. At the federal level, USFWS also uses the label species of concern, as an informal term that refers to species which might be in need of concentrated conservation actions. As the Species of Concern designated by USFWS do not receive formal legal protection, the use of the term does not necessarily ensure that the species will be proposed for listing as a threatened or endangered species.

Fish and Game Code

Fish and Game Code Sections 3503, 3503.5, 3511, and 3513 are applicable to natural resource management. For example, Section 3503 of the Code makes it unlawful to destroy any birds' nest or any birds' eggs that are protected under the MBTA. Further, any birds in the orders Falconiformes or Strigiformes (Birds of Prey, such as hawks, eagles, and owls) are protected under Section 3503.5 of the Fish and Game Code which makes it unlawful to take, possess, or destroy their nest or eggs. A consultation with CDFW may be required prior to the removal of any bird of prey nest that may occur on a project site. Section 3511 of the Fish and Game Code lists fully protected bird species, where the CDFW is unable to authorize the issuance of permits or licenses to take these species. Pertinent species that are State fully protected by the State include golden eagle (*Aquila chrysaetos*) and white-tailed kite (*Elanus leucurus*). Section 3513 of the Fish and Game Code makes it unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

Native Plant Protection Act

Sections 1900–1913 of the Fish and Game Code were developed to preserve, protect, and enhance Rare and Endangered plants in the state of California. The act requires all state agencies to use their authority to carry out programs to conserve Endangered and Rare native plants. Provisions of the Native Plant Protection Act prohibit the taking of listed plants from the wild and require notification of the CDFW at least ten days in advance of any change in land use which would adversely impact listed plants. This allows the CDFW to salvage listed plant species that would otherwise be destroyed.

California Native Plant Society Rare and Endangered Plant Species

Vascular plants listed as rare or endangered by the CNPS, but which have no designated status under FESA or CESA are defined as follows:

California Rare Plant Rank

1A- Plants Presumed Extirpated in California and either Rare or Extinct Elsewhere

1B- Plants Rare, Threatened, or Endangered in California and Elsewhere

2A- Plants Presumed Extirpated in California, But More Common Elsewhere

2B- Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

3- Plants about Which More Information is Needed - A Review List

4- Plants of Limited Distribution - A Watch List

Threat Ranks

.1- Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)

.2- Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

.3- Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known).

Local Policies

Coachella Valley MSHCP

A Multiple Species Habitat Conservation Plan (Plan) was prepared for the entire Coachella Valley and surrounding mountains to address current and potential future state and federal Endangered Species Act issues in the Plan Area. A Memorandum of Understanding ("Planning Agreement") was developed to govern the preparation of the Plan. In late 1995 and early 1996, under the auspices of CVAG, the cities of Cathedral City, Coachella, Desert Hot Springs, Indian Wells, Indio, La Quinta, Palm Desert, Palm Springs, and Rancho Mirage; County of Riverside (County); U.S. Fish and Wildlife Service (USFWS); California Department of Fish and Game (CDFG); Bureau of Land Management (BLM); U.S. Forest Service (USFS); and National Park Service (NPS) signed the Planning Agreement to initiate the planning effort. Subsequently, Caltrans, Coachella Valley Water District (CVWD), Imperial Irrigation District (IID), Riverside County Flood Control and Water Conservation District (County Flood Control), Riverside County Regional Park and Open Space District (County Parks), Riverside County Waste Resources Management District (County Waste), California Department of Parks and Recreation (State Parks), and CVMC decided to participate in the Plan.

The Plan balances environmental protection and economic development objectives in the Plan Area and simplifies compliance with endangered species related laws. The Plan is intended to satisfy the legal requirements for the issuance of Permits that will allow the Take of species covered by the Plan in the course of otherwise lawful activities. The Plan will, to the maximum extent practicable, minimize and mitigate the impacts of the Taking and provide for Conservation of the Covered Species.

The Conservation Plan includes the establishment of an MSHCP Reserve System, setting Conservation Objectives to ensure the Conservation of the Covered Species and conserved natural communities in the MSHCP Reserve System, provisions for management of the MSHCP Reserve System, and a Monitoring Program, and Adaptive Management. The MSHCP Reserve System will be established from lands within

21 Conservation Areas. Because some Take Authorization is provided under the Plan for Development in Conservation Areas, the actual MSHCP Reserve System will be somewhat smaller than the total acres in the Conservation Areas. When assembled, the Reserve System will provide for the Conservation of the Covered Species in the Plan Area.

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Branch regulates activities pursuant to Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Of the State agencies, the CDFG regulates activities under the Fish and Game Code Section 1600-1616, and the Regional Board regulates activities pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act.

Federal Regulations

Section 404 of the Clean Water Act

Since 1972, the Corps and EPA have jointly regulated the filling of waters of the United States, including wetlands, pursuant to Section 404 of the CWA. The Corps has regulatory authority over the discharge of dredged or fill material into the waters of the United States under Section 404 of the CWA. The Corps and EPA define "fill material" to include any "material placed in waters of the United States where the material has the effect of: (i) replacing any portion of a water of the United States with dry land; or (ii) changing the bottom elevation of any portion of the waters of the United States." Examples include, but are not limited to, the placement of sand, rock, clay, construction debris, wood chips, and "materials used to create any structure or infrastructure in the waters of the United States."

In April of 2020, the Corps and the EPA provided a new definition for *waters of the United States* [Federal Register, Vol. 85, No. 77 (April 21, 2020)] which encompass:

- The territorial seas and traditional navigable waters;
- Perennial and intermittent tributaries that contribute surface water flow to such waters;
- Certain lakes, ponds, and impoundments of jurisdictional waters; and
- Wetlands adjacent to other jurisdictional waters.

Additionally, the new definition identifies 12 categories of those waters and features that are excluded from the definition of ''waters of the United State, such as features that only contain water in direct response to rainfall (e.g., ephemeral features), groundwater, many ditches, prior converted cropland, and waste treatment systems. The final rule excludes from the definition of ''waters of the United States'' all waters or features not mentioned above. In addition to this general exclusion, the final rule specifically clarifies that waters of the United States do not include the following:

- Groundwater, including groundwater drained through subsurface drainage systems;
- Ephemeral features that flow only indirect response to precipitation, including ephemeral streams, swales, gullies, rills, and pools;
- Diffuse stormwater runoff and directional sheet flow over upland;
- Ditches that are not traditional navigable waters, tributaries, or that are not constructed in adjacent wetlands, subject to certain limitations;
- Prior converted cropland;
- Artificially irrigated areas that would revert to upland if artificial irrigation ceases;
- Artificial lakes and ponds that are not jurisdictional impoundments and that are constructed or excavated in upland or non-jurisdictional waters;

- Water-filled depressions constructed or excavated in upland or in non-jurisdictional waters incidental to mining or construction activity, and pits excavated in upland or in non jurisdictional waters for the purpose of obtaining fill, sand, or gravel;
- Stormwater control features constructed or excavated in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store stormwater runoff;
- Groundwater recharge, water reuse, and wastewater recycling structures constructed or excavated in upland or in non-jurisdictional waters; and
- Waste treatment systems.

Section 401 of the Clean Water Act

Pursuant to Section 401 of the CWA, any applicant for a federal license or permit to conduct any activity which may result in any discharge to waters of the United States must provide certification from the State or Indian tribe in which the discharge originates. This certification provides for the protection of the physical, chemical, and biological integrity of waters, addresses impacts to water quality that may result from issuance of federal permits, and helps insure that federal actions will not violate water quality standards of the State or Indian tribe. In California, there are nine Regional Water Quality Control Boards (Regional Board) that issue or deny certification for discharges to waters of the United States and waters of the State, including wetlands, within their geographical jurisdiction. The State Water Resources Control Board assumed this responsibility when a project has the potential to result in the discharge to waters within multiple Regional Boards.

State Regulations

Fish and Game Code

Fish and Game Code Sections 1600 et. seq. establishes a fee-based process to ensure that projects conducted in and around lakes, rivers, or streams do not adversely impact fish and wildlife resources, or, when adverse impacts cannot be avoided, ensures that adequate mitigation and/or compensation is provided.

Fish and Game Code Section 1602 requires any person, state, or local governmental agency or public utility to notify the CDFW before beginning any activity that will do one or more of the following:

(1) substantially obstruct or divert the natural flow of a river, stream, or lake;
(2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or
(3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake.

Fish and Game Code Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State. CDFW's regulatory authority extends to include riparian habitat (including wetlands) supported by a river, stream, or lake regardless of the presence or absence of hydric soils and saturated soil conditions. Generally, the CDFW takes jurisdiction to the top of bank of the stream or to the outer limit of the adjacent riparian vegetation (outer drip line), whichever is greater. Notification is generally required for any project that will take place in or in the vicinity of a river, stream, lake, or their tributaries. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks

that support fish or other aquatic life and watercourses having a surface or subsurface flow that support or have supported riparian vegetation. A Section 1602 Streambed Alteration Agreement would be required if impacts to identified CDFW jurisdictional areas occur.

Porter Cologne Act

The California *Porter-Cologne Water Quality Control Act* gives the State very broad authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. The Porter-Cologne Act has become an important tool in the post SWANCC and Rapanos regulatory environment, with respect to the state's authority over isolated and insignificant waters. Generally, any person proposing to discharge waste into a water body that could affect its water quality must file a Report of Waste Discharge in the event that there is no Section 404/401 nexus. Although "waste" is partially defined as any waste substance associated with human habitation, the Regional Board also interprets this to include fill discharged into water bodies.

Appendix E Special-Status Plant Survey Report

WHITEWATER PRESERVE LEVEE REPLACEMENT PROJECT

Riverside County, California

Special-Status Plant Focused Survey Report

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May 2020

WHITEWATER PRESERVE LEVEE REPLACEMENT PROJECT

Riverside County, California

Special-Status Plant Focused Survey Report

The undersigned certify that the statements furnished in this report and exhibits present data and information required for this biological evaluation, and the facts, statements, and information presented is a complete and accurate account of the findings and conclusions to the best of our knowledge and beliefs.



Travis J. McGill
Director



Thomas J. McGill, Ph.D.
Managing Director

May 2020

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APPENDIX

Appendix A Potentially Occurring Special-Status Plant Species
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Section 1 Introduction

ELMT Consulting (ELMT) conducted a focused special-status plant survey for the Whitewater Preserve Levee Replacement Project (project or project site) located in Riverside County, California. ELMT conducted three (3) separate focused plant surveys to coincide with the flowering periods of those special-status[1] plant species known to occur within the general vicinity of the project site. The special-status plant surveys were conducted on March 18, April 8, and May 1, 2020 to coincide with known flowering periods of special-status plant species known to occur in the vicinity of the project site that were determined to have a potential to occur with the project site. The surveys were conducted in accordance with the California Department of Fish and Wildlife (CDFW) *Guidelines for Assessing the Effects of Proposed Developments on Rare and Endangered Plants and Plant Communities* (CDFW 2009) as well as the United States Fish and Wildlife Service (USFWS) *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants* (USFWS 1996). The findings of the surveys will be used to establish constraints, if any, to project implementation including measures to avoid impacts to any federally and State listed plant species and California Native Plant Society (CNPS) *California Rare Plant Rank* plant species.

Site visits were spaced throughout the growing season to capture the floristic diversity on-site to determine if special status plants are present. Based on the results of the literature search and original habitat assessment the surveys focused on the presence/absence of Coachella Valley milk-vetch (*Astragalus lentiginosus* var. *coachellae*), triple-ribbed milk-vetch (*Astragalus tricarinatus*), little San Bernardino Mountains linanthus (*Linanthus maculatus*), Parry's spineflower (*Chorizanthe parryi* var. *parryi*) and white-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*).

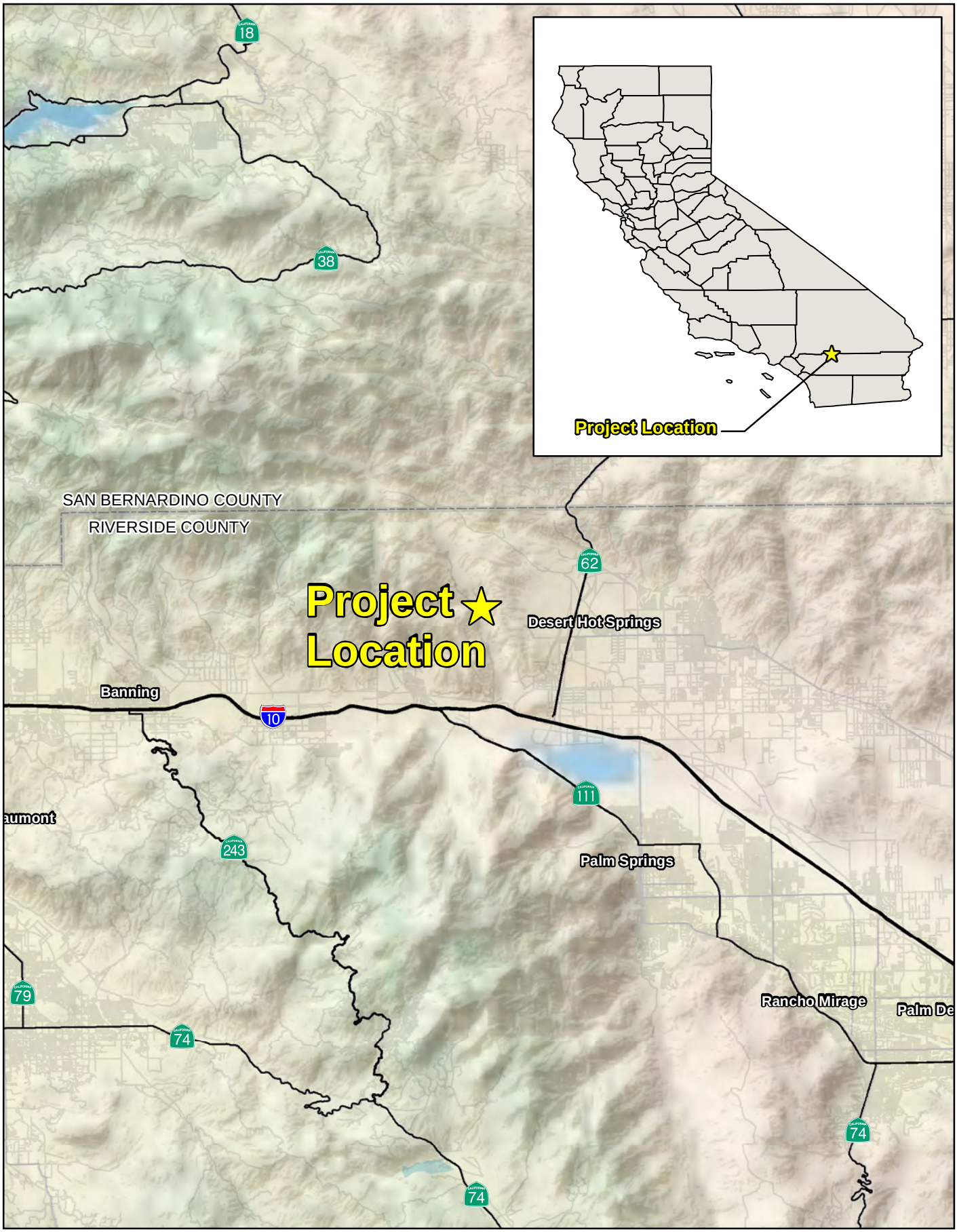
1.1 PROJECT LOCATION

The project site is located on the Whitewater River, north of Interstate 10, west of State Route 62, east of Kitching Peak, and southwest of Morongo Valley in Whitewater, Riverside County, California (Exhibit 1, *Regional Vicinity*). The project site is depicted on the White Water quadrangle of the United States Geological Survey (USGS) 7.5-minute topographic map series in Sections 15 and 22 of Township 2 South, Range 3 East (Exhibit 2, *Site Vicinity*). Specifically, the project site is located along the Whitewater River, adjacent to the Whitewater Preserve located at 9160 Whitewater Canyon Road. (Exhibit 3, *Project Site*).

1.2 PROJECT DESCRIPTION

The project proposes to build a permanent flood control structure to protect the Whitewater Preserve infrastructure and wetland habitats. Further, building a permanent flood control structure will protect the existing riparian forest within the preserve and downstream of the preserve from major flood events.

[1] As used in this report, "special-status" refers to plant species that are federally or State listed, proposed, or candidates; and plant species that have been designated a California Native Plant Society (CNPS) Rare Plant Rank.



WHITEWATER PRESERVE LEVEE REPLACEMENT PROJECT
SPECIALSTATUS PLANT FOCUSED SURVEY

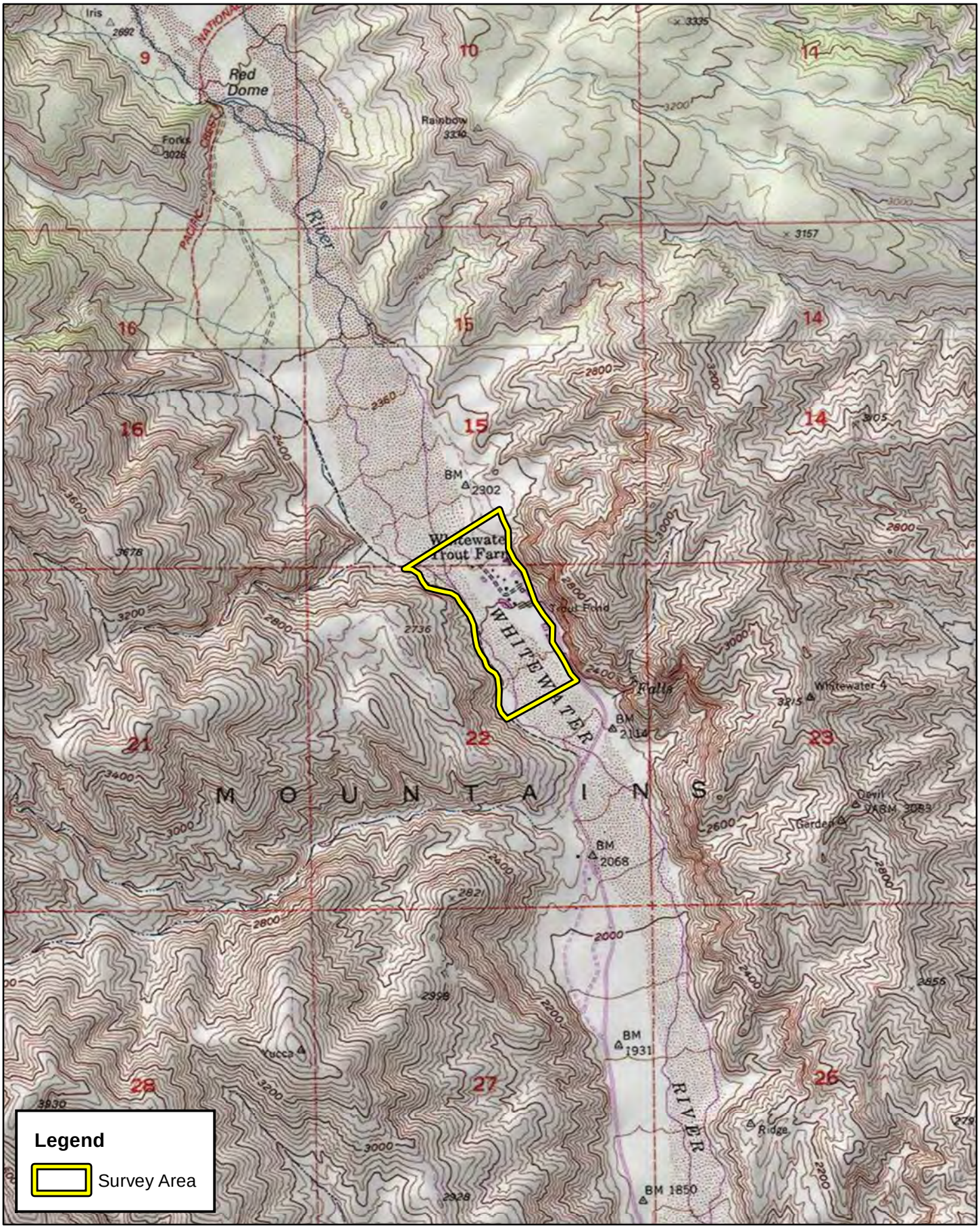
Regional Vicinity

ELMT CONSULTING

0 2.5 5 Miles

Source: ESRI Relief Map, National Highway Planning Network

Exhibit 1



WHITEWATER PRESERVE LEVEE REPLACEMENT PROJECT
SPECIAL-STATUS PLANT FOCUSED SURVEY REPORT

Site Vicinity

ELMT CONSULTING

Source: USA Topographic Map, Riverside County

Exhibit 2



WHITEWATER PRESERVE LEVEE REPLACEMENT PROJECT
SPECIAL-STATUS PLANT FOCUSED SURVEY REPORT

ELMT CONSULTING

0 250 500 1,000 Feet

Source: ESRI Aerial Imagery, Riverside County

Project Site

Exhibit 3

Section 2 Methodology

ELMT conducted a thorough literature review and records search to determine which special-status plant species have the potential to occur on or within the general vicinity of the project site. In addition to the literature review, three (3) focused surveys were conducted to coincide with the flowering periods of special-status plant species known to occur within the general vicinity, focusing on the presence/absence of Coachella Valley milk-vetch, triple-ribbed milk-vetch, little San Bernardino Mountains linanthus, Parry's spineflower, and white-bracted spineflower.

2.1 LITERATURE REVIEW

Prior to conducting the field visit, a literature review and records search was conducted for federally and State listed plant species, and CNPS *California Rare Plant Rank* listed plant species having the potential to occur within the general vicinity of the project site. Previously recorded occurrences of special-status plant species and their proximity to the project site were determined through a query of CDFWs *California Natural Diversity Database* (CNDDB) *Rarefind 5 and CNDDB BIOS*, the CNPS's *Electronic Inventory of Rare and Endangered Vascular Plants of California*, Calflora Database, Consortium of California Herbaria (CCH), compendia of special-status species published by CDFW, and USFWS species listings, as well as the following resources:

- Google Earth Pro historic and current aerial imagery (1996 - 2020);
- CDFW *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (2009);
- CNPS *Botanical Survey Guidelines* (2001);
- USFWS *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants* (1996);
- United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS), Soil Survey; and
- USFWS Critical Habitat designations for Threatened and Endangered Plant Species.

Based on the results of the database search, a list of special-status plant species having the potential to occur within the general vicinity of the project site was compiled and is provided in Appendix A.

2.2 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE 2009 PROTOCOL

Prior to the commencement of any activities that may modify natural vegetation (i.e., clearing, mowing, or ground-breaking activities) CDFW deems it necessary to conduct botanical surveys for special-status plant species based on the suitability of the habitat. CDFW recognized that it is appropriate to conduct a botanical field survey when:

- Natural (or naturalized) vegetation occurs on the site, and it is unknown if special status plant species or natural communities occur on the site, and the project has the potential for direct or indirect effects on vegetation; or
- Special status plants or natural communities have historically been identified on the project site; or
- Special status plants or natural communities occur on sites with similar physical and biological properties as the project site.

The 2009 protocol states that surveys need to be conducted using systematic field techniques in all habitats of a site to ensure thorough coverage of potential impact areas. The level of effort required per given area and habitat is dependent upon the vegetation and its overall diversity and structural complexity, which determines the distance at which plants can be identified. Conduct surveys by walking over the entire site to ensure thorough coverage, noting all plant taxa observed. The level of effort should be sufficient to provide comprehensive reporting.

2.3 SURVEY OBJECTIVES

Field surveys were conducted in a manner that maximizes the likelihood of locating special-status plant species that may be present. Plant taxon identified on site was identified to the taxonomic level necessary to determine its rarity and listing status. Surveys were conducted at the time of year when species are both evident and identifiable. Site visits were spaced throughout the growing season to accurately determine what plant species exist on-site. Multiple surveys were conducted to capture the floristic diversity at a level necessary to determine if special status plants are present. The timing and number of surveys was determined by geographic location, the natural communities present, and the weather patterns.

Table 1: Survey Dates and Personnel

Survey No.	Survey Date	Surveyor	Special-Status Plant Species Detected
1	3/18	Thomas McGill, Ph.D. and Travis McGill	No
2	4/8	Thomas McGill, Ph.D. and Travis McGill	No
3	5/1	Thomas McGill, Ph.D. and Travis McGill	No

2.4 FOCUSED PLANT SURVEYS

All areas that may be directly and indirectly impacted by the proposed project were extensively surveyed on foot. Linear transects were walked throughout the limits of disturbance and spaced at 10-meter intervals, where accessible, to ensure maximum visual coverage and increase the likelihood of

detecting special-status plant species known to occur within the general vicinity of the project site. All plant species observed during the surveys were identified by visual characteristics and morphology in the field and recorded in a field notebook/iPad. Unusual and less familiar plants were photographed on-site and identified in the laboratory using taxonomical guides. A handheld geographic positioning systems (GPS) device and standard field data sheets were used to record all populations of special-status plant species, if observed.

Based on the plant species known to occur within the general vicinity and the suitability of the on-site plant communities to support those plant species, three site visits were conducted on March 18, April 8, and May 1, 2020. These visits were spaced throughout the growing season to capture the appropriate phenotypic stage for proper identification of all sensitive plant species determined to have a potential to occur on the project site.

2.5 REGULATORY BACKGROUND

Federally listed species are protected under the Federal Endangered Species Act (FESA) and regulations related to the FESA are enforced by the USFWS. State-listed species are protected under the California Endangered Species Act (CESA) and these regulations are enforced by the CDFW. CDFW may also designate a species as a Species of Special Concern because of local and/or statewide population declines. California's Native Plant Protection Act (NPPA), requires all state agencies to use their authority to carry out programs to conserve endangered and rare native plants under Fish and Wildlife Code Sections 1900-1913. Provisions of the NPPA prohibit the taking of listed plants from the wild and require notification of the CDFW at least 10 days in advance of any change in land use that would adversely impact listed plants. This requirement allows CDFW to salvage listed plant species that would otherwise be destroyed. Additionally, local government agencies or watch groups may provide a list of species considered to be locally-important. The CNPS maintains a list of plants considered to be sensitive which are generally considered during the environmental review process. Guidelines for the implementation of the California Environmental Quality Act (CEQA) provide that a species can be considered endangered or "rare" regardless of appearance on a formal list. Any significant impact identified during the CEQA review process requires that the impact be mitigated to less than significant.

Section 3 Existing Conditions

3.1 TOPOGRAPHY AND SOILS

On-site surface elevation ranges from approximately 2,150 to 2,300 feet above mean sea level and generally slopes from north to south. The project site is located at the bottom of the Whitewater Canyon within the Whitewater River. The slopes of the canyon above the Whitewater River are steep, vertical walls while the bottom of the canyon is relatively flat and slopes from north to south. Generally, the Whitewater River, within the survey area, is composed of cobble and boulders with patches of loose sand and gravel. The NRCS USDA Web Soil Survey has not mapped the soils within the boundaries of the project site. Instead, data from the U.S. General Soil Map was acquired for the project site. Per the U.S. General Soil Map data, the project site is underlain by the following soil units: Urban Land – Tujunga – Soboba – Hanford and Tecopa – Rock Outcrop – Lithic Torriorthents.

3.2 SURROUNDING LAND USES

The project site occurs within Whitewater Canyon along the eastern bank of the Whitewater River. The site is undeveloped, composed of natural habitats, and is surrounded by the following land uses:

North: The area to the north of the site is composed almost entirely of undeveloped, vacant land within the San Bernardino Mountains. Several developed structures associated with historical and ongoing operations of the Whitewater Preserve Ranger Station and former Whitewater Trout Farm are supported in the immediate 600 feet.

East: Immediately to the east of the site are the Whitewater Preserve Ranger Station and Visitors' Center, trout ponds associated with the former Whitewater Trout Farm, paved parking areas, and Whitewater Canyon Road. Undeveloped, vacant land occurs beyond these structures within the San Bernardino Mountains.

South: The area to the south of the site is composed almost entirely of undeveloped, vacant land within the San Bernardino Mountains. The Whitewater River occurs immediately south of the project site and Whitewater Canyon Road occurs approximately 1,400 feet to the southeast.

West: The area to the west of the site is composed entirely of undeveloped, vacant land within the San Bernardino Mountains. Immediately to the west of the site is the Whitewater River.

3.3 SITE CONDITIONS

The Whitewater Preserve is owned by the Wildlands Conservancy and operates as a non-profit nature preserve. It offers free access to the public for outdoor recreation, includes a visitor center located in the former Whitewater Trout Farm, and serves as an access point into the Sand to Snow National

Monument. With the exception of the infrastructure associate with the historic trout farm, the project site is relatively undeveloped and supports native habitats and disturbed trails.

Four (4) plant communities were observed within the boundaries of the survey area during the survey: alluvial scrub, Sonoran cottonwood willow riparian forest, Sonoran creosote bush scrub, and grassland (Exhibit 4, *Vegetation*). In addition, the survey area contains two land cover types that would be classified as disturbed and developed. These plant communities and land cover types are described in further detail below.

3.3.1 Alluvial Scrub

The alluvial scrub plant community is found on the western portion of the survey area in association with the active channel of the Whitewater River. The active channel of the Whitewater River flows through this plant community, and this plant community is subject to flooding events following significant storm events. This plant community is characterized by braided channels of intermittent streams and rivers. Substrates consist of open cobble with sandy soil deposits. Plant species observed within this plant community include scalebroom (*Lepidospartum squamatum*), yerba santa (*Eriodictyon trichocalyx*), mulefat (*Baccharis salicifolia*), California buckwheat (*Eriogonum fasciculatum*), beavertail cactus (*Opuntia basilaris*), deerweed (*Acmispon glaber*), cheesebush (*Ambrosia salsola*), sweetbush (*Bebbia juncea*), California croton (*Croton californicus*), Wiggins' cholla (*Condea emoryi*), hairy parish viguiera (*Bahiopsis parishii*), and brittlebush (*Encelia farinosa*).

3.3.2 Sonoran Cottonwood Willow Riparian Forest

The Sonoran cottonwood willow riparian forest plant community was observed on the eastern and northwestern portions of the survey area. Dominant trees within this plant community include narrowleaf willow (*Salix exigua*), red willow (*Salix laevigata*), and mulefat. In addition, western sycamore (*Platanus racemosa*) and Fremont cottonwood (*Populus fremontii*) are found within this plant community. Low growing plant species found within the understory of this plant community includes California mugwort (*Artemisia douglasiana*), yellow sweetclover (*Melilotus indicus*), yellow monkey flower (*Mimulus guttatus*), rabbits foot grass (*Polypogon monspeliensis*), and stinging nettle (*Urtica dioica*).

3.3.3 Sonoran Creosote Bush Scrub

The top of the existing earthen levee and northeastern poriton fo the site supports a Sonoran creosote scrub plant community. Plant species observed within this plant community include cheesebush, sweetbush, brittlebush, and desert mallow (*Sphaeralcea ambigua*). Other low growing plant species found within this plant community include California buckwheat, California croton, yellow turbans (*Eriogonum pusillum*), desert trumpet (*Eriogonum inflatum*), and desert chicory (*Rafinesquia neomexicana*).

3.3.4 Grassland

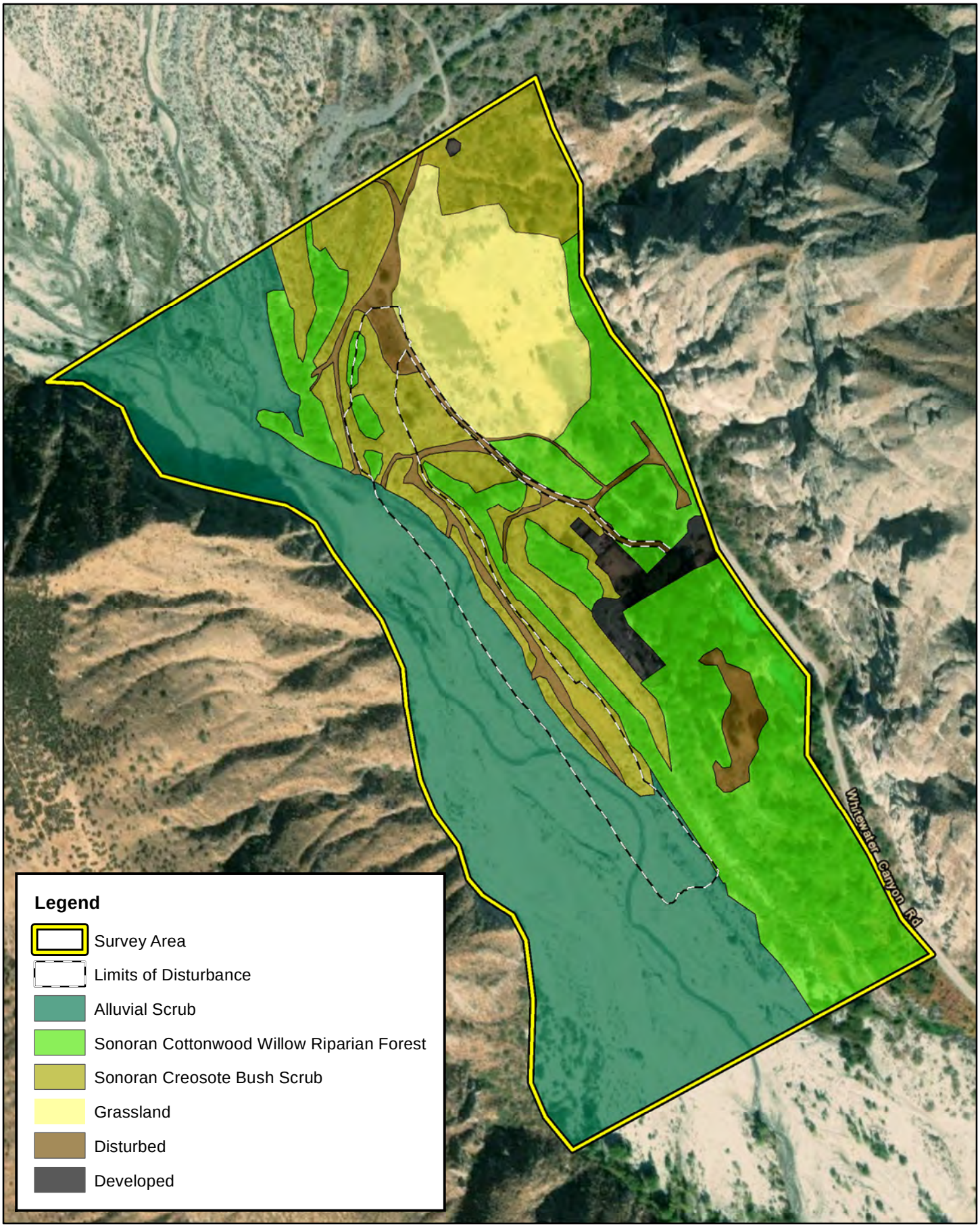
The grassland plant community can be found within the northeast portion of the survey area, within the existing Whitewater Preserve. This plant community is dominated by non-native plant species: wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), foxtail brome (*Bromus madritensis* ssp. *rubens*), downy brome grass (*Bromus tectorum*), fountain grass (*Pennisetum setaceum*), and Mediterranean grass (*Schismus barbatus*).

3.3.5 Disturbed

Disturbed areas primarily occur in the middle of the survey area in association with the existing earthen levee and dirt access roads/trails. These areas are routinely exposed to anthropogenic disturbances associated with vehicle traffic and recreational activities. Surface soils within these areas are generally devoid of vegetation and when vegetation is present, these areas can support early successional and non-native weedy plant species.

3.3.6 Developed

Developed areas encompass all paved impervious services and includes all buildings associated with the Whitewater Preserve in the middle of the eastern boundary of the survey area.



WHITEWATER PRESERVE LEVEE REPLACEMENT PROJECT
SPECIAL-STATUS PLANT FOCUSED SURVEY REPORT

ELMT CONSULTING

Source: ESRI Aerial Imagery, Riverside County

Vegetation

Exhibit 4

Section 4 Results

4.1 SPECIAL-STATUS PLANT SPECIES

The CNDDB Rarefind 5, the Quickview Tool in BIOS, the CNPS Electronic Inventory of Rare and Endangered Vascular Plants of California, and CCH was queried for reported locations of special-status plant species in the White Water, Desert Hot Springs, Morongo Valley, and Catclaw Flat USGS 7.5-minute quadrangles The literature search identified thirty-five (35) special-status plant species as having the potential to occur within these quadrangles. Special-status plant species identified during the literature review are presented in *Table A-1: Potentially Occurring Special-Status Plant Species*, provided in Appendix A. The following sections provide a detailed assessment of the plant species that were determined to have a moderate or higher potential to occur within the survey area, and the results of the focused survey. In addition, refer to Exhibit 5, *CNDDB Special-Status Plant Observations*, for a depiction of the special-status plant locations within the general vicinity of the project site.

Coachella Valley Milk-vetch (*Astragalus lentiginosus* var. *coachellae*)

Coachella Valley milk-vetch is an erect winter annual or a short-lived perennial that blooms between February and May, producing pink to deep-magenta colored flowers. It is federally listed as endangered and is designated by the CNPS with the Rare Plant Rank 1B.2, indicating that it is rare, threatened, or endangered in California and elsewhere, and is considered fairly threatened in California, with 20-80% of its known occurrences threatened. It is endemic to California and is only known from Riverside County and occurs in dunes and sandy flats, along the disturbed margins of sandy washes, and in sandy soils along roadsides where they occur adjacent to existing sand dunes. Coachella Valley milk-vetch occurs in the coarser sands at the margins of dunes and is strongly affiliated with sandy substrates. This species may also occur in sandy substrates in creosote bush scrub not associated with sand dune habitats and in localized pockets where sand has been deposited by wind or by active washes.

It should be noted that the northern portion of the project site is located within designated Critical Habitat for this species (78 Federal Register [FR] 10449 10497). The project site supports the fluvial sand transport processes that provides suitable habitat favored by this species. It was determined that Coachella Valley milk-vetch has a high potential to occur within the boundaries of the survey area. This species was not observed within the project footprint during a 2020 focused special-status plant survey.

Triple-ribbed Milk-vetch (*Astragalus tricarinatus*)

Triple-ribbed milk-vetch is short-lived erect perennial (2 to 10 inches in height) in the Fabacae (pea) family that blooms from February to May, producing white or pale cream-colored flowers. It is federally listed as endangered and is designated by the CNPS with the Rare Plant Rank 1B.2, indicating that it is rare, threatened, or endangered in California and elsewhere, and is considered fairly threatened in California, with 20-80% of its known occurrences threatened. Triple-ribbed milk-vetch is found in a narrow range primarily from the northwestern portion of the Coachella Valley, from the vicinity of Whitewater Canyon, in Mission Creek Canyon across Highway 62 to Dry Morongo Wash and Big Morongo Canyon. Preferred habitat for triple-ribbed milk-vetch has been characterized as sandy and

gravelly soils of dry washes or on decomposed granite or gravelly soils at the base of canyon slopes. However, most observations of this species have been in natural or man-made disturbed areas. For example observations have been made along washes, on canyon bottoms where slides or flooding occurs.

Further the project site provides the suitable habitat for this species; sandy and gravelly soils along a wash that is at the base of a canyon slope. In 2010, an unknown number of triple-ribbed milk-vetch was recorded in the northern portion of the project site (CNDDB 2010). It was determined that triple-ribbed milk-vetch has a moderate potential to occur within the boundaries of the survey area. This species was not observed within the project footprint during a 2020 focused special-status plant survey.

Little San Bernardino Mountains Linanthus (*Linanthus maculatus*)

Little San Bernardino Mountains linanthus is an annual herb in the Phlox family. It is designated by the CNPS with the Rare Plant Rank 1B.2, that it is rare, threatened, or endangered in California and elsewhere, and is considered fairly threatened in California, with 20-80% of its known occurrences threatened. The preferred Habitat of Little San Bernardino Mountains linanthus is in loose soft sandy soils on low benches along washes, generally where the substrate shows some evidence of water flow. It seems to occur in areas where few or no competing species are found, with little shrub or tree cover in the immediate vicinity. The sand is loose and well-aerated, soft and unconsolidated. This species typically occurs on the margins of washes on shallow sandy benches, not on areas where a hard surface layer occurs, and not on loose blowsand away from washes. It is associated with creosote bush scrub, but avoids growing in the shadow of other plants.

The project site provides the suitable habitat for this species, sandy or rocky openings within Sonoran Desert scrub plant community. An unknown number of little San Bernardino Mountains linanthus was observed just south of the survey area. It was determined little San Bernardino Mountains linanthus has a moderate potential to occur within the boundaries of the survey area. This species was not observed within the project footprint during a 2020 focused special-status plant survey.

Parry's Spineflower (*Chorizanthe parryi* var. *parryi*)

Parry's spineflower is an annual species in the buckwheat family. It blooms from April to June and comprised of white flowers with brown achenes 2.5 to 3mm long. It is designated by the CNPS with the Rare Plant Rank 1B.1, indicating that it is rare, threatened, or endangered in California and elsewhere, and is considered seriously endangered in California. Parry's spineflower is knowm from the flats and foothills of the San Gabriel, San Bernardino and San Jacinto Mountains within Los Angeles, San Bernardino and Riverside Counties of southern California. Preferred habitat for Parry's spineflower has been characterized as alluvial chaparral and scrub of the San Bernardino and San Jacinto Mountains.

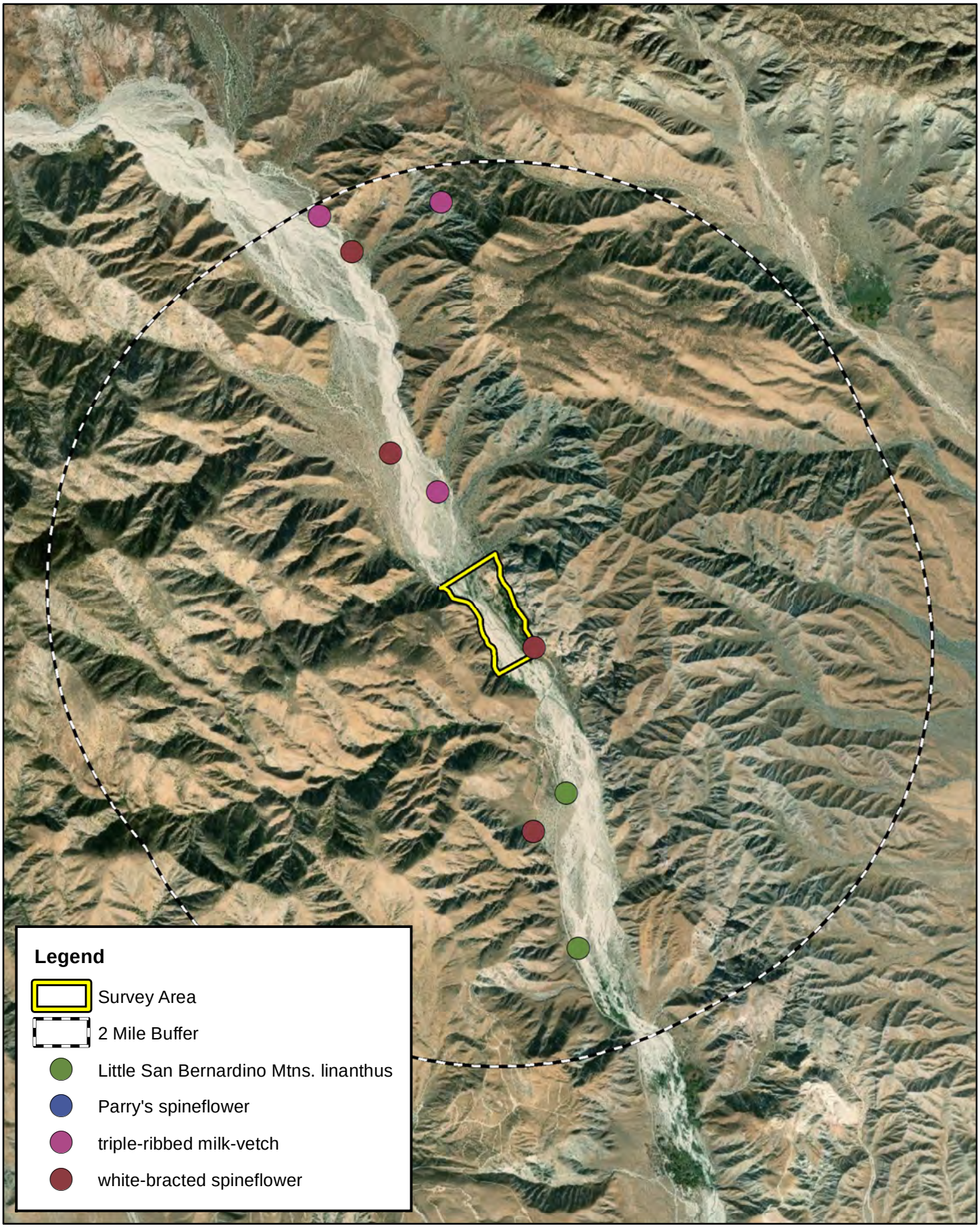
The project site provides the suitable habitat for this species; sandy or rocky openings within chaparral plant community. In 2003, an unknown number of Parry's spineflower was observed just west of the survey area about midway between Bonnie Bell and Whitewater Preserve (CNDDB 2003). It was determined Parry's spineflower has a moderate potential to occur within the boundaries of the survey

area. This species was not observed within the project footprint during a 2020 focused special-status plant survey.

White-bracted Spineflower (*Chorizanthe xanti* var. *leucotheca*)

White-bracted spineflower is an annual species in the buckwheat family. It blooms from April to June and comprised of pink to red flowers. It is designated by the CNPS with the Rare Plant Rank 1B.2, indicating that it is rare, threatened, or endangered in California and elsewhere, and is considered fairly threatened in California, with 20-80% of its known occurrences threatened. White-bracted spineflower is endemic to California and is only known from San Jacinto and San Bernardino Mountains. Preferred habitat for this species has been characterized as sandy or gravelly soils within alluvial fans.

The project site provides the suitable habitat for this species, sandy or rocky soils within alluvial fans. In 2003, an unknown number of white-bracted spineflower was observed just west of the survey area about midway between Bonnie Bell and Whitewater Preserve (CNDDB 2003). It was determined white-bracted spineflower has a moderate potential to occur within the boundaries of the survey area. This species was not observed within the project footprint during a 2020 focused special-status plant survey.



WHITEWATER PRESERVE LEVEE REPLACEMENT PROJECT
SPECIAL-STATUS PLANT FOCUSED SURVEY REPORT

ELMT CONSULTING

0 0.25 0.5 1 Miles

CNDDB Special-Status Plant Species Observations

Source: ESRI Aerial Imagery, Riverside County

Exhibit 5

Section 5 Conclusion and Recommendations

Despite a systematic inventory of all areas that may be directly and indirectly impacted by the proposed project, no special-status plant species were observed during the 2020 focused plant surveys. The timing of these visits encompassed the recorded blooming times of all of the potentially occurring special-status plant species known to occur in the general vicinity. Therefore, special-status plant species know to occur in the vicinity of the project site are presumed absent. Implementation of the proposed project is not expected to result in impacts to special-status plant species and no additional focused plant surveys are recommended.

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Appendix A Potentially Occurring Special-Status Plant Species

Table A-1: Potentially Occurring Special-Status Plant Species

Scientific Name Common Name	**Status**		**Habitat**	**Observed On-site**	**Potential to Occur**
SPECIAL – STATUS PLANT SPECIES					
Abronia villosa* var. *aurita chaparral sand-verbena	Fed: CA: CNPS: CVMSHCP:	None None 1B.1 Not Covered	Found on the coastal side of the southern California mountains in chaparral and coastal sage scrub plant communities in areas of full sun and sandy soils. Found at elevations ranging from 262 to 5,249 feet. Blooming period is from January to September.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Aloysia wrightii Wright's beebrush	Fed: CA: CNPS: CVMSHCP:	None None 4.3 Not Covered	Prefers rocky and carbonate soils within Joshua tree woodland, pinyon and juniper woodland. Found at elevations ranging from 2,953 to 5,249 feet. Blooming period is from April to October.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Astragalus lentiginosus* var. *coachellae Coachella Valley milk-vetch	Fed: CA: CNPS: CVMSHCP:	**END** None 1B.2 Covered	Preferred habitat includes desert dunes and sandy Sonoran desert scrub. Found at elevations ranging from 131 to 2,149 feet in elevation. Blooming period is from February to May.	No	**High** There is suitable habitat within and adjacent to the project site.
Astragalus tricarinatus triple-ribbed milk-vetch	Fed: CA: CNPS: CVMSHCP:	**END** None 1B.2 Covered	Found in sandy or gravelly soils within Joshua tree woodland and Sonoran desert scrub habitats. Found at elevations ranging from 1,476 to 3,904 feet. Blooming period is from February to May.	No	**Moderate** There is marginal habitat within and adjacent to the project site.
Boechera lincolnensis Lincoln rockcress	Fed: CA: CNPS: CVMSHCP:	None None 2B.3 Not Covered	Typically found in chenopod scrub and Mojavean desert scrub on limestone soils. Found at elevations ranging from 3,609 to 8,875 feet. Blooming period is from March to May.	No	**Presumed Absent** The project site is out of the elevation range for this species.
Boechera parishii Parish's rockcress	Fed: CA: CNPS: CVMSHCP:	None None 1B.2 Not Covered	Grows on pebble plain, pinyon and juniper woodland, and upper montane coniferous forest vegetation types, typically in rocky or quartzite areas on clay (sometimes on carbonate). Found at elevations ranging from 5,807 to 9,810 feet. Blooming period is from April to May.	No	**Presumed Absent** The project site is out of the elevation range for this species.
Calochortus palmeri* var. *palmeri Palmer's mariposa-lily	Fed: CA: CNPS: CVMSHCP:	None None 1B.2 Not Covered	Occurs in meadows and seeps, chaparral, and lower montane coniferous forest in vernally moist places. From 3,281 to 7,841 feet in elevation. Blooming period is from April to July.	No	**Presumed Absent** The project site is out of the elevation range for this species.
Chorizanthe parryi* var. *parryi Parry's spineflower	Fed: CA: CNPS: CVMSHCP:	None None 1B.1 Not Covered	Occurs on sandy and/or rocky soils in chaparral, coastal sage scrub, and sandy openings within alluvial washes and margins. Found at elevations ranging from 951 to 3,773 feet. Blooming period is from April to June.	No	**Moderate** There is moderate habitat within and adjacent to the project site.
Chorizanthe xanti* var. *leucotheca white-bracted spineflower	Fed: CA: CNPS: CVMSHCP:	None None 1B.2 Not Covered	Grows on sandy or gravelly soils within coastal scrub (alluvial fans), Mojavean desert scrub, pinyon and juniper woodland habitats. Found at elevations ranging from 984 to 3,937 feet. Blooming period is from April to June.	No	**Moderate** There is moderate habitat within and adjacent to the project site.

Scientific Name Common Name	**Status**		**Habitat**	**Observed On-site**	**Potential to Occur**
Diplacus johnstonii Johnston's monkeyflower	Fed: CA: CNPS: CVMSHCP:	None None 4.3 Not Covered	Found in lower montane coniferous forest (scree, disturbed areas, rocky or gravelly, roadside). Found at elevations ranging from 3,199 to 9,580 feet. Blooming period is from May to August.	No	**Presumed Absent** The project site is out of the elevation range for this species.
Dodecahema leptoceras slender-horned spineflower	Fed: CA: CNPS: CVMSHCP:	**END** **END** 1B.1 Not Covered	Chaparral, coastal scrub (alluvial fan sage scrub). Flood deposited terraces and washes. Found at elevations ranging from 1,181 to 2,690 feet. Blooming period is from April to June.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Eriastrum harwoodii Harwood's eriastrum	Fed: CA: CNPS: CVMSHCP:	None None 1B.2 Not Covered	Found in desert dune habitats. Found at elevations ranging from 411 to 3,002 feet. Blooming period is from March to June.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Erigeron breweri* var. *jacinteus San Jacinto Mountains daisy	Fed: CA: CNPS: CVMSHCP:	None None 4.3 Not Covered	Grows in rocky soils within subalpine coniferous forest and upper montane coniferous forest. Found at elevations ranging from 8,858 to 9,514 feet. Blooming period is from June to September.	No	**Presumed Absent** The project site is out of the elevation range for this species.
Eschscholzia androuxii Joshua Tree poppy	Fed: CA: CNPS: CVMSHCP:	None None 4.3 Not Covered	Occurs on sandy, gravelly, and/or rocky desert washes, flats, and slopes in Joshua tree woodland and Mojavean desert scrub. Found at elevations ranging from 1,900 to 5,530 feet above msl. Blooming period is February to June.	No	**Presumed Absent** The project site is out of the elevation range for this species.
Euphorbia misera cliff spurge	Fed: CA: CNPS: CVMSHCP:	None None 2B.2 Not Covered	Found on rocky soils within coastal bluff scrub, coastal scrub, and Mojavean desert scrub habitat. Found at elevations ranging from 33 to 1,640 feet. Blooming period is from December to October.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Galium angustifolium* ssp. *gabrielense San Antonio Canyon bedstraw	Fed: CA: CNPS: CVMSHCP:	None None 4.3 Not Covered	Grows in granitic, sandy, or rocky soils within chaparral and lower montane coniferous forest. Found at elevations ranging from 3,937 to 8,694 feet. Blooming period is from April to August.	No	**Presumed Absent** The project site is out of the elevation range for this species.
Galium angustifolium* ssp. *gracillimum slender bedstraw	Fed: CA: CNPS: CVMSHCP:	None None 4.2 Not Covered	Grows on rocky, granitic soils within Joshua tree woodland and Sonoran desert scrub habitats. Found at elevations ranging from 427 to 5,085 feet. Blooming period is from April to June.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Galium jepsonii Jepson's bedstraw	Fed: CA: CNPS: CVMSHCP:	None None 4.3 Not Covered	Found in granitic, rocky, or gravelly soils within lower montane coniferous forest and upper montane coniferous forest. Found at elevations ranging from 5,053 to 8,202 feet. Blooming period is from July to August.	No	**Presumed Absent** The project site is out of the elevation range for this species.
Galium johnstonii Johnston's bedstraw	Fed: CA: CNPS: CVMSHCP:	None None 4.3 Not Covered	Preferred habitats include chaparral, riparian woodland, lower montane coniferous forest, pinyon and juniper woodland. Found at elevations ranging from 4,003 to 7,546 feet. Blooming period is from June to July.	No	**Presumed Absent** The project site is out of the elevation range for this species.

Scientific Name Common Name	**Status**		**Habitat**	**Observed On-site**	**Potential to Occur**
Heuchera parishii Parish's alumroot	Fed: CA: CNPS: CVMSHCP:	None None 1B.3 Not Covered	Grows in alpine boulder and rock fields, lower and upper montane coniferous forest, and subalpine coniferous forest. Found at elevations ranging from 4,921 to 12,467 feet. Blooming period is from June to August.	No	**Presumed Absent** The project site is out of the elevation range for this species.
Hulsea vestita* ssp. *parryi Parry's hulsea	Fed: CA: CNPS: CVMSHCP:	None None 4.3 Not Covered	Occurs in granitic and gravelly soils within alpine boulder and rock field, and subalpine coniferous forest. Found at elevations ranging from 9,301 to 12,795 feet. Blooming period is from June to October.	No	**Presumed Absent** The project site is out of the elevation range for this species.
Imperata brevifolia California satintail	Fed: CA: CNPS: CVMSHCP:	None None 2B.1 Not Covered	Found in chaparral, coastal scrub, Mojavean desert scrub, riparian scrub, meadows and seeps habitats. Found at elevations ranging from 0 to 3,986 feet. Blooming period is from September to May.	No	**Low** There is minimal habitat within and adjacent to the project site.
Ivesia argyrocoma* var. *argyrocoma silver-haired ivesia	Fed: CA: CNPS: CVMSHCP:	None None 1B.2 Not Covered	Found in alkaline meadows and seeps, pebble plain, and upper montane coniferous forest. Found at elevations ranging from 5,000 to 9,711 feet. Blooming period is from June to August.	No	**Presumed Absent** The project site is out of the elevation range for this species.
Linanthus maculatus* ssp. *maculatus Little San Bernardino Mtns. linanthus	Fed: CA: CNPS: CVMSHCP:	None None 1B.2 Covered	Preferred habitats include desert dunes, Joshua tree woodland, Mojavean desert scrub, and Sonoran Desert scrub in sandy soils. Found at elevations ranging from 640 to 6,808 feet. Blooming period is from March to May.	No	**Moderate** There is moderate habitat within and adjacent to the project site.
Lycium torreyi Torrey's box-thorn	Fed: CA: CNPS: CVMSHCP:	None None 4.2 Not Covered	Grows in sandy, rocky, washes, streambanks, desert valleys within Mojavean desert scrub and Sonoran desert scrub habitats. Found at elevations ranging from 164 to 4,003 feet. Blooming period is from March to June.	No	**Low** There is minimal habitat within and adjacent to the project site.
Mentzelia tricuspis spiny-hair blazing star	Fed: CA: CNPS: CVMSHCP:	None None 2B.1 Not Covered	Habitats include Mojavean desert scrub. Prefers sandy, gravelly, slopes and washes. Found at elevations ranging from 492 to 4,199 feet. Blooming period is from March to May.	No	**Low** There is minimal habitat within and adjacent to the project site.
Monardella robisonii Robison's monardella	Fed: CA: CNPS: CVMSHCP:	None None 1B.3 Not Covered	Occurs in pinyon and juniper woodland. Found at elevations ranging from 2,001 to 4,921 feet. Blooming period is from February to October.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Muhlenbergia californica California muhly	Fed: CA: CNPS: CVMSHCP:	None None 4.3 Not Covered	Found in mesic, seeps, and streambanks within chaparral, coastal scrub, lower montane coniferous forest, and meadows and seeps. Found at elevations ranging from 328 to 6,562 feet. Blooming period is from June to September.	No	**Low** There is minimal habitat within and adjacent to the project site.
Nemacaulis denudata* var. *gracilis slender cottonheads	Fed: CA: CNPS: CVMSHCP:	None None 2B.2 Not Covered	Occurs in coastal dunes, desert dunes, and Sonoran desert scrub habitats. Found at elevations ranging from 164 to 1,312 feet. Blooming period is from March to May.	No	**Presumed Absent** The project site is out of the elevation range for this species.

Scientific Name Common Name	**Status**		**Habitat**	**Observed On-site**	**Potential to Occur**
Penstemon pseudospectabilis* ssp. *pseudospectabilis desert beardtongue	Fed: CA: CNPS: CVMSHCP:	None None 2B.2 Not Covered	Occurs in Mojavean desert scrub and Sonoran Desert scrub, typically in sandy washes and sometimes in rocky washes. Found at elevations ranging from 262 to 6,348 feet. Blooming period is from January to May.	No	**Low** There is minimal habitat within and adjacent to the project site.
Petalonyx linearis narrow-leaf sandpaper-plant	Fed: CA: CNPS: CVMSHCP:	None None 2B.3 Not Covered	Occurs in sandy or rocky canyons in Mojavean desert scrub or Sonoran Desert scrub. Found at elevations ranging from -82 to 3,658 feet. Blooming period ranges from January to December.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Saltugilia latimeri Latimer's woodland-gilia	Fed: CA: CNPS: CVMSHCP:	None None 1B.2 Not Covered	Habitats include chaparral, Mojavean desert scrub, pinyon and juniper woodland. Prefers rocky or sandy, often granitic, soils. Found at elevations ranging from 1,312 to 6,234 feet. Blooming period is from March to June.	No	**Low** There is minimal habitat within and adjacent to the project site.
Sedum niveum Davidson's stonecrop	Fed: CA: CNPS: CVMSHCP:	None None 4.2 Not Covered	Grows in rocky soils within lower montane coniferous forest, subalpine coniferous forest, and upper montane coniferous forest. Found at elevations ranging from 6,808 to 9,843 feet. Blooming period is from June to August.	No	**Presumed Absent** The project site is out of the elevation range for this species.
Selaginella eremophila desert spike-moss	Fed: CA: CNPS: CVMSHCP:	None None 2B.2 Not Covered	Found in chaparral and Sonoran desert scrub habitats within gravelly or rocky soil. Found at elevations ranging from 656 to 2,953 feet. Blooming period is from May to July.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Syntrichopappus lemmonii Lemmon's syntrichopappus	Fed: CA: CNPS: CVMSHCP:	None None 4.3 Not Covered	Grows in sandy or gravelly soils within chaparral, Joshua tree woodland, and pinyon and juniper woodland. Found at elevations ranging from 1,640 to 6,004 feet. Blooming period is from April to May.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.

U.S. Fish and Wildlife Service (USFWS) - Federal
END - Federal Endangered
THR - Federal Threatened

California Department of Fish and Wildlife (CDFW) - California
END - California Endangered
THR - California Threatened
SSC - California Species of Concern
WL - Watch List
FP - California Fully Protected

California Native Plant Society (CNPS)
California Rare Plant Rank
1A - Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere
1B - Plants Rare, Threatened, or Endangered in California and Elsewhere
2B - Plants Rare, Threatened, or Endangered in California, but More Common Elsewhere
4 - Plants of Limited Distribution – A Watch List

Threat Ranks
0.1 - Seriously threatened in California
0.2 - Moderately threatened in California
0.3 - Not very threatened in California

Appendix B Site Photographs



Photograph 1: Looking north from the southern portion of the levee replacement footprint.



Photograph 2: From the southern portion of the levee replacement footprint looking south along the existing earthenr levee.



Photograph 3: Looking north along the eroded earthern levee that will be replaced.



Photograph 4: Looking south along the existing earthern levee, where the new levee will be installed.



Photograph 5: View of the levee footprint.



Photograph 6: Looking south along the existing earthen levee on the eastern bank of the Whitewater River that will be replaced.



Photograph 7: View of the northern portion of the levee footprint.



Photograph 8: Looking south along the dirt access road along the existing earthen levee that will be replaced.



Photograph 9: Looking south at the northern extent of the levee footprint.



Photograph 10: View of the northern end of the levee footprint.

Appendix C Floral Compendium

Table C - 1: Floral Compendium

PLANT SPECIES	
Scientific Name	**Common Name**
Agavaceae	**Agave Family**
Hesperoyucca whipplei	chaparral yucca
Anacardiaceae	**Cashew Family**
Rhus ovata	sugar bush
Asteraceae	**Sunflower Family**
Ambrosia salsola	cheesebush
Artemisia californica	California sagebrush
Artemisia douglasiana	mugwort
Artemisia dracunculus	tarragon
Baccharis salicifolia	mulefat
Bahiopsis parishii	parish viguiera
Bebbia juncea	sweetbush
Chaenactis fremontii	Fremont pincushion
Encelia farinosa	brittlebush
Eriophyllum wallacei	Wallace's woolly daisy
Lepidospartum squamatum	scalebroom
Malacothrix glabrata	desert dandelion
Rafinesquia neomexicana	desert chicory
Asparagaceae	**Asparagus Family**
Dichelostemma capitatum	blue dicks
Betulaceae	**Birch Family**
Alnus rhombifolia	white alder
Boraginaceae	**Borage Family**
Amsinckia intermedia	common fiddleneck
Cryptantha sp.	popcorn flower
Eriodictyon trichocalyx	hairy yerba santa
Nama demissum	purple mat
Phacelia campanularia	California bluebells
Phacelia distans	common phacelia
Brassicaceae	**Mustard Family**
*Hirschfeldia incana**	short podded mustard
Nasturtium officinale	watercress
Cactaceae	**Cactus Family**
Cylindropuntia echinocarpa	Wiggins' cholla
Opuntia basilaris	beavertail cactus

Crassulaceae	**Stonecrop Family**
Dudleya saxosa ssp. aloides	desert dudleya
Cucurbitaceae	**Gourd Family**
Marah macrocarpa	wild cucumber
Euphorbiaceae	**Spurge Family**
Croton californicus	California croton
Fabaceae	**Pea Family**
Acmispon argophyllus	silver birds foot trefoil
Acmispon glaber	deerweed
Acmispon strigosus	strigose lotus
Astragalus douglasii	Douglas's milkvetch
Lupinus bicolor	annual lupine
Lupinus hirsutissimus	stinging lupine
*Melilotus indicus**	annual yellow sweetclover
Geraniaceae	**Geranium Family**
Erodium cicutarium	red-stemmed filaree
Lamiaceae	**Mint Family**
Salvia columbariae	chia
Malvaceae	**Mallow Family**
Sphaeralcea ambigua	desert mallow
Montiaceae	**Miner's Lettuce Family**
Calyptridium monandrum	common pussypaws
Nyctaginaceae	**Four O'clock Family**
Mirabilis laevis	wishbone bush
Onagraceae	**Evening Primrose Family**
Camissonia sp.	suncup
Orobanchaceae	**Broomrape Family**
Castilleja exserta	owl's clover
Phrymaceae	**Lopseed Family**
Mimulus guttatus	yellow monkey flower
Plantaginaceae	**Plantain Family**
Penstemon centranthifolius	scarlet bugler
Penstemon grinnellii var. grinnellii	Grinnell's beardtongue
*Veronica anagallis-aquatica**	water speedwell
Platanaceae	**Sycamore Family**
Platanus racemosa	western sycamore
Poaceae	**Grass Family**
*Avena fatua**	wild oat
Bromus diandrus	ripgut brome

*Bromus madritensis ssp. rubens**	foxtail brome
*Bromus tectorum**	downy brome grass
*Ehrharta erecta**	panic veldtgrass
*Pennisetum setaceum**	fountain grass
Polypogon monspeliensis	rabbitsfoot grass
Schismus barbatus	Mediterranean grass
Polemoniaceae	**Phlox Family**
Gilia angelensis	chaparral gilia
Linanthus dianthiflorus	Fringed lianthus
Leptosiphon lemmonii	Lemmon's linanthus
Polygonaceae	**Buckwheat Family**
Eriogonum fasciculatum	California buckwheat
Eriogonum inflatum	desert trumpet
Eriogonum pusillum	yellow turbans
Rosaceae	**Rose Family**
Adenostoma fasciculatum	chamise
Salicaceae	**Willow Family**
Populus fremontii	Fremont cottonwood
Salix exigua	narrowleaf willow
Salix laevigata	red willow
Solanaceae	**Nightshade Family**
*Datura stramonium**	Jimsonweed
Themidaceae	**Brodiaea Family**
Dichelostemma capitatum	blue dicks
Typhaceae	**Cattail Family**
Typha latifolia	broadleaf cattail
Urticaceae	**Nettle Family**
Urtica dioica	stinging nettle
Zygophyllaceae	**Caltrop Family**
Larrea tridentata	creosote bush

Appendix F LBVI/SWWF Survey Results

2020 Least Bell's Vireo & Southwestern Willow Flycatcher Survey Results for the Whitewater Preserve Whitewater, California

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INTRODUCTION

Kidd Biological, Inc. (KBI) was contracted by The Wildlands Conservancy (TWC) to conduct protocol breeding season surveys for the least Bell's vireo (*Vireo bellii pusillus*), (LBVI) and southwestern willow flycatcher (*Empidonax traillii extimus*), (SWFL) on approximately 25 acres of suitable habitat at the Whitewater Preserve in Whitewater, California. The surveys followed protocol established for these species by the U.S. Fish and Wildlife Service (USFWS). Biologist Angela Johnson (TE-59592B-2) conducted all eight LBVI surveys concurrently with the five protocol SWFL surveys; however, the species were surveyed at different times of the morning on each pass.

PROJECT DESCRIPTION

The Wildlands Conservancy's Whitewater Preserve is located along the banks of the Whitewater River north of the I-10 Freeway crossing in the County of Riverside. Currently, an older earthen levee system protects Whitewater Preserves' sensitive habitat, campgrounds, and facilities from potentially damaging flows from the Whitewater River. The existing levee system was built by the Whitewater Trout Company, which were the previous owners of the TWC property. After inspection of the existing system, it was found to have several issues including erosion and bank failures, which has been determined would not provide adequate flood protection if a 100-year storm event were to occur in the area.

TWC would like to evaluate flood control alternatives for the development and implementation for a replacement levee system and for facility improvements that can provide up to 500-years of protection for the habitat and facilities of Whitewater Preserve. The design of the levee is currently in its preliminary stages, but the current proposal includes a levee which will be 3.5-5-feet above the water surface, and a 16-ft wide road on top for access and maintenance.

SURVEY LOCATION

The site is located in northern Riverside County within the Whitewater River 4 miles north of Interstate 10. The site is west of the City of Desert Hot Springs, northeast of the City of Banning, northwest of the City of Palm Springs, and southwest of the City of Morongo Valley. It can further be described as being located within the Section 15 & 22 of Township 2 South, Range 3 East of the Whitewater, California U.S. Geological Survey (USGS) 7.5-minute quadrangle map (See Figures 1 and 2).

HABITAT DESCRIPTION

The approximately 25-acre survey area is located within Whitewater Canyon surrounded by San Gorgonio Wilderness and is an important corridor between the San Jacinto and San Bernardino Mountains. The closest community is Bonnie Bell, 2.5 miles to the south. Further to the south of Bonnie Bell is the San Gorgonio Pass Wind Farm. The survey area hosts a variety of native canopy and understory vegetation, with about half of the survey area with canopy cover present, mainly around the visitor's center and the southeast border of the survey area. The canopy throughout consists largely of Fremont cottonwood (*Populus fremontii*), and California sycamore (*Platanus racemosa*) with an understory of sandbar willow (*Salix exigua*), red/arroyo willow (*Salix, spp*.), mulefat (*Baccharis salicifolia*), grapevine (*Vitis spp*.), and patches of desert willow (*Chilopsis linearis*) throughout the sandy washes. The largest patch of riparian habitat was located to the north and south of the visitor's center and main entrance to the preserve, with a smaller patch to the southwest of Whitewater river, and little pockets of habitat throughout the survey area. The presence of healthy riparian vegetation and a nearby permanent water supply suggests that this habitat has a very high potential to support both sensitive riparian bird species.

SPECIES DESCRIPTION, DISTRIBUTION, AND STATUS

LEAST BELL'S VIREO

The LBVI is a small greenish-gray songbird with a white underbelly, two white wingbars, and white spectacles across the lores. The LBVI was once widespread throughout the Central Valley and other low elevation river valleys of California. Historically, the LBVI's breeding range extended from the interior of northern California to northwestern Baja California (Grinnell and Miller 1944). The LBVI typically prefers riparian areas dominated by willows of mixed age composition. These areas frequently include other trees such as western cottonwood and California sycamore, with a. It has been noted that the most critical structural component of LBVI's habitat in California was the presence of a dense understory of young willows, mulefat, California wild rose (*Rosa californica*), and a variety of other shrubby species (Goldwasser 1981, Franzreb 1989). Territory sizes of LBVI in California have been reported to range from 0.3-1.3 hectares (0.75-3.2 acres) (Kus, et al. 2010). It was noted by Newman (1992) that "variability in territory size was unrelated to vegetation structure, and did not influence reproductive success of pairs in Southern California."

Loss and degradation of breeding habitat has been the greatest contributor to the decline of the LBVI and SWFL. Habitat conversion for agricultural purposes has removed much of the original

riparian woodland, and flood control measures and channelization have further depleted the riparian habitats used by the LBVI and SWFL as well as other riparian birds. Another major contributing factor to the decline of the LBVI and SWFL was the introduction of the brown-headed cowbird (*Malothrus ater*) to California around 1890. Estimates from a 1989 study concluded that anywhere from 47% to 100% of all LBVI nests contained cowbird eggs (Franzreb 1989). The significant reduction in the population size and range of the vireo resulted in it being listed as a state endangered species in June 1980, and federally listed as endangered in May 1986. Critical Habitat for this species was designated in 1994 and this site falls within the designated critical habitat for the LBVI.

According to the Coachella Valley MSCHP "the least Bell's vireo is known to occur as a breeding bird in Chino Canyon and in Andreas Canyon. Other suitable breeding habitat may occur in Millard Canyon, Whitewater Canyon, Mission Creek, Palm Canyon, Murray Canyon, at Oasis de los Osos, at the Willow Hole-Edom Hill Preserve/ACEC, along the Whitewater River near the Salton Sea, and at Dos Palmas (CVAG 2016).

LBVI Survey Methods

Presence/absence surveys were conducted according to the USFWS *Least Bell's Vireo Survey Guidelines* (2001). All potentially suitable LBVI habitat within the survey areas were surveyed eight (8) times between April 10 and July 31, 2020 with at least 10 days between survey visits for each site. The surveys were conducted during the morning hours during appropriate weather conditions. Some survey days continued into the early afternoon if weather conditions and bird activity remained conducive for bird detection. Less than three linear kilometers (km) (1.9 miles) of habitat were surveyed per day. LBVI surveys were conducted passively, listening for vireo songs, calls, whisper songs, scolds and visually looking for adults and juveniles. Any nesting behavior was also noted.

LBVI observations were recorded in a field notebook application on a smart phone device, and GPS readings of the locations were taken during the surveys. If an exact point could not be taken, estimated points were determined post-survey. Numbers and locations of paired or unpaired territorial males, and the ages and sexes of encountered vireos (when discernible) were noted. Individual LBVI were also checked for colored leg bands.

SOUTHWESTERN WILLOW FLYCATCHER

SPECIES DESCRIPTION, DISTRIBUTION, AND STATUS

The SWFL is a small, insectivorous passerine that migrates north in the spring from South America, Mexico, and Central America, to breed in the southwestern desert riparian habitats of California, Arizona, New Mexico, and Texas. Within western Riverside County there are very few reported occurrences with the majority occurring within the Prado Basin. The most current estimated number of range-wide flycatcher territories is 1,299 (288 breeding pairs) (USFWS 2014, Durst et al. 2008). Based on the USFWS' 5-year review of this species, it is reported that there are several factors that may contribute to the species decline within its range. The most concerning is the spread of the tamarisk leaf beetle. Although tamarisk is a non-native species, it provides habitat for the SWFL and seems to be more tolerant of human disturbances than native riparian species such as willows and cottonwoods (USGS 2014). The loss of tamarisk without conserving and/or restoring native riparian habitats could cause large areas of currently suitable habitat to be lost.

Like the LBVI, the SWFL occurs in riparian woodland habitat that is characterized by a dense growth of willows, mulefat, arrowweed (*Pluchea* sp.), cottonwood, sycamore (*Platanus* sp.), and tamarisk. In addition to willow riparian woodland, the SWFL also nests in coast live oak woodland on the upper San Luis Rey River, San Diego County, California, in dense stands of tamarisk on the lower Colorado River, Imperial and Riverside Counties, California. Surface water or saturated soils are usually present in or adjacent to nesting thickets. Like the LBVI, the loss of habitat and parasitism by cowbirds are thought to be the major reasons for the declining numbers of SWFL (Pike et al, 2004, Kus 2002). The southwestern subspecies of willow flycatcher was federally listed as endangered in February 1995 (USFWS 1995). Critical habitat was established in 2005, and then revised in 2013. California Department of Fish and Wildlife (CDFW) determined that all subspecies in California are endangered under the California Endangered Species Act. Determining subspecies is based on the region the flycatcher is found breeding as they are nearly indistinguishable by site or call Within the desert region of Riverside County there are very few documented breeding pairs of SWFL, but the area is used for migrating stop overs. One breeding pair was observed in Mission Creek, and one possible pair was observed in Thousand Palms Oasis. According to the Coachella Valley MSHCP "suitable breeding habitat is present in a number of locations where riparian habitat exists, in Chino, Andreas, Murray, Palm, Millard, and Whitewater Canyons, and possibly in Stubbe and Cottonwood Canyons. Suitable breeding habitat may also occur at Oasis de los Osos, along the Whitewater River near the Salton Sea, at the Thousand Palms Preserve, and at Dos Palmas Preserve" (CVAG 2016)."

Declines in this species are mostly contributed to a loss of riparian habitat throughout the southwest. It is estimated that as much as 90% of riparian habitat has been lost in this region, and the remaining habitats have been degraded due to flood control and dam construction (Busch and Smith 1995).

SWFL Survey Methods

Presence/absence surveys were conducted according to the revised protocol for project-related surveys and the general guidelines described by Sogge *et al.* (2010). All potential SWFL habitat and riparian areas within the survey area were surveyed five (5) times: one (1) visit during the 1st Survey Period (May 15 to May 31), two (2) visits during the 2nd Survey Period (June 1 to June 24), and two (2) visits during the 3rd Survey Period (June 25 to July 17). Each visit was at least five (5) days apart. Surveys of the sites were conducted during morning hours and when the temperature exceeded 13°C (55°f). Less than 1.9 miles (3 km) of habitat were surveyed per day. Surveys for the SWFL were conducted concurrently with those for the LBVI, however the survey for each species was done on separate passes (e.g. LBVI was surveyed from south to north transect, while SWFL were surveyed for during the north to south transects).

Surveys were conducted within all potential habitat patches. If a singing SWFL was not heard in an area after one to two minutes, the permitted biologist played a taped vocalization for 15 to 30 seconds and observed the area for responding SWFLs. This was repeated every 20 to 30 meters. If a SWFL was detected, tape playing was discontinued.

Any SWFL observations would be recorded in a field data form (found in Appendix C), and GPS readings of the locations were taken during the surveys. If this species were observed, their behavior, numbers, and locations of paired or unpaired birds; ages; and sexes of encountered SWFL would be noted. The biologist also checked for leg bands.

Results

Surveys for LBVI and SWFL were conducted in all suitable habitat by permitted biologist Angela Johnson between April 20 and July 29, 2020. A total of thirteen (13) pairs of LBVI and twelve (12) individual SWFL were detected during the 2020 season (Figure 3).

A brief description of LBVI and SWFL survey results for each of the survey area is provided below. Data sheets for each of the surveys can be found in Appendix E.

TABLE 1. SURVEY CONDITIONS

Survey #	Date	Surveyor	Start Time	Stop Time	Weather	Temp. Range (°f)	# LBVI Detected	# SWFL Detected
1	4/20/20	AJ	0600	1055	0-30% CC, wind 3-4 mph	50-67	7	N/A
2	5/6/20	AJ	0545	1018	0% CC, wind 1-7 mph	69-89	15	N/A
3	5/20/20	AJ	0535	1043	0% CC, wind 3-6 mph	54-70	13	12
4	6/3/20	AJ	0515	0937	20-100% CC, wind 1 mph	77-94	17	None
5	6/17/20	AJ	0517	0930	0% CC, wind 3-14 mph	64-86	18	None
6	7/1/20	AJ	0518	0946	0% CC, wind 7-8 mph	67-76	9	None
7	7/15/20	AJ	0520	0940	0% CC, wind 6-14 mph	67-85	13	None
8	7/29/20	AJ	0530	1010	0% CC, wind 5-8 mph	69-92	14	N/A

TABLE 2. LBVI AND SWFL LOCATIONS (UTM- ZONE 11S)

LBVI Detection	Easting	Northing		SWFL Detection	Easting	Northing
LBVI Territory 1	531793 m E	3760787 m N		SWFL 1	531787 m E	3760876 m N
LBVI Territory 2	531845 m E	3760782 m N		SWFL 2	531781 m E	3760833 m N
LBVI Territory 3	531863 m E	3760724 m N		SWFL 3	531854 m E	3760770 m N
LBVI Territory 4	531926 m E	3760721 m N		SWFL 4	531888 m E	3760689 m N
LBVI Territory 5	531867 m E	3760651 m N		SWFL 5	531946 m E	3760620 m N

LBVI Detection	Easting	Northing		SWFL Detection	Easting	Northing
LBVI Territory 6	531977 m E	3760624 m N		SWFL 6	531977 m E	3760583 m N
LBVI Territory 7	531927 m E	3760561 m N		SWFL 7	531665 m E	3760977 m N
LBVI Territory 8	531858 m E	3760386 m N		SWFL 8	531674 m E	3761142 m N
LBVI Territory 9	531752 m E	3760424 m N		SWFL 9	531680 m E	3761230 m N
LBVI Territory 10	531446 m E	3761090 m N		SWFL 10	531411 m E	3761116 m N
LBVI Territory 11	531552 m E	3761077 m N		SWFL 11	531637 m E	3760464 m N
LBVI Territory 12	531640 m E	3761007 m N		SWFL 12	531821 m E	3760377 m N
LBVI Territory 13	531733 m E	3761072 m N				
When LBVI were detected in numerous locations, only the central point of the polygon is given.						

Other Sensitive Species Observed

This survey focused on two species, LBVI and SWFL; however, incidental observation(s) of all sensitive species were documented. There are various definitions of "sensitive" in accordance with State and Federal Agencies. The following is a brief summary of the status of the species that were observed on site (all definitions were taken directly from the CDFW Biogeographic Data Branch's Special Animals list [July 2020] unless otherwise indicated):

CDFW California Species of Special Concern (SSC): The Department has designated certain vertebrate species as "Species of Special Concern" because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction. The goal of designating species as "SSC" is to halt or reverse their decline early enough to secure their long-term viability.

CDFW: Watch List (WL): The birds on this Watch List are 1) not on the current Special Concern list but were on previous lists and they have not been state listed under CESA; 2) were previously

state or federally listed and now are on neither list; or 3) are on the list of "Fully Protected" species.

USFWS Bird of Conservation Concern (BCC): The goal of the Birds of Conservation Concern 2008 report is to accurately identify the migratory and non-migratory bird species (beyond those already designated as federally threatened or endangered) that represent our highest conservation priorities and draw attention to species in need of conservation action.

Sensitive species observed included:

TABLE 3. OTHER SENSITIVE SPECIES OBSERVED

Common Name	Scientific Name	Status
Peregrine Falcon	*Falco peregrinus*	BCC
Cooper's hawk	*Accipiter cooperi*	WL
Yellow warbler	*Setophaga petechial*	BCC, SSC
Yellow-breasted Chat	*Icteria virens*	SSC

BROWN-HEADED COWBIRDS AND INVASIVE SPECIES

Brown-headed cowbirds (*Molothrus ater*) (BHCB) were not detected (seen or heard) during any of the surveys in 2020. No cowbird traps were noted at any of the survey locations.

No non-native wildlife species were detected within the survey areas. However, Whitewater Preserve has a known feral cow population although none were seen by the biologist, feces were observed throughout the survey area.

Invasive plant species observed were low within the preserve. The only invasive plants present were ornamental palms located around the ponds near the visitor center.

CONCLUSION

A total of thirteen (13) Least Bell's Vireo territories and twelve (12) Southwestern Willow Flycatcher individuals were detected during the 2020 surveys. Due to SWFL being detected on just the first survey, it is likely that the birds detected were migrant Willow Flycatchers, and not the Southwestern subspecies.

Other sensitive species detected included the Peregrine falcon, Cooper's hawk, yellow warbler, and yellow-breasted chat.

CERTIFICATION

I certify that the information in this survey report and attached exhibits, fully and accurately represent my work.

Date: August 18, 2020 Signed: 

Angela Johnson TE 59592B-2

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APPENDIX A- FIGURES

FIGURE 1. SURVEY AREA MAP

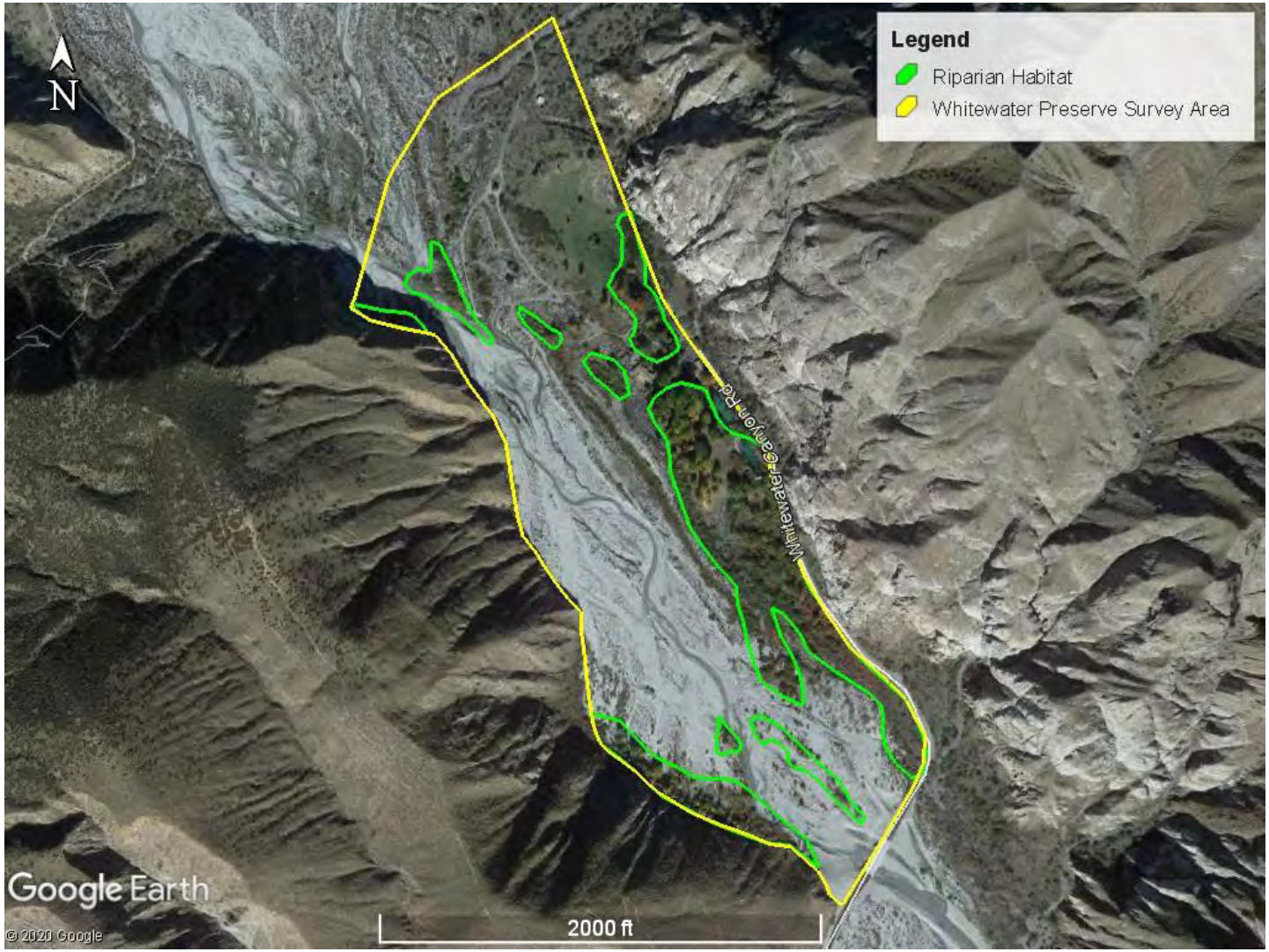


FIGURE 2. VICINITY MAP

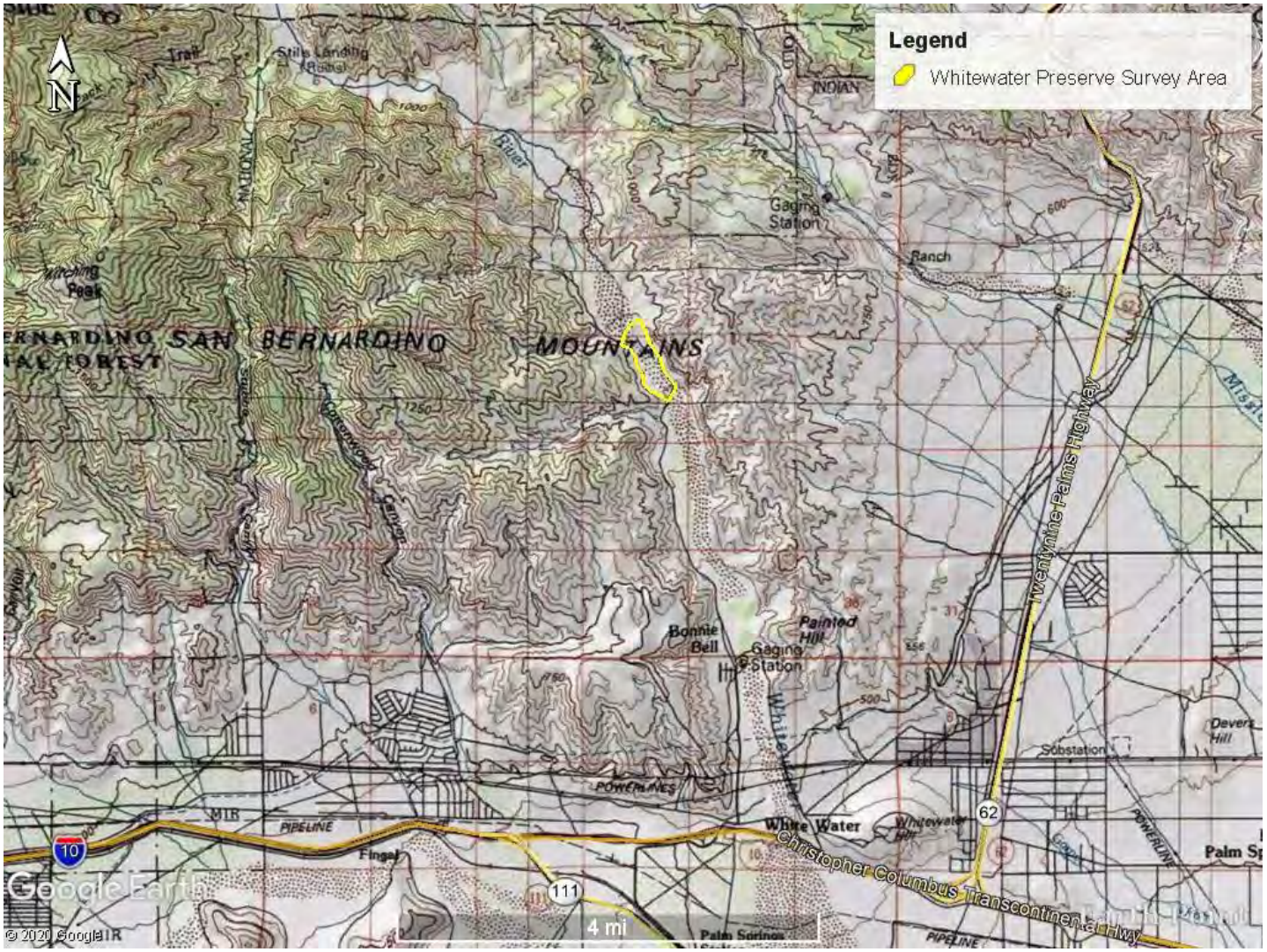
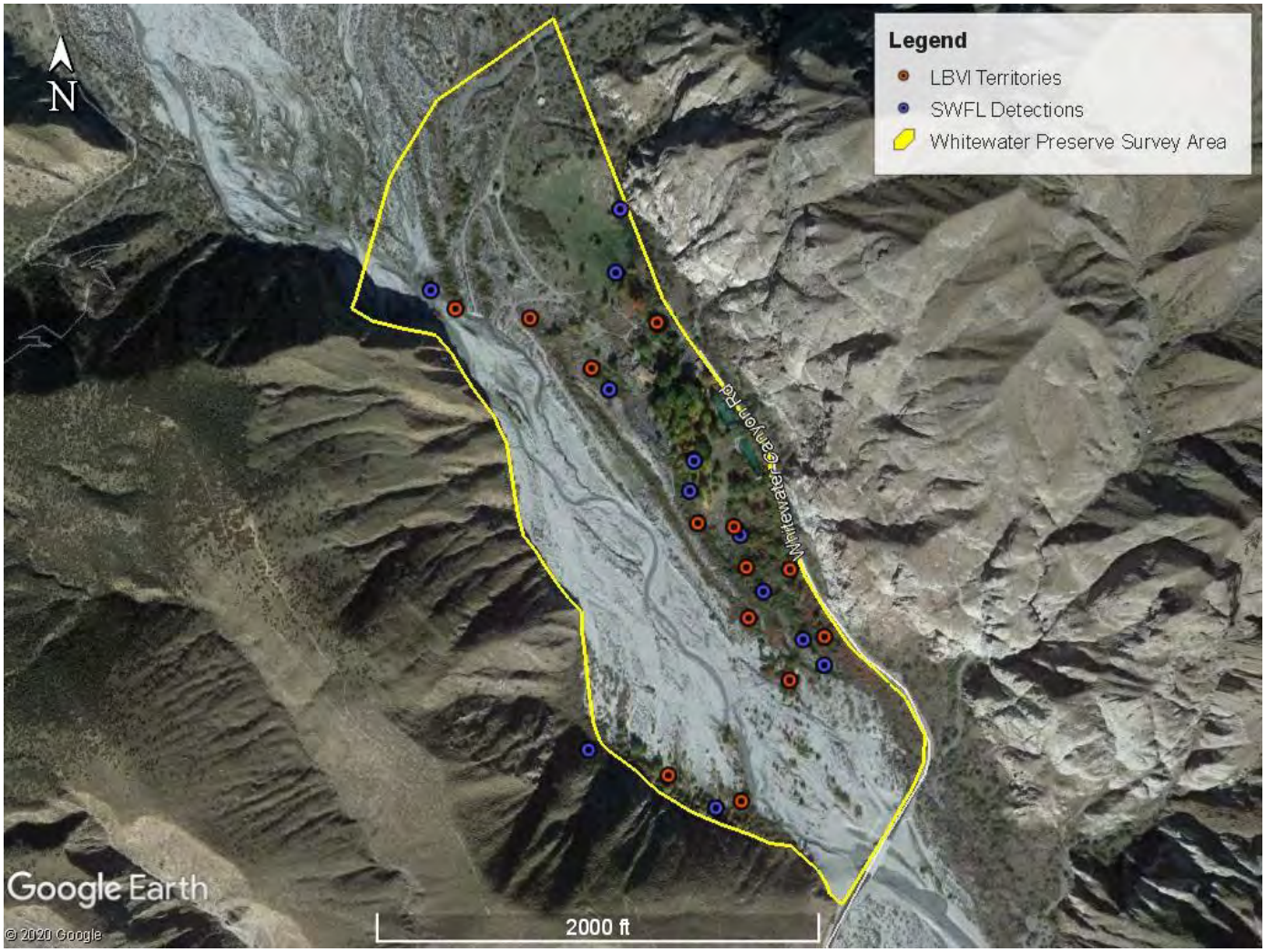


FIGURE 3. LBVI TERRITORIES AND SWFL DETECTIONS



APPENDIX B- AVIAN COMPENDIUM

Galliformes – Turkey, Grouse, Chicken, and New World Quail

Odontophoridae – New World Quail

Gambel's Quail (*Callipepla gambelii*)

Pelicaniformes – Pelicans, Boobies, Frigatebirds, Cormorants, and Wading Birds

Ardeidae – Herons

Green Heron (*Butorides virescens*)

Accipitriformes – Hawks, Kites, Eagles, and Allies

Accipitridae – Hawks, Kites, Eagles, and Allies

§ Cooper's Hawk (*Accipiter cooperii*)

Red-tailed Hawk (*Buteo jamaicensis*)

Gruiformes – Rails, Coots, Cranes, and Limpkin

Rallidae – Crakes, Coots, and Gallinules

American Coot (*Fulica americana*)

Columbiformes - Pigeons, and Doves

Columbidae - Pigeons and Doves

Mourning Dove (*Zenaida macroura*)

Cuculiformes – Cuckoos and Allies

Cuculidae – Cuckoos and Allies

Greater Roadrunner (*Geococcyx californianus*)

Strigiformes – Owls

Tytonidae – Barn Owls

Barn Owl (*Tyto alba*)

Apodiformes – Swifts and Hummingbirds

Apodidae – Swifts

White-throated Swift (*Aeronautes saxatalis*)

Trochilidae – Hummingbirds

Black-chinned Hummingbird (*Archilochus alexandri*)

Anna's Hummingbird (*Calypte anna*)

Allen’s Hummingbird (*Selasphorus sasin*)

Piciformes – Woodpeckers and Allies

Picidae – Woodpeckers and Allies

Nuttall's Woodpecker (*Picoides nuttallii*)

Falconiformes – Falcons and Caracara

Falconidae – Falcons

American Kestrel (*Falco sparverius*)

§ Peregrine Falcon (*Falco peregrinus*)

Passeriformes - Passerine Birds

Tyrannidae - Tyrant Flycatchers

Western Wood-Pewee (*Contopus sordidulus*)

§ Willow Flycatcher (*Empidonax traillii*)

Pacific-slope Flycatcher (*Empidonax difficilis*)

Black Phoebe (*Sayornis nigricans*)

Say's Phoebe (*Sayornis saya*)

Vermillion Flycatcher (*Pyrocephalus rubinus*)

Ash-throated Flycatcher (*Myiarchus cinerascens*)

Vireonidae – Vireos

§ Least Bell's Vireo (*Vireo bellii pusillus*)

Hutton's Vireo (*Vireo huttoni*)

Corvidae - Crows and Jays

California Scrub-Jay (*Aphelocoma californica*)

Common Raven (*Corvus corax*)

Hirundinidae – Swallows

Northern rough-winged Swallow (*Stelgidopteryx serripennis*)

Cliff Swallow (*Petrochelidon pyrrhonota*)

Aegithalidae - Long-tailed Tits and Bushtits

Bushtit (*Psaltriparus minimus*)

Sittidae – Nuthatches

Red-breasted Nuthatch (*Sitta canadensis*)

White-breasted Nuthatch (*Sitta carolinensis*)

Troglodytidae – Wrens

Rock Wren (*Salpinctes obsoletus*)

Canyon Wren (*Catherpes mexicanus*)

House Wren (*Troglodytes aedon*)

Bewick's Wren (*Thryomanes bewickii*)

Polioptilidae – Gnatcatchers

Black-tailed Gnatcatcher (*Polioptila melanura*)

Turdidae – Thrushes

Western Bluebird (*Sialia mexicana*)

Mimidae - Mockingbirds and Thrashers

California Thrasher (*Toxostoma redivivum*)

Ptiliogonatidae – Silky Flycatchers

Phainopepla (*Phainopepla nitens*)

Parulidae - Wood-Warblers

Orange-crowned Warbler (*Oreothlypis celata*)

Nashville Warbler (*Oreothlypis ruficapilla*)

Common Yellowthroat (*Geothlypis trichas*)

§ Yellow Warbler (*Setophaga petechia*)

Townsend's Warbler (*Setophaga townsendi*)

Wilson's Warbler (*Cardellina pusilla*)

Icteriidae – Chats

§ Yellow-breasted Chat (*Icteria virens*)

Passerellidae – New World Sparrows

Song Sparrow (*Melospiza melodia*)

California Towhee (*Melozone crissalis*)

Spotted Towhee (*Pipilo maculatus*)

Cardinalidae – Cardinals, Grosbeaks, and Allies

Summer Tanager (*Piranga rubra*)

Western tanager (*Piranga ludoviciana*)

Black-headed Grosbeak (*Pheucticus melanocephalus*)

Blue Grosbeak (*Passerina caerulea*)

Icteridae – Blackbirds, Orioles, and Allies

Hooded Oriole (*Icterus cucullatus*)

Fringillidae - Fringilline and Cardueline Finches and Allies

House Finch (*Haemorhous mexicanus*)

Lesser Goldfinch (*Spinus psaltria*)

Lawrence's Goldfinch (*Spinus lawrencei*)

§ Indicates Sensitive Species

APPENDIX C- SWFL SURVEY DETECTION FORMS

Appendix 1. Willow Flycatcher Survey and Detection Form

Always check the U.S. Fish and Wildlife Service Arizona Ecological Services Field Office web site (http://www.fws.gov/southwest/es/arizona/) for the most up-to-date version.

Willow Flycatcher (WIFL) Survey and Detection Form (revised April 2010)

Site Name Whitewater Preserve State CA County Riverside
USGS Quad Name Whitewater Elevation 664 (meters)
Creek, River, Wetland, or Lake Name Whitewater River
Is copy of USGS map marked with survey area and WIFL sightings attached (as required)? Yes ✓ No ___

Survey Coordinates: Start E 531583 N 3761489 UTM Datum NAD83 (See instructions)
Stop E 531998 N 3760042 UTM Zone 11
If survey coordinates changed between visits, enter coordinates for each survey in comments section on back of this page.
*** Fill in additional site information on back of this page ***

Survey # Observer(s) (Full Name)	Date (m/d/y) Survey Start	Number of Adult WIFLs	Estimated Number of Pairs	Estimated Number of Territories	Nest(s) Found? Y or N If Yes, number of nests	Comments (e.g., bird behavior; evidence of pairs or breeding; potential threats (livestock, cowbirds, *Diorhabda* spp.)) If *Diorhabda* found, contact USFWS and State WIFL coordinator	GPS Coordinates for WIFL Detections (this is an optional column for documenting individuals, pairs, or groups of birds found on each survey). Include additional sheets if necessary.
Survey # 1 Observer(s) Angela Johnson	Date 5/20/20 Start 0535 Stop 1043 Total hrs 5.13	12	0	0	N	All birds highly responsive to playback and to each other.	# Birds / Sex / UTM E / UTM N: 1 U 531787 3760876; 1 U 531781 3760833; 1 U 531854 3760770; 1 U 531888 3760689; 1 U 531946 3760620
Survey # 2 Observer(s) Angela Johnson	Date 6/3/20 Start 0515 Stop 0937 Total hrs 4.37	0					# Birds / Sex / UTM E / UTM N
Survey # 3 Observer(s) Angela Johnson	Date 6/17/20 Start 0517 Stop 0930 Total hrs 4.22	0					# Birds / Sex / UTM E / UTM N
Survey # 4 Observer(s) Angela Johnson	Date 7/1/20 Start 0518 Stop 0946 Total hrs 4.47	0					# Birds / Sex / UTM E / UTM N
Survey # 5 Observer(s) Angela Johnson	Date 7/15/20 Start 0520 Stop 0940 Total hrs 4.33	0					# Birds / Sex / UTM E / UTM N

cont. on comments page

Overall Site Summary Totals do not equal the sum of each column. Include only resident adults. Do not include migrants, nestlings, and fledglings. Be careful not to double count individuals. Total Survey Hrs 22.5	Total Adult Residents	Total Pairs	Total Territories	Total Nests	Were any Willow Flycatchers color-banded? Yes No ✓ If yes, report color combination(s) in the comments section on back of form and report to USFWS
	0	0	0	0	

Reporting Individual Angela Johnson Date Report Completed 8/12/20
US Fish and Wildlife Service Permit # 59592B-2 State Wildlife Agency Permit # ___
Submit form to USFWS and State Wildlife Agency by September 1st. Retain a copy for your records.

32 **A Natural History Summary and Survey Protocol for the Southwestern Willow Flycatcher**

Fill in the following information completely. Submit form by September 1st. Retain a copy for your records.

Reporting Individual Angela Johnson Phone # 970-412-4777
Affiliation Kidd Biological Inc E-mail kiddreid26@gmail.com
Site Name Whitewater Preserve Date Report Completed 8/12/20

Did you verify that this site name is consistent with that used in previous years? Yes ____ No ____ Not Applicable ✓
If site name is different, what name(s) was used in the past?
If site was surveyed last year, did you survey the same general area this year? Yes ____ No ____ If no, summarize below.
Did you survey the same general area during each visit to this site this year? Yes ✓ No ____ If no, summarize below.

Management Authority for Survey Area: Federal ____ Municipal/County ____ State ____ Tribal ____ Private ✓
Name of Management Entity or Owner (e.g., Tonto National Forest) The Wildlands Conservancy

Length of area surveyed: 1320 (meters)

Vegetation Characteristics: Mark the category that best describes the predominant tree/shrub foliar layer at this site (check one):

✓ Native broadleaf plants (entirely or almost entirely, > 90% native, includes high-elevation willow)

____ Mixed native and exotic plants (mostly native, 50 - 90% native)

____ Mixed native and exotic plants (mostly exotic, 50 - 90% exotic)

____ Exotic/introduced plants (entirely or almost entirely, > 90% exotic)

Identify the 2-3 predominant tree/shrub species in order of dominance. Use scientific name
Salix exigua, Populus fremontii, Salix spp.

Average height of canopy (Do not include a range): 5 (meters)

Attach copy of USGS quad/topographical map (REQUIRED) of survey area, outlining survey site and location of WIFL detections.
Attach sketch or aerial photo showing: site location, patch shape, survey route, location of any WIFLs or WIFL nests detected.
Attach photos of the interior of the patch, exterior of the patch, and overall site; describe any unique habitat features.

Comments (attach additional sheets if necessary): Detections from survey 1 continued...

# birds	Sex	UTM E	UTM N
1	U	531977	3760583
1	U	531665	3760977
1	U	531674	3761142
1	U	531680	3761230
1	U	531911	3761169

# birds	Sex	UTM E	UTM N
1	U	531687	3760464
1	U	531821	3760377

Territory Summary Table. Provide the following information for each verified territory at your site:

Territory Number	All Dates Detected	UTM N	UTM E	Pair Confirmed? Y or N	Nest Found? Y or N	Description of How You Confirmed Territory and Breeding Status (e.g., vocalization type, pair interactions, nesting attempts, behavior)

Attach additional sheets if necessary

APPENDIX D- SITE PHOTOS

Site overview



South of Campground



Trail South of Campground



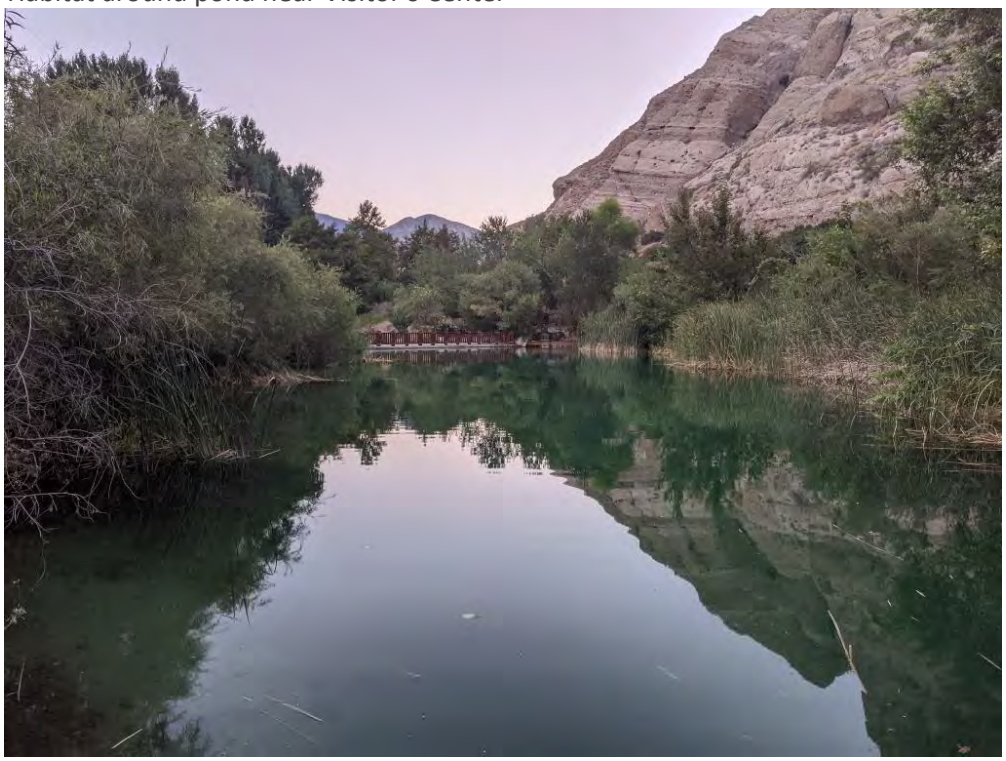
Southeast of River



North of Visitor's Center



Habitat around pond near Visitor's Center



WHITEWATER PRESERVE LEVEE REPLACEMENT PROJECT

Riverside County, California

Delineation of State and Federal Jurisdictional Waters

Prepared For:

Coachella Valley Mountains Conservancy
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Contact: *Jim Karpiak*

Prepared By:

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2201 N. Grand Avenue #10098
Santa Ana, California 92711
Contact: *Thomas J. McGill, Ph.D.*
951.285.6014

July 2020

WHITEWATER PRESERVE LEVEE REPLACEMENT PROJECT

Riverside County, California

Delineation of State and Federal Jurisdictional Waters

The undersigned certify that the statements furnished in this report and exhibits present data and information required for this biological evaluation, and the facts, statements, and information presented is a complete and accurate account of the findings and conclusions to the best of our knowledge and beliefs.



Travis J. McGill
Director



Thomas J. McGill, Ph.D.
Managing Director

July 2020

Executive Summary

ELMT Consulting (ELMT) has prepared this Delineation of State and Federal Jurisdictional Waters Report for the Approximately 160-Acre Property Project Site (project site or site) located in the City of Jurupa Valley, Riverside County, California. The jurisdictional delineation documents the regulatory authority of the U.S. Army Corps of Engineers (Corps), the Regional Water Quality Control Board (Regional Board), and the California Department of Fish and Wildlife (CDFW) pursuant to Section 401 and 404 of the Federal Clean Water Act (CWA), the California Porter-Cologne Water Quality Control Act, and Sections 1600 *et. seq.* of the California Fish and Game Code.[1]

One (1) perennial drainage feature, Whitewater River was observed within the boundary of the survey area. Whitewater River (Relatively Permanent Water) is tributary to the Salton Sea (Traditional Navigable Water). Therefore, the Whitewater River would qualify as waters of the United States and fall under the regulatory authority of the Corps, Regional Board, and CDFW. The acreage and liner footage of the drainage features within the survey area are provided in Table ES-1 below:

Table ES-1: On-Site Jurisdictional Areas and Impacts

Jurisdictional Feature	Corps/Regional Board Non-Wetland Waters			CDFW Streambed		
	On-Site Jurisdiction acreage (linear feet)	**Jurisdictional Impacts (permanent)** acreage (linear feet)	**Jurisdictional Impacts (temporary)** acreage (linear feet)	**On-Site Jurisdiction** acreage (linear feet)	**Jurisdictional Impacts (permanent)** acreage (linear feet)	**Jurisdictional Impacts (temporary)** acreage (linear feet)
Whitewater River	25.69 (2,827)	0.42 (614)	0.56 (818)	46.38 (2,827)	1.01 (1,517)	1.33 (1,888)
TOTALS	**25.69 (2,827)**	**0.42 (614)**	**0.56 (818)**	**46.38 (2,827)**	**1.01 (1,517)**	**1.33 (1,888)**

Based on current site conditions and design plans, impacts to the Whitewater River will occur from project implementation. As a result, the project applicant must obtain the following regulatory approvals prior to impacts occurring within the identified jurisdictional areas: Corps CWA Section 404 Permit; Regional Board CWA Section 401 Water Quality Certification; and CDFW Section 1602 Streambed Alteration Agreement (SAA). Refer to Sections 1-7 for a detailed analysis of site conditions and regulatory requirements.

[1] The field surveys for this jurisdictional delineation were conducted on September 7, 2018 pursuant to the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0* (Corps 2008); and *Minimum Standards for Acceptance of Aquatic Resources Delineation Reports* (Corps 2017); *The MESA Field Guide: Mapping Episodic Stream Activity* (CDFW 2014); and a *Review of Stream Processes and Forms in Dryland Watersheds* (CDFW 2010).

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Appendix A Documentation
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Section 1 Introduction

This delineation has been prepared for the for the Whitewater Preserve Levee Replacement Project (project site or site) in order to document the jurisdictional authority of the U.S. Army Corps of Engineers' (Corps), the Regional Water Quality Control Board (Regional Board), and the California Department of Fish and Wildlife (CDFW) pursuant to Section 401 and 404 of the Federal Clean Water Act (CWA), the California Porter-Cologne Water Quality Control Act, and Sections 1600 *et seq.* of the California Fish and Game Code. The analysis presented in this report is supported by field surveys and verification of site conditions conducted on January 7, and April 2, 2020.

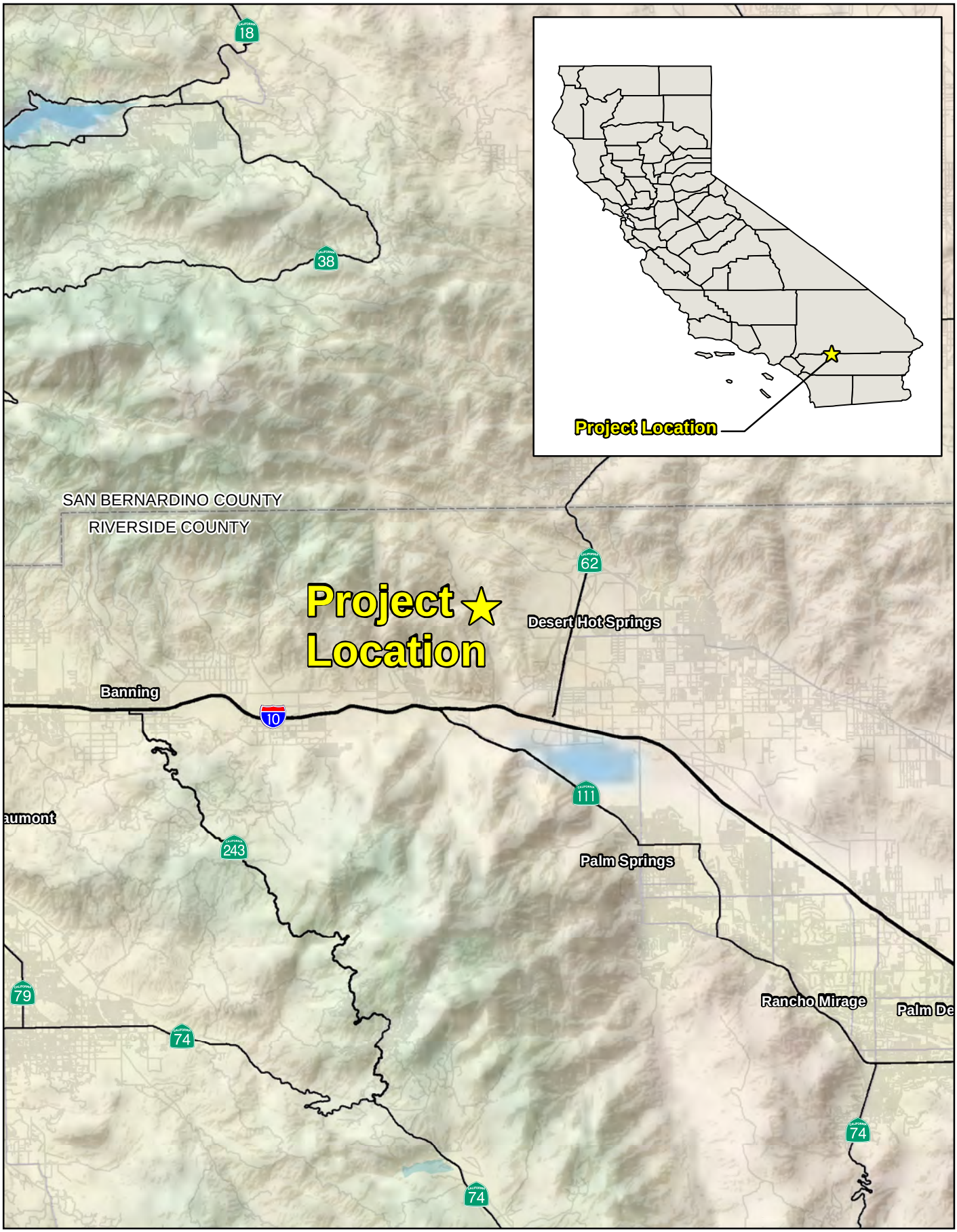
This jurisdictional delineation explains the methodology undertaken by ELMT Consulting (ELMT) to define the regulatory authority of the aforementioned regulatory agencies and documents the findings made by ELMT. This report presents our best effort at documenting the jurisdictional boundaries using the most up-to-date regulations, written policy, and guidance from the regulatory agencies. Ultimately the regulatory agencies make the final determination of jurisdictional boundaries.

1.1 PROJECT LOCATION

The project site is located on the Whitewater River, north of Interstate 10, west of State Route 62, east of Kitching Peak, and southwest of Morongo Valley in Whitewater, Riverside County, California (Exhibit 1, *Regional Vicinity*). The project site is depicted on the White Water quadrangle of the United States Geological Survey (USGS) 7.5-minute topographic map series in Sections 15 and 22 of Township 2 South, Range 3 East (Exhibit 2, *Site Vicinity*). Specifically, the project site is located along the Whitewater River, adjacent to the Whitewater Preserve located at 9160 Whitewater Canyon Road. (Exhibit 3, *Project Site*).

1.2 PROJECT DESCRIPTION

The project proposes to build a permanent flood control structure to protect the Whitewater Preserve infrastructure and wetland habitats. Further, building a permanent flood control structure will protect the existing riparian forest within the preserve and downstream of the preserve from major flood events.



WHITEWATER PRESERVE LEVEE REPLACEMENT PROJECT
DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS

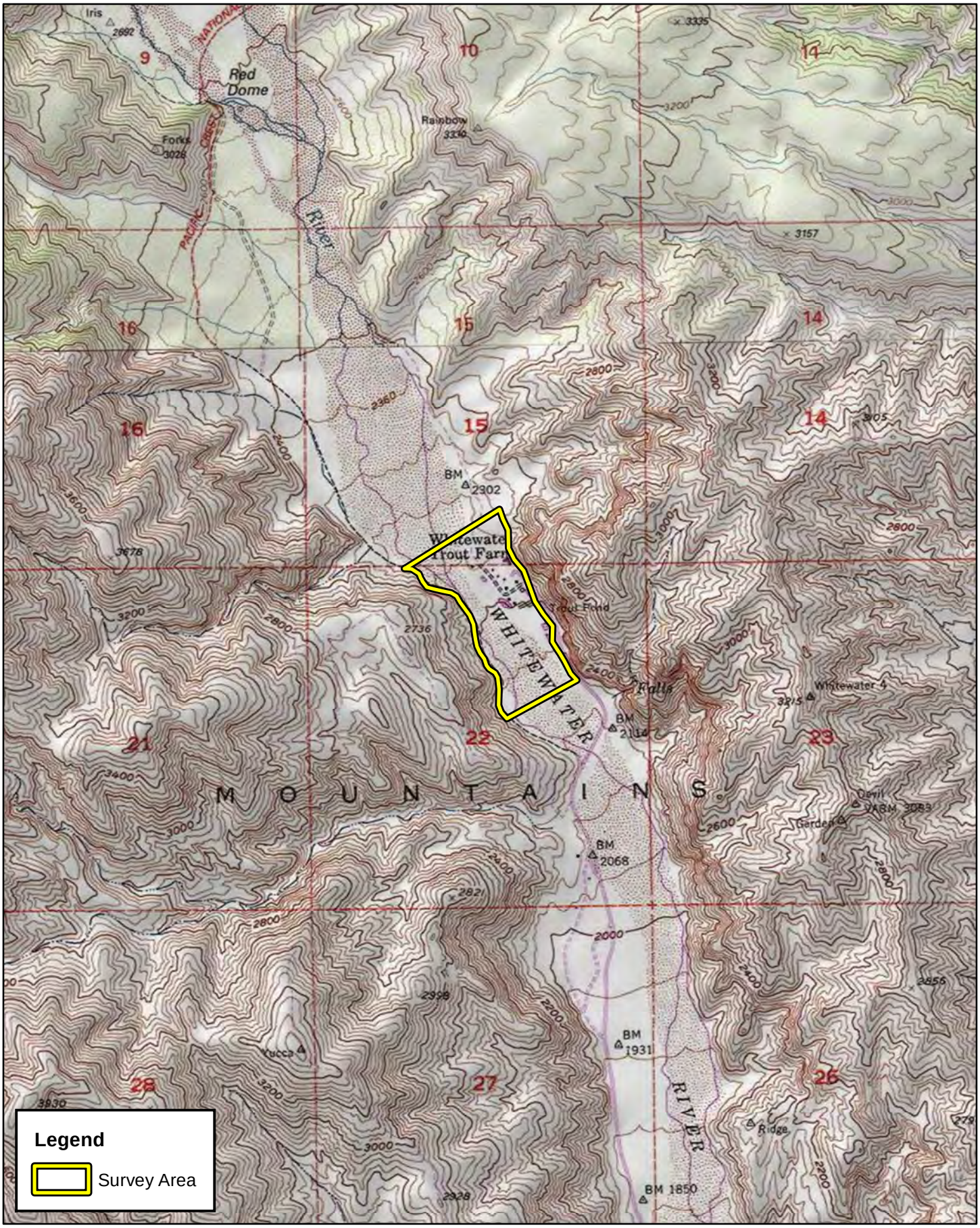
Regional Vicinity

ELMT CONSULTING

0 2.5 5 Miles

Source: ESRI Relief Map, National Highway Planning Network

Exhibit 1



WHITEWATER PRESERVE LEVEE REPLACEMENT PROJECT
DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS

Site Vicinity

ELMT CONSULTING

Source: USA Topographic Map, Riverside County

Exhibit 2



WHITEWATER PRESERVE LEVEE REPLACEMENT PROJECT
DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS

ELMT CONSULTING

0 250 500 1,000 Feet

Source: ESRI Aerial Imagery, Riverside County

Project Site

Exhibit 3

Section 2 Regulations

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Division regulates activities pursuant to Section 404 of the CWA, Section 10 of the Rivers and Harbors Act, and Section 103 of the Marine Protection, Research, and Sanctuaries Act. The Regional Board regulates activities pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act and the CDFW regulates activities under Sections 1600 *et seq*. of the California Fish and Game Code.

2.1 U.S. ARMY CORPS OF ENGINEERS

Since 1972, the Corps and U.S. Environmental Protection Agency (EPA) have jointly regulated the discharge of dredged or fill material into waters of the United States, including wetlands, pursuant to Section 404 of the CWA. The Corps and EPA define "fill material" to include any "material placed in waters of the United States where the material has the effect of: (i) replacing any portion of a water of the United States with dry land; or (ii) changing the bottom elevation of any portion of the waters of the United States." Examples include, but are not limited to, sand, rock, clay, construction debris, wood chips, and "materials used to create any structure or infrastructure in the waters of the United States." In April of 2020, the Corps and the EPA provided a new definition for *waters of the United States* [Federal Register, Vol. 85, No. 77 (April 21, 2020)] which encompass: the territorial seas and traditional navigable waters; perennial and intermittent tributaries that contribute surface water flow to such waters; certain lakes, ponds, and impoundments of jurisdictional waters; and wetlands adjacent to other jurisdictional waters. Additionally, the new definition identifies 12 categories of those waters and features that are excluded from the definition of ‘‘waters of the United State, such as features that only contain water in direct response to rainfall (e.g., ephemeral features), groundwater, many ditches, prior converted cropland, and waste treatment systems.

2.2 REGIONAL WATER QUALITY CONTROL BOARD

Pursuant to Section 401 of the CWA, any applicant for a federal license or permit to conduct any activity which may result in any discharge to waters of the United States must provide certification from the State or Indian tribe in which the discharge originates. This certification provides for the protection of the physical, chemical, and biological integrity of waters, addresses impacts to water quality that may result from issuance of federal permits and helps insure that federal actions will not violate water quality standards of the State or Indian tribe. In California, there are nine Regional Boards that issue or deny certification for discharges to waters of the United States and waters of the State, including wetlands, within their geographical jurisdiction. The State Water Resources Control Board (SWRCB) assumes this responsibility when a project has the potential to result in the discharge to waters within multiple Regional Boards.

Additionally, the California Porter-Cologne Water Quality Control Act gives the State very broad authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. The Porter-Cologne Water Quality Control Act has become an important tool post *Solid Waste*

Agency of Northern Cook County vs. United States Corps of Engineers[2] (SWANCC) and *Rapanos v. United States*[3] (Rapanos) court cases with respect to the State's regulatory authority over isolated and insignificant waters. Generally, any applicant proposing to discharge waste into a water body must file a Report of Waste Discharge in the event that there is no Section 404/401 nexus. Although "waste" is partially defined as any waste substance associated with human habitation, the Regional Board also interprets this to include discharge of dredged and fill material into water bodies.

2.3 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

Sections 1600 *et seq.* of the California Fish and Game Code establishes a fee-based process to ensure that projects conducted in and around lakes, rivers, or streams do not adversely impact fish and wildlife resources, or, when adverse impacts cannot be avoided, ensures that adequate mitigation and/or compensation is provided. Pursuant to Section 1602 of the California Fish and Game Code, a notification must be submitted to the CDFW for any activity that will divert or obstruct the natural flow or alter the bed, channel, or bank (which may include associated biological resources) of a river or stream or use material from a streambed. This includes activities taking place within rivers or streams that flow perennially or episodically and that are defined by the area in which surface water currently flows, or has flowed, over a given course during the historic hydrologic regime, and where the width of its course can reasonably be identified by physical and biological indicators.

[2] Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers, 531 U.S. 159 (2001)
[3] Rapanos v. United States, 547 U.S. 715 (2006)

Section 3 Methodology

The analysis presented in this report is supported by field surveys and verification of site conditions conducted on January 7, and April 2, 2020. ELMT conducted a field delineation to determine the jurisdictional limits of "waters of the United States" and "waters of the State" (including potential wetlands), located within the boundaries of the survey area.

Aerial photography was reviewed prior to conducting a field investigation in order to locate and inspect any potential natural drainage features, ponded areas, or water bodies that may fall under the jurisdiction of the Corps. In general, surface drainage features indicated as blue-line streams on USGS maps that are observed or expected to exhibit evidence of flow are considered potential jurisdictional areas and are also subject to federal regulatory jurisdiction. In addition, ELMT reviewed jurisdictional waters information through examining historical aerial photographs to gain an understanding of the impact of land-use on natural drainage patterns in the area. The United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) and Environmental Protection Agency (EPA) Water Program "My Waters" data layers were also reviewed to determine whether any hydrologic features and wetland areas have been documented on or within the vicinity of the survey area (i.e., project site and immediately surrounding area).

Following the literature review, biologists Thomas J. McGill, Ph.D., Travis J. McGill and Jacob H. Lloyd Davies conducted a site reconnaissance to determine jurisdictional limits of "waters of the United States" within the Whitewater River located within the boundaries of the survey area. While in the field, jurisdictional features were recorded onto a base map at a scale of 1" = 50' using topographic contours and visible landmarks as guidelines. Data points were obtained with a Garmin 62 Global Positioning System Map62 in order to record and identify specific widths for ordinary high water mark (OHWM) indicators, soil pits, photograph locations, and pertinent jurisdictional features. This data was then transferred via USB port as a .shp file and added to the project's jurisdictional map. The jurisdictional map was prepared in ESRI ArcInfo Version 10. Refer to Appendix E for a detailed summary of methodology utilized throughout the course of this delineation.

3.1 WATERS OF THE UNITED STATES

In the absence of adjacent wetlands, the limits of the Corps jurisdiction in non-tidal waters extend to the OHWM, which is defined as "*. . . that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.*"[4] Indicators of an OHWM are defined in *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (Corps 2008). An OHWM can be determined by the observation of a natural line impressed on the bank; shelving; changes in the character of the soil; destruction of terrestrial vegetation; presence of litter and debris; wracking; vegetation matted down, bent, or absent;

[4] CWA regulations 33 CFR §328.3(e).

sediment sorting; leaf litter disturbed or washed away; scour; deposition; multiple observed flow events; bed and banks; water staining; and/or change in plant community. The Regional Board shares the Corps' jurisdictional methodology, unless SWANCC or Rapanos conditions are present. In the latter case, the Regional Board considers such drainage features to be jurisdictional waters of the State.

Pursuant to the Corps Wetland Delineation Manual (Corps 1987), the identification of wetlands is based on a three-parameter approach involving indicators of hydrophytic vegetation, hydric soils, and wetland hydrology. In order to qualify as a wetland, a feature must exhibit at least minimal characteristics within each of these three parameters. It should also be noted that both the Regional Board and CDFW follow the methods utilized by the Corps to identify wetlands. For this project location, Corps jurisdictional wetlands are delineated using the methods outlined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0* (Corps 2008).

3.2 WATERS OF THE STATE

3.2.1 REGIONAL WATER QUALITY CONTROL BOARD

The California *Porter-Cologne Water Quality Control Act* gives the Regional Board very broad authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. The Regional Board shares the Corps' methodology for delineating the limits of jurisdiction based on the identification of OHWM indicators and utilizing the three parameter approach for wetlands.

3.2.2 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

Sections 1600 *et seq*. of the California Fish and Game Code applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State. Generally, the CDFW's jurisdictional limit is not defined by a specific flow event, nor by the presence of OHWM indicators or the path of surface water as this path might vary seasonally. Instead, CDFW's jurisdictional limit is based on the topography or elevation of land that confines surface water to a definite course when the surface water rises to its highest point. Further, the CDFW's jurisdictional limit extends to include any habitat (e.g. riparian), including wetlands and vernal pools, supported by a river, stream, or lake regardless of the presence or absence of hydric soils and saturated soil conditions. For this project location, CDFW jurisdictional limits were delineated using the methods outlined in the *MESA Field Guide* (Brady, III and Vyverberg 2013) and *A Review of Stream Processes and Forms in Dryland Watersheds* (Vyverberg 2010), which were developed to provide guidance on the methods utilized to describe and delineate episodic streams within the inland deserts region of southern California.

Section 4 Literature Review

ELMT conducted a thorough review of relevant literature and materials to preliminarily identify areas that may fall under the jurisdiction of the regulatory agencies. A summary of materials utilized during ELMT's literature review is provided below and in Appendix A. In addition, refer to Section 8 for a complete list of references used throughout the course of this delineation.

4.1 WATERSHED REVIEW

The project site is located within the Whitewater River Watershed (HUC 18100201). The Whitewater River Watershed drains into the Whitewater River, which begins in the San Bernardino Mountains and moves southeast to the Salton Sea and Sonoran Desert. The Whitewater River is tributary to the Salton Sea.

The Whitewater River Watershed covers 1,920 square miles and includes the majority of Riverside County and a small portion of southern San Bernardino County. The watershed consists mainly of sparsely populated mountains, desert, and agricultural lands. The watershed is bounded on the south by the San Jacinto and Santa Rosa Mountains, on the west by the Santa Ana Watershed, on the east by the Salton Sea, the Hexie and Cottonwood Mountains, and Southern Mojave Watershed, and on the north east by the little San Bernardino Mountains and Southern Mojave Watershed. The highest elevation (upper reaches) of the watershed occur in the San Jacinto Mountains at 10,000 feet above mean sea level, while the Salton Sea at 230 feet below mean sea level forms the lowest elevation of the watershed.

The Whitewater River, a channelized river, is the major surface drainage watercourse in the Coachella Valley. The Whitewater River also has a constructed downstream extension known as the Coachella Valley Stormwater Channel, which serves as a drainage way for irrigation return flows, treated community wastewater, and storm runoff. The Whitewater River is typically a desert dry wash at its lower reaches, flowing only in periods of intense rain, but is an intermittent stream in its upper reaches.

4.2 LOCAL CLIMATE

Riverside County is characterized by cool winter temperatures and warm summer temperatures, with its rainfall occurring almost entirely in the winter. Relative to other areas in Southern California, winters are colder with chilly to cold morning temperatures common. Climatological data was not available for the City of Whitewater. Data was instead obtained for the nearest city, the City of Palm Springs, which indicates the average annual precipitation is 4.85 inches per year. Almost all of the precipitation occurs in the months between December and February, with hardly any occurring between the months of April and June. The wettest month is January, with a monthly average total precipitation of 1.14 inches. The average maximum and minimum temperatures for the City of Palm Springs are 89 and 60 degrees Fahrenheit (F) respectively with July being the hottest month (monthly average 108.0° F) and December being the coldest (monthly average 44.0° F). Temperatures during the site visits were in the mid- to high 60s to 70s (degrees Fahrenheit) with infrequent, light winds and little to no cloud cover.

4.3 USGS TOPOGRAPHIC QUADRANGLE

The USGS 7.5 Minute Series Topographic Quadrangle maps show geological formations and their characteristics, describing the physical setting of an area through contour lines and major surface features including lakes, rivers, streams, buildings, landmarks, and other factors that may fall under an agency's jurisdiction. Additionally, the maps depict topography through color and contour lines, which are helpful in determining elevations and latitude and longitude within the project site.

The project site is located within the White Water quadrangle of the United States Geological Survey's (USGS) 7.5-minute topographic map series in Sections 15 and 22 of Township 2 South, Range 3 East. According to the topographic map, the project site occurs at the bottom of Whitewater Canyon within the Whitewater River. On-site surface elevation ranges from approximately 2,150 to 2,300 feet above mean sea level and generally slopes from north to south. The project site is located at the bottom of the Whitewater Canyon within the Whitewater River. The slopes of the canyon above the Whitewater River are steep, vertical walls while the bottom of the canyon is relatively flat and slopes from north to south.

4.4 AERIAL PHOTOGRAPHS

Prior to conducting the field delineation, ELMT reviewed current and historical aerial photographs (1994-2020) of the project as available from Google Earth Pro Imaging. Aerial photographs can be useful during the delineation process, as they often indicate the presence of drainage features and riparian/riverine habitat within the boundaries of the project site, if any.

Land uses in the vicinity of the project site mostly consists of vacant, undeveloped land consisting of natural habitats associated with Whitewater Canyon. The Whitewater River traverses the central portion of the project site from north to south. The unincorporated community of Bonnie Bell is located south of the Whitewater Preserve, which is approximately 9.5 miles northwest of Palm Springs. Areas to the east and west consist of vacant, undeveloped land within the San Bernardino Mountains

The project site occurs within Whitewater Canyon along the eastern bank of the Whitewater River. The site is undeveloped, composed of natural habitats, and is surrounded by the following land uses:

North: The area to the north of the site is composed almost entirely of undeveloped, vacant land within the San Bernardino Mountains. Several developed structures associated with historical and ongoing operations of the Whitewater Preserve Ranger Station and former Whitewater Trout Farm are supported in the immediate 600 feet.

East: Immediately to the east of the site are the Whitewater Preserve Ranger Station and Visitors' Center, trout ponds associated with the former Whitewater Trout Farm, paved parking areas, and Whitewater Canyon Road. Undeveloped, vacant land occurs beyond these structures within the San Bernardino Mountains.

South: The area to the south of the site is composed almost entirely of undeveloped, vacant land within the San Bernardino Mountains. The Whitewater River occurs immediately south of

the project site and Whitewater Canyon Road occurs approximately 1,400 feet to the southeast.

West: The area to the west of the site is composed entirely of undeveloped, vacant land within the San Bernardino Mountains. Immediately to the west of the site is the Whitewater River.

4.5 SOILS

The project site is located at the bottom of the Whitewater Canyon within the Whitewater River. The slopes of the canyon above the Whitewater River are steep, vertical walls while the bottom of the canyon is relatively flat and slopes from north to south. Generally, the Whitewater River, within the survey area, is composed of cobble and boulders with patches of loose sand and gravel. The U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey has not mapped the soils within the boundaries of the project site. Instead, data from the U.S. General Soil Map was acquired for the project site. Per the U.S. General Soil Map data, the project site is underlain by the following soil units: Urban Land – Tujunga – Soboba – Hanford and Tecopa – Rock Outcrop – Lithic Torriorthents.

4.6 HYDRIC SOILS LIST OF CALIFORNIA

ELMT reviewed the USDA NRCS Hydric Soils List of California in an effort to verify whether on-site soils are considered to be hydric[5]. It should be noted that lists of hydric soils along with soil survey maps provide off-site ancillary tools to assist in wetland determinations, but they are not a substitute for field investigations. The presence of hydric soils is initially investigated by comparing the mapped soil series for the site to the County list of hydric soils. According to the hydric soils list, Tujunga, Soboba, and Rock Outcrop have been listed as hydric in the Coachella Valley area.

4.7 NATIONAL WETLANDS INVENTORY

ELMT reviewed the U.S. Fish and Wildlife Service's (USFWS) National Wetland Inventory maps. The NWI maps riverine resources associated with the Whitewater River and tributaries, two (2) freshwater ponds associated with the existing preserve, and Freshwater Forested/Shrub Wetland resources associated with the Sonoran cottonwood willow riparian forest within the survey area. Refer to Appendix A, *Documentation*.

4.8 FLOOD ZONE

ELMT searched the Federal Emergency Management Act website for flood data for the project site. Based on Flood Insurance Rate Map No. 06065C0860G the project site is located within Zone X – areas determined to be outside the 0.2% annual chance floodplain. Refer to Appendix A, *Documentation*.

[5] A hydric soil is a soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part.

Section 5 Site Conditions

ELMT biologist Thomas J. McGill, Ph.D., Travis J. McGill, and Jacob H. Lloyd Davies conducted a field delineation on January 7, and April 2, 2020 to verify existing site conditions and document the extent of potential jurisdictional areas within the boundaries of the project site. The temperature during the site visit was in the 60 and 80s ° F with no cloud cover overhead. ELMT field staff encountered no limitations during the field delineation. Refer to Appendix B for representative photographs taken throughout the project site.

5.1 ON-SITE FEATURES

5.1.1 DRAINAGE FEATURES

One drainage feature, Whitewater River, and its associated floodplain were observed within the survey area. Whitewater River conveys flows in a north to south direction through the western portion of the survey area. Surface flows within the Whitewater River are provided by direct precipitation, and runoff from the adjacent mountains. Within the survey area, the Whitewater River is an earthen feature characterized by rocky substrate with a regular distribution of gravel and cobble. Four (4) plant communities were observed within the boundaries of the survey area during the survey: alluvial scrub, Sonoran cottonwood willow riparian forest, Sonoran creosote bush scrub, and grassland. The OHWM ranged from 6 to 20 feet in width, and was delineated using the following indicators: flow patterns; scour; and substrate characteristics. During the field investigation surface water was present that ranged in depth from 6 to 24 inches.

Within the survey area, the Whitewater River and its floodplain primarily support an alluvial scrub plant community with Sonoran cottonwood willow scrub on its banks. Plant species observed within this plant community include scalebroom (*Lepidospartum squamatum*), yerba santa (*Eriodictyon trichocalyx*), mulefat (*Baccharis salicifolia*), California buckwheat (*Eriogonum fasciculatum*), beavertail cactus (*Opuntia basilaris*), deerweed (*Acmispon glaber*), cheesebush (*Ambrosia salsola*), sweetbush (*Bebbia juncea*), California croton (*Croton californicus*), Wiggins' cholla (*Condea emoryi*), hairy parish viguiera (*Bahiopsis parishii*), brittlebush (*Encelia farinosa*), narrowleaf willow (*Salix exigua*), red willow (*Salix laevigata*), western sycamore (*Platanus racemosa*) and Fremont cottonwood (*Populus fremontii*).

5.1.2 WETLAND FEATURES

In order to qualify as a wetland, a feature must exhibit all three wetland parameters (i.e., vegetation, soils, and hydrology) described in the Corps Arid West Regional Supplement. Although evidence of hydrology (i.e., surface water) and hydric vegetation were present within the Whitewater River within the limits of disturbance, soils support big rocks/cobble, and no soil pits were able to be dug. No hydric soils are anticipated to occur. Therefore, no wetland features are anticipated to occur on the project site. Within the project site, water does not persist long enough to create anaerobic conditions within the soil.

Section 6 Findings

This report presents ELMT's best effort at determining the extent of jurisdictional features using the most up-to-date regulations, written policy, and guidance from the regulatory agencies. Please refer to the following sections for a summary of jurisdictional areas within the project site.

6.1 U.S. ARMY CORPS OF ENGINEERS DETERMINATION

6.1.1 WATERS OF THE UNITED STATES DETERMINATION

A total of 25.69 acre (2,827 linear feet) of Corps jurisdiction waters are located within the survey area. Refer to Table 1 for a summary of on-site jurisdictional areas, and Exhibit 4, *Jurisdictional Areas.* for an illustration of on-site Corps jurisdictional areas. Based on the proposed project design, a total of 0.42 acre (614 linear feet) of permanent impacts and 0.56 acre (818 linear feet) of temporary impacts to Corps jurisdictional waters will be impacted from project implementation. The acreage and liner footage of the on-site drainage features and anticipated impacts are provided in Table 1 and Exhibit 5, *Jurisdictional Impacts*. All temporary impacts will be restored to existing site conditions.

Table 1: Jurisdictional Areas and Impacts

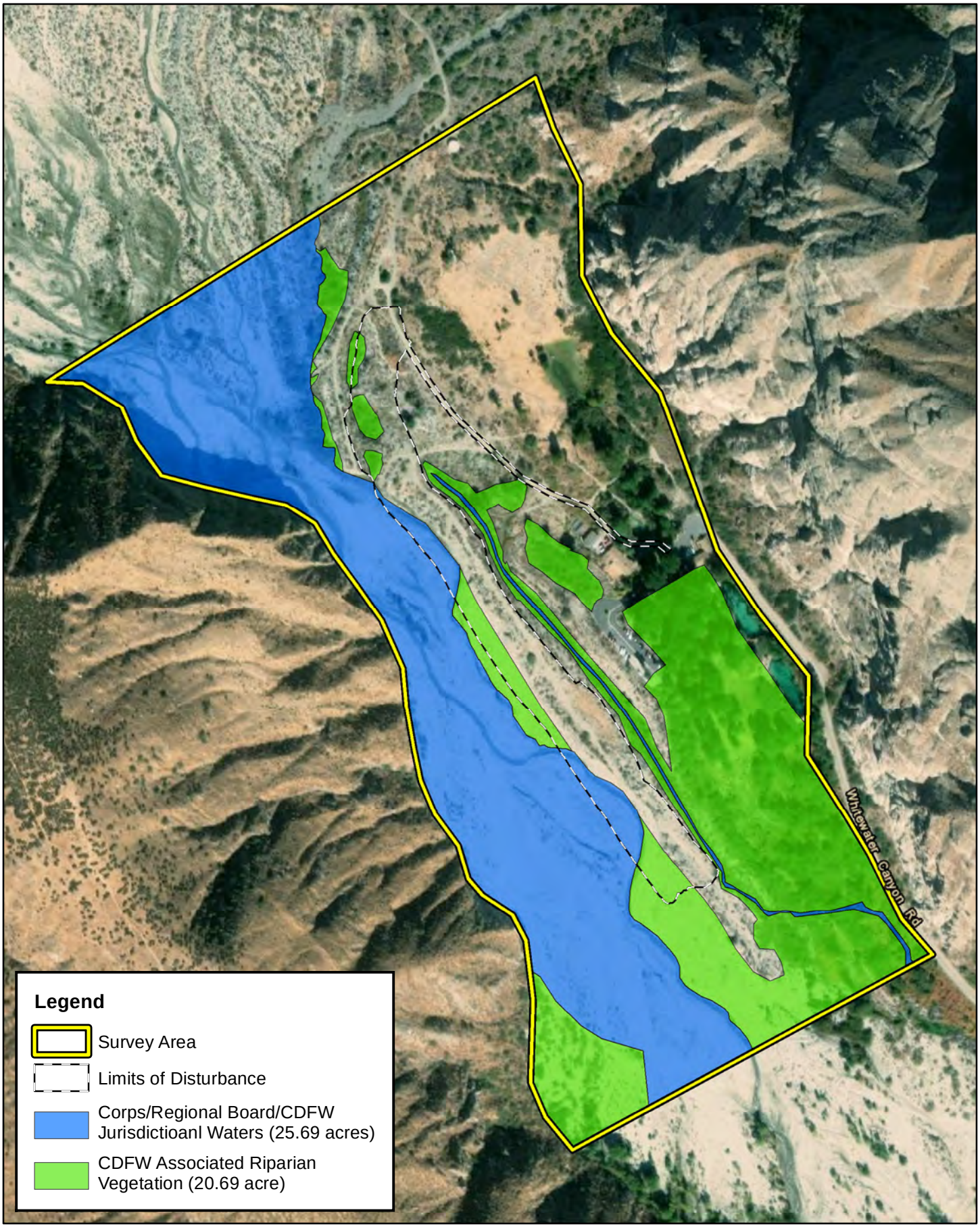
Jurisdictional Feature	Corps/Regional Board Non-Wetland Waters			CDFW Streambed		
	On-Site Jurisdiction acreage (linear feet)	**Jurisdictional Impacts (permanent)** acreage (linear feet)	**Jurisdictional Impacts (temporary)** acreage (linear feet)	**On-Site Jurisdiction** acreage (linear feet)	**Jurisdictional Impacts (permanent)** acreage (linear feet)	**Jurisdictional Impacts (temporary)** acreage (linear feet)
Whitewater River	25.69 (2,827)	0.42 (614)	0.56 (818)	46.38 (2,827)	1.01 (1,517)	1.33 (1,888)
TOTALS	**25.69 (2,827)**	**0.42 (614)**	**0.56 (818)**	**46.38 (2,827)**	**1.01 (1,517)**	**1.33 (1,888)**

6.2 REGIONAL WATER QUALITY CONTROL BOARD

No isolated or Rapanos conditions were observed within the boundaries of the survey area. Therefore, the Regional Board jurisdictional limit follows that of the Corps. A total of 25.69 acre (2,827 linear feet) of Regional Board jurisdiction waters are located within the survey area. Refer to Table 1 for a summary of on-site jurisdictional areas, and Exhibit 4, *Jurisdictional Areas.* for an illustration of on-site Regional Board jurisdictional areas. Based on the proposed project design, a total of 0.42 acre (614 linear feet) of permanent impacts and 0.56 acre (818 linear feet) of temporary impacts to Regional Board jurisdictional waters will be impacted from project implementation. The acreage and liner footage of the on-site drainage features and anticipated impacts are provided in Table 1 and Exhibit 5, *Jurisdictional Impacts*. All temporary impacts will be restored to existing site conditions.

6.3 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

The on-site drainage features exhibit characteristics consistent with CDFW's methodology and would be considered CDFW streambed. Therefore, approximately 46.38 acre (2,827 linear feet) of CDFW jurisdiction are located within boundaries of the survey area. Refer to Exhibit 4, *Jurisdictional Areas,* for an illustration of CDFW jurisdictional areas and anticipated impacts. Based on the proposed project design, a total of 1.01 acre (1,517 linear feet) of permanent impacts and 1.33 acre (1,888 linear feet) of temporary impacts to CDFW jurisdictional waters will be impacted from project implementation. The acreage and liner footage of the on-site drainage features and anticipated impacts are provided in Table 1 and Exhibit 5, *Jurisdictional Impacts*. All temporary impacts will be restored to existing site conditions.



WHITEWATER PRESERVE LEVEE REPLACEMENT PROJECT
DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS

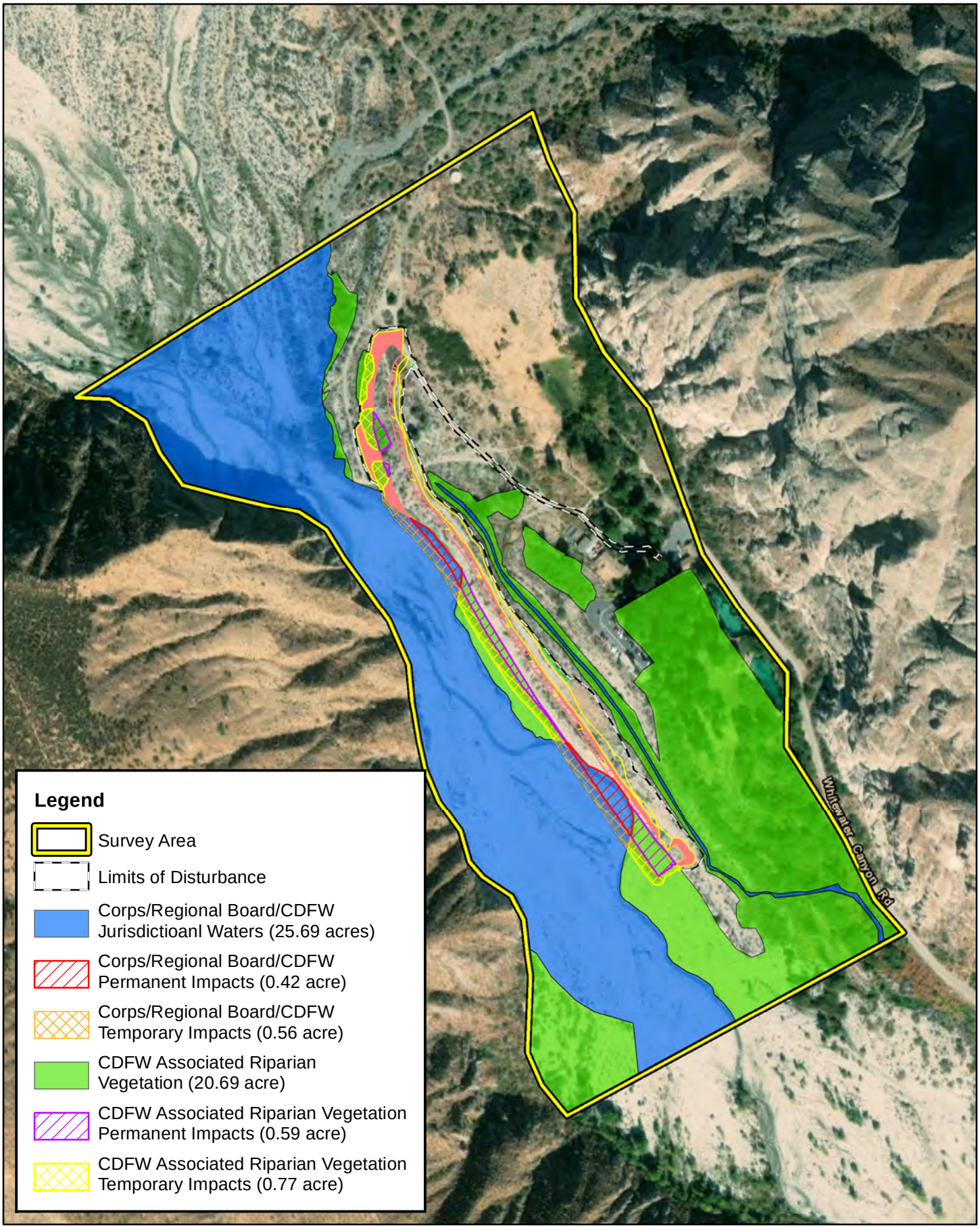
ELMT CONSULTING

0 250 500 1,000 Feet

Jurisdictional Areas

Source: ESRI Aerial Imagery, Riverside County

Exhibit 4



WHITEWATER PRESERVE LEVEE REPLACEMENT PROJECT
DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS

Jurisdictional Impacts

Source: ESRI Aerial Imagery, Riverside County

Exhibit 5

Section 7 Regulatory Approval Process

The following is a summary of the various permits, certifications, and agreements that may be necessary prior to construction and/or alteration within jurisdictional areas. Ultimately the regulatory agencies make the final determination of jurisdictional boundaries and permitting requirements.

7.1 U.S. ARMY CORPS OF ENGINEERS

The Corps regulates discharges of dredged or fill materials into waters of the United States, including wetlands, pursuant to Section 404 of the CWA. Therefore, any impacts to on-site jurisdictional areas will require a CWA Section 404 permit prior to project implementation. In order to qualify for the Corps Nationwide Permit (NWP) program, project impacts to "waters of the United States" typically need to be under a designated acre threshold (typically 0.5 acre). If project impacts exceed the acreage threshold then a Standard Individual Permit (IP) with the Corps would need to be processed. The NWPs are a streamlined process that already have supporting National Environmental Protection Agency (NEPA) compliance completed. If a project does not meet the requirements of the NWPs then IP will need to be processed, which requires its own NEPA compliance document.

Any impacts to the Whitewater River associated with the proposed project will likely qualify for NWP No. 31, *Maintenance of Existing Flood Control Facility*.

7.2 REGIONAL WATER QUALITY CONTROL BOARD

The Regional Board regulates discharges to surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act. Therefore, any impacts to on-site jurisdictional areas will require a CWA Section 401 Water Quality Certification from the San Diego Regional Board prior to project implementation. The application will require a processing fee which is based on the extent of project impacts. and the final CWA Section 401 Water Quality Certification will not be issued until all fees are paid to the Regional Board. It should also be noted that the Regional Board requires that California Environmental Quality Act (CEQA) compliance be obtained prior to issuance of the Section 401 Water Quality Certification.

7.3 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

Pursuant to Section 1602 of the California Fish and Game Code, the CDFW regulates any activity that will divert or obstruct the natural flow or alter the bed, channel, or bank (which may include associated biological resources) of a river or stream. Therefore, any impacts to the on-site jurisdictional areas will require a Section 1602 Streambed Alteration Agreement from the CDFW prior to project implementation. The notification will require a processing fee which is based on the term and cost of the proposed project. It should also be noted that the CDFW requires that the payment of the process fee be paid and CEQA compliance be obtained prior to the issuance of the final Section 1602 Streambed Alteration Agreement.

7.4 RECOMMENDATIONS

It is recommended that this delineation be forwarded to the regulatory agencies for their review and concurrence. The concurrence/receipt would solidify findings noted within this report.

Section 8 References

Brady, III, Roland H. and Kris Vyverberg. 2013. *Methods to Describe and Delineate Episodic Stream Processes on Arid Landscapes for Permitting Utility-Scale Solar Power Plants.* California Energy Commission, Publication Number: CEC-500-2014-013.

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Appendix A Documentation

U.S. Fish and Wildlife Service
National Wetlands Inventory

NWI Map



December 31, 2019

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Flood Hazard Layer FIRMette

FEMA

33°59'26.29"N

116°39'38.24"W



116°39'0.78"W

33°58'56.46"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 12/31/2019 at 2:56:50 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Appendix B Site Photographs



Photograph 1: Looking north from the southern portion of the levee replacement footprint.



Photograph 2: From the southern portion of the levee replacement footprint looking south along the existing earthenr levee.



Photograph 3: Looking north along the eroded earthern levee that will be replaced.



Photograph 4: Looking south along the existing earthern levee, where the new levee will be installed.



Photograph 5: View of the levee footprint.



Photograph 6: Looking south along the existing earthen levee on the eastern bank of the Whitewater River that will be replaced.



Photograph 7: View of the northern portion of the levee footprint.



Photograph 8: Looking south along the dirt access road along the existing earthen levee that will be replaced.



Photograph 9: Looking south at the northern extent of the levee footprint.



Photograph 10: View of the northern end of the levee footprint.

Appendix C Methodology

WATERS OF THE UNITED STATES

Since 1972, the Corps and EPA have jointly regulated the filling of waters of the United States, including wetlands, pursuant to Section 404 of the CWA. The Corps has regulatory authority over the discharge of dredged or fill material into the waters of the United States under Section 404 of the CWA. The Corps and EPA define "fill material" to include any "material placed in waters of the United States where the material has the effect of: (i) replacing any portion of a water of the United States with dry land; or (ii) changing the bottom elevation of any portion of the waters of the United States." Examples include, but are not limited to, the placement of sand, rock, clay, construction debris, wood chips, and "materials used to create any structure or infrastructure in the waters of the United States."

In April of 2020, the Corps and the EPA provided a new definition for *waters of the United States* [Federal Register, Vol. 85, No. 77 (April 21, 2020)] which encompass:

- The territorial seas and traditional navigable waters;
- Perennial and intermittent tributaries that contribute surface water flow to such waters;
- Certain lakes, ponds, and impoundments of jurisdictional waters; and
- Wetlands adjacent to other jurisdictional waters.

Additionally, the new definition identifies 12 categories of those waters and features that are excluded from the definition of ''waters of the United State, such as features that only contain water in direct response to rainfall (e.g., ephemeral features), groundwater, many ditches, prior converted cropland, and waste treatment systems. The final rule excludes from the definition of ''waters of the United States'' all waters or features not mentioned above. In addition to this general exclusion, the final rule specifically clarifies that waters of the United States do not include the following:

- Groundwater, including groundwater drained through subsurface drainage systems;
- Ephemeral features that flow only indirect response to precipitation, including ephemeral streams, swales, gullies, rills, and pools;
- Diffuse stormwater runoff and directional sheet flow over upland;
- Ditches that are not traditional navigable waters, tributaries, or that are not constructed in adjacent wetlands, subject to certain limitations;
- Prior converted cropland;
- Artificially irrigated areas that would revert to upland if artificial irrigation ceases;
- Artificial lakes and ponds that are not jurisdictional impoundments and that are constructed or excavated in upland or non-jurisdictional waters;

- Water-filled depressions constructed or excavated in upland or in non-jurisdictional waters incidental to mining or construction activity, and pits excavated in upland or in non jurisdictional waters for the purpose of obtaining fill, sand, or gravel;
- Stormwater control features constructed or excavated in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store stormwater runoff;
- Groundwater recharge, water reuse, and wastewater recycling structures constructed or excavated in upland or in non-jurisdictional waters; and
- Waste treatment systems.

WETLANDS

For this project location, Corps jurisdictional wetlands are delineated using the methods outlined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0* (Corps 2008). This document is one of a series of Regional Supplements to the Corps Wetland Delineation Manual (Corps 1987). The identification of wetlands is based on a three-parameter approach involving indicators of hydrophytic vegetation, hydric soil, and wetland hydrology. In order to be considered a wetland, an area must exhibit at least minimal characteristics within these three (3) parameters. The Regional Supplement presents wetland indicators, delineation guidance, and other information that is specific to the Arid West Region. In the field, vegetation, soils, and evidence of hydrology are examined using the methodology listed below and documented on Corps wetland data sheets, when applicable. It should be noted that both the Regional Board and the CDFW jurisdictional wetlands encompass those of the Corps.

Vegetation

Nearly 5,000 plant types in the United States may occur in wetlands. These plants, often referred to as hydrophytic vegetation, are listed in regional publications by the U.S. Fish and Wildlife Service (USFWS). In general, hydrophytic vegetation is present when the plant community is dominated by species that can tolerate prolonged inundation or soil saturation during growing season. Hydrophytic vegetation decisions are based on the assemblage of plant species growing on a site, rather than the presence or absence of particular indicator species. Vegetation strata are sampled separately when evaluating indicators of hydrophytic vegetation. A stratum for sampling purposes is defined as having 5 percent or more total plant cover. The following vegetation strata are recommended for use across the Arid West:

- *Tree Stratum:* Consists of woody plants 3 inches or more in diameter at breast height (DBH), regardless of height;
- *Sapling/shrub stratum:* Consists of woody plants less than 3 inches DBH, regardless of height;
- *Herb stratum:* Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size; and,

- *Woody vines:* Consists of all woody vines, regardless of size.

The following indicator is applied per the test method below.[1] Hydrophytic vegetation is present if any of the indicators are satisfied.

Indicator 1 – Dominance Test

Cover of vegetation is estimated and is ranked according to their dominance. Species that contribute to a cumulative total of 50% of the total dominant coverage, plus any species that comprise at least 20% (also known as the "50/20 rule") of the total dominant coverage, are recorded on a wetland data sheet. Wetland indicator status in California (Region 0) is assigned to each species using the *National Wetland Plant List, version 2.4.0* (Corps 2012). If greater than 50% of the dominant species from all strata were Obligate, Facultative-wetland, or Facultative species, the criteria for wetland vegetation is considered to be met. Plant indicator status categories are described below:

- *Obligate Wetland (OBL):* Plants that almost always occur in wetlands;
- *Facultative Wetland (FACW):* Plants that usually occur in wetlands, but may occur in non-wetlands;
- *Facultative (FAC):* Plants that occur in wetlands and non-wetlands;
- *Facultative Upland (FACU):* Plants that usually occur in non-wetlands, but may occur in wetlands; and,
- *Obligate Upland (UPL):* Plants that almost never occur in wetlands.

Hydrology

Wetland hydrology indicators are presented in four (4) groups, which include:

Group A – Observation of Surface Water or Saturated Soils

Group A is based on the direct observation of surface water or groundwater during the site visit.

Group B – Evidence of Recent Inundation

Group B consists of evidence that the site is subject to flooding or ponding, although it may not be inundated currently. These indicators include water marks, drift deposits, sediment deposits, and similar features.

Group C – Evidence of Recent Soil Saturation

[1] Although the Dominance Test is utilized in the majority of wetland delineations, other indicator tests may be employed. If one indicator of hydric soil and one primary or two secondary indicators of wetland hydrology are present, then the Prevalence Test (Indicator 2) may be performed. If the plant community satisfies the Prevalence Test, then the vegetation is hydric. If the Prevalence Test fails, then the Morphological Adaptation Test may be performed, where the delineator analyzes the vegetation for potential morphological features.

Group C consists of indirect evidence that the soil was saturated recently. Some of these indicators, such as oxidized rhizospheres surrounding living roots and the presence of reduced iron or sulfur in the soil profile, indicate that the soil has been saturated for an extended period.

Group D – Evidence from Other Site Conditions or Data

Group D consists of vegetation and soil features that indicate contemporary rather than historical wet conditions, and include shallow aquitard and the FAC-neutral test.

If wetland vegetation criteria is met, the presence of wetland hydrology is evaluated at each transect by recording the extent of observed surface flows, depth of inundation, depth to saturated soils, and depth to free water in the soil test pits. The lateral extent of the hydrology indicators are used as a guide for locating soil pits for evaluation of hydric soils and jurisdictional areas. In portions of the stream where the flow is divided by multiple channels with intermediate sand bars, the entire area between the channels is considered within the OHWM and the wetland hydrology indicator is considered met for the entire area.

Soils

A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper 16-20 inches.[2] The concept of hydric soils includes soils developed under sufficiently wet conditions to support the growth and regeneration of hydrophytic vegetation. Soils that are sufficiently wet because of artificial measures are included in the concept of hydric soils. It should also be noted that the limits of wetland hydrology indicators are used as a guide for locating soil pits. If any hydric soil features are located, progressive pits are dug moving laterally away from the active channel until hydric features are no longer present within the top 20 inches of the soil profile.

Once in the field, soil characteristics are verified by digging soil pits along each transect to an excavation depth of 20 inches; in areas of high sediment deposition, soil pit depth may be increased. Soil pit locations are usually placed within the drainage invert or within adjoining vegetation. At each soil pit, the soil texture and color are recorded by comparison with standard plates within a *Munsell Soil Chart* (2009). Munsell Soil Charts aid in designating color labels to soils, based by degrees of three simple variables – hue, value, and chroma. Any indicators of hydric soils, such as organic accumulation, iron reduction, translocation, and accumulation, and sulfate reduction, are also recorded.

Hydric soil indicators are present in three groups, which include:

All Soils

"All soils" refers to soils with any United States Department of Agriculture (USDA) soil texture. Hydric soil indicators within this group include histosol, histic epipedon, black histic, hydrogen sulfide, stratified layers, 1 cm muck, depleted below dark surface, and thick dark surface.

[2] According to the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0 (Corps 2008), growing season dates are determined through on-site observations of the following indicators of biological activity in a given year: (1) above-ground growth and development of vascular plants, and/or (2) soil temperature.

Sandy Soils

"Sandy soils" refers to soil materials with a USDA soil texture of loamy fine sand and coarser. Hydric soil indicators within this group include sandy mucky mineral, sandy gleyed matrix, sandy redox, and stripped matrix.

Loamy and Clayey Soils

"Loamy and clayey soils" refers to soil materials with a USDA soil texture of loamy very fine sand and finer. Hydric soil indicators within this group include loamy mucky mineral, loamy gleyed matrix, depleted matrix, redox dark surface, depleted dark surface, redox depressions, and vernal pools.

SWANCC WATERS

The term "isolated waters" is generally applied to waters/wetlands that are not connected by surface water to a river, lake, ocean, or other body of water. In the presence of isolated conditions, the Regional Board and CDFW take jurisdiction through the application of the OHWM/streambed and/or the 3 parameter wetland methodology utilized by the Corps.

RAPANOS WATERS

The Corps will assert jurisdiction over non-navigable, not relatively permanent tributaries and their adjacent wetlands where such tributaries and wetlands have a significant nexus to a Traditional Navigable Water (TNW). The flow characteristics and functions of the tributary itself, in combination with the functions performed by any wetlands adjacent to the tributary, determine if these waters/wetlands significantly affect the chemical, physical, and biological integrity of the TNWs. Factors considered in the significant nexus evaluation include:

(1) The consideration of hydrologic factors including, but not limited to, the following:

- volume, duration, and frequency of flow, including consideration of certain physical characteristics of the tributary
- proximity to the TNW
- size of the watershed average annual rainfall
- average annual winter snow pack

(2) The consideration of ecologic factors including, but not limited to, the following:

- the ability for tributaries to carry pollutants and flood waters to TNWs
- the ability of a tributary to provide aquatic habitat that supports a TNW
- the ability of wetlands to trap and filter pollutants or store flood waters
- maintenance of water quality