

Initial Study PREA-2021-00089, PREA-2021-00099

Baker Travel Stop and Mobile Home Park

APN: 0544-471-11, 0544-472-03

April 2024

Appendix B: Biological Resources Supporting Information

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Initial Study PREA-2021-00089, PREA-2021-00099

Baker Travel Stop and Mobile Home Park

APN: 0544-471-11, 0544-472-03

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B-1: Habitat and Jurisdictional Assessment

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April 14, 2023

FIRST CARBON SOLUTIONS

Attention: *Jason Brandman*
250 Commerce, Suite 250
Irvine, California 92602

SUBJECT: Habitat and Jurisdictional Assessment Update for the Proposed Travel Stop and Live-Work Housing Park Located in the Community of Baker, San Bernardino County, California

Introduction

This report contains the findings of ELMT Consulting's (ELMT) habitat and jurisdictional assessment for the proposed Travel Stop and Live-Work Housing Park project (project site or site) located in Baker, San Bernardino County, California. A habitat assessment was conducted by ELMT biologist Jacob H. Lloyd Davies on October 6, 2021, to document baseline conditions and assess the potential for special-status¹ plant and wildlife species to occur within the proposed project site that could pose a constraint to implementation of the proposed project. Mr. Lloyd Davies conducted a follow-up survey on January 29, 2023, to verify existing conditions. This report provides an in-depth assessment of the suitability of the on-site habitat to support special-status plant and wildlife species identified by the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDDB) and other electronic databases as potentially occurring in the vicinity of the project.

The site was also evaluated for its potential to support natural drainage features, ponded areas, and/or water bodies that have the potential to fall under the regulatory authority of the of the United States Army Corps of Engineers (Corps), Regional Water Quality Control Board (Regional Board), and/or California Department of Fish and Wildlife (CDFW).

Project Location

The project site is generally located north and west of Interstate 15, east of State Route 127, and south of the Silurian Hills in Baker, San Bernardino County, California. The project site is depicted on the Baker quadrangle of the United States Geological Survey's (USGS) 7.5-minute topographic map within Section 29 of Township 14 North, Range 9 East. Specifically, the project site is composed of two disjunct parcels that are bifurcated by Baker Boulevard and are located south of Silver Lane and east of Caltrans Avenue within Assessor Parcel Numbers 0544-471-11 and 0544-472-03. Refer to Exhibits 1- 3 in Attachment A.

¹ As used in this report, "special-status" refers to plant and wildlife species that are federally, State, and MSHCP listed, proposed, or candidates; plant species that have been designated with a California Native Plant Society Rare Plant Rank; wildlife species that are designated by the CDFW as fully protected, species of special concern, or watch list species; and specially protected natural vegetation communities as designated by the CDFW.

Project Description

The project proposes the development of a truck stop and live-work housing park (mobile home park) on approximately 19.82 and 2.16 acres, respectively.

Methodology

A literature review and records search were 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 to the literature review, a general habitat assessment or field investigation of the project site was conducted to document existing conditions and assess the potential for special-status biological resources to occur within the project site.

Literature Review

Prior to conducting the field investigation, 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's QuickView Tool in the Biogeographic Information and Observation System (BIOS), CNDDDB Rarefind 5, the California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California, Calflora Database, compendia of special-status species published by CDFW, and the United States Fish and Wildlife Service (USFWS) species listings.

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 within 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 (1985-2021);
- United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS), Soil Survey²;
- USFWS Critical Habitat designations for Threatened and Endangered Species;
- USFWS Endangered Species Profiles; and
- USFWS National Wetlands Inventory (NWI).

The literature review provided a baseline from which to inventory the biological resources potentially occurring within the project site. The CNDDDB database was used, in conjunction with ArcGIS software, to locate the nearest recorded occurrences of special-status species and determine the distance from the project site.

2 A soil series is defined as a group of soils with similar profiles developed from similar parent materials under comparable climatic and vegetation conditions. These profiles include major horizons with similar thickness, arrangement, and other important characteristics, which may promote favorable conditions for certain biological resources.

Field Investigation

Following the literature review, biologist Jacob H. Lloyd Davies inventoried and evaluated the condition of the habitat within the project site on October 6, 2021 and January 29, 2023. Plant communities and land cover types identified on aerial photographs during the literature review were verified by walking meandering transects throughout the project site. In addition, aerial photography was reviewed prior to the site investigation to locate potential natural corridors and linkages that may support the movement of wildlife through the area. These areas identified on aerial photography were then walked during the field investigation.

Soil Series Assessment

On-site and adjoining soils were researched prior to the field investigation using the USDA NRCS Soil Survey for the Mojave Desert, Northeast Part. In addition, a review of the local geological conditions and historical aerial photographs was conducted to assess the ecological changes that the project site have undergone.

Plant Communities

Plant communities were mapped using 7.5-minute USGS topographic base maps and aerial photography. The plant communities were classified in accordance with Sawyer, Keeler-Wolf and Evens (2009), delineated on an aerial photograph, and then digitized into GIS Arcview. The Arcview application was used to compute the area of each plant community and/or land cover type in acres.

Plants

Common plant species observed during the field investigation 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).

Wildlife

Wildlife species detected during the field investigation by sight, calls, tracks, scat, or other sign were recorded during surveys in a field notebook. Field guides 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 well standardized, scientific names are provided immediately following common names in this report (first reference only).

Jurisdictional Drainages and Wetlands

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 United States 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. 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 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 project site.

Topography and Soils

The site is relatively flat with no areas of significant topographic relief. On-site elevation ranges from approximately 1,000 to 1,027 feet above mean sea level and generally slopes from northeast to southwest. A query of the NRCS USDA Web Soil Survey determined that the project site is located in an area that has not been mapped. Soils underlying the general vicinity of the site are reported to consist primarily of Rillito, Gunsight, and Playas.

Existing Site Conditions

The proposed project site is composed of two disjunct parcels (northern and southern) in a primarily undeveloped area in the eastern outskirts of the community of Baker. The two parcels are transected by Baker Boulevard, which runs southwest to northeast between them. The northern parcel is bounded by Silver Land to the north with commercial and residential development beyond, and commercial development to the west. The southern parcel is bounded by undeveloped, vacant land to the northeast and southwest, and Interstate 15 to the southeast. The project itself is largely undeveloped with the exception of the eastern and western boundaries of the northeast parcel and the southeast boundary of the southern parcel.

Vegetation

The project site supports one (1) plant community, creosote bush scrub, and two (2) land cover types that would be classified as disturbed and developed (refer to Exhibit 4, *Vegetation*, in Attachment A). Refer to Attachment C, *Site Photographs*, for representative site photographs.

Creosote Bush Scrub

A creosote bush scrub plant community (*Larrea tridentata* alliance) occurs in a narrow swathe in the northern portion of the site and throughout most of the southern portion of the site. Vegetative density within this plant community varies according to proximity to routine disturbance, primarily caused by vehicular access. This plant community is dominated by creosote (*Larrea tridentata*) with an understory of low-growing perennials and early successional species. Other plant species observed in this plant community include Arabian grass (*Schismus arabicus*), fringed amaranth (*Amaranthus fimbriatus*), spineflower (*Chorizanthe* spp.), allscale saltbush (*Atriplex polycarpa*), desert holly (*Atriplex hymenelytra*), cheesebush (*Ambrosia salsola*), burrobrush (*Ambrosia dumosa*), slender buckwheat (*Eriogonum gracile*), Thurber’s buckwheat (*Eriogonum thurberi*), devil’s lettuce (*Amsinckia tessellata*), pectocarya (*Pectocarya* spp.), sandmat (*Euphorbia micromera*), hopsage (*Grayia spinosa*), leaved cambess (*Oligomeris linifolia*), Mojave cottonthorn (*Tetradymia stenolepsis*).

Per CDFW, Natural Communities with ranks of S1-S3 are considered Sensitive Natural Communities and will need to be addressed in the environmental review processes of CEQA and its equivalents. The onsite creosote bush scrub plant community would fall under the general *Larrea tridentata* alliance which has a Global Rank of 5 and a State Rank of 5 (G5, S5). The onsite creosote bush scrub plant community does not have a dominance of any of the other desert native plant species (i.e, *Psoralea argyrea*, *Senna armata*, *Pleuraphis rigida*, *Fouquieria splendens*, or *Lycium andersonii*) that would make it qualify as a Sensitive Natural Community. As a result, the onsite creosote bush scrub plant community does not qualify as a CDFW Sensitive Natural Community; no further review is necessary.

Disturbed

Disturbed areas are present in the middle and eastern sections of the northern portion of the project site, and along the northern boundary and access roads in the southern parcel. Disturbed areas observed within the project site are barren or support minimal vegetative cover. Plant species observed within disturbed portions of the site included creosote, Arabian grass, allscale saltbush, buckwheats, devil's lettuce, and sandmat.

Developed

The western boundary and eastern portion of the northern parcel support developed land in the form of compacted gravel trailer parking and turnabout areas. In addition, the southern parcel supports developed land beneath several billboards.

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 as a general reference and is limited by the season, time of day, and weather conditions in which the field investigation was conducted. Wildlife detections were based on calls, songs, scat, tracks, burrows, and direct observation. The project site provides limited habitat for wildlife species except those adapted to a high degree of anthropogenic disturbances and development.

Fish

No fish or hydrogeomorphic features (e.g., creeks, ponds, lakes, reservoirs) with frequent sources of water that would support populations of fish were observed on or within the vicinity of the project site. Therefore, no fish are expected to occur and are presumed absent from the project site.

Amphibians

No amphibians or hydrogeomorphic features (e.g., creeks, ponds, lakes, reservoirs) with frequent sources of water that would support populations of amphibians were observed on or within the vicinity of the project site. Therefore, no amphibians are expected to occur and are presumed absent from the project site.

Reptiles

The project site and surrounding area provide suitable foraging and cover habitat for reptile species adapted to conditions in the Mojave Desert and routine anthropogenic disturbance. No reptiles were observed during the field investigation; however, this is likely due to seasonal conditions. Reptilian species observed during

the 2021 field investigation include great basin fence lizard (*Sceloporus occidentalis longipes*), and great basin whiptail (*Aspidoscelis tigris tigris*). Common reptilian species that could be expected to occur on-site include western side-blotched lizard (*Uta stansburiana elegans*), western zebra-tailed lizard (*Callisaurus draconoides rhodostictus*), desert horned lizard (*Phrynosoma platyrhinos calidarum*), and northern Mojave rattlesnake (*Crotalus scutulatus scutulatus*).

Birds

The project site and surrounding area provide suitable foraging and nesting habitat for bird species adapted to conditions in the Mojave Desert and routine anthropogenic disturbance. Bird species detected during the field investigation include common raven (*Corvus corax*), white-crowned sparrow (*Zonotrichia leucophrys*), and black-throated sparrow (*Amphispiza bilineata*), house sparrow (*Passer domesticus*), and European starling (*Sturnus vulgaris*). Other common avian species that could be expected to occur on-site include great-tailed grackle (*Quiscalus mexicanus*), lesser goldfinch (*Spinus psaltria*), house finch (*Haemorhous mexicanus*), mourning dove (*Zenaidura macroura*), and turkey vulture (*Cathartes aura*).

Mammals

The project site and surrounding area provide suitable marginal foraging and cover habitat for mammalian species adapted to conditions in the Mojave Desert and routine anthropogenic disturbance. Mammalian species detected during the field investigation include coyote (*Canis latrans*). Common mammalian species that could be expected to occur on-site include black-tailed jackrabbit (*Lepus californicus*) and desert cottontail (*Sylvilagus audubonii*). No bat species are expected to roost on-site due to the lack of suitable roosting opportunities.

Nesting Birds

No active nests or birds displaying nesting behavior were observed during the field survey, which was conducted during breeding season. The project site and surrounding area provides foraging and nesting habitat for year-round and seasonal avian residents, as well as migrating songbirds that could occur in the area. In addition, the undeveloped portions of the project site have the potential to provide suitable nesting opportunities for birds that nest on the open ground and those acclimated to routine disturbances (e.g., killdeer (*Charadrius vociferans*)). The billboards along the southern boundary of the project site provide suitable nesting opportunities for raptors; however, foraging habitat is limited for large raptors.

Nesting birds are protected pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (Sections 3503, 3503.5, 3511, and 3513 prohibit the take, possession, or destruction of birds, their nests or eggs). If construction occurs between February 1st and August 31st, a pre-construction clearance survey for nesting birds should be conducted within three (3) days of the start of any vegetation removal or ground disturbing activities to ensure that no nesting birds will be disturbed during construction.

Migratory Corridors and Linkages

Habitat linkages provide connections 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 still inadequate for others. Wildlife corridors are features that allow for the dispersal, seasonal migration, breeding, and foraging of a variety of wildlife species. Additionally, open space can provide a buffer against both human disturbance and natural fluctuations in resources.

According to the San Bernardino County General Plan, the project site has not been identified as occurring within a Wildlife Corridor or Linkage. The proposed project will be confined to existing areas that have been heavily disturbed and are isolated from regional wildlife corridors and linkages. In addition, there are no riparian corridors, creeks, or useful patches of steppingstone habitat (natural areas) within or connecting the site to a recognized wildlife corridor or linkage. As such, implementation of the proposed project is not expected to impact wildlife movement opportunities. Therefore, impacts to wildlife corridors or linkages are not expected to occur.

Jurisdictional Areas

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Branch regulates discharge of dredge or fill materials into “waters of the United States” pursuant to Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Of the State agencies, the CDFW regulates alterations to streambed and bank under Fish and Wildlife Code Sections 1600 et seq., and the Regional Board regulates discharges into surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act.

The site was carefully assessed the site for depressions, inundation, presence of hydrophytic vegetation, staining, cracked soil, ponding, and indicators of active surface flow and corresponding 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. Suspected jurisdictional areas were checked for the presence of definable channels, soils, and hydrology.

The USFWS NWI and the USGS National Hydrography Dataset were reviewed to determine if any blueline streams or riverine resources have been documented within or immediately surrounding the project site. No blueline streams or riverine resources were documented onsite during the literature review. However, during the field investigation, three (3) unnamed ephemeral drainage features (Drainages 1, 2, and 3) were observed on the project site during the field delineation. Drainage 1 generally flows northeast to southwest across the northern boundary of the site and Drainages 2 and 3 generally flow east to west until converging with Drainage 1 off-site. These features are located approximately 1.2 miles east of the final stretches of the Mojave River. On-site drainages only convey surface flow in direct response to precipitation and do not support riparian vegetation. The on-site drainage features, after flowing off-site, converge with the final length of the Mojave River between Soda Lake and Silver Lake. Therefore, Drainages 1, 2, and 3 would qualify as waters of the United States under the jurisdiction of the Corps, and would qualify as “waters of the State” under the regulatory authority of the Regional Board and CDFW. A Delineation of State and Federal Jurisdictional Waters report was prepared under separate cover. Table 1 below provides a summary of the onsite jurisdictional areas. Also refer to Exhibit 6, *Jurisdictional Areas*, in Attachment A.

Table 1: On-Site Jurisdictional Areas

Jurisdictional Feature	Stream Flow	Cowardin Class	Class of Aquatic Resource	Corps/Regional Board Waters of the United States		CDFW Streambed	
				On-Site Jurisdiction		On-Site Jurisdictional Streambed	
				Acreage	Linear Feet	Acreage	Linear Feet
Drainage 1	Ephemeral	Riverine	Non-Section 10 Non-Wetland	0.08	1,531	0.08	1,531
Drainage 2	Ephemeral	Riverine	Non-Section 10 Non-Wetland	0.07	1,483	0.07	1,483
Drainage 3	Ephemeral	Riverine	Non-Section 10 Non-Wetland	0.02	676	0.02	676
TOTALS				0.17	3,690	0.17	3,690

Any impacts to on-site jurisdictional areas will require a Corps Clean Water Act Section 404 Permit, Regional Board CWA Section 401 Water Quality Certification, and a CDFW Section 1602 Lake or Streambed Alteration Agreement prior to project implementation.

Special-Status Biological Resources

The CNDDDB Rarefind 5 and the CNPS Electronic Inventory of Rare and Endangered Vascular Plants of California were queried for reported locations of special-status plant and wildlife species as well as special-status natural plant communities in the Baker USGS 7.5-minute quadrangle. 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 special-status plant four (4) species and five (5) special-status wildlife species as having the potential to occur within the Baker 7.5-minute quadrangle. No special-status plant communities have been recorded within the Baker USGS 7.5-minute quadrangle. 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 Attachment D: *Potentially Occurring Special-Status Biological Resources*.

Special-Status Plants

According to the CNDDDB and CNPS, four (4) special-status plant species have been recorded in the Baker quadrangle (refer to Attachment D). No special-status plant species were observed on-site during the habitat assessment. Based on habitat requirements for specific special-status plant species, the availability and quality of on-site habitats, and isolation of the project site, it was determined that the project site has a low potential to support Borrego milk-vetch (*Astragalus lentiginosus* var. *borreganus*) and winged cryptantha (*Johnstonella holoptera*). The project site was determined not provide suitable habitat for any of the other special-status plant species known to occur in the area and are presumed to be absent from the project site. No focused surveys are recommended.

Borrego milk-vetch and winged cryptantha are both CNPS list 4.3 plant species.

CNPS Rare Plant Rank 4 plant species are plants of limited distribution (a watch list species), and the 0.3 ranking mean they are not very threatened in California. In an effort to increase coverage for unlisted but regionally sensitive plants under the California Environmental Quality Act (CEQA), the California Native Plant Society began publishing sensitivity rankings for special-status plant species. Further, these species are not regulated under the federal or state Endangered Species Act. These species, if present, would not rise to the level significance, and no mitigation would be required. No further review is needed.

Special-Status Wildlife

According to the CNDDDB, five (5) special-status wildlife species have been reported in the Baker quadrangle (refer to Attachment C). No special-status wildlife species were observed on-site during the field investigation. Due to the site's isolation (mainly by Interstate 15, Baker Boulevard, and existing developments) from surrounding undeveloped areas, the proposed project site does not provide suitable habitat for special-status species known to occur in the area. Based on habitat requirements for specific species, the availability and quality of on-site habitats, and isolation of the project site, it was determined that the proposed project site does not have potential to support any of the special-status wildlife species known to occur in the area and all are presumed to be absent from the project site. No focused surveys are recommended.

Additionally, in accordance with the San Bernardino County Biotic Resources Overlay Map, it should be noted that the project site is located within areas mapped as supporting habitat of special concern for burrowing owl and desert tortoise - sparse population. The following provides a discussion of the suitability of the habitat on the project site to support these two species.

Burrowing Owl

The burrowing owl is currently listed as a California Species of Special Concern. It is a grassland specialist distributed throughout western North America where it occupies open areas with short vegetation and bare ground within shrub, desert, and grassland environments. Burrowing owls use a wide variety of arid and semi-arid environments with well-drained, level to gently-sloping areas characterized by sparse vegetation and bare ground (Haug and Didiuk 1993; Dechant et al. 1999). Burrowing owls are dependent upon the presence of burrowing mammals (such as ground squirrels) whose burrows are used for roosting and nesting (Haug and Didiuk 1993). The presence or absence of colonial mammal burrows is often a major factor that limits the presence or absence of burrowing owls. Where mammal burrows are scarce, burrowing owls have been found occupying man-made cavities, such as buried and non-functioning drain pipes, stand-pipes, and dry culverts. Burrowing mammals may burrow beneath rocks and debris or large, heavy objects such as abandoned cars, concrete blocks, or concrete pads. They also require open vegetation allowing line-of-sight observation of the surrounding habitat to forage as well as watch for predators.

No burrowing owls or recent sign (i.e., pellets, feathers, castings, or whitewash) was observed during the field investigation. Portions of the project site are unvegetated and/or vegetated with a variety of low-growing plant species that allow for line-of-sight observation favored by burrowing owls. However, no suitable burrows (>4 inches) for roosting and nesting were observed within or near site boundaries. In addition, the site is bounded by electrical poles that provide perching opportunities for large raptors (i.e.

red-tailed hawk [*Buteo jamaicensis*]) that prey on burrowing owls. Therefore, the project site was determined not to have potential to support burrowing owl. No further surveys are recommended.

Desert Tortoise

The Mojave population of the desert tortoise inhabits areas north and west of the Colorado River in the Mojave Desert of California, Nevada, Arizona, and southwestern Utah, and in the Sonoran Desert in California. Throughout the majority of the Mojave Desert, desert tortoises occur most commonly on gentle sloping soils characterized by an even mix of sand and gravel and sparsely vegetated low-growing vegetation where there is abundant inter-shrub space. Typical habitat for the Mojave desert tortoise has been characterized as Mojavean desert scrub below 5,500 feet in elevation with a high diversity of perennial and ephemeral plants. The dominant shrub commonly associated with desert tortoise habitat is creosote bush; however, other shrubs including burrobush (*Ambrosia dumosa*), Mojave yucca, cheesebush (*Ambrosia salsola*), and Mojave prickly pear (*Opuntia mojaviensis*) also provide suitable habitat. The desert tortoise spends 95 percent of its life underground and will opportunistically utilize burrows of various lengths, deep caves, rock and caliche crevices, or overhangs for cover. Therefore, a moderately friable soil is required to allow for burrow construction and ensure that burrows do not collapse.

No live desert tortoises, suitable burrows, or other sign were observed during the field investigation. The Creosote bush scrub plant community supported by the project site has a low potential to provide suitable habitat for desert tortoise; however, the contiguous open space surrounding the site is fragmented and thoroughly isolated from other suitable open space nearby. As such, the project site was determined not to have potential to support desert tortoise. No further surveys are recommended.

Critical Habitats

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 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 Clean Water Act Permit from the United States Army Corps of Engineers). If there is a federal nexus, then the federal agency that is responsible for providing the funding or permit would consult with the USFWS.

The project site is not located within federally designated Critical Habitat. The nearest designated Critical Habitat is located approximately 3.71 miles east of the project site for desert tortoise (*Gopherus agassizii*) (refer to Exhibit 6, *Critical Habitat*, in Attachment A). Therefore, the loss or adverse modification of Critical Habitat from site development will not occur and consultation with the USFWS for impacts to Critical Habitat will not be required for implementation of the proposed project.

Local Policies and Ordinances

San Bernardino County Development Code

Section 88.01.060 of the County of San Bernardino Development Code provides regulations for the removal or harvesting of specified desert native plants in order to preserve and protect the plants and to provide for the conservation and wise use of desert resources. The provisions are intended to coincide with the Desert Native Plants Act (Food and Agricultural Code Section 8001 et seq.) and the State Department of Food and Agriculture to implement and enforce the Act.

Pursuant to Section 88.01.060 of the Development Code, the following desert native plants or any part of them, except the fruit, shall not be removed except under a Tree or Plant Removal Permit:

- 1) The following desert native plants with stems two inches or greater in diameter or six feet or greater in height:
 - (A) *Dalea spinosa* (smoke tree)
 - (B) All species of the genus *Prosopis* (mesquites)
- 2) All species of the family *Agavaceae* (century plants, nolinās, yuccas)
- 3) Creosote Rings, 10 feet or greater in diameter
- 4) All Joshua trees (*Yucca brevifolia*)
- 5) Any part of any of the following species, whether living or dead:
 - (A) *Olneya tesota* (desert ironwood)
 - (B) All species of the genus *Prosopis* (mesquites)
 - (C) All species of the genus *Cercidium* (palos verdes)

Based on the results of the field investigation, none of the aforementioned desert native plant species that are protected by the San Bernardino County Development Code were observed onsite. A Desert Native Plant permit will not be required from San Bernardino County.

Conclusion

Based literature review and field survey, and existing site conditions discussed in this report, implementation of the project will have no significant impacts on federally or State listed species known to occur in the general vicinity of the project site. Additionally, the project will have no effect on designated Critical Habitat or regional wildlife corridors/linkage because none exists within the area. With completion of a pre-construction nesting bird clearance survey, no impacts to year-round, seasonal, or special-status avian residents will occur from implementation of the proposed project. Further, in order to mitigate for impacts to jurisdictional drainages, regulatory approvals will be required through the Corps, Regional Board, and a CDFW prior to project implementation.

Recommendations

Migratory Bird Treaty Act and Fish and Game Code

Nesting birds are protected pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (Sections 3503, 3503.5, 3511, and 3513 prohibit the take, possession, or destruction of birds, their nests or eggs). In order to protect migratory bird species, a nesting bird clearance survey should be conducted prior to any ground disturbance or vegetation removal activities that may disrupt the birds during

the nesting season.

If construction occurs between February 1st and August 31st, a pre-construction clearance survey for nesting birds should be conducted within three (3) days of the start of any vegetation removal or ground disturbing activities to ensure that no nesting birds will be disturbed during construction. 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. If an active avian nest is discovered during the pre-construction clearance survey, construction activities should stay outside of a no-disturbance buffer. The size of the no-disturbance buffer will be determined by the wildlife biologist and will depend on the level of noise and/or surrounding anthropogenic disturbances, line of sight between the nest and the construction activity, type and duration of construction activity, ambient noise, species habituation, and topographical barriers. These factors will be evaluated on a case-by-case basis when developing buffer distances. Limits of construction to avoid an active nest will be established in the field with flagging, fencing, or other appropriate barriers; and construction personnel will be instructed on the sensitivity of nest areas. A biological monitor should be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, construction activities within the buffer area can occur.

Jurisdictional Waters

Three riverine resources were identified within the southern parcel during the initial field investigation. Impacts to jurisdictional waters will require authorization from the corresponding regulatory agency. Authorizations may include, but are not limited to a Section 404 permit from the USACE or Approved Jurisdictional Determination, a Section 401 Water Quality Certification or Report of Waste Discharge from the Regional Board, and/or a Section 1602 Streambed Alteration Agreement from CDFW.

Please do not hesitate to contact Tom McGill at (951) 285-6014 or tmcgill@elmtconsulting.com or Travis McGill at (909) 816-1646 or travismcgill@elmtconsulting.com should you have any questions this report.

Sincerely,



Thomas J. McGill, Ph.D.
Managing Director



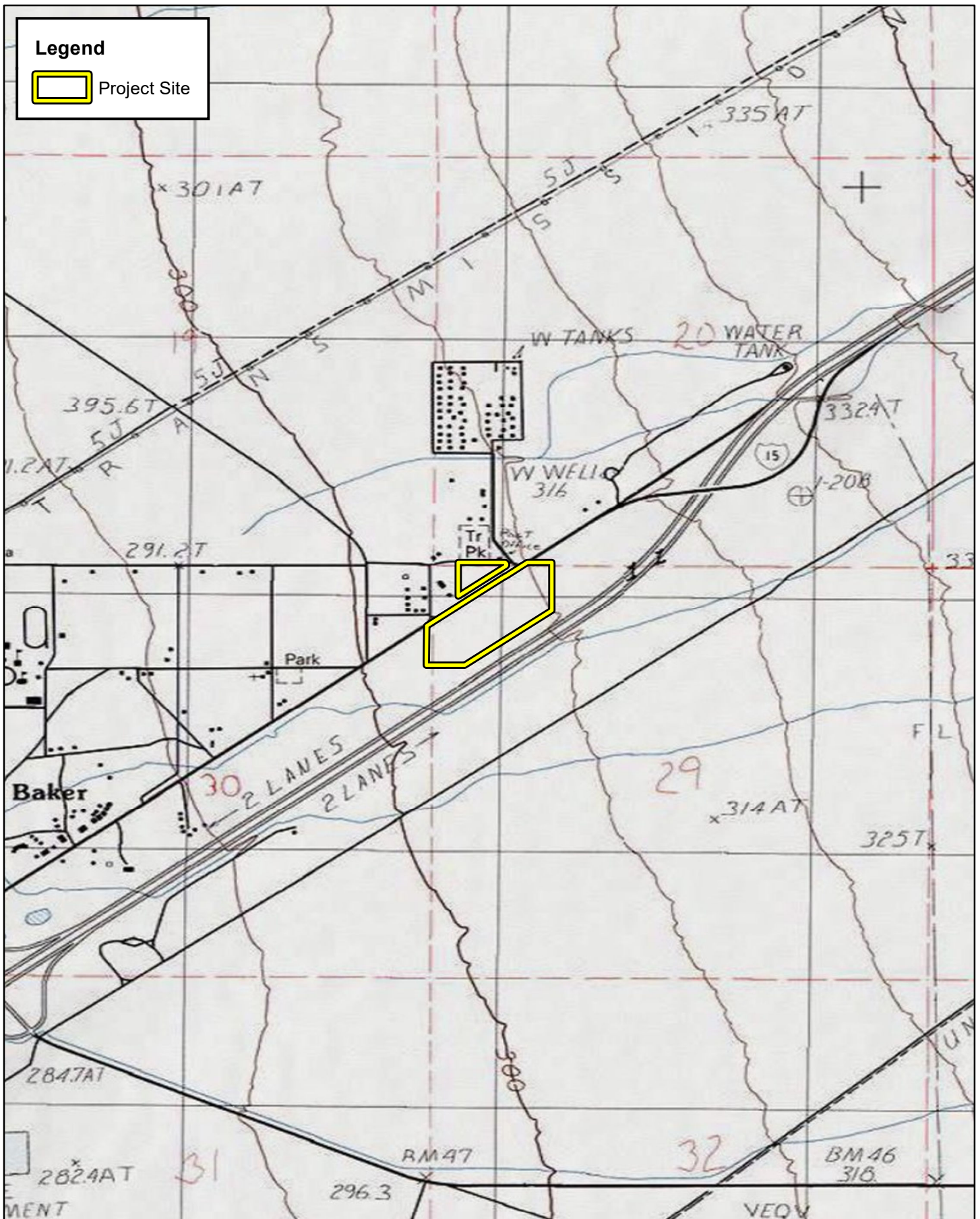
Travis J. McGill
Director

Attachments:

- A. *Project Exhibits*
- B. *Site Photographs*
- C. *Potentially Occurring Special-Status Biological Resources*
- D. *Regulations*

Attachment A

Project Exhibits



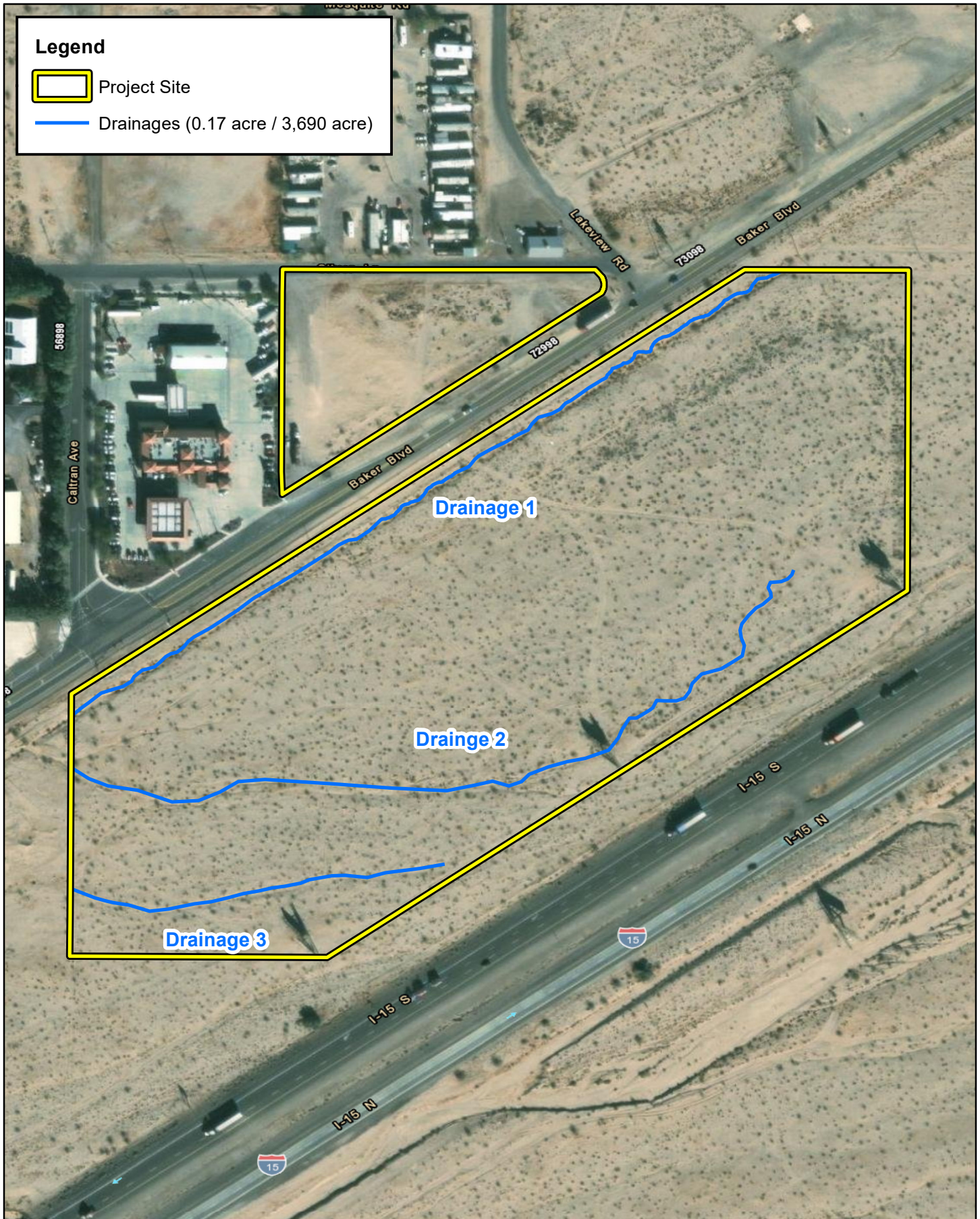
BAKER - TRAVEL STOP AND LIVE-WORK PARK



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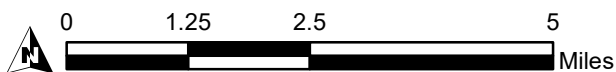


Legend

Critical Habitat

 Desert tortoise

BAKER - TRAVEL STOP AND LIVE-WORK PARK



Source: ESRI Aerial Imagery, San Bernardino County

Critical Habitat

Exhibit 6

Attachment B

Site Photographs



Photograph 1: From the northwest corner of the northern portion of the project site looking south.



Photograph 2: From the northwest corner of the northern portion of the project site looking east.



Photograph 3: From the northeast corner of the northern portion of the project site looking west.



Photograph 4: From the northeast corner of the northern portion of the project site looking southwest.



Photograph 5: From the southwest corner of the northern portion of the project site looking northeast.



Photograph 6: From the southwest corner of the northern portion of the project site looking north.



Photograph 7: From the northwest corner of the southern portion of the project site looking south.



Photograph 8: From the northwest corner of the southern portion of the project site looking northeast.



Photograph 9: From the northeast corner of the southern portion of the project site looking west.



Photograph 10: From the northeast corner of the southern portion of the project site looking south.



Photograph 11: From the southeast corner of the southern portion of the project site looking north.



Photograph 12: From the southeast corner of the southern portion of the project site looking southwest.



Photograph 13: From the southwest corner of the southern portion of the project site looking east.



Photograph 14: From the southwest corner of the southern portion of the project site looking north.

Attachment C

Potentially Occurring Special-Status Plant Species

Table C-1: Potentially Occurring Special-Status Biological Resources

Scientific Name Common Name	Status	Habitat Description	Observed On-site	Potential to Occur
SPECIAL-STATUS WILDLIFE SPECIES				
<i>Eremarionta rowelli bakerensis</i> Baker's desertsnailed	Fed: None CA: None	Restricted to rock outcrops and talus in partially shaded canyons.	No	Presumed Absent There is no suitable habitat present within or adjacent to the project site. There are no rock outcrops onsite with partially shaded areas that would support this species.
<i>Gopherus agassizii</i> Mojave desert tortoise	Fed: THR CA: THR	Occurs in desert scrub, desert wash, and Joshua tree habitats with friable, sandy, well-drained soils for nest and burrow construction. Highest densities occur in creosote bush scrub with extensive annual wildflower blooms and succulents with little to no non-native plant species.	No	Presumed Absent Some suitable habitat is present within the project site. However, the site and limited adjacent open space is entirely surrounded by existing development that supports constant heavy vehicle traffic. No suitable burrows or habitat were observed during the survey.
<i>Icteria virens</i> Yellow-breasted chat	Fed: None CA: SSC	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.	No	Presumed Absent There is no suitable habitat present within or adjacent to the project site. The project site does not support riparian habitats needed to support this species.
<i>Pyrocephalus rubinus</i> vermillion flycatcher	Fed: None CA: SSC	Occurs in a variety of open habitats including open woodland, clearings, desert scrub, savannah, agricultural land, golf courses, and recreational parks. The species tends to stay near water, often occurring in riparian vegetation characterized by cottonwoods (<i>Populus fremontii</i>), mesquite (<i>Prosopis</i> spp.), willows (<i>Salix</i> spp.), and sycamores (<i>Platanus</i> spp.).	No	Presumed Absent There is no suitable habitat present within or adjacent to the project site. The project does not support the requisite habitat structures needed to support this species.
<i>Uma scoparia</i> Mojave fringe-toed lizard	Fed: None CA: SSC	Restricted to sparsely vegetated, windblown sand in dunes, flats, riverbanks and washes. It requires fine, loose sand for burrowing and lays its eggs in subsurface burrows. Vegetation is typically scant and often consists of creosote bush scrub or other scrub.	No	Presumed Absent There is no suitable habitat present within or adjacent to the project site. The project site does not support fine windblown sandy habitat.
SPECIAL-STATUS PLANT SPECIES				
<i>Androstephium breviflorum</i> small-flowered androstephium	Fed: None CA: None CNPS: 2B.2	Grows within desert dunes, and Mojavean desert scrub (bajadas). Found at elevations ranging from 720 to 2,625 feet. Blooming period ranges from March to April.	No	Presumed Absent There is no suitable habitat present within or adjacent to the project site. The project site does not support desert dunes or bajadas needed for this species.

Scientific Name Common Name	Status	Habitat Description	Observed On-site	Potential to Occur
<i>Astragalus lentiginosus</i> var. <i>borreganus</i> Borrego milk-vetch	Fed: None CA: None CNPS: 4.3	Grows in sandy soils within Mojavean desert scrub and Sonoran desert scrub. Found in elevations ranging from 100 to 2,935 feet. Blooming period ranges from February to May.	No	Low The Creosote bush scrub plant community onsite was determined to provide marginal habitat for this species. Due to surrounding developments and anthropogenic disturbances, this species was determined to have a low potential to occur onsite.
<i>Johnstonella holoptera</i> winged cryptantha	Fed: None CA: None CNPS: 4.3	Grows within Mojavean desert scrub and Sonoran desert scrub. Found at elevations ranging from 330 to 5,545 feet. Blooming period ranges from March to April.	No	Low The Creosote bush scrub plant community onsite was determined to provide marginal habitat for this species. Due to surrounding developments and anthropogenic disturbances, this species was determined to have a low potential to occur onsite.
<i>Sibara deserti</i> desert winged-rockcrest	Fed: None CA: None CNPS: 4.3	Grows within Mojavean desert scrub. Found at elevations ranging from 1,130 to 4,265 feet. Blooming period ranges from March to April.	No	Presumed Absent There is no suitable habitat present within or adjacent to the project site. The project site occurs outside of the known elevation range for this species.

**U.S. Fish and Wildlife Service
(Fed) - Federal**
END – Federal Endangered
THR – Federal Threatened
DL - Delisted

**California Department of Fish and Wildlife
(CA) - California**
END – California Endangered
THR – California Threatened
CTHR – California Candidate Threatened
DL - Delisted
FP – California Fully Protected
SSC – California Species of Special Concern
WL – California Watch List
CE – Candidate Endangered

**California Native Plant Society (CNPS) -
California Rare Plant Rank**
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
0.2- Moderately threatened in
California
0.3- Not very threatened in California

Attachment 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 Regulations

San Bernardino County Development Code

Section 88.01.060 of the County of San Bernardino Development Code provides regulations for the removal or harvesting of specified desert native plants in order to preserve and protect the plants and to provide for the conservation and wise use of desert resources. The provisions are intended to coincide with the Desert Native Plants Act (Food and Agricultural Code Section 8001 et seq.) and the State Department of Food and Agriculture to implement and enforce the Act.

Pursuant to Section 88.01.060 of the Development Code, the following desert native plants or any part of them, except the fruit, shall not be removed except under a Tree or Plant Removal Permit:

- 1) The following desert native plants with stems two inches or greater in diameter or six feet or greater in height:
 - (A) *Dalea spinosa* (smoke tree)
 - (B) All species of the genus *Prosopis* (mesquites)
- 2) All species of the family *Agavaceae* (century plants, nolinās, yuccas)
- 3) Creosote Rings, 10 feet or greater in diameter
- 4) All Joshua trees
- 5) Any part of any of the following species, whether living or dead:
 - (A) *Olneya tesota* (desert ironwood)
 - (B) All species of the genus *Prosopis* (mesquites)
 - (C) All species of the genus *Cercidium* (palos verdes)

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

In accordance with the Revised Definition of “Waters of the United States” (March 20, 2023), “waters of the United States” are defined as follows:

The “waters of the United States” are defined in paragraph (a) of this rule:

- (1) traditional navigable waters, the territorial seas, and interstate waters;
- (2) impoundments of “waters of the United States”;
- (3) tributaries to traditional navigable waters, the territorial seas, interstate waters, or impoundments when the tributaries meet either the relatively permanent standard or the significant nexus standard (“jurisdictional tributaries”);
- (4) wetlands adjacent to traditional navigable waters; wetlands adjacent to and with a continuous surface connection to relatively permanent paragraph impoundments or to jurisdictional tributaries when the jurisdictional tributaries meet the relatively permanent standard; and wetlands adjacent to impoundments or jurisdictional tributaries when the wetlands meet the significant nexus standard (“jurisdictional adjacent wetlands”); and
- (5) intrastate lakes and ponds, streams, or wetlands not identified in (1) through (4) above that meet either the relatively permanent standard or the significant nexus standard.

The “relatively permanent standard” means relatively permanent, standing or continuously flowing waters connected to traditional navigable waters, and waters with a continuous surface connection to such relatively permanent waters or to traditional navigable waters. The “significant nexus standard” means waters that, either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of traditional navigable waters, the territorial seas, or interstate waters.

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.

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Initial Study PREA-2021-00089, PREA-2021-00099

Baker Travel Stop and Mobile Home Park

APN: 0544-471-11, 0544-472-03

April 2024

B-2: Delineation of State and Federal Jurisdictional Waters, Travel Stop and Mobile Home Park

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TRAVEL STOP AND LIVE-WORK HOUSING PARK

COMMUNITY OF BAKER, SAN BERNARDINO COUNTY, CALIFORNIA
(Assessor Parcel Numbers 0544-472-11 and 0544-472-03)

Delineation of State and Federal Jurisdictional Waters

Prepared For:

FIRST CARBON SOLUTIONS

Attention: *Jason Brandman*
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Prepared By:

ELMT Consulting, Inc.

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Santa Ana, California 92711
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714.716.5050

April 2023

TRAVEL STOP AND LIVE-WORK HOUSING PARK

COMMUNITY OF BAKER, SAN BERNARDINO 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
Biologist/Director



Thomas J. McGill, Ph.D.
Managing Director

April 2023

Executive Summary

ELMT Consulting (ELMT) has prepared this Delineation of State and Federal Jurisdictional Waters Report for the proposed Travel Stop and Live-Work Housing Park (project site or site) located in the Community of Baker, San Bernardino 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

Three (3) unnamed ephemeral drainage features (Drainages 1, 2, and 3) were observed on the project site during the field delineation. Drainage 1 generally flows northeast to southwest across the northern boundary of the site and Drainages 2 and 3 generally flow east to west until converging with Drainage 1 off-site, and are located approximately 1.2 miles east of the final stretches of the Mojave River. On-site drainages only convey surface flow in direct response to precipitation and do not support riparian vegetation. The on-site drainage features, after flowing off-site, converge with the final length of the Mojave River between Soda Lake and Silver Lake. Therefore, Drainages 1, 2, and 3 would qualify as waters of the United States under the jurisdiction of the Corps, and would qualify as “waters of the State” under the regulatory authority of the Regional Board and CDFW. Refer to Table ES-1 for a summary of on-site jurisdictional areas.

Table ES-1: Jurisdictional Areas

Jurisdictional Feature	Stream Flow	Cowardin Class	Class of Aquatic Resource	Corps/Regional Board Waters of the United States		CDFW Streambed	
				On-Site Jurisdiction		On-Site Jurisdictional Streambed	
				Acreage	Linear Feet	Acreage	Linear Feet
Drainage 1	Ephemeral	Riverine	Non-Section 10 Non-Wetland	0.08	1,531	0.08	1,531
Drainage 2	Ephemeral	Riverine	Non-Section 10 Non-Wetland	0.07	1,483	0.07	1,483
Drainage 3	Ephemeral	Riverine	Non-Section 10 Non-Wetland	0.02	676	0.02	676
TOTALS				0.17	3,690	0.17	3,690

Approximately 0.17 acres (3,690 linear feet) of non-wetland waters of the United States occur on-site. Likewise, the on-site drainage features exhibit characteristics consistent with CDFW’s methodology and would be considered CDFW streambed totaling 0.17 acres (3,690 linear feet).

¹ The field surveys for this jurisdictional delineation were conducted on January 29, 2023 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).

Any impacts to on-site jurisdictional areas will require a Corps Clean Water Act Section 404 Permit, Regional Board CWA Section 401 Water Quality Certification, and a CDFW Section 1602 Lake or Streambed Alteration Agreement prior to project implementation. Refer to Sections 1-7 for a detailed analysis of site conditions and regulatory requirements.

Table of Contents

Section 1	Introduction.....	1
1.1	Project Location.....	1
Section 2	Regulations	5
2.1	U.S. Army Corps of Engineers.....	5
2.2	Regional Water Quality Control Board.....	6
2.3	California Department of Fish and Wildlife.....	7
Section 3	Methodology	8
3.1	Waters of the United States	8
3.2	Waters of the State.....	8
3.2.1	Regional Water Quality Control Board.....	8
3.2.2	California Department of Fish and Wildlife.....	9
Section 4	Literature Review	10
4.1	Watershed Review	10
4.2	Local Climate	10
4.3	USGS Topographic Quadrangle.....	11
4.4	Aerial Photographs	11
4.5	Soils.....	11
4.6	Hydric Soils List of California	12
4.7	National Wetlands Inventory	13
4.8	Flood Zone	13
Section 5	Site Conditions	14
5.1	On-Site Features.....	14
5.1.1	Drainage Features	14
5.1.2	Wetland Features	15
Section 6	Findings.....	17
6.1	U.S. Army Corps of Engineers Determination.....	17
6.1.1	Waters of the United States Determination.....	17
6.1.2	Federal Wetland Determination	17
6.2	Regional Water Quality Control Board.....	17
6.2.1	Waters of the State Determination	17
6.2.2	State Wetland Determination	17
6.3	California Department of Fish and Wildlife.....	17
Section 7	Regulatory Approval Process	18
7.1	United States Army Corps of Engineers	18
7.2	Regional Water Quality Control Board.....	18

7.3	California Department of Fish and Wildlife.....	18
7.4	Recommendations	18
Section 8	References.....	19

EXHIBITS

Exhibit 1:	Regional Vicinity	2
Exhibit 2:	Site Vicinity	3
Exhibit 3:	Project Site.....	4
Exhibit 5:	Jurisdictional Areas.....	16

APPENDIX

Appendix A	Documentation
Appendix B	Site Photographs
Appendix C	Methodology

Section 1 Introduction

This delineation has been prepared for the proposed Travel Stop and Live-Work Housing Park project (project site or site) in order to document the potential 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 29, 2023.

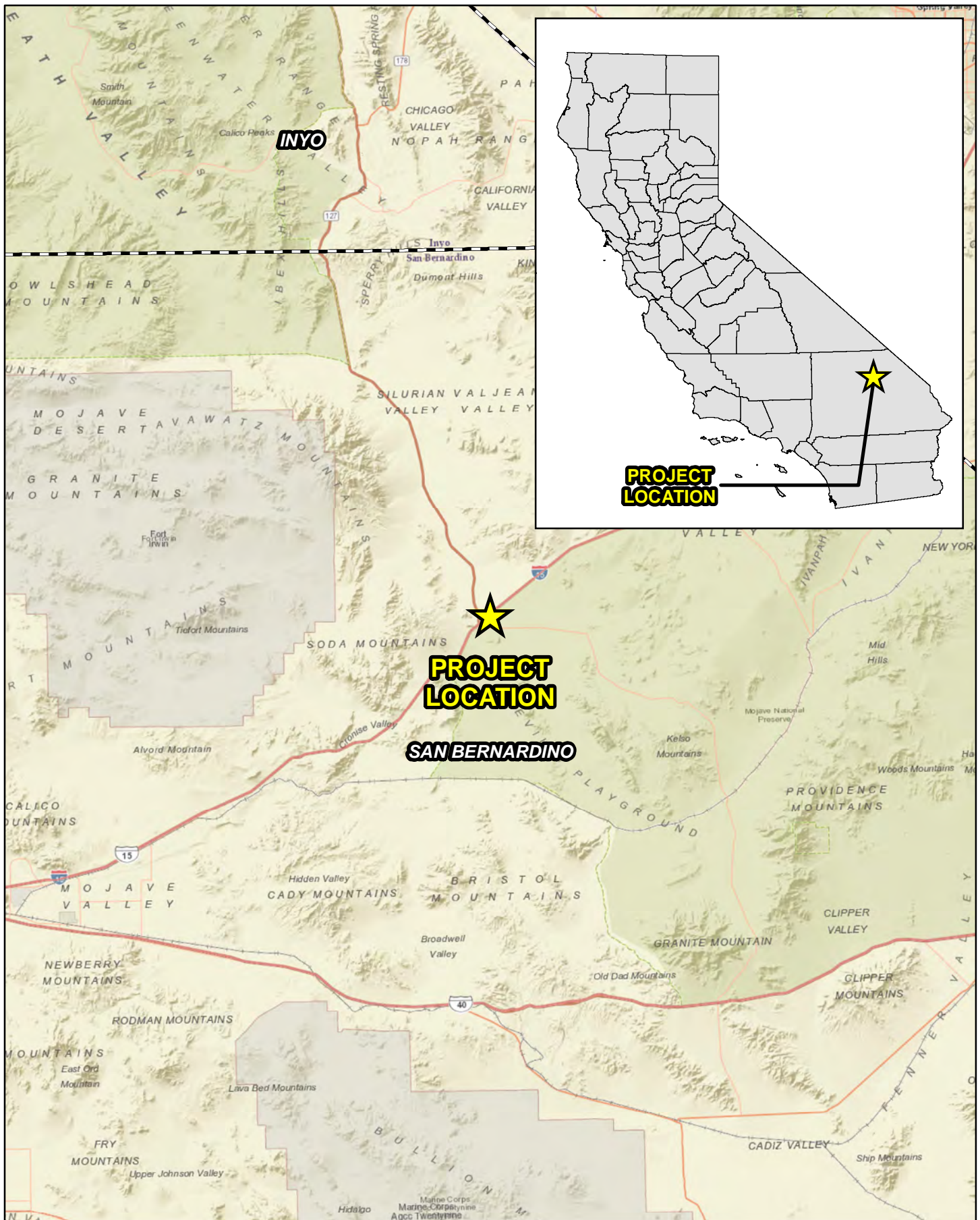
This jurisdictional delineation explains the methodology undertaken by ELMT Consulting (ELMT) to define the regulatory authority of the aforementioned regulatory agencies and documents the findings made by ELMT. This report documents the jurisdictional boundaries using the most up-to-date regulations, written policy, and guidance from the regulatory agencies.

1.1 PROJECT LOCATION

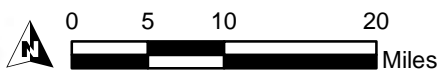
The project site is generally located north and west of Interstate 15, east of State Route 127, and south of the Silurian Hills in Baker, San Bernardino County, California (Exhibit 1, *Regional Vicinity*). The project site is depicted on the Baker quadrangle of the United States Geological Survey's (USGS) 7.5-minute topographic map within Section 29 of Township 14 North, Range 9 East (Exhibit 2, *Site Vicinity*). Specifically, the project site is composed of two disjunct parcels that are bifurcated by Baker Boulevard and are located south of Silver Lane and east of Caltrans Avenue within Assessor Parcel Numbers 0544-471-11 and 0544-472-03 (Exhibit 3, *Project Site*).

1.2 PROJECT DESCRIPTION

The project proposes the development of a truck stop and live-work housing park (mobile home park) on approximately 19.82 and 2.16 acres, respectively.



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JURISDICTIONAL DELINEATION
Regional Vicinity



Source: World Street Map, San Bernardino County



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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.”

On April 21, 2020, the Environmental Protected Agency and Corps published a final rule defining the scope of waters subject to federal regulation under the Clean Water Act ("Navigable Waters Protection Rule"). The rule codifies the long-standing exclusion of "water-filled depressions constructed or excavated 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." (33 CFR 328.3(b)(9); *see also* 85 FR 22252, 22323 (Apr. 21, 2020).)

On December 30, 2022, the agencies announced the final "Revised Definition of 'Waters of the United States'" rule. This rule also considers the best available science and extensive public comment to establish a definition of “waters of the United States” that supports public health, environmental protection, agricultural activity, and economic growth. In accordance with the Revised Definition of “Waters of the United States” (March 20, 2023), “waters of the United Sates” are defined as follows:

The “waters of the United States” are defined in paragraph (a) of this rule:

- (1) traditional navigable waters, the territorial seas, and interstate waters;
- (2) impoundments of “waters of the United States”;
- (3) tributaries to traditional navigable waters, the territorial seas, interstate waters, or impoundments when the tributaries meet either the relatively permanent standard or the significant nexus standard (“jurisdictional tributaries”);
- (4) wetlands adjacent to traditional navigable waters; wetlands adjacent to and with a continuous surface connection to relatively permanent paragraph impoundments or to jurisdictional tributaries when the jurisdictional tributaries meet the relatively permanent standard; and wetlands adjacent to impoundments or jurisdictional tributaries when the wetlands meet the significant nexus standard (“jurisdictional adjacent wetlands”); and

(5) intrastate lakes and ponds, streams, or wetlands not identified in (1) through (4) above that meet either the relatively permanent standard or the significant nexus standard.

The “relatively permanent standard” means relatively permanent, standing or continuously flowing waters connected to traditional navigable waters, and waters with a continuous surface connection to such relatively permanent waters or to traditional navigable waters. The “significant nexus standard” means waters that, either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of traditional navigable waters, the territorial seas, or interstate waters.

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 v. 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.

Under the State Water Resources Control Board State Wetland Definition, an area is a wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area’s vegetation is dominated by hydrophytes or the area lacks vegetation.

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)

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 substantially 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. One CDFW guidance document, although not a formally adopted rule or policy, requires notification for 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. If the project will not “substantially adversely affect an existing fish or wildlife resource,” following notification to CDFW, the project may commence without an agreement with CDFW. (Fish & G. Code, § 1602(a)(4)(A)(i).)

Section 3 Methodology

The analysis presented in this report is supported by field surveys and verification of site conditions conducted on January 29, 2023. ELMT conducted a field delineation to determine the jurisdictional limits of “waters of the State” and jurisdictional streambed (including potential wetlands), located within the boundaries of the project site. While in the field, jurisdictional features were recorded on an aerial base map at a scale of 1" = 50' using topographic contours and visible landmarks as guidelines. Data points were obtained with a Garmin Map62 Global Positioning System to record and identify specific widths for ordinary high water mark (OHWM) indicators and the locations of photographs, soil pits, and other pertinent jurisdictional features, if present. This data was then transferred as a .shp file and added to the Project's jurisdictional exhibits. The jurisdictional exhibits were prepared using ESRI ArcInfo Version 10 software.

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; 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.

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

⁴ CWA regulations 33 CFR §328.3(e).

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. CDFW Regulations define "stream" as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and that supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation." (14 Cal. Code Regs., § 1.72.) For this project location, CDFW jurisdictional limits were delineated using this definition of "stream."

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, *Documentation*. 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 northeast portion of the Mojave Watershed (HUC 18090208). The Mojave Watershed is a large, closed basin in the western Mojave Desert that occurs within central and western San Bernardino County and drains approximately 4,500 square miles. The primary geographic and hydrologic feature of the Mojave Watershed is the Mojave River, which occurs approximately 5.22 miles east of the site. The headwaters of the Mojave River are in the San Bernardino Mountains, which annually receives greater than forty inches of precipitation at its highest elevations. Much of the winter precipitation in the San Bernardino Mountains falls in the form of snow, which provides spring recharge to the Mojave River system. This results in an annual recharge to the Mojave River of approximately 75,000 acre-feet. The Mojave River transects the watershed north and east to its terminus at Silver Lake, just north of the Community of Baker. Elevations within the watershed range from 8,500 feet above mean sea level at Butler Peak in the San Bernardino Mountains to 1,400 feet above mean sea level at Afton Canyon near the terminus of the Mojave River. There are multiple intermittent or ephemeral waterways in the eastern portion of the watershed which convey surface water runoff to Silver Lake during extreme rain events. Silver Lake remains dry most of the year. Aside from extreme rain events, the Mojave River channel is typically dry downstream of the Mojave Forks Dam, except in certain locations where groundwater is forced to the surface by geologic influences.

4.2 LOCAL CLIMATE

San Bernardino 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 in northeast San Bernardino County are colder with chilly to cold morning temperatures common. Climatological data obtained for the Community of Baker indicates the annual precipitation averages 3.39 inches per year. Almost all of the precipitation occurs in the months between December and March, with hardly any to none occurring in June. The wettest month is February, with a monthly average total precipitation of 0.79 inches. The average maximum and minimum temperatures for the region are 82.8- and 58.9-degrees Fahrenheit (°F) respectively with July (monthly average 93° F) being the hottest month and December (monthly average 49°F) being the coldest. Temperatures during the site visit were in the low-60s (°F) with mostly clear skies.

Additionally, the NRCS Climate Analysis for Wetlands Tables (WETS Tables) were required. The WETS Tables define the normal range for monthly precipitation and growing season required to assess the climatic characteristics for a geographic area over a representative period of time. The nearest WETS station to the project site is located in Barstow, approximately 60 miles to southwest. The climate data is described in the WETS Table provided in Appendix A and summarized below:

- **Type:** The climate of the area is characterized by a Mediterranean climate with moderate winters and warm, dry summers.
- **Precipitation:** Precipitation in the study area primarily occurs as rain with minimal snowfall. The average annual rainfall is approximately 5 inches.
- **Air Temperature:** Air temperatures in the study area range between an average January high of 59.2 degrees Fahrenheit (°F), and an average July high of 103.2°F, with an average July low of 72.6°F and an average December low 35.0°F. The annual average high is approximately 80.0°F, and the annual average low is approximately 52.2°F.

Based on the review of the WETS Tables, the comparison of historical rainfall to observed rainfall for the 3-month period before the field investigation, did not show any abnormal rainfall patterns that would have contributed to the presence/absence of wetland indicators.

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 depicted on the Baker quadrangle of the United States Geological Survey's (USGS) 7.5-minute topographic map series within Section 29 of Township 14 North, Range 9 East. According to the topographic map, the project site consists entirely of vacant/undeveloped land in between Interstate 15 and Baker Boulevard.

Elevation on the project site ranges from to 300 to 310 feet above mean sea level and is generally flat with no areas of significant topographic relief.

4.4 AERIAL PHOTOGRAPHS

Prior to conducting the field delineation, ELMT reviewed current and historical aerial photographs (1985-2021) 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 riverine habitat within the boundaries of the project site, if any.

According to the 1994 through 2021 aerial photographs, the project site has been exposed to a variety of disturbances, primarily from light and heavy vehicle access and parking. The community of Baker served primarily as a fueling and vehicle services hub since the early 1900's, and the northern portion of the site has supported through associated vehicular traffic and parking for several decades. According to historic aerials, this has been ongoing since at least 1994, with this portion of the site providing access to Baker Boulevard from adjacent fueling and service stations. The southern portion of the site has been subject to less disturbance relative to the northern portion due to its position on the opposite side of Baker Boulevard to existing development. According to historic aerials, the on-site billboards that occur along the southeast

boundary of the southern portion of the site have been in place since at least 1995, and the electricity transmission lines that bound the southern portion of the site to the north have been in place since 2010. In addition, boundary vegetation, presumably windrows, is visible since at least 1994, but no sign associated structures or agriculture is visible. These features gradually faded as native vegetation replaced whatever species were initially present.

The project site supports one (1) plant community, creosote bush scrub, and two (2) land cover types that would be classified as disturbed and developed. The northern portion of the site supports mainly disturbed and developed land with a small swathe of creosote bush scrub near the middle of the northern boundary. The southern portion of the site primarily supports creosote bush scrub with disturbed land occurring on access roads and developed land occurring beneath existing billboards. Refer to Appendix B, *Site Photographs*.

4.5 SOILS

Soils within and adjacent to the Project site were researched prior to the field delineation using the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Custom Soil Resource Report for Riverside County, Coachella Valley Area. Soil surveys furnish soil maps and interpretations originally needed in providing technical assistance to farmers and ranchers; in guiding other decisions about soil selection, use, and management; and in planning, research, and disseminating the results of the research. In addition, soil surveys are now heavily utilized in order to obtain soil information with respect to potential wetland environments and jurisdictional areas (i.e., soil characteristics, drainage, and color).

Based on the NRCS USDA Web Soil Survey, the project site occurs in an area that has not been mapped. Soils underlying the general vicinity of the site are reported to consist primarily of Rillito, Gunsight, and Playas. Soils within the northern parcel and portions of the southern parcel have been disturbed and compacted by ongoing trailer parking, access roads and adjacent development.

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 hydric⁵. 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, Playas have been listed as hydric in Mojave Desert Area, Northeast Part, California.

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.

4.7 NATIONAL WETLANDS INVENTORY

ELMT reviewed the U.S. Fish and Wildlife Service's (USFWS) National Wetland Inventory maps. Based on this review, no wetland features or riverine resources have been mapped within the boundaries of the project site. However, during the field investigation, three (3) riverine resources were identified within the southern parcel (refer to Exhibit 4, *Jurisdictional Areas*). The northern of the three features collects flows from Baker Boulevard and nearby undeveloped land and conveys them off-site to the southwest. The middle and southern features convey flows from within site boundaries off-site to the west until meeting with downstream portions of the northern drainage. No surface water was observed during the field investigation. Refer to Appendix A, *Documentation*.

4.8 FLOOD ZONE

The Federal Emergency Management Act (FEMA) website was searched for flood data for the project site. Based on Flood Insurance Rate Map No. 06071C2325H the project site is located within Zone D – Areas with possible but undetermined flood hazards due to levees; no flood hazard analysis has been conducted. Refer to Appendix A, *Documentation*.

Section 5 Site Conditions

ELMT biologists Jacob H. Lloyd Davies conducted a field delineation on January 29, 2023, to verify existing site conditions and document the extent of potential jurisdictional areas within the boundaries of the project site. ELMT field staff encountered no limitations during the field delineation.

5.1 ON-SITE FEATURES

5.1.1 DRAINAGE FEATURES

Three (3) unnamed ephemeral drainage features were observed within the boundaries of the project site during the field delineation, all within the southern portion of the site (refer to Exhibit 4, *Jurisdictional Areas*). ELMT carefully assessed the site for depressions, inundation, presence of hydrophytic vegetation, staining, cracked soil, ponding, and indicators of active surface flow and corresponding 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. Suspected jurisdictional areas were checked for the presence of definable channels, soils, and hydrology.

The northern drainage (Drainage 1) generally flows from northeast to southwest along Baker Boulevard, collecting flows from the adjacent road and undeveloped land. This drainage enters the project site along the northern boundary near the northeast corner via surface flow from the northeast. From there, Drainage 1 flows in a southwest direction where it exits the northeast corner of the site at the top of the eastern boundary. The middle and southern drainages (Drainage 2 and Drainage 3) contribute to an array of braided channels that convey surface flows from within and east of site boundaries westward. Both drainages terminate at Drainage 1 off-site to the west.

No surface water was present within any of the on-site drainages during the field investigation, and no riparian vegetation was observed on-site during the field investigation. Evidence of an OHWM was observed via scour, changes in substrate, shelving, and lack of vegetation. Across Drainage 1, the OHWM ranged from approximately 1-6 feet in width; across Drainage 2, the OHWM ranged from approximately 1-3 feet in width; and across Drainage 3, the OHWM ranged from approximately 1-2 feet in width. The on-site drainage features only convey surface flows in direct response to precipitation and do not support riparian vegetation.

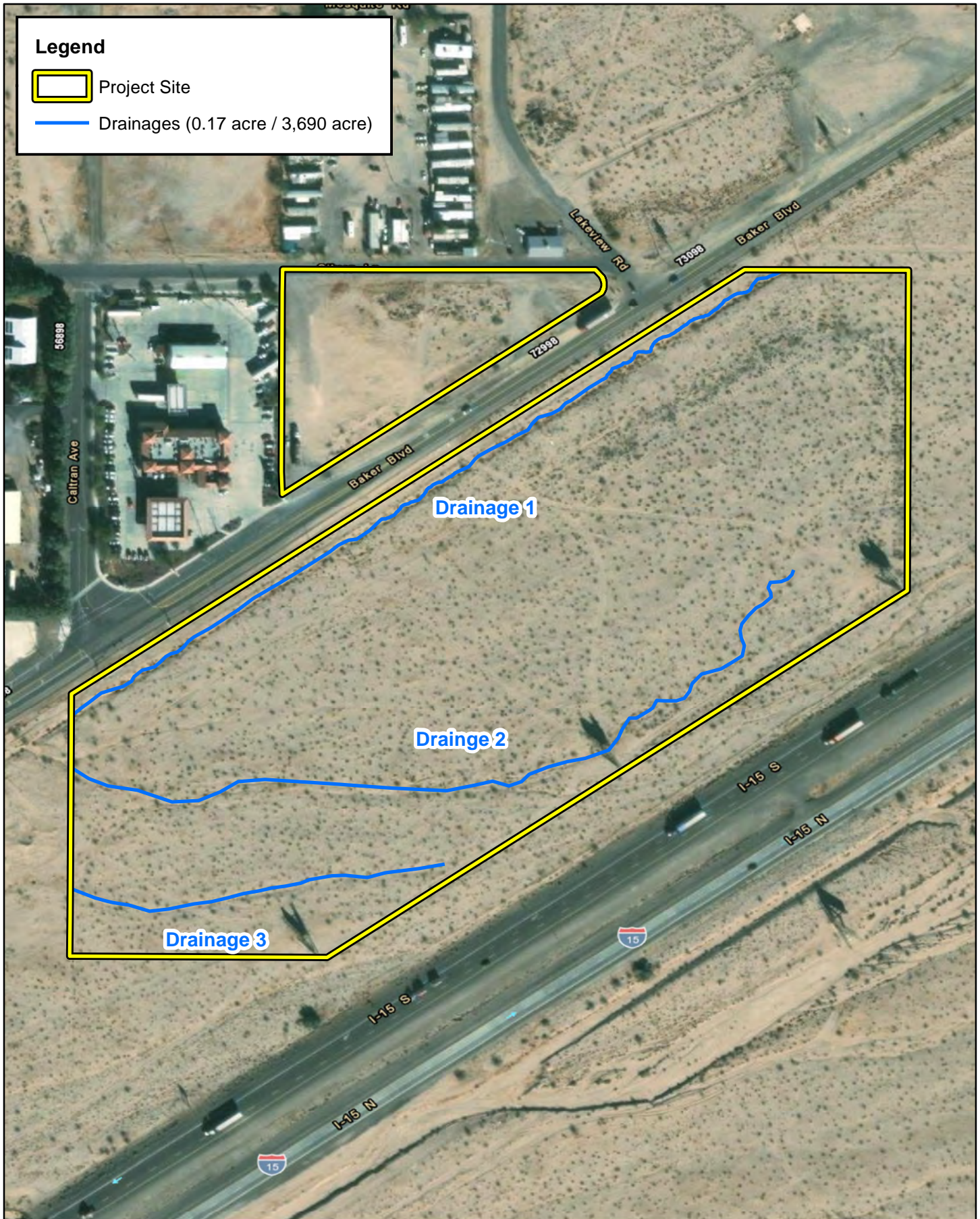
The bottom of all three drainage features primarily consisted of sandy substrate consisting of loose sandy soils and small cobble with minimal vegetation. The banks of the drainage features were vegetated with upland plant species indicative of the surrounding Creosote Bush Scrub plant community. This plant community is dominated by creosote (*Larrea tridentata*) and is found within the majority of the southern portion of the project site. Other common plant species include Arabian grass (*Schismus arabicus*), fringed amaranth (*Amaranthus fimbriatus*), spineflower (*Chorizanthe* spp.), allscale saltbush (*Atriplex polycarpa*), desert holly (*Atriplex hymenelytra*), cheesebush (*Ambrosia salsola*), burrobrush (*Ambrosia dumosa*), slender buckwheat (*Eriogonum gracile*), Thurber's buckwheat (*Eriogonum thurberi*), devil's lettuce (*Amsinckia tessellata*), pectocarya (*Pectocarya* spp.), sandmat (*Euphorbia micormera*), hopsage (*Grayia spinosa*), and leaved cambess (*Oligomeris linifolia*).

Once off-site, water continues to flow in a southwestern direction before being conveyed beneath Baker Boulevard via a series of culverts, after which flows are conveyed westward to the final length of the Mojave River that conveys flows northward from Soda Lake to Silver Lake. During most storm events, infiltration likely occurs in one of several detention basins before Silver Lake, with Silver Lake only receiving flows during extreme storm events.

As a result, all three on-site drainages bear a surface hydrologic connection to downstream waters of the United States (Silver Lake) and will be considered jurisdictional by the Corps. In addition, the drainages will fall under the regulatory authority of the Regional Board as waters of the State and CDFW as jurisdictional streambed.

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., scour, changes in substrate, shelving) was present within the on-site drainages, these areas were dominated by upland plant species. Further, water does not persist long enough on the project site to create hydric soil (anaerobic) conditions, and none of the on-site drainages supported a dominance of hydrophytic vegetation. As a result, no features on-site meet the Corps' or Regional Board's wetland definition to qualify as jurisdictional wetlands.



BAKER - TRAVEL STOP AND LIVE-WORK PARK

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.

6.1 U.S. ARMY CORPS OF ENGINEERS DETERMINATION

6.1.1 WATERS OF THE UNITED STATES DETERMINATION

Drainages 1, 2, and 3 exhibit a surface hydrologic connection to downstream waters of the United States. Approximately 0.17 acres (3,690 linear feet) of non-wetland waters of the State occur on-site.

6.1.2 FEDERAL WETLAND DETERMINATION

An area must exhibit all three wetland parameters described in the Corps Arid West Regional Supplement to be considered a jurisdictional wetland. Based on the results of the field delineation, it was determined that no areas within the project site met all three wetland parameters. Therefore, no jurisdictional wetland features exist within the project site.

6.2 REGIONAL WATER QUALITY CONTROL BOARD

6.2.1 WATERS OF THE STATE DETERMINATION

The on-site drainage features exhibit characteristics consistent with the Regional Board's methodology and would likely be considered jurisdictional waters of the State. Approximately 0.16 acres (3,690 linear feet) of non-wetland waters of the State occur on-site.

6.2.2 STATE WETLAND DETERMINATION

Under the State Water Resources Control Board State Wetland Definition, an area is a wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.

Based on the results of the field delineation, it was determined that no areas within the project site meet the State Wetland Definition. Therefore, no state wetland features exist within the project site.

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. Approximately 0.17 acre (3,690 linear feet) of CDFW jurisdiction was mapped within boundaries of the project site, consisting of 0.16 acre of jurisdictional streambed.

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 UNITED STATES 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. If any impacts occur to Drainages 1, 2, or 3, it will be necessary for the Applicant to acquire a CWA Section 404 permit prior to impacts occurring within Corps jurisdictional areas. If any impacts occur to Drainages 1, 2, or 3, they will likely result in the loss of less than ¼-acre of Corps jurisdiction (non-wetland waters), and it would be anticipated that the proposed project can be authorized via a Nationwide Permit (NWP).

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. The Regional Board's jurisdiction extends to all waters of the State and U.S., including wetlands. If any impacts to Drainages 1, 2, or 3 occur, for a Corps Section 404 permit to be approved, a Section 401 Water Quality Certification from the Regional Board will be required. The Regional Board also requires a Section 401 Certification Application Fee, which is dependent on the amount and type of impacts (i.e., acreage, linear feet, and project type). It should also be noted that the Regional Board requires that California Environmental Quality Act (CEQA) compliance be obtained prior to issuance of the 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 Drainages 1, 2, or 3, will require a Section 1602 Streambed Alteration Agreement from the CDFW prior to project implementation, if the project will have a substantial adverse impact on an existing fish or wildlife resource. The notification fee is based on the term and cost of a project. The Section 1602 Streambed Alteration Agreement will not be issued until all fees are paid to the CDFW.

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

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Appendix A Documentation



U.S. Fish and Wildlife Service

National Wetlands Inventory

Baker Travel Stop



U.S. Fish and Wildlife Service, National Standards and Support Team,
wetlands_team@fws.gov

March 17, 2023

Wetlands

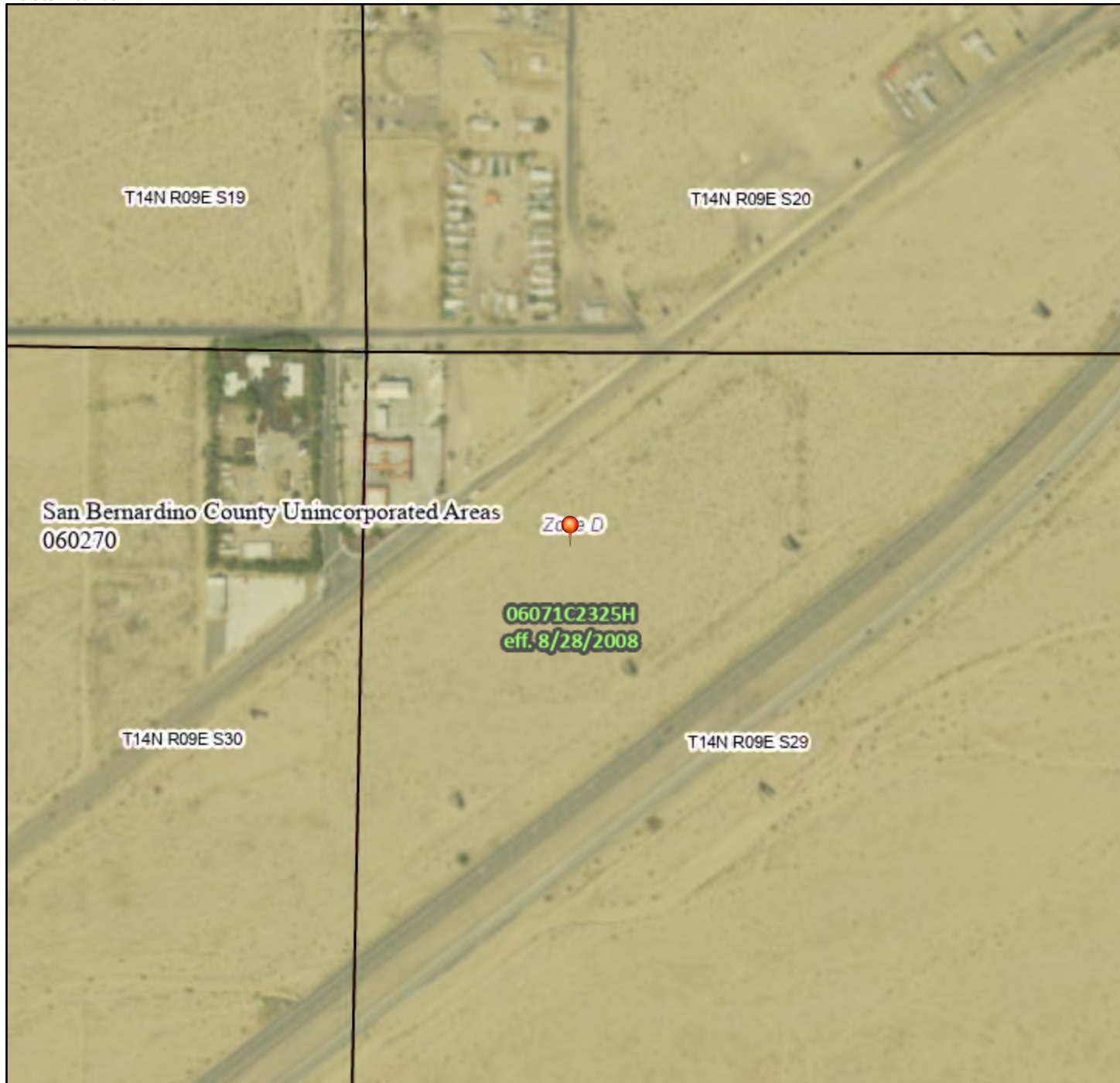
	Estuarine and Marine Deepwater		Freshwater Emergent Wetland		Lake
	Estuarine and Marine Wetland		Freshwater Forested/Shrub Wetland		Other
			Freshwater Pond		Riverine

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



116°3'39"W 35°16'51"N



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

1:6,000

116°3'1"W 35°16'22"N

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

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
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
OTHER FEATURES		Levee, Dike, or Floodwall
		Cross Sections with 1% Annual Chance Water Surface Elevation
OTHER FEATURES		Coastal Transect
		Base Flood Elevation Line (BFE)
OTHER FEATURES		Limit of Study
		Jurisdiction Boundary
OTHER FEATURES		Coastal Transect Baseline
		Profile Baseline
MAP PANELS		Hydrographic Feature
		Digital Data Available
MAP PANELS		No Digital Data Available
		Unmapped



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 **2/6/2023 at 4:23 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.

WETS Table

WETS Station: BARSTOW, CA

Requested years: 2000 - 2022

Month	Avg Max Temp	Avg Min Temp	Avg Mean Temp	Avg Precip	30% chance precip less than	30% chance precip more than	Avg number days precip 0.10 or more	Avg Snowfall
Jan	59.2	35.5	47.3	0.73	0.13	0.64	2	0.0
Feb	63.3	38.3	50.8	0.72	0.16	0.70	2	0.0
Mar	70.4	43.9	57.2	0.53	0.28	0.60	1	0.0
Apr	77.9	49.5	63.7	0.33	0.00	0.30	1	0.0
May	86.5	57.0	71.7	0.08	0.00	0.05	0	0.0
Jun	97.7	66.1	81.9	0.00	0.00	0.00	0	0.0
Jul	103.2	72.6	87.9	0.26	0.06	0.23	1	0.0
Aug	101.5	70.8	86.1	0.21	0.00	0.16	1	0.0
Sep	94.2	63.5	78.9	0.12	0.00	0.15	0	0.0
Oct	81.1	52.3	66.7	0.36	0.00	0.26	1	0.0
Nov	67.8	41.5	54.7	0.44	0.11	0.40	1	0.0
Dec	57.4	35.0	46.2	0.91	0.33	0.99	2	0.4
Annual:					-	-		
Average	80.0	52.2	66.1	-	-	-	-	-
Total	-	-	-	4.70			12	0.4

GROWING SEASON DATES

Years with missing data:	32 deg = 2	28 deg = 2	24 deg = 2
Years with no occurrence:	32 deg = 0	28 deg = 0	24 deg = 4
Data years used:	32 deg = 21	28 deg = 21	24 deg = 21
Probability	32 F or higher	28 F or higher	24 F or higher
50 percent *	2/25 to 11/22: 270 days	2/5 to 12/5: 303 days	1/4 to 12/22: 352 days
70 percent *	2/19 to 11/28: 282 days	1/30 to 12/11: 315 days	12/22 to 1/4: 378 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

STATS TABLE - total precipitation (inches)

Yr	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annl
1980					0.24	T		0.00	0.31	0.00	0.00	0.00	0.55
1981	0.62	0.40	0.62	0.04	0.11	0.00	0.00	0.20	0.60	0.06	0.24	0.00	2.89
1982	1.15	0.52	0.98	0.96	0.16	0.00	1.03	0.13	0.16	0.19	1.54	0.69	7.51
1983	1.37	1.03	2.96	0.42	0.00	0.00	0.00	0.88	0.12	1.00	0.63	0.78	9.19
1984	T	0.00	T	T	T	0.04	1.65	1.52	1.84	0.00	0.45	2.75	8.25
1985	1.02	0.10	0.25	T		0.00	0.13	0.00	0.48	0.02	1.29	0.42	3.71
1986	M0.55	0.57	1.45	M0.36	0.00	0.00	0.06	0.00	0.00	0.30	0.55	0.47	4.31
1987	1.35	0.26	2.01	0.00	1.21	0.25	0.51	0.00	0.34	0.73	0.72	0.68	8.06
1988	1.16	0.96	0.12	1.14	0.00	0.16	0.00	1.17	0.00	0.00	0.17	0.33	5.21

Table 1: Annual Data for 2000-2023													
Year	Category A	Category B	Category C	Category D	Category E	Category F	Category G	Category H	Category I	Category J	Category K	Category L	Category M
1989	0.66	0.03	0.23	M0.00	0.00	0.00	0.00	1.12	0.00	0.00	0.15	0.00	2.19
1990		0.07		0.00	M0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.24
1991	0.89	0.87	M0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.02	0.00	0.68	2.76
1992	0.32	2.46	1.73	0.32	0.00	0.00	0.00	0.00	0.00	1.34	0.00	1.11	7.28
1993	2.91	2.69	0.15	0.00	0.00	0.50	0.00	0.00	0.00	0.04	0.05	0.42	6.76
1994	0.25	0.00		MT		0.00	0.00	0.00	0.00	0.00	0.02	0.81	1.08
1995	2.45	0.15	1.04	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.76
1996	0.10	1.74	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.30	0.80	0.45	3.51
1997	0.79	0.03	0.00	0.00	0.00	0.00	0.23	0.00	3.49	T	1.39	1.23	7.16
1998	0.52	4.22	0.79	0.12	0.37	0.00	0.44	0.47	0.74	0.00	0.00	0.00	7.67
1999	0.00	0.28	0.01	0.00	0.00	0.60	M2.07	0.00	0.63	0.00	0.00	0.00	3.59
2000		0.84	0.11	0.13	0.00	0.00	0.00	0.32	0.00	0.60	0.00	M0.04	2.04
2001	M1.09	2.06	0.67	0.00	0.00	0.00	M0.00	0.00	0.50	0.14	0.62	0.32	5.40
2002	T	0.00	0.15	0.10	0.00	0.00	0.01	0.00	0.40	0.07	0.36	0.51	1.60
2003	T	1.58	1.12	0.98	0.01	T	0.49	0.07	T	0.00	1.37	0.32	5.94
2004	0.34	2.37	0.93	0.24	0.00	0.00	0.00	0.61	M0.27	2.26	1.17	1.72	9.91
2005	2.30	2.39	1.34	0.10	0.11	0.00	1.14	0.26	0.71	1.33	0.03	T	9.71
2006	0.19	0.10	0.67	0.60	0.01	0.01	0.20	0.00	T	0.01	T	0.47	2.26
2007	T	0.20	T	0.24	0.00	0.00	0.01	0.01	T	0.00	1.20	0.27	1.93
2008	1.39	0.04	0.00	0.00	0.10	0.00	0.85	0.00	0.12	0.00	0.65	1.35	4.50
2009	0.01	0.98	T	0.09	0.04	T	T	0.01	0.00	0.00	0.01	0.46	1.60
2010	2.69	1.71	0.22	0.64	MT	0.00	0.00	1.01	0.00	1.13	1.12	7.07	15.59
2011	0.01	0.52	0.24	0.07	T	0.00	0.20	0.58	0.34	0.31	0.81	0.28	3.36
2012	0.17	0.15	0.21	0.64	0.00	0.00	0.30	0.06	0.00	0.13	T	0.74	2.40
2013	0.43	0.23	0.41	0.00	T	0.00	0.33	0.57	0.14	T	1.06	T	3.17
2014	0.00	0.09	0.54	0.30	0.36	0.00	0.08	0.78	0.06	0.00	0.01	1.05	3.27
2015	2.12	0.67	T	0.18	MT	T	0.92	0.10	0.38	0.93	0.09	0.39	5.78
2016	0.93	0.25	0.34	1.08	0.09	0.00	0.47	0.00	0.00	0.86	0.09	1.03	5.14
2017	M2.48	0.53	0.00	0.00	0.00	0.00	0.00	0.02	0.06	T	0.00	0.00	3.09
2018	0.42	0.01	1.17	0.00	0.49	0.00	0.33	0.00	M0.00	M0.03	M0.14	1.12	3.71
2019	0.95	1.81	1.66	T	M0.57	0.02	0.03	0.00	T	M0.00	0.80	1.97	7.81
2020	0.01	T	1.90	2.11	0.00	0.02	0.00	T	0.00	0.00	T	0.17	4.21
2021	0.39	0.01	M0.15	M0.00	0.00	0.02	0.38	0.00	0.00	0.55	0.00	0.67	2.17
2022	0.08	MT	T	0.01	0.00	0.02	0.01	0.51	T	T	0.66	1.03	2.32
2023	1.15	0.43	1.40	M0.00									2.98

Notes: Data missing in any month have an "M" flag. A "T" indicates a trace of precipitation.

Data missing for all days in a month or year is blank.

Creation date: 2023-04-21

Appendix B Site Photographs



Photograph 1: From the entry of Drainage 1 into site boundaries looking southwest (downstream) along Drainage 1.



Photograph 2: Looking southwest (downstream) across the northern portion of Drainage 1.



Photograph 3: Looking southwest (downstream) across the southern portion of Drainage 1.



Photograph 4: From the exit of Drainage 1 from site boundaries looking northeast (upstream) along Drainage 1.



Photograph 5: Looking northeast towards the origin of the OHWL for Drainage 2.



Photograph 6: Looking southeast (upstream) along the eastern portion of Drainage 2.



Photograph 7: Looking west (downstream) along the western portion of Drainage 2.



Photograph 8: From the exit of Drainage 2 from site boundaries looking east (upstream) along Drainage 2.



Photograph 9: Looking west towards the origin of the OHWM for Drainage 2.



Photograph 10: Looking east (upstream) along Drainage 3.



Photograph 11: Looking east (upstream) along Drainage 3.



Photograph 12: From the exit of Drainage 3 from site boundaries looking east (upstream) along Drainage 3.

Appendix C Methodology

WATERS OF THE UNITED STATES

In accordance with the Revised Definition of “Waters of the United States” (March 20, 2023), “waters of the United States” are defined as follows:

The “waters of the United States” are defined in paragraph (a) of this rule:

- (1) traditional navigable waters, the territorial seas, and interstate waters;
- (2) impoundments of “waters of the United States”;
- (3) tributaries to traditional navigable waters, the territorial seas, interstate waters, or impoundments when the tributaries meet either the relatively permanent standard or the significant nexus standard (“jurisdictional tributaries”);
- (4) wetlands adjacent to traditional navigable waters; wetlands adjacent to and with a continuous surface connection to relatively permanent paragraph impoundments or to jurisdictional tributaries when the jurisdictional tributaries meet the relatively permanent standard; and wetlands adjacent to impoundments or jurisdictional tributaries when the wetlands meet the significant nexus standard (“jurisdictional adjacent wetlands”); and
- (5) intrastate lakes and ponds, streams, or wetlands not identified in (1) through (4) above that meet either the relatively permanent standard or the significant nexus standard.

The “relatively permanent standard” means relatively permanent, standing or continuously flowing waters connected to traditional navigable waters, and waters with a continuous surface connection to such relatively permanent waters or to traditional navigable waters. The “significant nexus standard” means waters that, either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of traditional navigable waters, the territorial seas, or interstate waters.

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;

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.

- ◆ *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

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

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.

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.

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.